



Notice of Meeting and Meeting Agenda Environmental Services Committee

Wednesday, October 21, 2020

1:30 PM

6th Floor Boardroom
625 Fisgard St.
Victoria, BC V8W 1R7

D. Blackwell (Chair), N. Taylor (Vice Chair), B. Desjardins, L. Helps, M. Hicks, G. Holman, J. Loveday, C. McNeil-Smith, J. Ranns, D. Screech, 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. [20-665](#) Minutes of the September 16, 2020 Environmental Services Committee Meeting

Recommendation: That the minutes of the Environmental Services Committee meeting of September 16, 2020 be adopted as circulated.

Attachments: [Minutes - September 16, 2020](#)

4. Chair's Remarks

5. Presentations/Delegations

6. Committee Business

6.1. [20-631](#) 2019-2022 Climate Action & Environmental Stewardship Service Planning

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

1. That Appendix A, Community Needs Summary - Climate Action & Adaptation, be approved as presented and advanced to the October 28, 2020 provisional budget review process;
2. That staff pursue the completion of an updated Climate Action Strategy;
3. That staff pursue completion of a detailed business case for a Regional Energy Retrofit Program; and
4. That staff report back in 2021 with 2022 budget implications (as proposed in the May 13, 2020 CRD Board staff report).

Attachments: [Staff Report: 2019-2022 Climate Action & Env. Stewardship Service Planning](#)
[Appendix A: Community Need Summary - Climate Action](#)
[Appendix B: Climate Action & Adaptation - Initiatives Progress Report](#)

6.2. [20-618](#) 2019-2022 Landfill & Recycling Service Planning

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
That Appendix A, Community Need Summary - Landfill & Recycling, be approved as presented and advanced to the October 28, 2020 provisional budget review process.

Attachments: [Staff Report: 2019-2022 Landfill & Recycling Service Planning](#)
[Appendix A: 2021 Community Need Summary - Landfill & Recycling](#)
[Appendix B: Landfill & Recycling - Initiatives Progress Report](#)

6.3. [20-630](#) Enkern Facility Update

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

Attachments: [Staff Report: Enkern Facility Update](#)
[Appendix A: City of Edmonton Factsheet - Waste-to-Biofuels Initiative](#)

6.4. [20-608](#) Provincial Plastics Action Plan Update and Next Steps

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
That the Plastics Action Plan and Next Steps report be received for information.

Attachments: [Staff Report: Provincial Plastics Action Plan Update and Next Steps](#)
[Appendix A: Plastics Action Plan Policy Consultation Paper \(July 2019\)](#)
[Appendix B: Province of BC - Order in Council - June 29, 2020](#)
[Appendix C: Recycling Regulation - Policy Intentions Paper](#)

6.5. [20-650](#) Motion from Solid Waste Advisory Committee (meeting of October 2, 2020)

Recommendation: That the Solid Waste Advisory Committee request support and direction from the Environmental Services Committee for the opportunity for the Solid Waste Advisory Committee to do a self-assessment survey.

7. Notice(s) of Motion

8. New Business

9. Adjournment

The next meeting is November 18, 2020.

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

Meeting Minutes

Environmental Services Committee

Wednesday, September 16, 2020

1:30 PM

6th Floor Boardroom
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT

Directors: D. Blackwell (Chair), N. Taylor (Vice Chair), B. Desjardins, L. Helps (1:31 pm), M. Hicks, G. Holman, J. Loveday, C. McNeil-Smith, J. Ranns, D. Screech, R. Windsor, C. Plant (Board Chair, ex-officio)(3:10 pm)(EP)

Staff: L. Hutcheson, General Manager, Parks and Environmental Services; G. Harris, Senior Manager, Environmental Protection; R. Smith, Senior Manager, Environmental Resource Management; J. Frederick, Engineer 5, Environmental Engineering; M. Lagoa, Acting Deputy Corporate Officer; S. Closson, Committee Clerk (Recorder)

EP - Electronic Participation

The meeting was called to order at 1:30 pm.

1. Territorial Acknowledgement

Chair Blackwell provided a Territorial Acknowledgement.

2. Approval of Agenda

MOVED by Director Taylor, **SECONDED** by Director Screech,
That the agenda be amended to permit Sara Gose to participate as a delegation.
CARRIED

MOVED by Director Taylor, **SECONDED** by Director Screech,
That the agenda for the September 16, 2020 Environmental Services Committee meeting be approved as amended.
CARRIED

3. Adoption of Minutes

3.1. [20-521](#) Minutes of the July 15, 2020 Environmental Services Committee Meeting

MOVED by Director Taylor, **SECONDED** by Director Helps,
That the minutes of the Environmental Services Committee meeting of July 15, 2020 be adopted as circulated.
CARRIED

4. Chair's Remarks

There were no Chair's remarks.

5. Presentations/Delegations

- 5.1. Delegation - Sara Gose; Resident of Highlands: Solid Waste Advisory Board member: Re: Agenda Item 6.2.: Solid Waste Management Plan - Next Steps
- S. Gose spoke in favour of the CRD Board adopting Alternative 2 of the staff report for item 6.2.

6. Committee Business

- 6.1. [20-541](#) Hartland Traffic Study - Follow Up
- L. Hutcheson spoke to the Hartland Traffic Study follow-up report.
J. Frederick spoke to the Hartland Traffic Study presentation.
- Discussion ensued on the following:
- cost of study
 - contracted analysis work
 - commercial trucks and residential vehicle access
 - public consultation and subsequent plan amendments
 - future timeline for hauling aggregate
 - aggregate storage options
- MOVED by Director Helps, SECONDED by Director Screech,
The Environmental Services Committee recommends to the Capital Regional District Board:**
1. That the revised Stantec Opinion of Probable Cost for the Willis Point Road truck climbing lane options and the revised Bunt & Associates Hartland Landfill Alternate Access Transportation Impact Analysis be received for information; and
 2. That these materials be incorporated into future public consultation for the draft Solid Waste Management Plan.
- CARRIED**

- 6.2. [20-531](#) Solid Waste Management Plan - Next Steps
- R. Smith introduced the Solid Waste Management Plan Next Steps.
- Discussion ensued on the following:
- waste reduction targets
 - population growth impacts
 - alternatives for waste reduction
 - waste to energy project
 - additional consultation requirements and costs
- MOVED by Director Desjardins, SECONDED by Director Taylor,
That Alternative 2 of the staff report be recommended in place of Alternative 1:
The Environmental Services Committee recommends to the Capital Regional District Board:**
- That staff proceed with analysis to understand strategies, including waste flow management, waste stream bans, and costs and funding sources, to meet an enhanced target of 2/3 waste reduction from current levels (125 kg/capita/year) by**

2030, and review these strategies through the Solid Waste Advisory Committee before returning to the Environmental Services Committee for direction.

DEFEATED

OPPOSED: Blackwell, Hicks, Holman, McNeil-Smith, Screech, Windsor

MOVED by Director Screech, **SECONDED** by Director Holman,
The Environmental Services Committee recommends to the Capital Regional District Board:

1. That the waste reduction target remain at 250 kg/capita/year by 2030 but goal 1 be changed to read "To surpass the provincial per capita waste disposal target and achieve 125 kg/capita/year";
2. That the Solid Waste Advisory Committee's recommended additions be added to the draft Solid Waste Management Plan; and
3. That staff proceed with community and local government consultation on the draft Solid Waste Management Plan, including targeted stakeholder consultation with residents in the areas of Hartland Landfill, Prospect Lake, Willis Point and Highlands.

CARRIED

OPPOSED: Desjardins, Taylor

6.3. [20-520](#)

Summary Review of Waste-to-Energy Options

L. Hutcheson spoke to the Summary Review of Waste-to-Energy Options.

Discussion ensued on the following:

- Esquimalt Integrated Resource Management (IRM) study
- biosolid processing
- gasification systems
- emerging technologies
- solid waste and kitchen scrap combined processing
- land disposal

MOVED by Director Ranns, **SECONDED** by Director Hicks,
That the Esquimalt Integrated Resource Management study be placed in the report as an appendix of this item for review at the next Board meeting.

CARRIED

MOVED by Director Windsor, **SECONDED** by Director Hicks,
That the staff explore the Enerkem Biofuels Facility to augment the previous CRD completed work and as a secondary option, explore the Nova Scotia Chester demonstration municipal waste processing facility.

CARRIED

MOVED by Director Helps, **SECONDED** by Director Screech,
The Environmental Services Committee recommends to the Capital Regional District Board:

That this report be received for information.

CARRIED

6.4. [20-518](#)

Recycling Markets Update

R. Smith provided the Recycling Markets Update.

Discussion ensued on the following:

- recycling services expansion
- rural depots and curbside pickup funding models
- Recycling BC local service funding

**MOVED by Director Holman, SECONDED by Director Windsor,
The Environmental Services Committee recommends to the Capital Regional
District Board:**

That the Recycling Markets Update report be received for information.

CARRIED

6.5. [20-515](#)

Millstream Meadows Remediation Project

G. Harris spoke to the Millstream Meadows Remediation Project.

Discussion ensued on the following:

- affected residences
- groundwater contamination sources
- provision of bottled water
- disbursement of land sale proceeds

**MOVED by Director Screech, SECONDED by Director Helps,
The Environmental Services Committee recommends to the Capital Regional
District Board:**

**That the Millstream Meadows project budget increase from \$14.32M to \$14.70M
be incorporated into the 2021 capital plan, with the additional project budget of
\$0.38M funded from a combination of requisition under Bylaw No. 3519, Hartland
tipping fees, provincial funding and the reserve funding from Septage Disposal
service in 2021.**

CARRIED

6.6. [20-506](#)

Community Efficiency Financing Program Grant

G. Harris introduced the Community Efficiency Financing Program Grant.

Discussion ensued on transition of oil tanks and retrofit programs for residents
of the region.

**MOVED by Director Helps, SECONDED by Director Screech,
The Environmental Services Committee recommends to the Capital Regional
District Board:**

**That approval be given to submit an application to the Federation of Canadian
Municipalities Community Efficiency Financing grant program to study a regional
accessible energy retrofit financing program.**

CARRIED

7. Notice(s) of Motion

There were no Notice(s) of Motion.

8. New Business

There was no new business.

9. Motion to Close the Meeting

9.1. [20-552](#) Motion to Close the Meeting

MOVED by Director Taylor, **SECONDED** by Director Loveday,
That the meeting be closed for Appointments in accordance with Section 90(1)(a)
of the Community Charter.

CARRIED

MOVED by Director Taylor, **SECONDED** by Director Loveday,
That the meeting be closed for Contract Negotiations in accordance with Section
(90)(1)(k) of the Community Charter.

CARRIED

MOVED by Director Taylor, **SECONDED** by Director Loveday,
That such disclosures could reasonably be expected to harm the interests of the
Regional District.

CARRIED

The Environmental Services Committee went into closed session at 3:34 pm and
rose without report at 3:40 pm.

10. Adjournment

MOVED by Director Desjardins, **SECONDED** by Director Taylor,
That the September 16, 2020 Environmental Services Committee meeting be
adjourned at 3:40 pm.

CARRIED

Chair

Recorder

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 21, 2020**

SUBJECT **2019-2022 Climate Action & Environmental Stewardship Service Planning**

ISSUE SUMMARY

To provide the Environmental Services Committee with an overview of relevant initiatives undertaken by the Environmental Protection division in 2020 and planned for 2021 to deliver on approved Board Priorities and the Corporate Plan.

BACKGROUND

The Capital Regional District (CRD) Board completed its strategic planning early in 2019 and approved the CRD Board Strategic Priorities 2019-2022.

The four priorities are:

1. Community Wellbeing – Transportation & Housing
2. Climate Action & Environmental Stewardship
3. First Nations Reconciliation
4. Advocacy, Governance & Accountability

The priorities were confirmed at the annual check-in on May 13, 2020.

The 2019-2022 CRD Corporate Plan is aligned to the Board direction. It highlights the initiatives the CRD needs to deliver over the Board's four-year term to address the region's most important needs. The Corporate Plan identified 14 of initiatives under Climate Action & Adaptation, which fall under the Environmental Services Committee's mandate.

Appendix A, *Community Need Summary - Climate Action & Adaptation 2021*, is a summary of the planned activities for 2021. It contains details about core service levels, new initiatives proposed and performance metrics.

Appendix B, *Climate Action & Adaptation - Initiatives Progress Report*, provides insights into what has been delivered through the 12 delivery initiatives approved last year, for delivery in 2020.

The Service Planning process gathered information necessary to assemble a provisional budget for Committee and Board review. The purpose of this report is to explain how the Environmental Protection divisional program of work connects to the Board Priorities, Corporate Plan and provisional budget.

In addition to the above, the following motion was carried at the CRD Board meeting on May 13, 2020:

That the Capital Regional Board extend the previously approved two-year increase of \$95,000 for climate action initiatives, including a potential extension of the BC Hydro

matching funds for the Community Energy Manager and to provide staff support to seek grant funds and update the CRD Climate Action Strategy and refer the report back to staff for a further report on additional expenditures in the 2021 budget to accelerate the priority actions that staff have identified in the report including the Regional Energy Retrofit Program and the CRD Climate Action Strategy Update.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the CRD Board:

1. That Appendix A, Community Needs Summary – Climate Action & Adaptation, be approved as presented and advanced to the October 28, 2020 provisional budget review process;
2. That staff pursue the completion of an updated Climate Action Strategy;
3. That staff pursue completion of a detailed business case for a Regional Energy Retrofit Program; and
4. That staff report back in 2021 with 2022 budget implications (as proposed in the May 13, 2020 CRD Board staff report).

Alternative 2

1. That Appendix A, Community Needs Summary - Climate Action & Adaptation, be approved as presented and advanced to the October 28, 2020 provisional budget review process; and
2. That staff initiate a Climate Action Service bylaw amendment process to increase the maximum annual requisition by \$1,100,000 to allow the CRD to advance priority regional retrofit and electric vehicle charging infrastructure programs in the future.

IMPLICATIONS

Service Delivery Implications

The Community Need Summary provides an overview of all work that needs to be undertaken in order to meet our regulatory requirements, satisfy Board direction and meet the needs of the communities we serve.

Financial Implications

Initiatives identified in the Corporate Plan (including Board Priorities) cannot be undertaken without resourcing. The Board determines resourcing through its annual review and approval of financial plans. To support the Board's decision-making, staff, through the service planning process, provide recommendations on funding, timing and service levels. During this year's service planning process, staff have been mindful of the fiscal challenges facing the region in the months ahead.

Staff have identified one initiative that will have budget and/or staffing implications for 2021: the continued co-funding of the Community Energy Manager position to update the Climate Action Strategy and complete a building energy retrofit program business case (\$95,000/year).

The Climate Action service is currently at its maximum requisition limit. An increase in annual funding above \$95,000 would trigger a bylaw amendment process, requiring two-thirds agreement by local governments.

Staff are actively pursuing external grants and partnership opportunities to advance regional climate action goals and strategic priorities. This includes an application to the Federation of Municipalities Community Efficiency Financing Grant (approved by the Board October 14, 2020).

Environmental & Climate Implications

According to recent analysis, buildings account for 32% of emissions (18% residential buildings and 14% commercial/institutional buildings) across the capital region. On-road transportation accounts for approximately 46% of regional emissions.

From a residential building perspective, the CRD's Transition 2050 Retrofit Acceleration Strategy indicates that approximately 2,600 single family dwellings need to be retrofitted each year for our community to contribute to the achievement of an 80% to 100% GHG emissions reduction by 2050. This equates to approximately 10,000 tonnes of GHG emissions reduction annually from single family dwellings.

Staff will determine zero emissions vehicle adoption projections and GHG savings through a forthcoming EV Roadmap project.

Intergovernmental Implications

The CRD administers the Climate Action Inter-Municipal Working Group and Climate Action Inter-Municipal Task Force to support communication and collaboration between municipalities and electoral areas across the capital region, and provide information, feedback and support to programs and initiatives related to regional climate action. These groups would be utilized to refine the development of a Regional Energy Retrofit Program and a Zero Emission Vehicle Program and update the CRD Climate Action Strategy.

Regional Growth Strategy Implications

The Regional Growth Strategy includes a target to reduce GHG emissions by 61% by 2038, from a base year of 2007.

Financial Implications

A continuation of \$95,000/year requisition increase would allow for potential extension of the BC Hydro matching funds for the Community Energy Manager position, update the CRD Climate Action Strategy and complete a business case for a Regional Energy Retrofit Program.

To implement both a Regional Energy Retrofit Program and Zero Emission Vehicle Program, staff anticipate that annual costs would range between \$700,000 and \$1,100,000 per year. These

costs would be better determined as part of completion of a business case for implementing a Regional Building Energy Retrofit Program and further engagement with regional stakeholders, as part of the CRD's EV Roadmap project in 2021.

CONCLUSION

Staff have been progressing initiatives and actions identified in the Corporate Plan, including Board Priorities. The Board determines resourcing through its annual review and approval of financial plans. As per previous years, to support the Board's decision-making, staff are providing recommendations on funding, timing and service levels through the service and financial planning processes.

RECOMMENDATION

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

1. That Appendix A, Community Needs Summary - Climate Action & Adaptation, be approved as presented and advanced to the October 28, 2020 provisional budget review process;
2. That staff pursue the completion of an updated Climate Action Strategy;
3. That staff pursue completion of a detailed business case for a Regional Energy Retrofit Program; and
4. That staff report back in 2021 with 2022 budget implications (as proposed in the May 13, 2020 CRD Board staff report).

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: Community Need Summary - Climate Action

Appendix B: Climate Action & Adaptation - Initiatives Progress Report

Community Need

2021 Summary



Climate Action & Adaptation

Strategy

Target Outcome

We envision reduced greenhouse gas emissions, triple-bottom-line solutions and progress on adaptation

Strategic Context

Strategies

- [Corporate Climate Action Strategy](#)
- [Regional Climate Action Strategy](#)
- [Regional Growth Strategy](#)
- [Regional Water Supply Strategic Plan](#)
- [Special Task Force on First Nations Relations](#)
- [Statement of Reconciliation](#)
- [Solid Waste Management Plan](#)

Trends, risks and issues

- A Climate Emergency Declaration with a commitment to accelerate corporate and community efforts was made in February 2019; this will guide the updating of the CRD's Climate Action Strategies in 2021.
- There was a 1% reduction in the overall regional greenhouse gas emissions (GHG) reductions between 2007 and 2018, equivalent to 14% reduction per capita. Population growth and concurrent economic growth will continue to add emissions as the region transitions to a reduced dependence on fossil fuels.
- Climate is changing, which will result in various regional impacts to human health, water supply and demand, rainwater and coastal storm management, transportation networks, ecosystems and species, buildings and energy systems, tourism and recreation, and food and agriculture
- Climate action is a shared responsibility and the regional government has a limited role focused on research, education and outreach, facilitation, regional program delivery, and managing emissions and adaptation within its own service delivery.

Services

Core Services Levels	
Service	Levels
Community Climate Action To support and align regional climate action efforts with local governments related to strategies, policies and programs, and liaising and coordinating information and efforts with senior levels of government. Provide climate data and indicators, public education and community programming.	<ul style="list-style-type: none"> • Advance regional and climate mitigation and adaptation goals. • Lead regional-scale community initiatives and research activities. Pursue grants for regional programming. • Facilitate regional coordination, knowledge sharing, capacity building and advocacy.
Corporate Climate Action CRD services will embed climate action within their own service delivery with support from Climate Action program staff. The program will support the organization with its corporate climate goals/commitments, develop and monitor corporate policies related to climate action, undertake annual reporting, support corporate building and fleet emission reduction and climate preparedness initiatives.	<ul style="list-style-type: none"> • Development of corporate climate action policy related to corporate fleet, buildings and other capital projects • Develop and monitor corporate climate action plans and strategies • Complete annual reporting
Support Services The core services listed rely on the support of several corporate and support divisions to effectively operate on a daily basis. These services are reported on in the Accountability Community Need Summary.	<ul style="list-style-type: none"> • Services include: Human Resources & Corporate Safety, Corporate Communications, Asset Management, Financial Services, Information Technology & GIS, Information Services, Legislative Services, Facility Management, Fleet Management, Legal Services, Risk & Insurance and Real Estate Services.

Community Need



2021 Summary

Initiatives

Initiatives approved in prior years, which have been now been delivered or absorbed in Core Services.

- 5a-1 – Climate Emergency
- 5a-2 – Collaborate with local governments
- 5a-4 – Facilitate networks
- 5a-5 – Create partnerships
- 5b-1 – Reduce corporate emissions
- 5b-2 – Landfill Gas Usage
- 5c-1 – Regional Sea Level Rise

Business Model

Funding

Who contributes

- All municipalities & Electoral Areas participate in these services.
- Support Services: varies per service

Funding Sources

- Requisitions and grants

Reporting Structure

- [Environmental Services Committee](#)

Community Need Key Performance Indicator (KPI)			
Definition and Source	2019 Actual	2020 Forecast	2021 Target
<p>Metric 1: Community GHG Emissions – target to decrease community GHG emissions by 33% from 2007 levels by 2020 and 61% by 2038.</p> <p>Percentage reduction in GHG emissions generated by community activities, including stationary energy, transportation, waste, industrial process and product use, agriculture, forestry and other land use; data from Regional GHG Inventory Study (Stantec, 2020)</p>	<p>1%* overall 14%* per capita</p>	<p>1%* overall 14%* per capita</p>	<p>Annualized target not currently available</p>
<p>Metric 2: Corporate GHG Emissions – target to decrease corporate GHG emissions by 33% from 2007 levels by 2020.</p> <p>Percentage reduction in GHG emissions generated by CRD operations; data from CRD 2019 Climate Action Annual Report</p> <p style="text-align: right;">* Based on 2018 results</p>	<p>18%*</p>	<p>20%</p>	<p>Annualized target not currently available</p>

Discussion

Link to Target Outcome

The metrics included provide community and corporate GHG reduction results.

Discussion

- Metric 1:** The CRD completed a regional GHG inventory in 2020, which provides emissions for 2007, 2010, 2012 and 2018 following the GPC Basic+ Framework. In 2018, the CRD emitted approximately 1.7 million tonnes of CO₂e. The region is not on track to meet its 2020 Regional Growth Strategy GHG reduction target. While a decrease is expected, it is unknown at this time what the impacts of COVID-19 will be on regional emissions. Refined KPIs will be determined during the update of the CRD Climate Action Strategy in 2021.
- Metric 2:** In 2018, CRD operations produced 2,299 tonnes of CO₂e. This represents an 18% reduction compared to 2007 levels. The CRD has been carbon neutral since 2012, through a combination of corporate reductions and with carbon credits generated through previous methane destruction from the Hartland landfill gas capture system. While COVID-19 impacts are expected to slightly reduce corporate emission in 2020, new services such as the McLaughlin Point Wastewater Treatment Plant are expected to increase overall emissions in 2020. A new target will be determined during the update of the CRD Climate Action Strategy in 2021.

Community Need

Initiative Progress Report



Climate Action & Adaptation

Initiatives approved in 2020 Budget		
Ref	Initiative	Progress to date
5a-1	Climate Emergency	Progressing – declaration passed by Board February 29, 2019. Recruitment of a term position (co-funded with BC Hydro). Focus is now on community planning.
5a-2	Collaborate with local governments	Part of core services – ongoing through inter-municipal working groups and for specific projects.
5a-3	Model Bylaws	Progressing – developing model bylaw language for electric vehicle charging performance standard.
5a-4	Facilitate networks	Part of core services – Inter-Municipal Working Group, Inter-Municipal Task Force, Inter-regional work group (Transition 2050), Province-wide Community Energy Managers Network and associated local government sub-groups
5a-5	Create partnerships	Part of core services – same as per 5a-4, project-based work.
5b-1	Reduce corporate emissions	Progressing – developing a corporate energy management process for buildings, facilities and infrastructure, including tools to monitor and report on facility energy consumption. Continue to pursue Zero Emission Fleet Initiative.
5b-2	Landfill Gas Usage	Progressing – the CRD and Fortis BC are negotiating a supply contract to direct landfill gas into the established distribution system.
5b-4	GHGe Reduction through alternative fuel	On hold – Fortis BC could not provide RNG alternate fuel to offset corporate emissions in 2020 due to provincial demand.
5c-1	Regional Sea Level Rise	Completed – project completed and released to local government and First Nations.
5c-2	Regional Climate Action Strategy	Progressing – update of the Plan to be started in Q4 2020

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 21, 2020**

SUBJECT **2019-2022 Landfill & Recycling Service Planning**

ISSUE SUMMARY

To provide the Environmental Services Committee with an overview of relevant initiatives undertaken by the Environmental Resource Management, Environmental Protection and Engineering Services divisions in 2020 and planned for 2021 to deliver on approved Board Priorities and Corporate Plan.

BACKGROUND

The Capital Regional District (CRD) Board completed its strategic planning early in 2019 and approved the CRD Board Strategic Priorities 2019-2022.

The four priorities are:

1. Community Wellbeing – Transportation & Housing
2. Climate Action & Environmental Stewardship
3. First Nations Reconciliation
4. Advocacy, Governance & Accountability

The priorities were confirmed at the annual check-in on May 13, 2020.

The 2019-2022 CRD Corporate Plan is aligned to the Board direction. It highlights the initiatives the CRD needs to deliver over the Board's four-year term to address the region's most important needs. The Corporate Plan identified six initiatives under Landfill & Recycling, which fall under the Environmental Services Committee's mandate.

Appendix A *Community Need Summary – Landfill & Recycling 2021* is a summary of the planned activities for 2021. It contains details about core service levels, new initiatives proposed and performance metrics.

Appendix B *Landfill & Recycling – Initiatives Progress Report* provides insight into what has been delivered through the nine delivery initiatives approved last year, for delivery in 2020.

The Service Planning process gathered information necessary to assemble a provisional budget for Committee and Board review. The purpose of this report is to explain how the Environmental Resource Management, Environmental Protection and Engineering Services divisional program of work connects to the Board Priorities, Corporate Plan and provisional budget.

ALTERNATIVES

Alternative 1

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

That Appendix A, *Community Need Summary – Landfill & Recycling*, be approved as presented and advanced to the October 28, 2020 provisional budget review process.

Alternative 2

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

That Appendix A, Community Need Summary – Landfill & Recycling, be approved as amended and advanced to the October 28, 2020 provisional budget review process.

IMPLICATIONS

Financial Implications

Initiatives identified in the Corporate Plan (including Board Priorities) cannot be undertaken without resourcing. The Board determines resourcing through its annual review and approval of financial plans. To support the Board's decision-making, staff, through the service planning process, provide recommendations on funding, timing and service levels.

During this years' service planning process, staff have been mindful of the fiscal challenges facing the region in the months ahead. To that end, any budget increase or other impacts have been mitigated as much as possible.

Service Delivery Implications

The Community Need Summary provides an overview of all work that needs to be undertaken in order to meet our regulatory requirements, satisfy Board direction and meet the needs of the communities we serve.

Alignment with Board & Corporate Priorities

Staff have identified four initiatives that will have budget implications for 2021 (Table 1).

Table 1: Community Needs Summary – Landfill & Recycling, Delivery Initiatives

#	Initiative	Description	Year(s)	FTE impacts in 2021	Budget Impacts in 2021
9a-1.1	Resource Recovery, Senior Project Coordinator	Facilitation of resource recovery initiatives at Hartland	2021 to 2023	1 Term extension	Included in Provisional Budget
9b-0.1	Hartland Waste Technician	Monitoring and enforcement of WorkSafeBC material handling protocols	2021	0.5 ongoing	Included in Provisional Budget
9b-0.2	Hartland Landfill Attendant	Enhance staffing complement to respond to increase in material volumes dropped-off at Hartland depot	2021 to 2025	2 x 0.5 ongoing	Included in Provisional Budget
9b-0.3	Food Waste Attendant	Consolidation and trucking of food waste materials brought to Hartland depot	2021 to 2023	1 Term	Included in Provisional Budget

Delivery Initiatives

In April 2020, the Capital Regional District (CRD) announced approval in principle of an agreement where FortisBC will purchase renewable natural gas (RNG) generated from Hartland Landfill for beneficial use in its natural gas distribution system. Once finalized, the agreement would allow for FortisBC to purchase and distribute Hartland-generated RNG that would result in greenhouse gas emission reductions of approximately 264,000 tonnes of CO₂e over the 25-year project life – equivalent to removing 2,240 cars from the road for 25 years.

- 9a.1.1 – Resource Recovery Senior Project Coordinator: extend a two-year term position for another three years; this position facilitates key Hartland resource recovery initiatives as they are developed (e.g., renewable natural gas and potentially organics processing).

The Hartland public drop-off depot receives garbage, recyclables and household hazardous materials. Today, over 80 items from 28 product categories are accepted for recycling. Material volumes dropped off at the public depot have doubled over the last decade. Over the same time period, the staffing complement has only increased by 50 per cent (ongoing positions) and auxiliary spend has increased by 20 per cent.

In order to maintain existing service levels and ensure the safe continued operation of the depot, the following initiatives have been put forward to address some of the pressures experienced. All four initiatives seek to increase the staffing complement to support key aspects of the Hartland services operation:

- 9b-0.1 – Hartland Waste Technician: increase an existing part-time position to full-time; this position monitors and enforces WorkSafeBC material handling protocols to ensure workers' safety with respect to renovation waste.
- 9b-0.2 – Hartland Landfill Attendant: creation of two part-time ongoing positions; the positions will address the pressure resulting from the increase in solid waste volume and ensure we can maintain Hartland's six-day-a-week operations and reduce the overall spend on auxiliary resources.
- 9b-0.3 – Food Waste Attendant: create a two-year term position; the position will be responsible for managing the consolidation and trucking of food waste materials brought to the Hartland food scraps transfer station by commercial haulier. This role used to be performed by the Landfill Attendants but those resources are now fully tasked.

The cost of the four initiatives will be recovered through the Hartland tipping fees and renewable natural gas revenue.

CONCLUSION

Staff have been progressing initiatives and actions identified in the Corporate Plan, including Board Priorities. The Board determines resourcing through its annual review and approval of financial plans. As per previous years, to support the Board's decision-making, staff are providing recommendations on funding, timing and service levels through the service and financial planning processes.

RECOMMENDATION

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

That Appendix A, Community Need Summary – Landfill & Recycling, be approved as presented and advanced to the October 28, 2020 provisional budget review process.

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: 2021 Community Need Summary – Landfill & Recycling

Appendix B: Landfill & Recycling – Initiatives Progress Report

Community Need



2021 Summary

Landfill & Recycling

Strategy

Target Outcome

We envision minimizing waste disposal and maximizing waste diversion

Strategic Context

Strategies

- [Solid Waste Management Plan](#) – guides how the region will manage solid waste, including recyclables, compostable material and garbage from homes, businesses and institutions, as well as construction and demolition sites
- [Hartland Environmental Programs](#) – the Hartland Landfill Environmental Programs provide a comprehensive program to monitor and evaluate the effects of landfilling operations on the environment.

Trends, risks and issues

- Hartland public drop-off area is experiencing increased customer volumes of homeowners dropping off garbage and recycling. Increased WorkSafe requirements when receiving homeowner renovation and demolition materials at the landfill.
- Ongoing consideration of solid waste resource recovery projects to maximize the environmental/economic benefits associated with waste diversion and disposal.
- A new Solid Waste Management Plan (SWMP) is currently being drafted and should be completed and approved by the Province by the end of 2021.
- The ongoing efforts to engage with local communities regarding the application of biosolids at Hartland Landfill is likely to continue for the next five years during development of the long-term biosolids management plan.

Services

Core Services Levels	
Service	Levels
Diversion Services Responsible for solid waste management planning in the Capital Region, including policy and program development to increase waste reduction or recycling.	<ul style="list-style-type: none"> Planning & policy development activities include the SWMP and the administration of 49 contracts and agreements and Compost Facilities Bylaw Delivery of the recycling programs, which include curbside collection from 123,000 households and packaging, printed paper and glass collection from six electoral area depots. Today, Hartland recycling facility collects over 80 items from 28 product categories
Landfilling Services Ensure regional landfill capacity with the operation of the CRD's Hartland Landfill. Ongoing capital and operating investments are made at Hartland to ensure compliance with BC Ministry of Environment landfill regulations, including leachate and landfill gas management infrastructure.	<ul style="list-style-type: none"> Administration of five contracts and agreements Residential service at bin area (9am-6pm weekdays, 9am-2pm Saturdays) Commercial service at active face (7am-5pm weekdays, 9am-2pm Saturdays)
Resource Recovery Services Installation and operation of landfill collection and utilization infrastructure at Hartland Landfill to ensure landfill gas (methane) destruction and compliance with provincial environmental regulations. Seek to maximize the environmental and financial benefits of Hartland Landfill gas utilization.	<ul style="list-style-type: none"> Electricity generation using landfill gas generates enough electricity to power 1,600 homes
Hartland Environmental Programs Monitoring, assessment and technical reporting to support regulatory compliance and contaminant reduction at Hartland Landfill	<ul style="list-style-type: none"> Regulatory compliance monitoring of surface water, groundwater, landfill gas and leachate

Community Need



2021 Summary

Engineering Services Provide engineering feasibility studies, detailed design, tendering, construction management and commissioning services that support a number of community needs (Landfill & Recycling, Parks & Environmental Resource Management, Health Facilities, Climate Action, Recreation and Electoral Areas).	<ul style="list-style-type: none"> • Lead or support the planning, design and project management of over a dozen construction projects averaging \$3.5 to \$5 million annually • Projects include ongoing contract management of the solid waste filling and aggregate production contracts, as well as smaller projects related to landfill gas collection, leachate management, environmental controls and emergency response preparation • Engineering Services also manages an additional 15-20 projects each year for other CRD facilities • Lead engineering and procurement on the RNG and Kitchen Scraps and Organics Processing Capital Projects
Support Services The core services listed rely on the support of several corporate and support divisions to effectively operate on a daily basis. These services are reported on in the Accountability Community Need Summary.	<ul style="list-style-type: none"> • Services include Human Resources & Corporate Safety, Corporate Communications, Asset Management, Financial Services, Information Technology & GIS, Information Services, Legislative Services, Facility Management, Fleet Management, Legal Services, Risk & Insurance and Real Estate Services.

Initiatives					
Ref	Initiative	Description	Year(s)	Status	2021 impacts
9a-1.1	Senior Project Coordinator, Resource Recovery	Position to facilitate Hartland resource recovery projects (including RNG and potentially organics processing)	2021 - 2023	NEW Not started	1.0 Term
9b-0.1	Hartland Waste Technician	Increase resourcing from half to 1FTE to monitor and enforce WorkSafe BC material handling protocols	2021	NEW Not started	1.0 Ongoing
9b-0.2	Hartland Landfill Attendant	Conversion of two part-time auxiliary positions to ongoing to meet increasing volumes of waste at public drop off area	2021	NEW Not started	2 x 0.5 Converted

Community Need



2021 Summary

9b-0.3	Food Waste Attendance	Term position to facilitates the consolidation and trucking of materials brought to the Hartland kitchen scraps transfer station by commercial waste haulers	2021 - 2022	NEW Not started	1.0 Term
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Initiative approved in prior years which have now been delivered or absorbed in Core Services:

- 9a-1 – Resource Recovery and Waste Reduction
- 9a-2 – Infoline Support *
- 9b-1 – Public Awareness of Extended Producer Responsibility
- 9b-2 – SWMP Update
- 9b-3 – Controlled Waste Permits *
- 9b-4 – Electronic Stewardship Attendant *
- 9c-1 – Changing Recycling Markets
- 9d-1 – Hartland Landfill Longevity
- 9e-1 – Organic Waste Processing Procurement

*New – Initiatives not in the 2019-2022 Corporate Plan

Business Model

Funding
<p>Who contributes</p> <ul style="list-style-type: none"> • Every jurisdiction in the region – not requisition/tax based – user fee-for-service based • Support Services: varies per service <p>Funding Sources</p> <ul style="list-style-type: none"> • Landfill tipping fees and recycling program revenues

Reporting Structure
<ul style="list-style-type: none"> • Environmental Services Committee • Project based reporting for Environmental Engineering: Parks Committee, Electoral Areas Committee, Recreations

Community Need Key Performance Indicator (KPI)			
Definition and Source	2019 Actual	2020 Forecast	2021 Target
Metric 1: Solid waste disposal target rate of 350 kg/person per year by 2020 Annual kilos of solid waste per capita; calculation based on provincial Municipal Solid Waste methodology	382	360	350
Metric 2: Capture 75% of landfill gas at Hartland landfill Percentage of landfill gas captured at Hartland Landfill; data from CRD staff measurement and calculation	66%	65%	70%
Metric 3: Waste compaction rate at Hartland Landfill of 850 kg/m³ Kilos per cubic metre; data from CRD staff measurement	1,160	950	950
Discussion			
<p>Link to Target Outcome</p> <p>The landfill and recycling metrics focus on minimizing waste disposal and maximizing waste diversion (Metric 1) while ensuring they are done efficiently (Metric 3) and environmentally sustainably (Metric 2).</p> <p>Discussion</p> <ul style="list-style-type: none"> • Metric 1: Currently, the capital region's waste disposal rate is at 382 kg/person per year, which is better than the provincial average of 506 kg/person (2017) and well on the way to the target set by the province of 350kg/capita. • Metric 2: There is a target set by the province to capture 75% of landfill gas. • Metric 3: Effective waste compaction results in efficient use of landfill airspace and the prolonged use of existing landfill capacity. 			

Community Need



Initiative Progress Report

Landfill & Recycling

Initiatives approved in 2020 Budget		
Ref	Initiative	Progress to date
5b-2	Landfill Gas Usage	Ongoing - the collection of landfill gas is part of the core service Progressing - agreement in principle for FortisBC to purchase renewable natural gas (RNG) generated from Hartland Landfill for beneficial use in the FortisBC natural gas distribution system
9a-1	Resource Recovery and Waste Reduction	Ongoing - new opportunities are evaluated as waste diversion programs and resource recovery technologies mature.
9a-2	Infoline Support *	Part of core service - recruitment completed and now part of day-to-day operations, topped up with auxiliary hours.
9b-1	Public Awareness of Extended Producer Responsibility	Ongoing - provincial programs and associated awareness opportunities continue to evolve.
9b-2	SWMP Update	Ongoing - Stage 1 consultation on draft plan complete
9b-3	Controlled Waste Permits *	Part of core service - recruitment completed and now part of day-to-day operations.
9b-4	Electronic Stewardship Attendant *	Completed - attendant hired
9c-1	Changing Recycling Markets	Ongoing - markets continue to mature and evolve.
9d-1	Hartland Landfill Longevity	Ongoing - part of Solid Waste Management Plan consultation.
9e-1	Organic Waste Processing Procurement	Ongoing - implementation of procurement strategy starting spring 2021.

* New - Initiatives not in the 2019-2022 Corporate Plan

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 21, 2020**

SUBJECT **Enerkem Facility Update**

ISSUE SUMMARY

To provide an overview of the Enerkem gasification facility.

BACKGROUND

At its September 16, 2020 meeting, the Environmental Services Committee requested that staff report back on the Enerkem technology for processing municipal solid waste. Staff have met virtually with David Zheng, Commercial Development Coordinator at Enerkem. This report provides a summary of the Enerkem Technology from publicly available information and information provided by David Zheng.

Enerkem is a company that aims to produce renewable methanol and ethanol from non-recyclable, non-compostable waste through a gasification process. Feedstock can include solid waste, plastic waste or biomass residues. The waste recovery process uses “advanced gasification” to react the feedstock material at high temperatures to generate pure syngas, methanol and ethanol. These products can then be further processed to generate renewable chemicals or transportation fuels. In addition, at least three levels of solids are produced, a small percentage of which are considered hazardous. A processing and transfer facility, along with facilities to process waste that can’t be gasified, are also necessary to fully process the feedstock materials.

The first Enerkem facility, the Enerkem Alberta Biofuels Commercial Demonstration Facility (EAB), was constructed as part of the Edmonton Waste-to-Biofuels Initiative between 2013 and 2014. The initiative is a partnership between the City of Edmonton, the Government of Alberta, through Alberta Innovates–Energy and Environment Solutions, and Enerkem. According to information on the City of Edmonton website (Appendix A), the project includes three facilities:

- Integrated Processing and Transfer Facility, owned and operated by the City of Edmonton with an approximate capital cost of \$40 million,
- Waste to biofuels and chemicals facility owned and operated by Enerkem Alberta Biofuels (EAB) with an approximate capital cost of \$100 million,
- Advanced Energy Research Facility owned and operated by the City of Edmonton with a capital cost of \$11 million.

Also located on the site are a recycling centre and a composting centre.

The Enerkem facility has a contract with the City of Edmonton to process up to 100,000 dry tonnes of municipal solid waste per year for 25 years. The EAB commercial demonstration facility is designed to produce up to 38 million litres per year of biofuels. The facility started producing ethanol in 2017 and is currently focused on maintaining continuous operations using a mixed waste feedstock, before maximizing the volume of material being processed. A recent partnership

between Enerkem and Suncor has brought in the Suncor management team to support the operation of the EAB commercial demonstration facility.

A second Enerkem facility is currently under development in Varennes, Quebec, incorporating the learnings from the EAB commercial demonstration facility into the design of this second facility. There are also several other facilities in the feasibility or development phases globally. According to Enerkem, the optimal size of the technology is a two-train gasification plant of 350,000 tonnes per year of post recycling municipal and/or industrial, commercial and institutional waste (220,000 dry tonnes/year). In 2019, Hartland accepted approximately 145,000 tonnes of municipal solid waste. To obtain further information about the Enerkem Technology, process effectiveness and costs, the Capital Regional District would need to enter into a non-disclosure agreement. This information could be reported back to the committee in a closed report.

CONCLUSION

The Enerkem technology uses gasification to process waste into syngas, methanol and ethanol. Enerkem currently has a commercial demonstration facility in Edmonton, Alberta, and other plants in development, including one in Quebec. The optimal plant size to achieve economies of scale is approximately 350,000 tonnes of municipal solid waste per year. To obtain further information about the Enerkem Technology to better understand their process effectiveness and costs, the Capital Regional District would need to enter into a non-disclosure agreement.

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

ATTACHMENT

Appendix A: City of Edmonton Factsheet – Waste-to-Biofuels Initiative

Factsheet - Edmonton Waste-to-Biofuels Initiative

- The City of Edmonton, the Government of Alberta, through Alberta Innovates - Energy and Environment Solutions, and Enerkem, under Enerkem Alberta Biofuels (EAB), have partnered to create this sustainable initiative which will convert waste that can't be recycled or composted into valuable products such as clean fuels and biochemicals.
- The Waste-to-Biofuels and Chemicals Facility will produce 38 million litres of clean fuels and biochemicals when operating at full capacity. While initially the biochemical methanol will be produced, the biorefinery operation will later shift to produce ethanol as a valuable biofuel. The annual production capacity of ethanol is enough to fill the tanks of 400,000 cars using a 5% ethanol blend. Footprint of the Waste-to-Biofuels and Chemicals Facility: 2.8 hectares (7 acres).
- Feedstock for conversion into biofuels is prepared from residuals from the City of Edmonton's composting, recycling and processing facilities – waste that would otherwise be landfilled. Annual amount of this refuse derived fuel (RDF) is 100,000 tonnes.

The initiative is composed of three facilities located at the Edmonton Waste Management Centre:

1. Waste-to-Biofuels and Chemicals Facility

(Inaugurated on June 4th, 2014) – Owned and operated by Enerkem Alberta Biofuels, will produce 38 million litres of clean fuels and biochemicals annually when operating at full capacity.

2. Advanced Energy Research Facility

(Opened in 2011) – Owned and operated by the City of Edmonton, this facility is attracting world-class energy research.

3. Integrated Processing and Transfer Facility

(Opened in 2010) – Owned and operated by the City of Edmonton, this facility sorts organic waste for composting and prepares RDF as a feedstock for the Waste-to-Biofuels and Chemicals Facility.



Partner Contributions

Waste-to-Biofuels and Chemicals Facility

Owner/Operator: Enerkem Alberta Biofuels
Capital Cost: approx. \$100 million
(construction cost)

Integrated Processing and Transfer Facility

Owner/Operator: City of Edmonton
Capital Cost: \$40 million
(RDF feedstock preparation)

Advanced Energy Research Facility

Owner/Operator: City of Edmonton
Capital Cost: \$11 million

Alberta Innovates - Energy and Environment Solutions (AI-EES) contributed \$29 million to the overall Waste-to-Biofuels initiative. AI-EES staff served on the steering committee that directed and guided the execution of this project, and provided technical input and advice.

Factsheet - Edmonton Waste-to-Biofuels Initiative

Benefits

Environment/Energy

- Reduces Alberta's greenhouse gas emissions by approximately 60% when compared to fossil fuel production and landfilling activities;
- Provides a cost-effective alternative to landfilling;
- Increases energy diversification and greens Alberta's energy basket;
- Contributes to the goals of the City of Edmonton's environmental plan – The Way we Green;
- Helps meet federal and provincial 5% renewable fuels standards.

Economy

- Creates high quality green jobs;
- Implements a new local biorefinery industry – the production of advanced biofuels and chemicals;
- Increases domestic production of biofuels and reduces biofuels imports;
- Commercial facility alone expected to generate \$65M in net annual economic benefits in the local area.

Innovation

- Elevates Alberta's profile as a leader in clean technology;
- The Advanced Energy Research Facility:
 - » enables the development of technologies capable of converting a wide variety of residual waste streams into biofuels and green chemicals;
 - » creates a network of top researchers from Alberta, Canada and around the world - particularly those specialized in thermo-catalysis; and
 - » contributes to the advancement of a new line of advanced chemicals and hydrocarbon fuels suitable for today's carbon reality.

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 21, 2020**

SUBJECT Provincial Plastics Action Plan Update and Next Steps

ISSUE SUMMARY

To update the committee with regard to the BC Ministry of Environment and Climate Change Strategy (ENV) Plastics Action Plan.

BACKGROUND

In July 2019, ENV released its Plastics Action Plan, which proposed amendments to the BC Recycling Regulation (BCRR) to address plastic waste management in BC. The Plastics Action Plan outlined the following four main approaches to the issue:

- **Bans on single-use plastic packaging:** Determining which types of plastic packaging to phase out altogether, as well as any necessary exemptions, such as for health, safety and accessibility to keep products available for the people who need them.
- **Dramatically reduce single-use plastic in landfills and waterways:** Requiring producers to take responsibility for a wider range of plastic products, ensuring more single-use items, like sandwich bags, straws and cutlery, get recycled.
- **Plastic bottle and beverage container returns:** Expanding the deposit-refund system to cover all beverage containers – including milk and milk-substitutes – with a ten cent refundable deposit, keeping millions more containers out of landfills and waterways.
- **Reducing plastics overall:** Supporting effective ways to prevent plastic waste and making sure recycled plastic is reused effectively.

ENV sought feedback on its Plastics Action Plan between July and September 2019 and, in November 2019, it published a report of the results of that consultation process, a copy of which is provided for information in Appendix A.

Based on the results of the consultation, the Province passed an Order in Council on June 29, 2020 to amend the BCRR to take new steps to better manage plastics in BC. Information regarding this amendment was provided in the September 16, 2020 information report to the Environmental Services Committee. Highlights of the changes include:

- increasing the minimum deposit on refundable beverage containers from five cents to ten cents, effective June 29, 2020;
- requiring that all milk and milk substitute beverage containers become subject to a deposit/refund system, effective February 1, 2022; and
- expanding the range of packaging and paper products that are subject to the BCRR to include packaging-like products and single-use products, effective January 1, 2023.

A copy of the Order in Council is provided for information in Appendix B.

In further response to the Plastics Action Plan feedback, the ENV also released an Intentions Paper on September 12, 2020 to solicit feedback on further expanding the BCRR. Feedback is being sought on expanding the BCRR to include:

- mattresses
- additional household hazardous waste products, such as:
 - pool chemicals
 - fire extinguishers
 - flares
 - medical syringes
 - bear spray
 - fertilizer
 - additional paints, sealers and adhesives
 - veterinary pet medicines
- electric car batteries
- solar power equipment
- non-residential industrial, commercial and institutional packaging and paper products

ENV is accepting feedback on the Intentions Paper (Appendix C) up to November 20, 2020. Staff will be providing feedback in support of moving forward with expanding the BCRR to include all of the proposed materials.

The expansion of the BCRR to include industrial, commercial and institutional packaging and paper products will, in combination with the inclusion of packaging-like products and single-use products announced through the Order in Council on June 29, provide mandated recycling alternatives for single-use polystyrene cups and containers from both residential and non-residential sources. This will help to significantly address the issues associated with a variety of single-use items, including polystyrene cups and containers and diminish the need for a model bylaw to ban their use, as was considered Environmental Services Committee at its October 23, 2019 meeting.

On October 7, 2020, the federal government announced a ban on single-use plastic items where they are found in the environment, are often not recycled, and have readily available alternatives. Based on those criteria, bans are proposed for plastic checkout bags, straws, stir sticks, six-pack rings, cutlery and foodware made from hard-to-recycle plastics. The federal government wants to hear from Canadians and stakeholders on this approach and comments will be accepted until December 9, 2020. CRD staff will review and provide feedback on the proposed bans. Regulations will be finalized by the end of 2021.

CONCLUSION

In July 2019, the BC Ministry of Environment and Climate Change Strategy (ENV) released its Plastics Action Plan to help address plastics waste management in BC and, based on feedback received, the province announced the expansion of the BCRR to include packaging-like products and single-use products. More recently, ENV has released an Intentions Paper soliciting feedback on further expanding the regulation to include an array of additional products, including all non-residential packaging and paper products. Staff will be providing feedback in support of the proposed expansion. The expansion of the regulation announced on June 29, 2020, combined with the proposed expansion outlined in the Intentions Paper, significantly addresses the issues associated with a variety of single-use items in BC.

RECOMMENDATION

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

That the Plastics Action Plan and Next Steps 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: Plastics Action Plan, Policy Consultation Paper – BC Ministry of Environment and Climate Change Strategy – July 2019
- Appendix B: Province of British Columbia Order in Council – June 29, 2020
- Appendix C: Recycling Regulation Policy Intentions Paper – BC Ministry of Environment and Climate Change Strategy – September 12, 2020



Plastics Action Plan

POLICY CONSULTATION PAPER



The ministry is seeking feedback on new policy opportunities and proposed amendments to the Recycling Regulation of the Environmental Management Act by September 30, 2019 to address plastic waste.

Instructions on how to provide comments are provided on the last page of this consultation paper.



Introduction

British Columbians want action on plastic waste. Too often plastic packaging and single use items end up as litter in our communities, waste in landfills or debris in lakes, rivers and oceans. Plastic pollution hurts wildlife and harms ecosystems, and it is increasing year after year. The Ministry of Environment and Climate Change Strategy recognizes that new steps are needed and is proposing action in four connected areas.

1 BANS ON SINGLE-USE PACKAGING



Determining which types of plastic packaging to phase out altogether, as well as any necessary exemptions, such as those for health, safety and accessibility to keep products available for the people that need them.

2 DRAMATICALLY REDUCE SINGLE-USE PLASTIC IN LANDFILLS & WATERWAYS



Requiring producers to take responsibility for more plastic products, ensuring more single-use items like sandwich bags, straws and cutlery get recycled.

3 PLASTIC BOTTLE AND BEVERAGE CONTAINER RETURNS



Expanding the deposit-refund system to cover all beverage containers — including milk and milk-substitutes — with a 10-cent refundable deposit, keeping millions more containers out of landfills and waterways.

4 REDUCING PLASTICS OVERALL



Supporting effective ways to prevent plastic waste in the first place and ensuring recycled plastic is re-used effectively.

Through the release of this consultation paper, B.C. is engaging on the development of new policy options and seeking feedback on proposed amendments to improve existing programs.

B.C. has been actively involved in the development of a Canada-wide Strategy and Action Plan on Zero Plastic Waste ([Strategy](#) and [Action Plan](#)), and will continue to support and align with longer-term proposed federal initiatives to ban harmful single-use plastics.

Dramatically Reducing Plastic Use

DEVELOPING A PATH FORWARD WITH NEW POLICY OPTIONS

The Ministry of Environment and Climate Change Strategy (the ministry) recognizes that waste prevention is the highest priority. Plastic bans have been adopted in different forms in different jurisdictions to address the growing problem of plastic pollution — for British Columbia, it's critical that we solicit public input on what forms potential bans on plastic packaging could take. For instance, there may be items of interest to British Columbians which are not covered by the proposed federal ban and that are within B.C.'s jurisdictional authority, or that are a priority due to B.C.'s coastal and remote geography.

There are also actions being taken by local governments in B.C. that could be supported by a provincial harmonized approach. B.C. proposes to collaborate with all levels of government both to avoid duplicating regulatory initiatives, and to progress actions that would have an immediate impact and protect B.C.'s environment. In addition, B.C. proposes to work with the federal government to develop national recycled content standards to ensure that in the longer term any new plastics and packaging produced contain recycled plastic.

NEW POLICY OPTIONS

- » Consider provincial bans for plastic packaging under the *Environmental Management Act*.
- » Support the development of recycled content performance standards being led by the federal government.



More than 40% of plastic is used only once. We can do our part to change this, and we want your thoughts and ideas on how to do it best.

Expanding Recycling and Recovery

AMENDMENTS TO THE RECYCLING REGULATION

By expanding recycling and recovery of plastics that are in use, we can significantly reduce the waste that accumulates in landfills and waterways. By doing this as efficiently as possible, we can improve the supply of clean recycled plastics for re-manufacturing. When this strategy is combined with higher recycled content standards for products, it can reduce the need for new plastics to be created.

Both expanding producer responsibility and expanding B.C.'s beverage container return system can be achieved through changes in existing regulations. B.C. currently regulates Extended Producer Responsibility (EPR) for many products, requiring producers (manufacturers, distributors and retailers) of designated products to take responsibility for the life cycle of their products, including collection and recycling. This shifts the responsibility from taxpayers, local government or Indigenous communities to the producers and consumers of a product.

By requiring producers to be accountable, EPR programs reduce waste by incentivizing producers to design products that are recyclable and durable in order that they can be recovered for future use instead of going to disposal. This further supports a circular economy approach to waste management where resources are continually conserved and reused as raw materials.

B.C. proposes to expand existing EPR by including single-use items and packaging-like products under the [Recycling Regulation](#)¹ to ensure that these items are being managed responsibly through EPR programs prior to any potential federal bans coming into force (estimated for 2021 and beyond).

B.C. is able to move quickly in this regard as the North American leader with more than twenty-two EPR programs already in place. Expanding EPR to cover these items enables B.C. to capture any items that are beyond the scope or exempted from any federal ban.

¹ <https://bit.ly/2Oaqi5n>

The proposed amendments also include an update to the beverage container deposit system that would reduce the prevalence of littered single-use bottles in the environment and landfills by an estimated 50 million bottles per year.

As these actions would result in an increase in plastic items to be recycled, the Province would work with the federal government to develop national recycled content standards — ensuring that new single-use plastics and packaging-like products are produced using recycled plastic content.

PROPOSED AMENDMENTS TO THE RECYCLING REGULATION

- » Add 'packaging-like products' and 'single-use items' as obligated products to the Recycling Regulation to be recovered and recycled by producers.
- » Add all single-use beverage containers to the deposit-refund system.
- » Amend the refundable deposit amount to 10 cents for all beverage containers.
- » Allow electronic refund options for beverage containers in addition to cash.

Too often plastic packaging and single use items end up as litter in our communities, waste in landfills or debris in lakes, rivers and oceans. Plastic pollution hurts wildlife and harms ecosystems, and it is increasing year after year.



We Want Your Input

HERE ARE SOME SOLUTIONS WE ARE CONSIDERING

1 BANS ON SINGLE-USE PACKAGING



Determining which types of plastic packaging to phase out altogether, as well as any necessary exemptions, such as those for health, safety and accessibility to keep products available for the people that need them.

The *Environmental Management Act*² (EMA) governs the management of waste in British Columbia, to protect public health and the environment. The EMA allows for the banning of packaging by prohibiting, regulating or restricting the use or sale of packaging materials. British Columbia is considering bans as a policy option for plastic packaging and would like input on viable approaches.

Bans can be an effective policy tool to prevent plastic waste from occurring in the first place and help reduce the use of plastics that are commonly found in the environment and littered in our communities. Bans can also be used to divert recyclable plastics away from landfills to recycling facilities. They are also used to stop the use of plastics that are not recyclable or are considered difficult to recycle and manage.

Plastic packaging includes items such as plastic films (e.g., plastic bags, pouches or wraps) and containers (e.g., bottles, cups, tubs, and other hard plastics) that are used to package food and beverage products, consumer goods, cosmetics and personal care items.

Recent studies have shown that plastic packaging accounts for approximately 47% of all plastic waste discarded, and the majority of single-use plastics are used as packaging³.

² <https://bit.ly/1FETB2d>

³ <https://bit.ly/320HPTJ>

EXAMPLES OF BANS

- » The European Union will ban single-use plastic products (plastic cotton swabs, cutlery, plates, straws, drink stirrers and sticks for balloons), as well as cups, food and beverage containers made of polystyrene foam and all products made from oxo-degradable plastics by 2021.
- » Many US states such as Maine, Vermont, California, and New York have enacted bans on plastic packaging including plastic bags and polystyrene foam.

B.C. Local Governments:

- » The City of Vancouver single-use item reduction strategy includes bans for plastic straws, foam cups and foam take-out containers beginning in 2020.
- » More than 23 communities in B.C. have been actively working on developing bans for single-use plastic items such as bags and straws.

Plastic packaging bans are typically implemented through the following approaches:

- » **Bans to regulate the sale or use:** regulate the supply of certain plastic packaging into the marketplace or prevent or restrict the use of certain plastic packaging — e.g., a ban on the use of polystyrene foam in packaging and takeout containers and cups, or a ban on an identified type of packaging, such as a ban on plastic bags to contain or transport goods at the point of sale.
- » **Disposal bans:** prohibit the disposal of plastics that instead can be readily recycled. These bans are typically implemented at the disposal site located within the jurisdiction applying the ban — e.g., an energy-from-waste facility or landfill — and at transfer facilities where wastes are aggregated for transport to a final disposal facility. Bans on the disposal of materials, such as plastics, are implemented after systems are in place to collect and recycle the banned materials (such as those created under EPR programs).

Globally there are a number of new regulations banning plastics. Bans on the sale of plastic bags have been introduced in 65 countries, as well as many regional and local jurisdictions. The federal government recently announced their intention to ban harmful single-use plastics as early as 2021 to reduce pollution from single-use plastic products and packaging, such as shopping bags, straws, cutlery, plates, and stir sticks.

British Columbia communities have also taken significant steps to implement strategies, including bans, levies or fees on plastic bags. Beyond plastic bags, many B.C. communities are pursuing single-use plastic bans on items including plastic bags and straws, polystyrene foam, disposable cups and takeout food containers.

The City of Victoria was the first municipality in B.C. to ban plastic bags in July 2018 through a business licensing bylaw. Municipalities may regulate in relation to a number of areas under the *Community Charter*. On July 11, 2019 the B.C. Court of Appeal ruled, however, that the intent of the bylaw was for the *protection of the natural environment* and therefore under the *Community Charter*, municipalities wishing to exercise their regulatory authority for protection of the natural environment are required to obtain Provincial approval. The Province is currently reviewing all aspects of the decision and recognizes that local governments need clarity on what their authorities are and the process for acting on those authorities should they so desire. Feedback from this engagement process will inform actions and processes moving forward.

Recent studies have shown that plastic packaging accounts for approximately 47% of all plastic waste discarded, and the majority of single-use plastics are used as packaging.



When policy tools, such as a ban, are evaluated, it is important to consider all impacts and to ensure that viable alternatives are available. For example, research has shown that switching from single-use plastic bags to single-use paper bags results in simply trading one set of environmental costs for another. A single-use paper bag can require up to four times as much energy to manufacture and produces two times the greenhouse gas emissions when compared to a single-use plastic bag; however, they are bio-degradable and do not persist in the environment like plastic bags do. Successful policies have included the use of bans, generally in combination with levies and fees to decrease unnecessary single-use consumption and to encourage the reuse of bags and other sustainable alternatives. It is critical to find the right policy approach that results in the fewest unintended consequences.

In addition, exemptions to the ban are often required where no viable alternative is found, or to ensure that the essential safety, health, and wellness of all individuals is maintained. For the remaining plastic packaging and single-use plastics, EPR programs are necessary to ensure these materials can be collected and recycled back into new packaging and products.

- » **Do you think bans on plastic packaging should be implemented in B.C.? What plastic packaging products are a priority for B.C. to ban?**
- » **What types of bans should be considered (examples include bans on sale of a certain type of packaging or ban on use of a certain type, or bans on disposal)?**
- » **If a ban was applied, how should exemptions be considered?**
- » **Bans can be implemented in some form by all levels of government due to the different regulatory powers in place. Are there bans best suited for implementation at the federal, provincial or local government level? Should local governments be given the authority to ban problematic plastic items in their community? What types of bans should be considered?**

2

MORE RECYCLING OPTIONS



Dramatically reduce single-use plastic in landfills and waterways: requiring producers to take responsibility for more plastic products, ensuring more single-use items like sandwich bags, straws and cutlery get recycled.

EXPANDING PRODUCER RESPONSIBILITY FOR PACKAGING-LIKE PRODUCTS AND SINGLE-USE ITEMS

British Columbia is a national leader in recycling with the widest range of regulated items collected — its existing province-wide Extended Producer Responsibility (EPR) program regulates recycling of packaging and paper products. The inclusion of packaging-like products and single-use items in the Recycling Regulation would expand the type of plastic products that producers are required to collect for recycling from sectors that may include, but are not limited to, residential and municipal properties province-wide.

Packaging-like products are materials that are sold as a product but are in turn used as packaging. This includes re-usable plastic containers, freezer/sandwich bags, canning jars, wrapping paper, and moving boxes. Single-use items are materials that are not necessarily packaging but similarly serve a one-time purpose. This includes plastic straws, stir sticks, cutlery and 'disposable' items purchased in multiples, such as plates, bowls, cups, and party supplies that could be easily diverted in a manner similar to packaging and packaging-like products. This change would require an amendment to the Recycling Regulation.

- » **Do you have comments or suggestions regarding the ministry's proposal to include packaging-like products in the Recycling Regulation? Are there any packaging-like products you believe should be exempt from the Recycling Regulation?**
- » **Do you have comments or suggestions regarding the ministry's proposal to add single-use items to the Recycling Regulation? Are there any single-use items you feel should be exempt from the Recycling Regulation?**

3

EXPANDING PLASTIC BOTTLE AND BEVERAGE CONTAINER RETURNS



Improving the deposit-refund system to cover all beverage containers — including milk and milk-substitutes — with a 10-cent refundable deposit, keeping millions more containers out of landfills and waterways.

EXPANDING RECOVERY AND RECYCLING OF BEVERAGE CONTAINERS

Expanding the EPR deposit-refund system to cover all beverage containers and standardizing the refundable deposit to 10 cents, as well as modernizing the system, would capture and recycle millions more single-use containers, while reducing consumer and retailer confusion over what is and is not covered under a deposit-refund program.

Beverage containers that are currently excluded from the deposit-refund system would now be included, such as milk and milk substitutes (e.g., rice milk, soya milk, flavoured milk, and the array of milk-like products including energy drinks and caffeinated milk beverages). Milk and related products are currently under the residential packaging and paper products schedule of the Recycling Regulation. Obligating these products under the beverage container deposit-refund schedule would provide the needed incentive for greater returns from residents and would capture all containers from commercial generators (e.g., restaurants, schools, offices) that are currently exempted from the Recycling Regulation.

This change would require an amendment to the Recycling Regulation, which currently has a range of deposit-refund amounts from 5 to 20 cents depending on the container type. Creating a uniform 10 cent deposit-refund for all beverage containers translates into an estimated additional 50 million beverage containers diverted from landfills and our environment. Most plastic beverage containers sold today have a 5 cent deposit and are frequently discarded, yet beverage containers with a 10 cent deposit, such as beer cans/bottles, are returned more often by consumers.

The Recycling Regulation currently requires all refunds for returning beverage containers to be paid in cash. Modernizing the Recycling Regulation to also allow refunds to be electronic and paid in an alternative form of cash (e-transfer, cheque, in-store credit, charitable donation, or similar alternatives), would increase ease and efficiency for the consumer. An example includes convenience options such as drop-and-go systems where customers set up an account, tag their mixed bag of containers and drop it in an automated receiving system. Bags are later picked up and sorted, and credit is applied to the customer's account. The existing depot network and cash refunds would still be maintained as an option to ensure those individuals and communities depending on cash refunds continue to have access to this immediate source of income.

Other jurisdictions have seen success with raising deposit-refund rates, expanding to more products and modernizing return systems. Oregon's recovery rate was stagnant at 65% in 2016 until a doubling of deposit-refunds from 5 to 10 cents (for all beverage containers), coupled with enhanced return options such as drop-and-go bags, resulted in an overall return rate of 90% in 2018. In 2008, Alberta increased deposit-refunds to a minimum 10 cents and expanded the program to include milk and related products, resulting in total recovery rates since increasing from 75% to 85%.

In two years' time, B.C would review the impact of the deposit rate changes to determine if further increases to the beverage container deposit rate are required to improve the recovery rate.

- » **Do you have comments or suggestions on the ministry's proposal to include milk and milk substitutes in the beverage container deposit-refund schedule?**
- » **Do you have comments or suggestions on the ministry's proposal to create a uniform 10 cent deposit-refund for all beverage containers?**
- » **Do you have comments or suggestions on the ministry's proposal to allow refunds to be electronic and paid in an alternative form of cash (e-transfer, cheque, in-store credit, charitable donation, or similar alternatives)?**

4

REDUCING PLASTICS OVERALL



Supporting effective ways to prevent plastic waste in the first place and ensuring recycled plastic is re-used effectively.

DEVELOPMENT OF NATIONAL RECYCLED CONTENT PERFORMANCE STANDARDS

Recycled content performance standards (standards) go hand in hand with extended producer responsibility programs. EPR programs collect and recycle the materials, turning them into recycled plastic commodities. Standards create the demand for recycled plastic materials by requiring a minimum content of recycled plastic in new packaging and products.

Standards help producers of plastic products to design products with recyclability in mind, which helps to eliminate products that are hard to recycle. Having a common national standard provides clarity and avoids a patchwork approach across provinces and territories for producers. National standards also incentivize and complement government procurement policies and targets requiring purchased plastic products to contain recycled plastic. Procurement policies at all levels of government can stimulate and support market development in this area.

Increasing the levels of recycled plastic content in products can also result in greenhouse gas emissions reductions to help meet the goals set out in [CleanBC⁴](#), the Government's plan to reduce carbon pollution. The production and manufacturing of packaging and products, including the increasing use of plastics, generates greenhouse gas emissions. These emissions can be substantially mitigated by ensuring that packaging and products are reused and, once they reach the end of their life, are collected to be recycled back into new packaging and products. This reduces the need to produce more plastic from virgin materials and fossil fuels.

Recycling plastic beverage containers, for example, has been shown to reduce greenhouse gas emissions by almost 70% compared to producing plastic from virgin resources⁵.

As noted earlier, B.C. has been actively involved in developing the Canada-wide Action Plan on Zero Plastic Waste⁶ which identifies the federal government as leading the development of national performance requirements and standards for plastics. British Columbia has a significant opportunity to collaborate and influence the development of these standards, in particular with the proposed recycled content standard.

- » **What should B.C. consider in the development of a national standard on recycled content and any associated targets?**
- » **Do you have comments or suggestions on any related provincial policies or actions?**

Recycling plastic beverage containers, for example, has been shown to reduce greenhouse gas emissions by almost 70% compared to producing plastic from virgin resources.



⁴ <https://cleanbc.gov.bc.ca/>

⁵ <https://bit.ly/30UDrkd>

⁶ <https://bit.ly/2Q0QVtP> and <https://bit.ly/2XbqmAx>

Implementation

The actions proposed in this consultation paper will further advance the reduction, diversion and recyclability of plastics and other single-use items in B.C.

Feedback received will help B.C. determine other potential actions that should be developed or further consulted upon at the provincial level. Your input is welcomed regarding other potential products for inclusion in the Recycling Regulation, or other policy initiatives to minimize plastic waste.

All comments received through webinars, meetings, mail or email by 30 September 2019 will be compiled for review by ministry staff before final drafting of the regulatory amendments. This is expected to be completed in 2019.

By expanding recycling and recovery of plastics that are in use, we can significantly reduce the waste that accumulates in landfills and waterways.



Additional Information Sessions

The ministry will conduct a series of webinars on the proposed revisions. The webinars will review the information contained in this consultation paper and provide an opportunity to ask questions and provide comments.

If you are interested in participating in a webinar, please contact the email below:

Email: Plastics@gov.bc.ca

Providing Feedback

The ministry welcomes comments on the information and proposals outlined in this consultation paper, and has provided the following opportunities for feedback:

- 1. Complete the public survey at:**
<https://cleanbc.gov.bc.ca/plastics>
- 2. Send a formal submission to: Plastics@gov.bc.ca**
Read the guidelines for formal submissions at:
<https://cleanbc.gov.bc.ca/plastics>
- 3. Email your comments to: Plastics@gov.bc.ca**
- 4. Mail your comments to:**
*Ministry of Environment and Climate Change Strategy –
Recycling Regulation Amendments
PO Box 9341 Stn Prov Govt
Victoria, BC V8W 9M1*

All comments received through the public survey, formal submission, webinars, mail or email by September 30, 2019 will be compiled for review by ministry staff before final drafting of the amendments to the Recycling Regulation or other policy changes. This is expected to be completed in 2019.

Please note that each organization's submission with opinions and identifiers could be made public either through a decision by the Ministry or if a Freedom of Information request is made under the *Freedom of Information and Protection of Privacy Act*.

Thank you for your time and comments.



Plastics Action Plan

WHAT WE HEARD REPORT

November 2019

Prepared for: Ministry of Environment and
Climate Change Strategy

Prepared by: R.A. Malatest & Associates Ltd.



A person is standing on a surfboard in a calm lake, holding a paddle. The water is still, reflecting the surrounding landscape. In the background, there are large, rugged mountains with patches of snow. The sky is filled with soft, white clouds. The overall scene is peaceful and scenic.

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Introduction

Background

The Government of British Columbia is considering a variety of proposed amendments to the Recycling Regulation of the *Environmental Management Act*. The amendments are all aimed at addressing plastic waste in the province, and fall within four main topic areas:

- ***Bans on single-use plastic packaging*** – Determining which types of plastic packaging to phase out altogether, as well as any necessary exemptions, such as for health, safety and accessibility to keep products available for the people that need them.
- ***Dramatically reduce single-use plastic in landfills and waterways*** – Requiring producers to take responsibility for a wider range of plastic products, ensuring more single-use items, like sandwich bags, straws and cutlery, get recycled.
- ***Plastic bottle and beverage container returns*** – Expanding the deposit-refund system to cover all beverage containers – including milk and milk-substitutes – with a 10 cent refundable deposit, keeping millions more containers out of landfills and waterways.
- ***Reducing plastics overall*** – Supporting effective ways to prevent plastic waste and making sure recycled plastic is re-used effectively.

The purpose of each of these proposed changes is to reduce the amount of plastic waste created in British Columbia (B.C.), and thus reduce the environmental impact of plastic pollution.

The Engagement Process

Engaging with Indigenous Communities and First Nations

The Province is committed to working closely with Indigenous peoples, governments and organizations. As part of the CleanBC Plastics Action Plan, the Government of British Columbia will continue to engage with Indigenous communities to address plastic waste. The information obtained through the engagement process summarized in this report from Indigenous communities is not considered to represent all Indigenous views. Further engagement on these topics is ongoing and will continue to be considered as part of an in-depth policy review occurring over the coming months.

Public Engagement

The Government of British Columbia was interested in collecting feedback on the proposed changes from interested parties, affected groups, and the general public. To collect this feedback, the Citizen Engagement Team, Ministry of Citizen Services, Government Digital Experience office

led by the Ministry of Environment and Climate Change Strategy (Ministry) undertook a series of public engagement activities.

Online Survey

Feedback from the public was largely collected using a standardized survey tool, available online at <https://cleanbc.ca/plastics>. The survey consisted of eight survey questions on the topics of plastic waste reduction, recycling, beverage container deposit-refund systems, and recycled content standards. Seven of these items were closed-ended questions, while one was an open-ended text box for participants to write in their comments. The survey also included five demographic questions, to collect information about participant type, region, and other variables. A copy of this survey instrument is attached in **Appendix A**.

The online survey was available from July 25 to September 30, 2019. The engagement was originally scheduled to close September 18 but was extended to September 30, 2019 due to the high level of interest in the engagement. During this period, a total of 35,611 survey responses were received.¹ Of these, 216 participants identified themselves as living outside of B.C. these cases were removed from analysis and reporting, resulting in a total of 35,397 survey responses incorporated into this report.

Submissions from the General Public

Members of the general public who wanted to provide more in-depth comments on the Plastics Action Plan than was possible via the survey had the option of sending an email to plastics@gov.bc.ca. Emails were accepted throughout the consultation period (July 25 to September 30, 2019). During this time, 131 email comments were received from the general public. In addition, 15 long-form written submissions were received from members of the public.

Written Submissions from Local Governments, Indigenous Communities and Interested Stakeholders

Local governments, Indigenous communities and interested stakeholders such as businesses, producers, and non-governmental organizations (NGOs) were able to submit long-form written submissions through email to plastics@gov.bc.ca. Submissions were required to adhere to a set of guidelines published on the engagement website; these guidelines can be found at <https://cleanbc.gov.bc.ca/plastics-submission-guidelines>.

Written submissions were accepted throughout the consultation period (July 25 to September 30, 2019). During this time, 129 submissions were received from local governments, Indigenous communities and interested stakeholders.

¹ “Responses” includes both full survey completions and partial completes.

For analysis purposes, submissions received from local governments, Indigenous communities and interested stakeholders, were examined separately from those received from members of the general public.

Webinars

A series of four webinars was conducted by the Ministry to provide detailed information about the changes being considered, and to offer the opportunity for a question and answer period. A variety of groups joined these webinars, including representatives from local governments, businesses and producers, non-governmental organizations and members of the general public. In total 142 people attended the webinars.

Transcripts were made of the question and answer sessions during the webinars, and these documents were incorporated into the qualitative analysis conducted on feedback received.

Participants

Online Survey

In total, 35,397 valid survey responses from B.C. residents were received during the engagement period. The large majority of participants who answered the survey identified as citizens (96.6%),² followed by business and industry (2.9%).³ The remainder of the participants (<1%) were composed of local government representatives, and non-governmental organizations.

Submissions from General Public

In total, 131 email comments and 15 formal written submissions were received from citizens throughout the engagement period. While some submitters did include information about themselves such as their involvement in the issue, their region, or other information, this was not required and was not reported consistently in all emails. Therefore, details on the breakdown of email submissions by participant type, region, or other information are not available.

Written Submissions from Local governments, Indigenous Communities and Interested Stakeholders

A total of 129 written submissions were received from local governments, Indigenous communities and, interested stakeholders during this engagement process.

² Due to apparent confusion among respondents regarding the definition of “recycler”, the categories of “general public” and “recycler” were collapsed. Based on review of the data, it appears that some members of the general public identified themselves as recyclers as they participate in their local recycling programs, whereas the intended definition was organizations and businesses that undertake the work of recycling products, such as bottle depots.

³ Due to small cell counts for several groups (retailers, small business owners, and producers), these categories were collapsed into one and titled “business and industry”.

Webinar Participation

Four webinars were held during the engagement period to provide in-depth information about the proposed changes to local and interested stakeholders, and offer time for these groups to have their questions about these issues answered. Each webinar was approximately one hour long. These sessions consisted of a half-hour presentation to attendees on the proposed changes, followed by a half-hour question and answer session.

Analysis of Feedback Received

Analysis of feedback, from all information channels, was conducted by R.A. Malatest and Associates Ltd. (Malatest) for the client. Findings from these analyses are summarized in this report; the next sections describe analysis methods and approaches for quantitative and qualitative data.

Qualitative Analysis

Submissions received from members of the general public were coded using a pre-developed coding framework; up to three codes were applied per written submission.

Written submissions from local governments, Indigenous communities and interested stakeholder groups, and transcripts of question and answer sessions from webinars, were qualitatively coded using an inductive, iterative approach with the software package NVivo. An initial coding framework was developed based on the first 25 documents received in the consultation process. This coding framework was then reviewed and refined as new submissions arrived; every time a code was added or revised in the coding framework, previously coded content was reviewed to identify whether changes to coding were required in those documents. This iterative revision was undertaken on 65 documents, at which point saturation was reached and the remaining content was coded according to the existing framework.

The online survey included several open-ended text fields where participants had the opportunity to provide more in-depth answers to select questions (please refer to **Appendix A** to see these questions). These open-ended comments were coded, grouping similar themes and ideas together. The coding framework was developed based on review of a random sample of 1,000 survey completions; all responses to the open-ended text fields in these 1,000 completions were reviewed and themes identified through an inductive, iterative coding process. This coding framework was then shared with representatives from the Ministry for their input, to ensure that the themes identified were an accurate reflection of the issues at hand.

Quantitative Analysis

The majority of survey responses were analyzed quantitatively. Summary statistics methods were used to create an overall picture of responses to closed-ended questions. Open-ended text fields in the survey were coded thematically according to a coding framework (attached in **Appendix B**) and the codes applied were then also summarized using statistical methods.

Due to the high volume of responses, a random sample of all comments was selected for coding and summary. For all open-ended fields, a minimum 20% sample of comments was taken, although the specific proportion varied by field. For the field with the greatest variability in responses – Q8, asking participants what change would help them recycle more – a higher proportion of responses was sampled and coded.

For all fields, efforts were made to ensure that the sample would be large enough to provide a statistically reliable understanding of the general themes and content brought up by participants to the survey. **Table 1** below summarizes the number of responses to each open-ended field, the sample taken for coding, and the proportion of all responses that were coded.

Table 1: Samples of Comments from Open-Ended Text Fields

Survey Field	Number of Responses Received	Number of Responses Coded	Proportion of all Responses Coded
Q2 other: What are some barriers you face when it comes to recycling?	12,054	2,475	20.5%
Q3 other: What would help you to recycle more?	4,658	976	21.0%
Q8: What change would make the biggest difference for you when it comes to reducing plastic waste?	28,060	18,755	66.8%

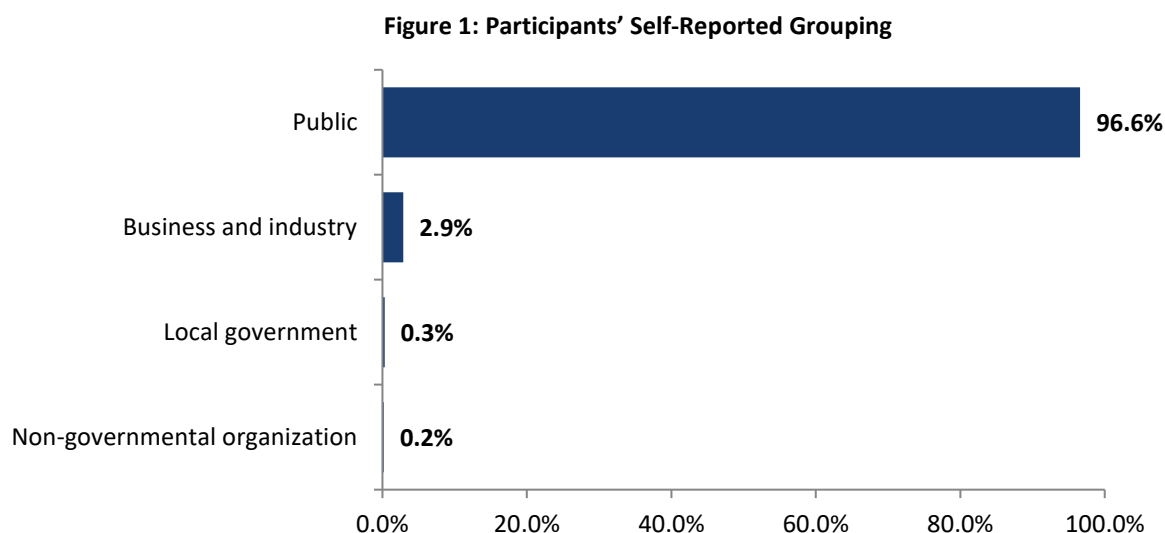
Where appropriate, some cross-tabulations and comparisons of responses by group type (e.g. by region, by group) were undertaken to identify what, if any, differences exist in responses among these sub-groups. Demographic variables of interest for these comparisons were identified *a priori* by the client in consultation with Malatest, based on existing knowledge about these sub-groups and interest in better understanding diverging trends among them.

What We Heard from the Online Survey

Summary of Participants

Type of Participant

The large majority of survey participants identified themselves as citizens, followed by business and industry. The breakdown of participant type is summarized in the figure below.



Valid n=34,885.

Sample numbers may change across survey items due to missing or skipped questions.

Source: CleanBC Plastics Action Plan Survey, 2019

For more information, please see Table C1 in Appendix C.

Region

A majority of survey responses (91%) came from the three most populous regions in the province: the Lower Mainland/Fraser Valley, Vancouver Island and the Sunshine Coast, and the Thompson/Okanagan. The table below provides a summary of the proportion of responses from each region of B.C., and the proportion of B.C.'s population that resides in each of these regions (as of the 2016 Census).

Table 2: Breakdown of Survey Responses, and B.C. Population, by Region

Region	Number of Survey Responses	Proportion of Survey Responses	Proportion of B.C. Population
Lower Mainland / Fraser Valley	13,686	39.2%	60.9%
Vancouver Island and Sunshine Coast	13,648	39.1%	17.2%
Thompson / Okanagan	4,500	12.9%	11.8%
Kootenay	1,526	4.4%	3.3%
Cariboo	530	1.5%	3.4%
Northwest and North Coast	400	1.1%	1.2%
Nechako	358	1.0%	0.8%
Northeast	238	0.7%	1.5%

Valid n=34,886

Sample numbers may change across survey items due to missing or skipped questions.

Source: CleanBC Plastics Action Plan Survey, 2019; Census Profile, 2016 Census

For more information, please see Table C2 in Appendix C.

Indigenous Representation

Indigenous people represent 6% of B.C.'s total population (based on 2016 Census figures). Indigenous people represented 4% of participants to the CleanBC Plastics Action Plan Survey. Please refer to Table C5 in Appendix C for more information.

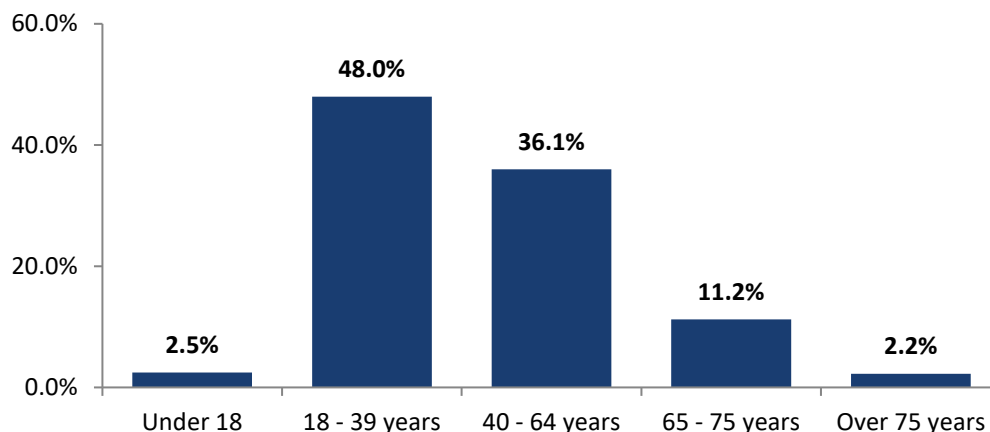
Gender

Women made up 71% of participants (n=24,721), men made up 27% (n=9,362), and those who identified as gender diverse represented 2% of survey participants (n=624). These findings are summarized in Table C3 of Appendix C.

Age

Participants under 39 years of age made up slightly more than one-half of the total survey sample. Those aged 40 to 64 represented slightly over one-third of the sample, and those aged 65 and over made up approximately 13% of the survey sample.

Figure 2: Participants' Self-Reported Age Groups



Valid n=34,756

Sample numbers may change across survey items due to missing or skipped questions.

Source: CleanBC Plastics Action Plan Survey, 2019

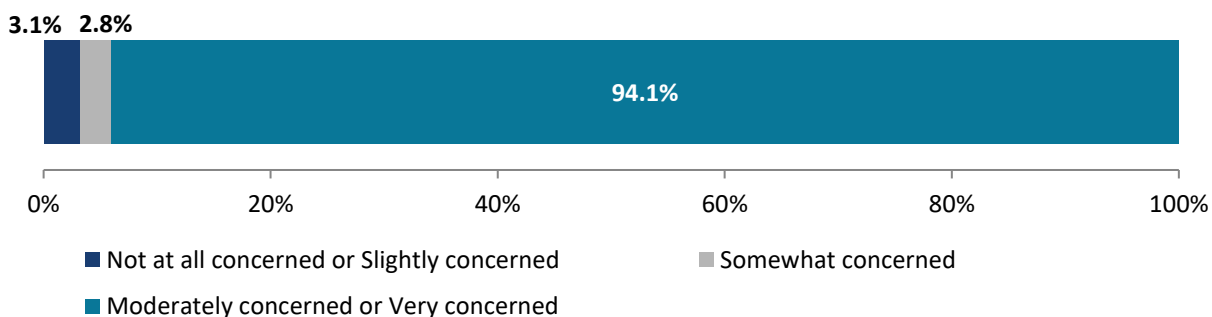
For more information, please see Table C4 in Appendix C.

Survey Findings

Concern about Plastic Waste

Participants in the online survey reported high levels of concern about plastic waste: 84% said they were “very concerned” and a further 10% said they were “moderately concerned”.

Figure 3: How concerned are you about the problem of plastic waste?



Valid n=35,032

Sample numbers may change across survey items due to missing or skipped questions.

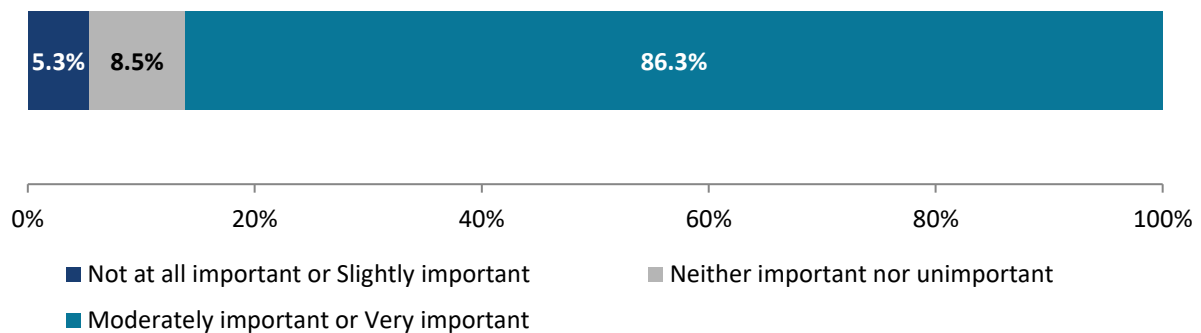
Source: CleanBC Plastics Action Plan Survey, 2019

For more information, please see Table C6 in Appendix C.

The large majority of survey participants reported that they placed high importance on purchasing goods made with recycled content, although participant endorsement for this was slightly lower than self-reported concern about plastic waste. Fifty-six percent reported that purchasing items

with recycled content was “very important” to them, and a further 30% reported that it was “moderately important” to them.

Figure 4: If you had the choice, how important for you is it to purchase products made with recycled content, even if they might cost you more?



Valid n=35,003

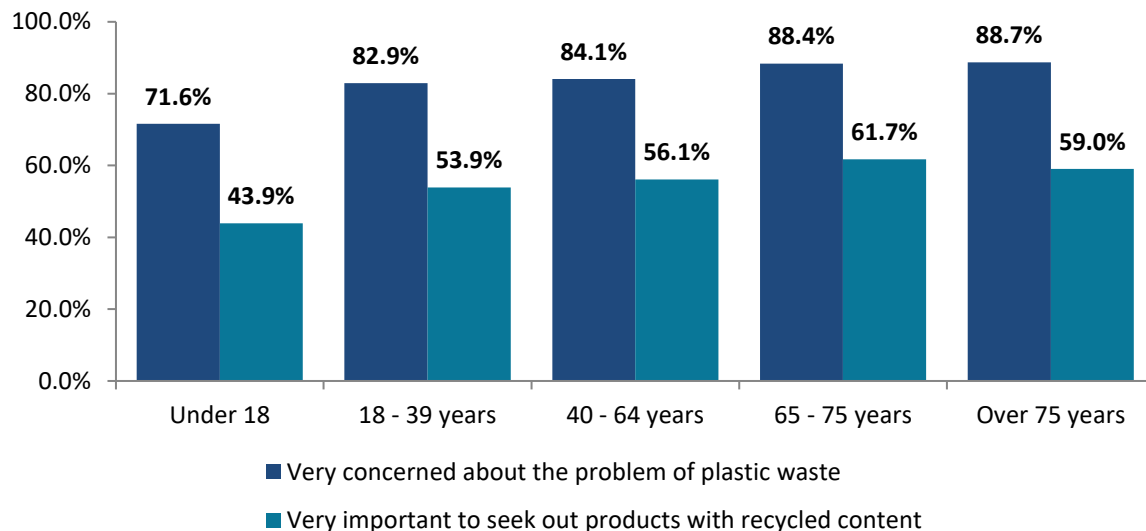
Sample numbers may change across survey items due to missing or skipped questions.

Source: CleanBC Plastics Action Plan Survey, 2019

For more information, please see Table C15 in Appendix C.

Older participants were significantly more likely to report high levels of concern around the issue of plastic waste, with the proportion of participants reporting being “very concerned” increasing with increasing age. Similarly, older participant groups reported greater willingness to seek out products made with recycled content (with the exception of participants over 75 years old, who did not differ significantly from other adult age categories).

Figure 5: Concerns about Plastic Waste, by Age Group



Concern about plastic waste valid n=31,328

Important to seek out products with recycled content valid n=31,487

Sample numbers may change across survey items due to missing or skipped questions.

Source: CleanBC Plastics Action Plan Survey, 2019

For more information, please see Table C17 in Appendix C.

Participants in the Northeast region reported high levels of concern about the problem of plastic waste, however levels were somewhat lower compared to participants from other regions of the province; approximately 82% reported being “somewhat” or “very” concerned about the problem of plastic waste, compared to the province-wide average of 94%.⁴ Participants from this region were also less likely to report that it was important to them to buy products made with recycled content – 69% of participants from this region reported it was important or very important to them to purchase goods made with recycled plastics, compared to the province-wide average of 85%.⁵

There were no differences by participant type in level of concern about plastic waste – across all groups, approximately 84% of participants reported that they were “very concerned” about the problem of plastic waste. Business and industry participants were more likely than members of the general public to report that it was “very important” to them to purchase items made with recycled content (65% of business and industry, compared to 58% of the public).⁶

⁴ Please refer to Table C18 in Appendix C for further details.

⁵ *Ibid.*

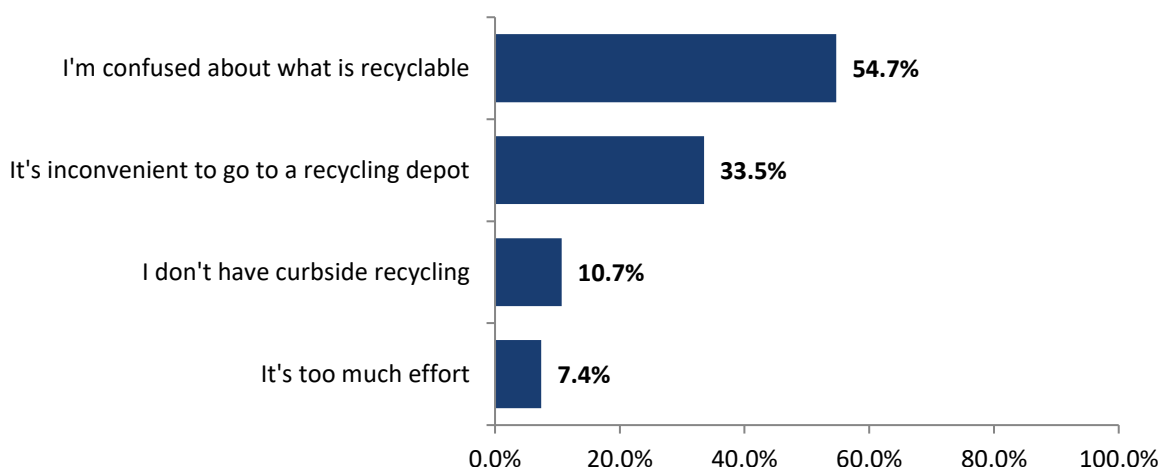
⁶ Please refer to Table C19 in Appendix C for further details.

Barriers to Recycling and Possible Solutions

Survey participants were asked to indicate what barriers they face when it comes to recycling. Participants were able to select as many as applied from a list of four options, and also had the opportunity to write in other reasons in an “Other, please specify” field. A sample⁷ of written comments was summarized by theme and coded for analysis; the coding scheme can be found in **Appendix B**.

Confusion about what is recyclable was the biggest barrier to recycling reported by participants, with 55% of all participants indicating that this was an issue for them. The next-most common barrier was inconvenience of recycling depots, which one-third of participants cited as a challenge.

Figure 6: What are some barriers you face when it comes to recycling? (Closed-Ended Response Options)



Valid n=35,397

Sample numbers may change across survey items due to missing or skipped questions.

Percentages may add to more than 100% due to multiple responses.

Source: CleanBC Plastics Action Plan Survey, 2019

For more information, please see Table C7 in Appendix C.

Among participants who provided written answers that were coded, the most common other barriers to recycling were items not being recyclable in any program (23%), certain items not being recyclable in curbside or private recycling programs (20%), and item or recycling bin contamination and the belief that items are going to landfill (14%).⁸

“Further to confusion around what is recyclable, there are good websites in place to tell me but they're not exhaustive. I find I always end up with ‘unknowns’. The hard plastic caps they're using on cans instead of 6 pack rings now, for example. I

⁷ Due to the high volume of responses, a random sample of all comments was selected for coding and summary. Please refer to the section on how analysis was conducted, on pages 5 and 6, for more details.

⁸ Please refer to Table C8 in Appendix C for further details.

feel like everything sold that's plastic should be recyclable, and the onus should be on the manufacturer to relay how and where to recycle it.” – Citizen

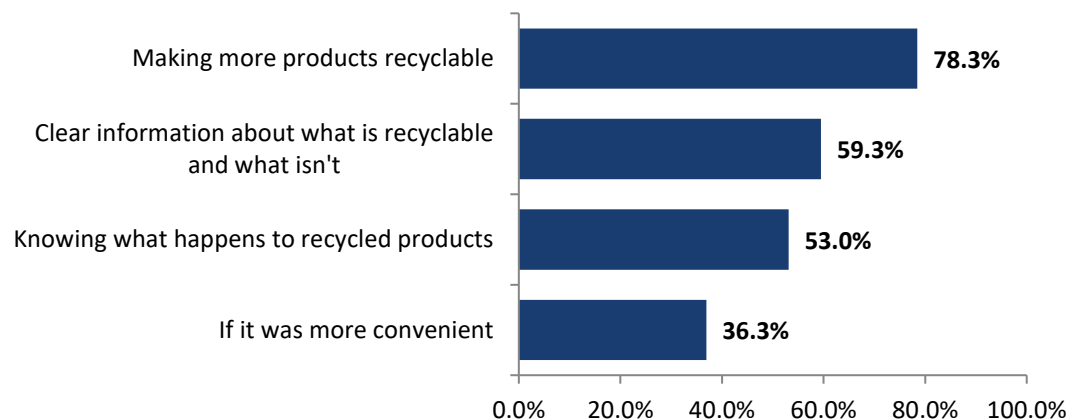
“News about the ineffectiveness or compromised integrity of some recycling programs makes it very frustrating.” – Citizen

“Not all items are accepted to be recycled together by curb side collecting programs (i.e. have to sort out plastic bags/wrap and bring to depot separately), this makes recycling less convenient and less appealing to public. Also public areas do not offer as many recycling bins as garbage bins, so recyclable items end up in trash.” – Citizen

“Too many items are still produced that are not recyclable, thus leaving no option but to throw away or to try not to purchase in the first place.” – Citizen

Participants endorsed a number of suggestions to improve or support their recycling habits. More than one-half of participants reported that making more products recyclable, having clear information about what is recyclable and what is not, and knowing what happens to recycled products would all help them to improve their recycling habits.

Figure 7: What Would Help You to Recycle More?



Valid n=35,397

Sample numbers may change across survey items due to missing or skipped questions.

Percentages may add to more than 100% due to multiple responses.

Source: CleanBC Plastics Action Plan Survey, 2019

For more information, please see Table C9 in Appendix C.

Among participants who provided written answers that were coded, the most common other ways to support recycling included requiring reductions or bans on plastic packaging (10%), financial penalties or incentives aimed at producers and businesses (9%), and required reductions or bans on all plastics (8%).⁹

“If it is sold, it should be recyclable. If it can't be recycled it should not be used.” – Citizen

“Bottles and papers and compost are simple enough. But when it comes to plastic packing what can and cannot be recycled is super confusing.” – Citizen

“Even for a devoted recycler such as myself, it's confusing and I can see why others don't bother (but it's no excuse).” – Citizen

“I strongly want to emphasize the ‘knowing what happens to recycled products’ category. Having a better understanding of what happens to recycled products and how much actually gets reused helps me to engage in the process.” – Citizen

“There are so many rumours that the plastics aren't getting recycled. That it is just sitting in a warehouse somewhere or it ends up going to the landfill. If people don't feel like their community is dealing with the recycling then they get disheartened and stop recycling.” – Citizen

“I would prefer not to have to recycle at all and would totally support zero-packaging stores and ‘bring your own bag/container’ etc. initiatives” – Citizen

Public Attitudes towards Bans

Overall, participants were highly supportive of the provincial government considering bans on both single-use plastic packaging and polystyrene foam¹⁰ packaging: 93% believed it was important to consider a ban on single-use plastic packaging, and 94% found it important to consider a ban on polystyrene foam packaging.¹¹

⁹ Please refer to Table C10 in Appendix C for further details.

¹⁰ It should be noted that polystyrene foam is often referred to as Styrofoam™, a trademarked brand name of polystyrene.

¹¹ Please refer to Tables C11 and C12 in Appendix C for further details.

With the exception of participants under 18, there were no differences by age in interest on bans for polystyrene foam packaging – approximately 86% of all adult participants reported it was “very important” that the government consider a ban on polystyrene foam packaging (while only 66% of those under 18 found this very important). Interest in considering a ban on single-use plastic packaging, however, varied by age. Participants aged 65 and over were significantly more likely to support considering a ban on single-use plastic packaging, compared to younger age cohorts.¹²

Though overall support was still high, participants from the Northeast region were less likely than participants in other regions to report that considering bans on single-use plastic and polystyrene foam packaging was important to them. In most regions of B.C., interest in considering a ban on single-use plastic packaging was around 93%, whereas in the Northeast it was 79%. In most of B.C., interest in considering a ban on polystyrene foam packaging was around 95%, whereas in the Northeast it was 82%.¹³

There were no major differences in interest in considering a ban on single-use plastic packaging across participant group types; across all groups, approximately 93% of participants reported that it was “moderately” or “very important”. Similarly, approximately 94% of all participants reported that it was “moderately” or “very important” for the provincial government to consider a ban on polystyrene foam packaging; there were no differences by participant type.

“I would like the province to ban single use plastic bags in grocery stores, as well as single use cutlery and Styrofoam containers. These three would make the biggest change in my everyday life. I cannot stand what it does to our planet!” – Citizen

“Ban SINGLE USE all together... Make it clear and concise for people as to what is recyclable. Make it convenient.” – Citizen

“Ban plastic straws, plastic cutlery. Find a way to ensure that grocers and stores always have to provide an option that doesn't make use of single-use plastics or containers.” – Citizen

“The change that would make the biggest difference, by far, is to ban all single-use and limited-use plastic, including plastic food wrap and plastic shipping materials. It is not enough to expand recycling programs; we should not even be using these plastics in the first place.” – Citizen

¹² Please refer to Table C17 in Appendix C for further details.

¹³ Please refer to Table C18 in Appendix C for further details.

Public Attitudes towards Changes to the Deposit-Refund Schedule

Most survey participants were supportive of increasing the beverage deposit amount to 10 cents: 71% of participants were “very supportive” and a further 14% were “somewhat supportive”. Only 7% of participants were opposed to this change.¹⁴ A slightly smaller proportion of participants supported including milk and milk-substitute containers in the deposit-refund schedule: 58% of participants strongly agreed with this change, and a further 20% agreed with it. Ten percent of participants disagreed or strongly disagreed with the change.¹⁵

Older participants (those aged 40 years and over) were significantly more likely than younger age cohorts (under 40) to support increasing the beverage container deposit to 10 cents. Participants aged 65 and over were significantly more likely to support including milk and milk-substitute containers in the recycling deposit-refund schedule, compared to participants under 65.¹⁶

Across B.C., there was high support (85%) for increasing the deposit-refund on beverage containers to 10 cents. Support for this change was lower in the Northeast region with 76% of participants supporting the change, and 16% opposed to it (compared to an average of 6% of participants opposed across all other regions).¹⁷ Participants in this region were also less likely to support the inclusion of milk and milk-substitute containers in the deposit-refund schedule with 69% of participants supporting the change compared to an average of 79% of participants across all other regions in B.C.¹⁸

Support for raising the deposit fee on beverage containers to 10 cents, and for including milk and milk-substitute containers in the recycling deposit-refund schedule, was roughly equal across all groups; no major differences among the general public, business and industry, local government, or non-governmental organizations were noted.¹⁹

“Introduce deposits for all containers. We already have the system for pop and liquor containers. Just expand it.” - Citizen

“Have higher deposits (10 cents is great, but I'd like to see at least 20 cents). Add more containers to the deposit system, making it more worthwhile to make the trip to depots...” - Citizen

¹⁴ Please refer to Table C13 in Appendix C for further details.

¹⁵ Please refer to Table C14 in Appendix C for further details.

¹⁶ Please refer to Table C17 in Appendix C for further details.

¹⁷ Please refer to Table C18 in Appendix C for further details.

¹⁸ Please refer to Table C18 in Appendix C for further details.

¹⁹ Please refer to Table C19 in Appendix C for further details.

What We Heard from the Public

During the engagement period, 146 submissions were received from members of the public in response to the call for public feedback. These submissions were then coded for content related to the topics of the public consultation – namely, themes related to changes to the beverage container deposit-refund schedule, a ban on single-use plastic packaging, expanded Extended Producer Responsibility (EPR) programs, and national efforts to improve recycling and reduce overall plastic waste.

It should be noted that a large number of the submissions received contained content that was coded as off-topic (n=55, 38%). Examples of off-topic content included discussion of environmental issues not specifically pertaining to plastic waste (e.g., the environmental cost of personal vehicle use, emissions from wood burning fireplaces).

Feedback on Plastic Packaging Bans

Plastic packaging bans were the most commented on issue in submissions from the public; 62 submissions addressed this issue. Of these 62 submissions, 42 were supportive of bans on single-use plastic packaging. These comments tended to simply state support for the proposed change, encouraging the Province to move forward with a ban on single-use plastic packaging.

“I am writing you to ask that you move ahead with eliminating single use bags (focused on plastic) from commercial outlets in British Columbia. The environmental impact these items are having on our environment are considerable and the adverse human health impacts are only now becoming clear.”

“...Yes, bans on some single use plastic packaging should be implemented province-wide. There are readily available alternatives for consumers (e.g., re-useable shopping bags, paper straws, re-useable beverage containers, etc.) and changes in consumption habits can negate many of the perceived “needs” for such items. I would not ban plastics required for acute health care. I think polystyrene (Styrofoam) use should be discouraged – it has many advantages over alternatives for packaging some materials such as fresh meat, but few others. Polystyrene is also problematic to recycle, although that may be due to handling costs, rather than technical constraints...”

A large number of respondents (n=18) recommended modifications to the single-use plastic packaging ban; the majority of these modifications encouraged going *further* in provincial bans, such as banning all single-use plastics (not just packaging), or banning plastics altogether.

“Please work to ban all single use plastics within an overall plan to dramatically reduce plastic overall. You need more recycling - not just at curb side, but in condos and in industry. Make it more expensive to buy anything made in or wrapped in plastic and offer greater incentives to recycle.”

In one submission from the public, the issue of accessibility was raised. This submission noted that a ban on single-use plastic products (such as plastic straws) with exemptions for accessibility requirements does not support accessibility; instead, it creates a barrier to accessibility by requiring a person in need of a utensil to ask for one from a server or retail worker, rather than having free access to the tools they need to participate fully in society.

“...Exemptions for health and accessibility need to be considered. However, it may not be feasible to have every store still carry plastic straws only for people with disabilities. If people have invisible disabilities, and ask for a straw, they would have to then out their disability...”

Feedback on More Recycling Options and Extended Producer Responsibility (EPR) Programs

Twenty-five members of the public who submitted emails discussed the proposal to expand EPR programs in the province. Of these, 23 submissions either indicated support for the expansion of EPR programs or recommended even further expansion to what was proposed in the consultation paper. Two submissions expressed mixed support; these submissions acknowledged that in principle expanded producer responsibility and enhanced recycling options are good, but indicated that they had concerns about practical issues that may be involved in implementing the changes.

Of those who urged the government to expand EPR programs even further than what was proposed in the consultation paper, all advocated the inclusion of additional materials in EPR programs. The most common materials or products that members of the public recommended for inclusion in EPR programs were:

- Polystyrene foam, particularly foam used for dock flotation (n=16);
- Industrial, Commercial, and Institutional (ICI) generated waste and recyclables (n=8); and
- Mattresses and soft furnishings (n=4).

“...Extend EPR to packaging-like products (straws, utensils, bags, reusable containers, etc.). These products are problematic for consumers to recycle – we try to avoid many of the packaging-like items listed or reuse them if possible and then place them in the blue box, hoping they are recyclable. As consumers, we don’t know if they are recycled or if they are contaminants...”

“...work needs to be done on recycling in the ICI sector,²⁰ as well as textiles. Right now, the majority of people likely throw away their textiles in the garbage...”

A few submissions (n=4) also highlighted their concerns about the efficacy of EPR programs, due to the perception that many materials collected do not end up being recycled but instead are incinerated or shipped overseas. These submissions recommended changes to the recycling system to end these practices.

Feedback on Changes to the Beverage Deposit-Refund Schedule

Thirty-one submissions spoke to the issue of changes to the beverage container deposit-refund schedule; of these, 23 were supportive, with nine of these submissions encouraging the government to go further still in its beverage container deposit-refund changes. A further seven submissions expressed mixed support or suggestions for modifications to the proposed changes. Only one submission was opposed to the changes.

Public submissions that were supportive of the changes to the bottle deposit rates universally praised the change as being likely to motivate consumers to return their beverage bottles, thus reducing waste of recyclable materials. Among those respondents who encouraged the government to go further with its changes to the beverage container deposit rates, all agreed that 10 cents is likely to be too low to encourage large changes in recycling behaviours, and recommended higher deposit-refund rates. The recommended rates suggested varied, with some suggesting rates as high as \$1 or \$2, but most of these respondents indicated that a 20 or 25 cent deposit rate would be appropriate.

Among those who expressed mixed support, the most prevalent concern identified was the impact of higher deposit rates on low-income households. In particular, expanding deposit-refund rates to include milk and milk-substitute containers was identified as having the potential to cause hardship for some households. Further, two submissions noted that return of containers can be challenging for people living in rural and remote communities, where access to depots and recycling facilities may be limited.

“The deposit system is a brilliant system to encourage recycling and facilitating litter and landfill reduction. I support including as many items as possible in our deposit system even beyond beverage containers. Having a unified deposit amount for all sizes makes good sense as it simplifies the system...”

“...Larger containers might need a bigger incentive than 10 cents. Should someone collecting bottles see larger containers (e.g. wine bottle) and something smaller (e.g. juice box), there wouldn't be as much incentive to collect the wine bottles

²⁰ “ICI” refers to the Industrial, Commercial, and Institutional sector.

since they're heavier and take up more space, may crack etc. if you get the same amount of money for it..."

None of the submissions from the public commented on the proposal to allow refunds to be electronic and paid in an alternative form of cash (e.g. e-transfer, cheque, in-store credit, charitable donation, or similar alternatives), at collection facilities.

Feedback on Reducing Plastics Overall

Few submissions from the public discussed efforts to reduce plastics overall or the issue of national harmonization of recycled content standards. Among the submissions that did discuss overall reduction of plastics (n=13), most discussed a need for a cultural and lifestyle shift among Canadians. Issues identified in these types of comments included common expectations about convenience that need to be re-assessed (e.g. single-serving meal products packaged in plastic, the accessibility of plastic checkout bags), and a need to move to "slower", more sustainable options such as reusable glass containers for beverages, and waste-free bulk shopping options.

"All consumers need to stop using plastics before the manufacturer will discontinue their use of plastics. Sell milk in glass only. Sell coffee, spices, etc. by using potato sack materials...We need to think back to how groceries were purchased 100 years ago. That is the only way to deal with our pollutants!"

"...In my view this is a very serious global problem and BC and Canada needs to set an example on how to eliminate plastic from the environment."

What We Heard from Local Governments, Indigenous Communities and Interested Stakeholders

Summary of Respondents

As mentioned previously, this engagement received a total of 129 written submissions from a variety of groups. These submissions were grouped according to type; a summary of the number of submissions received from each group is provided below.

Table 3: Breakdown of Groups Participating in Submission Process

Impacted Group Type	Number of Submissions Received
Indigenous communities	1
Local governments	53
Businesses and retailers	38
Producers and recyclers*	12
Non-governmental organizations	25
Total	129

*Note: Recyclers refer to organizations and businesses that undertake the work of recycling products, such as bottle depots.

Views on Plastic Packaging Bans

Overall Attitudes towards a Single-Use Plastic Packaging Ban

Attitudes towards single-use plastic packaging bans tended to vary from supportive to mixed. Slightly less than one-half of all submissions that spoke to the overall issue of a single-use plastic packaging ban were supportive (46%), and slightly less than one-half were mixed (48%); 20% of submissions indicated negative views towards single-use plastic packaging bans.²¹

Responses that were supportive of a ban on single-use plastic packaging tended to emphasize two themes: the urgency of the environmental impacts being created by plastic waste, and the effectiveness of bans in preventing that waste from being created in the first place. For example, an Indigenous community indicated majority community support for a ban on all single-use plastic products, not just single-use plastic packaging products. Community members also indicated that they would prefer to see fewer plastics so readily available in the marketplace, in order to encourage reduction in use of plastics and overall plastic waste. The vast majority of supportive submissions came from local governments and from NGOs: 41 of 43 submissions expressing support on a ban came from these two groups.

Among those responses that indicated mixed attitudes towards a single-use plastic packaging ban, one major concern emerged. Both local governments and business and retail interests expressed

²¹ Submissions could voice multiple opinions on issues, and so percentages may add to more than 100%.

concern that banning single-use plastic packaging could result in replacement packaging that has more severe environmental impacts (e.g. using glass containers instead of plastic which are heavier to transport and result in greater greenhouse gas emissions).

Submissions that expressed negative or unsupportive views towards a plastics packaging ban tended to come from businesses and retailers, or plastics producers; 17 of 19 submissions that expressed views opposing the ban on single-use plastic packaging came from these two groups. Concerns raised in these submissions included: the potential net negative environmental impact of a change to non-plastic packaging alternatives; food safety requirements that make plastics the material of choice; and, overall economic competitiveness with other jurisdictions (both within Canada, such as other provinces, and internationally).

Recommendations for a Ban

Types of Bans

Written submissions responded to several questions in the consultation paper regarding how such a ban should be implemented, including details such as what types of bans should be used, what products are priorities to ban, and what level of government should be responsible for the certain bans.

The most popular type of ban identified was a ban on the sale and distribution of types of single-use plastic packaging. Twenty-six submissions explicitly endorsed such a ban type, while only two were opposed. Similar to the support for a ban on single-use plastic packaging generally, submissions that endorsed a ban on sale and distribution emphasized that such a ban would be the most effective way to prevent plastic waste from being created at all.

A disposal ban was favoured by 12 submissions, but opposed by 18. Submissions that favoured a disposal ban tended to focus on the possibility of recycling single-use plastic packaging content and emphasized increasing diversion from landfill to recycling. Among those who opposed a disposal ban, however, the issue of resources was frequently raised, particularly by local governments. It was noted that disposal bans can be challenging and costly to implement, and often download responsibility for waste management away from the producers of the waste to municipalities and taxpayers. Further, some local governments noted that rural and remote regions of the province may not have easy access to recycling facilities, putting local residents in the position of either holding on to their recyclables indefinitely, or illegally dumping them (whether at landfills, in contravention of a disposal ban, or in public spaces).

Priority Items for Banning

One of the topics included in the invitation for submissions was what, if any, items should be a priority for banning under a single-use plastic packaging ban. Forty submissions identified specific items or types of items to be prioritized for a ban. Priority items for banning included:

- Plastic straws (n=28);

- Plastic bags (n=25);
- Polystyrene packaging (n=18);
- Oxo-degradable plastics (n=15);
- Biodegradable or compostable plastics (n=13); and
- Take-out containers, single-use utensils and cutlery (n=12).

Exemptions

Fifty-four submissions discussed exemptions to a ban on single-use plastic packaging. Among those submissions that included discussion of exemptions, nearly all identified reasons for identifying exemptions, rather than specific items to be exempted. The most common considerations or reasons that were considered to be valid for exemptions included medical, health, and disability or accessibility issues. Eleven submissions identified food safety concerns as grounds for exemptions; seven of these submissions came from business and retail groups.

One submission, from an advocacy organization for people with disabilities, responded specifically to the concern that single-use plastic straws would be targeted for banning. This respondent strongly discouraged government not to ban plastic straws, even with exemptions for accessibility needs. This submission noted that most single-use straw alternatives (e.g. those made from silicone, stainless steel or bamboo) do not meet the accessibility needs of some people with disabilities and therefore cannot be substituted if a ban on plastic straws were to come into effect. Further, this respondent noted that making plastic straws available upon request for accessibility needs does not support true accessibility for people with disabilities, as it forces these people to undertake additional effort to have access to the utensils they need, and requires them to “out” themselves as having a disability in order to get access to a straw.

Appropriate Levels of Government to Manage Bans

A large number of submissions touched on the issue of what level of government should be responsible for bans on single-use plastic packaging: 72 submissions addressed this issue. Nine submissions stated that bans should be implemented at the highest level of government possible, to ensure consistency and stability for business and reduce cross-jurisdictional disposal (e.g. residents dumping or recycling their materials in other towns). Five of these nine submissions came from business and retailers.

Forty of the submissions discussed the implementation of bans at the provincial or federal levels. Although there were a variety of views expressed, major trends within the submissions indicated that bans on the production, sale, and/or distribution of specific plastic products were preferable at the provincial or federal level, as it helps to create consistency for businesses and aligns with the environmental protection responsibilities of these levels of government. Some (n=6) local governments indicated that they would like the authority to ban problematic plastics in their communities *in addition to* bans at these higher levels of government, as they believed that

municipal governments would be more flexible and able to respond quickly to plastics that were creating waste issues in their communities. This issue coincided with the concern about a need for clarity on municipal authority, described below.

Thirty-nine submissions addressed the issue of municipal authority over single-use plastic packaging bans; the vast majority of these submissions came from local governments throughout B.C. In these submissions, two themes emerged:

1. A need for clarity on the authority of municipal governments to ban problematic items, given the recent B.C. Supreme Court decision against the City of Victoria Checkout Bag Regulation Bylaw; and
2. The implications that a province-wide *disposal* ban could have on smaller municipalities and regional districts, which may not have the capacity to properly check and filter loads for unacceptable plastics.

Views on More Recycling Options and Extended Producer Responsibility (EPR) Programs

Items for Inclusion in an Expanded EPR Program

The overall sentiment towards inclusion of packaging-like and single-use items in an expanded EPR program was positive. Thirty-eight submissions were supportive, while only 10 were unsupportive, and 27 expressed mixed views; mixed views were defined as being supportive in principle of an expanded EPR program, but alongside identification of practical issues, or the limitations of recycling to reduce material use.

Support for this change came from a variety of groups, including local governments, Indigenous communities, NGOs, plastics producers and recyclers, and retailers and businesses. Mixed responses to this change were largely concerned with three issues:

1. Recycling infrastructure capacity and the challenges that an increase in the return of recyclable materials could create;
2. The limitations of recycling in reducing the use of single-use items, as consumers will continue to purchase single-use items and then recycle them, rather than cut down on their use of the items; and,
3. Concerns about the efficacy of existing EPR programs in B.C. given recent media coverage of recyclable materials being incinerated or shipped overseas.

Similar issues were raised by submissions that were opposed to the change, in addition to two businesses or retailers' groups opposing government intervention in the market.

Few submissions identified specific items to be included in expanded EPR regulations, compared to comments on items for banning. Specific items identified as appropriate for inclusion in an expanded EPR program included:

- Plastic films and soft plastics often used in Industrial, Commercial, and Institutional (ICI) sectors (e.g. plastic pallet wrap, bubble wrap, building and lumber wrap) (n=3);
- Disposable hot and cold drink cups (n=3);
- Plastic cigarette filters (n=2); and
- Polystyrene foam (n=2).

Exemptions

Fourteen submissions addressed packaging-like products or single-use items that should potentially be exempt from the recycling regulations under an expanded EPR scheme. Four of these submissions indicated that no exemptions should be granted – these submissions came from local governments and NGOs. A further six submissions identified exemptions based on health and safety – for example, contaminated building materials, biomedical waste, and plastics required for food safety. Finally, four submissions from plastics producers, retailers and businesses indicated that any plastics that can be reused – even if intended or marketed as a single-use item, like a plastic take-out container or a sandwich bag – should be exempted.

Overall Attitudes towards more Recycling Options and Expanded EPR Programs

A large number of submissions identified adding waste (in particular, packaging) from the Industrial, Commercial, and Institutional (ICI) sector to the Recycling Regulation. Fifty-one submissions – mainly local governments and non-governmental organizations – identified this as a recommendation to the provincial government. Many of the submissions reported that participating in private diversion programs for businesses is largely driven by the market value of diverted materials (i.e. the cost markets are willing to pay for recycled plastics). In situations where the value of those materials is low, ICI waste producers have little incentive to participate in diversion programs as it becomes more costly for them to do so. It was suggested that including ICI materials with a focus on packaging in the *Recycling Regulation* would make diversion a requirement for these businesses, rather than an optional activity.

In general, attitudes towards expanding the EPR program were highly mixed: 47 submissions expressed mixed attitudes towards it, 18 were supportive, and one was negative or unsupportive.

Of the 47 submissions that expressed mixed attitudes towards the proposed expansion of the EPR program, 37 came from local governments. “Mixed attitudes” were defined as expressing some level of support for recycling programs and the principle of recycling materials that cannot be reused, but identified challenges with the implementation of the changes or limitations on the ability of recycling programs to reduce overall use of the targeted materials. Among these submissions, a few commonly expressed concerns or themes emerged:

1. Some local governments and businesses expressed concern that current recycling infrastructure is not equipped to handle an increase in recycling volume that the suggested expansion of EPR would entail, and that significant investment in recycling facilities would be necessary;
2. Making items recyclable does not support a reduction in their use or a move to more sustainable alternatives, and bans on single-use plastic products are preferable to recycling them; and
3. Concerns about the efficacy of the current EPR model in B.C. and the perception that the collection of recyclable materials does not result in them being recycled.

Submissions that were supportive of an expanded EPR program tended to comment on the overall justness or appropriateness of a “polluter pays” principle. Some of these supportive submissions (n=6) also noted that an expanded EPR program would be beneficial to the production of goods made with recycled plastics, as more recycling of products would result in more feed stocks available to plastics manufacturers in B.C.; all six of the submissions that raised this consideration came from organizations that are involved in the production, distribution, and/or recycling of plastic products.

Views on Changes to the Beverage Deposit-Refund Schedule

Uniform 10 cent Deposit on Beverage Containers

Fifty-one submissions commented on the proposed change to make the deposit-refund on all beverage containers a uniform 10 cents. Of these, 18 indicated support, two were unsupportive, and 32 expressed strong support and urged the government to go further by raising the deposit-refund rate even higher.²²

Among those local governments, Indigenous communities and interested stakeholders who indicated support, nearly all supported the idea of a uniform deposit level as it would promote clarity and ease for consumers. Thirty-two respondents disagreed with the deposit level proposed. These submissions suggested that 10 cents was too low to incentivize bottle returns, and a higher level such as 25 cents should be set for all beverage containers instead.

The two submissions that indicated opposition to the proposed change suggested instead that B.C.’s beverage container deposit-refund levels be harmonized with Alberta’s, which are currently set at 10 cents for containers under one litre and 25 cents for containers over one litre.

²² Submissions could voice multiple opinions on issues, and so numbers may add to more than the total number of submissions that commented on an issue.

Addition of Milk and Milk-Substitute Containers to Deposit-Refund Schedule

Fifty-four submissions discussed the proposal to include milk and milk-substitute containers in the deposit-refund schedule. Forty-two submissions indicated support for this proposal, while 14 indicated mixed support or suggestions for modifications to the plan, and one was opposed to the idea.²³

Among the 42 submissions that were supportive of including milk and milk substitute containers in the deposit-refund schedule, the benefit noted by nearly all was that adding a deposit to these containers would incentivize their return and increase recovery rates. A small number of submissions simply voiced their support for the change without expanding on why they supported it or any benefits expected to be seen from the change.

Submissions that indicated mixed support for the proposal identified a few areas of concern for the implementation of such a change. These included:

- Affordability concerns, particularly if the deposit applied to larger “family-sized” milk containers rather than just single-serving milk and milk-substitute beverage containers;
- The ability of households in rural communities to recoup their deposits, as some rural and remote regions of the province do not have easy access to a bottle collection facility; and
- Capacity issues for retailers obligated to accept beverage container returns, as larger gallon-sized milk jugs are bulky and difficult to store.

Non-cash Refund Options

Forty-two submissions addressed the proposal to allow facilities to offer non-cash refund options for beverage container returns. This proposal was largely received positively: 35 submissions were supportive of the idea, and a further seven expressed mixed support. Among those whose attitudes were mixed, the primary concern was that facilities should be required to continue offering cash refunds to those who prefer that payment option, and cash refunds should not be replaced by alternative payment forms. Some of these submissions noted that binners²⁴ may be particularly impacted by this change, and so a requirement that facilities continue to offer cash refunds is necessary to protect this vulnerable group.

Views on Reducing Plastics Overall

Forty-one submissions commented on the topic of B.C.’s participation in creating national recycled content performance standards for post-consumer recycled content and on EPR regulations. Of

²³ Submissions could voice multiple opinions on issues, and so numbers may add to more than the total number of submissions that commented on an issue.

²⁴ A binner is a person “who collects redeemable containers and other things from bins to sustain their livelihood and to divert waste from landfills”; Definition courtesy of <https://www.biddersproject.org/>

these, 31 expressed support, 11 were mixed or suggested modifications to the plan, and two were unsupportive of the plan.²⁵

Among submissions that expressed support for the introduction of national recycled content standards, a number of expected benefits were identified. The most common anticipated benefits of such recycled content standards included:

1. High recycled content standards at the national level would strongly incentivize the design, development, and production of goods that use less virgin plastics and more recycled plastics;
2. Requirements for high levels of recycled content in goods would increase the value of feed stocks (i.e. post-consumer recycled plastics) which would in turn incentivize return rates and reduce the amount of recyclable plastics being dumped, or otherwise lost to create waste in the environment; and
3. This effort being most impactful at the national level, as individual provinces and territories may have economies and plastics supply chains that are too small to effectively implement these changes in a way that can be competitive and cost effective in a global marketplace.

Among those who expressed mixed support, or no support, for nationally harmonized recycled content standards, six identified issues relating to the broader national and/or global markets for recycled plastics, including both supply (e.g. the capacity of other provinces currently to collect and supply sufficient plastic materials to support the production of post-consumer recycled plastic feed stocks) and demand (e.g. the capacity for post-consumer recycled plastics to be priced competitively against virgin plastics in global markets).

A further five submissions expressing mixed or no support indicated that certain plastic product uses are not appropriate for post-consumer content. In some cases, there are health and safety regulations limiting the quality of plastics that can be used for a specific purpose (e.g. food packaging plastics); in others, concerns were raised about the overall reduction in quality of plastics through the recycling process and that recycled plastics can typically only be used for lower-quality purposes when compared to virgin plastics.

Submissions identified some other suggestions related to reducing plastics overall, beyond what was included in the consultation paper. The most common recommendations included:

1. Setting strong targets for both plastic waste diversion and post-consumer recycled content (n=32);

²⁵ Submissions could voice multiple opinions on issues, and so numbers may add to more than the total number of submissions that commented on an issue.

2. Increasing demand for recycled plastic content by including stipulations for such plastic content in its own procurement initiatives (either at the federal or provincial levels) (n=28); and
3. Investing in research and innovation to reduce plastics such as chemical recycling, alternative materials to plastics, and composting technology for biodegradable plastics (n=17).

Additional Views Brought Forward

In addition to the specific questions put forward in the engagement invitation, many submissions from local governments, Indigenous communities and interested stakeholders identified issues to be incorporated into considerations regarding these changes, as well as suggestions for additional or alternative actions that the Province could undertake.

Some of the considerations or issues raised by groups through their submissions included:

- The need for coordination at multiple levels of government (including from disparate ministries such as the Ministry of Health), Indigenous communities, as well as impacted groups such as coastal communities (n=37);
- Recommendations to take a phased-in approach to banning or expanding EPR to packaging-like and single-use plastic items (n=28);
- Recommendations that the Province take a life cycle analysis perspective when considering what types of single-use plastic packaging to ban (n=21); and
- Recommendations to consult with industry on all proposals (n=20).

Further, there were specific actions or policies that some groups recommended that the Province pursue. The most commonly recommended actions or policies included:

- Government support to make packaging-free shopping more accessible (n=34);
- Holding stewards under EPR programs more accountable for recovery rates and the final destination of materials they collect (n=32);
- Using government policy and incentives to emphasize higher levels of the waste reduction hierarchy (redesign of packaging, reusable packaging, reduction of overall packaging) rather than recycling (n=28);
- Government support for research into alternatives to plastics, environmental impacts of plastics, and other studies to support moving away from plastics (n=17); and
- Increasing consumer awareness of how to recycle, what can be recycled, and benefits of recycling (n=17).

Summary

The Engagement Process

The Government of British Columbia is considering a variety of proposed amendments to the Recycling Regulation of the *Environmental Management Act* and as such has collected the following feedback on the proposed changes from local governments, Indigenous communities, interested stakeholders, and the general public:

- 35,397 responses submitted to an online survey;
- 131 email comments and 15 long-form written submissions from the general public;
- 129 formal submissions from local governments, Indigenous communities and interested stakeholders; and
- Transcripts from the question and answer periods from four webinars attended by 142 people including representatives from local governments, businesses and producers, non-governmental organizations and members of the general public.

Plastic Waste as a Priority for Action

British Columbians, local governments, Indigenous communities and a variety of interested stakeholders such as non-governmental organizations and businesses, all recognize the urgent problem posed by plastic waste. While some groups differed on the appropriate approach to the issue, there was broad consensus through this engagement that plastic waste is a major environmental issue that needs addressing.

Bans on Types of Plastic Packaging

Among the general public, there appears to be strong support for considering bans on types of single-use plastic packaging and polystyrene foam packaging: 93% and 94% of the public supported consideration of such bans, respectively. Comments received through emails from members of the public tended to reflect this sentiment and were supportive of bans on types of single-use plastic packaging.

Local governments and interested stakeholders were more likely to differ on their attitudes towards bans. While most local governments and NGOs were supportive of bans in principle, producers, retailers, and businesses were more likely to identify potential challenges to bans on types of single-use plastic packaging and be in favour of broad exemptions for issues such as food safety in grocery stores and restaurants.

Some major concerns were raised by respondents in this engagement that may be taken into consideration for a potential ban on single-use plastics packaging.

First, accessibility issues may need to be taken into account; it was noted that making certain items like straws available on an as-requested basis is not true accessibility, as it requires an effort and disclosure from a person in need of a straw that able-bodied people do not have to make in the same situation.

Second, many local governments and interested stakeholders raised the issue of the *type* of ban that should be implemented. While producers, retailers, and businesses tended to favour a ban on disposal of these plastics, it was noted by many local governments that disposal bans can be difficult to enforce and place an additional burden on municipalities to monitor and deal with such bans. Other respondents preferred a ban on the sale and distribution of single use plastic packaging and products, as such bans are perceived to be more effective in preventing the creation of plastic waste in the first place.

Third, the issue of what level of government should be responsible for bans was raised in many submissions from local governments and interested stakeholders. Many, including most retailers, producers, and businesses, emphasized that they preferred bans at the highest level of government possible (i.e. provincial or federal) in order to support consistency and competitiveness across jurisdictions. Local governments often supported a ban on the sale and distribution of certain single-use plastic products at the provincial level; some wanted, in addition to such bans, the authority for local governments to ban *additional items* that are problematic for their communities. It was noted in these submissions, though, that local governments' authority to implement such bans is currently uncertain; clarification from the Province, particularly regarding the rights and responsibilities of local governments under the *Community Act*, is desired.

Expanded Recycling Programs

A majority of participants in the public engagement survey (55%) indicated that confusion over what is recyclable and what is not, is a barrier to recycling for them. Further, three-quarters of participants in the survey reported that making more items recyclable would help them to recycle more. Submissions from members of the general public appear to support this attitude, with most either supporting an expansion to EPR programs or requesting specific materials be added to EPR programs, and very little opposition to this proposal.

The majority of interested stakeholders who spoke to the issue of an expanded EPR program in their submission expressed mixed support, however many were still supportive of expanding the program to include more items, including single-use plastic products. While those who were supportive of the plan endorsed a "polluter pays" principle as fundamentally fair, those with mixed attitudes tended to raise practical considerations for the program and the limitations of recycling programs in reducing the use of targeted materials.

Some of the practical concerns raised regarding expanding the EPR program included recycling facility capacity to handle an influx of additional materials, and worry that the EPR program is already not effective in handling the current programs as there is a perception that stewards do

not always recycle materials collected. These groups emphasized the need to improve the existing EPR regulation in conjunction with the proposal to expand EPR programs to single-use plastic products and packaging-like products.

While the overall sentiment towards inclusion of packaging-like and single-use plastic items in an expanded EPR program was positive, some submissions noted that increasing EPR programs to collect these items is not a complete solution to the issue of plastic waste, as it does not prevent these waste products from being created in the first place. These submissions recommended focus on higher levels of the waste reduction hierarchy, such as reduction, redesign, replacement, and reuse.

The issue of ICI recyclables was raised in a large number of submissions, particularly from local governments and NGOs. These groups noted that the ICI sector is a large contributor to overall waste in B.C., and the incentive to participate in private diversion programs is waning due to the low market prices obtained for recycled plastics. These groups called for the inclusion of ICI sector waste, in particular packaging, in the *Recycling Regulation*.

Expanded Beverage Container Deposit-Refund System

On the whole, the proposals for change to the beverage container deposit-refund system were the least controversial among all included in the *CleanBC Plastics Action Plan* paper. Among survey participants, 85% supported the creation of a uniform 10 cent deposit on all beverage containers, and 78% supported including milk and milk-substitute containers in the beverage container deposit-refund schedule. Among members of the general public who provided submissions, those that commented on these changes tended to be supportive of a uniform deposit on beverage containers, but several (n=6) suggested that the 10 cent deposit rate was too low and should be increased. Comments on the creation of a deposit on milk and milk-substitute containers, and the offering of non-cash payment options for returns, was not spoken to among submissions from the public.

The vast majority of respondents that commented on the beverage container deposit-refund system were supportive of them. Most agreed that the uniform deposit rate created clarity for consumers, although there were many groups who suggested that a 10 cent deposit may be too low and should be raised to 20 or 25 cents. Support was also strong for the inclusion of milk and milk-substitute containers in the beverage deposit-refund schedule, although some groups did raise the issues of affordability for low-income households and the ability of households in rural and remote regions to return these containers to a depot. Finally, all groups supported the offering of non-cash refund options in principle, although several did emphasize the need to retain a cash refund option at all sites that accept returns.

Reducing Plastics Overall

A large majority of survey participants (86%) reported that they were interested in seeking out products made with post-consumer recycled content, even if that meant paying a little more for the product. This was slightly less than the proportion of participants who reported that plastic waste was a concern for them (94%), but still high overall.

The majority of respondents that provided formal submissions were supportive of efforts to create nationally harmonized standards for post-consumer recycled content. Businesses, retailers, and producers were supportive of this approach as it would lead to consistency across jurisdictions and avoid a “patchwork” of regulations. A number of benefits to the supply chain for recycled plastic content were also noted as likely outcomes of a national standard for post-consumer recycled content in plastic products, such as incentivizing and increasing return rates for recyclable plastic products and the ability of efforts at the national level to be most impactful and likely to be cost competitive in global plastics markets.

Respondents also identified a number of additional efforts that could be made at the provincial or federal levels to support a reduction in plastic waste. Some of these suggestions included: government support to make plastic-free shopping more accessible to consumers, such as refillable beverage containers and use of reusable containers in bulk shopping; encouraging a market for post-consumer recycled content through requirements in its own procurement initiatives; and, government support for research into plastics recycling and plastics alternatives.

Next Steps and Further Information

The CleanBC website, including the original policy consultation paper can be found here: <https://cleanbc.gov.bc.ca/plastics>

Formal submissions submitted by local governments, Indigenous communities, interested stakeholders can be found here: <https://cleanbc.gov.bc.ca/plastics-formal-submissions>

APPENDIX A: SURVEY INSTRUMENT



The Province is considering a range of options to reduce plastic waste and help people in B.C. to use less plastic overall.

Your input is important, and it will help us understand better how these steps might affect you. For more information visit cleanbc.gov.bc.ca/plastics.

This feedback form will take approximately 10 minutes to complete and will be open until September 30, 2019 at 4 pm.

1. How concerned are you about the problem of plastic waste?

- ☐ 1 - Not at all concerned
- ☐ 2 - Slightly concerned
- ☐ 3 - Somewhat concerned
- ☐ 4 - Moderately concerned
- ☐ 5 - Very concerned

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The Ministry's proposal would require companies to take responsibility for many more plastic products and packaging. This would make more single-use plastic items like sandwich bags, 'disposable' plastic cups, straws, and cutlery get recycled.

2. What are some barriers you face when it comes to recycling? (select multiple)

- ☐ I don't have curbside recycling
- ☐ It's inconvenient to go to a recycling depot
- ☐ I'm confused about what is recyclable
- ☐ It's too much effort
- ☐ Other _____

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3. What would help you to recycle more? (select multiple)

- ☐ Clear information about what is recyclable and what isn't
- ☐ Making more products recyclable
- ☐ Knowing what happens to recycled products
- ☐ If it was more convenient
- ☐ Other _____

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Many governments are moving forward with bans on plastic packaging. For example the City of Vancouver has committed to banning plastic straws, foam cups, and foam take-out containers beginning in 2020.

Bans on plastics can impact everyday activities like shopping and eating out. They may require industry to use alternative materials, the costs of which might be passed on to consumers.



4. How important is it to you that the provincial government consider bans -- with appropriate safety, medical, and accessibility exemptions in place – for single-use plastic packaging?

	1 - Not at all important	2 - Slightly unimportant	3 – Neither important nor unimportant	4 - Moderately important	5 - Very Important
Single-use plastic packaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Styrofoam packaging such as foam take-out containers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

--

We're looking to expand the deposit-refund system to cover all beverage containers, and change the refundable deposit to 10 cents for all containers – keeping more single-use containers out of landfills and our waterways.

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5. When Alberta and Oregon raised their bottle deposits to 10 cents, millions more bottles were recycled every year.

Please rate your support for increasing the beverage container refundable deposit fee to 10 cents:

- ☐ 1 - Not at all supportive
- ☐ 2 - Slightly unsupportive
- ☐ 3 - Neither supportive nor unsupportive
- ☐ 4 - Somewhat supportive
- ☐ 5 - Very supportive

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6. Deposit refund systems have the highest recovery rate of all recycling programs. Some products like milk jugs and similar containers currently do not have a deposit.

Do you think milk jugs and other similar containers should have a refundable deposit, even if it means paying 10 cents more at the check-out?

- ☐ 1 - Strongly disagree
- ☐ 2 - Disagree
- ☐ 3 - Neither agree nor disagree
- ☐ 4 - Agree
- ☐ 5 - Strongly agree



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7. A number of products are currently being made from recycled plastic. Recycled content standards would require a minimum content of recycled plastic in new packaging and products.

If you had the choice, how important for you is it to purchase products made with recycled content, even if they might cost you more?

- ☐ 1 - Not at all important
- ☐ 2 - Slightly unimportant
- ☐ 3 - Neither important nor unimportant
- ☐ 4 - Moderately important
- ☐ 5 - Very important

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8. In conclusion, what change would make the biggest difference for you when it comes to reducing plastic waste (for example at home, in the workplace, or in stores or restaurants)?

About You

To get a better understanding about who is responding to this survey, please provide a bit of detail about yourself.

(all questions are optional)

A) What best describes how you responded to this survey.

I am responding as a:

- ☐ Citizen
- ☐ Producer
- ☐ Retailer
- ☐ Recycler
- ☐ Small business owner
- ☐ Local government
- ☐ Non-governmental Organization (NGO)
- ☐ Other _____



B) In what region of B.C. or area do you live?

- ☐ Vancouver Island / Sunshine Coast
- ☐ Lower Mainland / Fraser Valley
- ☐ Thompson/Okanagan
- ☐ Kootenay
- ☐ Cariboo
- ☐ Northwest and North Coast
- ☐ Nechako
- ☐ Northeast
- ☐ Outside B.C.

C) What is your gender?

- ☐ Male gender
- ☐ Female gender
- ☐ Gender diverse

D) Which is your age?

- ☐ Under 18
- ☐ 18 - 39 years
- ☐ 40 - 64 years
- ☐ 65 - 75 years
- ☐ Over 75 years

E) Do you identify as an Indigenous person, that is, First Nations (status or non-status), Métis or Inuit?

- ☐ Yes
- ☐ No

Thank you for your time and input.

APPENDIX B: CODING FRAMEWORKS

Coding Frameworks for Plastics Consultation

<i>Q2_other: What are some barriers you face when it comes to recycling?</i>		
Code Number	Code Name	Description of Code
1	I don't have curbside recycling	Respondent reports that they don't have curbside recycling in their municipality / region, and this creates a barrier to recycling for them.
2	It's inconvenient to go to a recycling depot	Respondent reports that going to a recycling depot to recycle some or all of their recyclables is inconvenient and this creates a barrier to recycling for them.
3	I'm confused about what is recyclable	Respondent reports that they do not have a good grasp of what items are recyclable and which are not. Note that this DOES NOT include comments where respondents are aware of recycling rules but frustrated by the different requirements for different materials.
4	It's too much effort	Respondent indicates that recycling takes too much time or effort to do. Note that comments about the <i>need</i> to clean recyclables should go here, but concerns about contamination by other unclear recyclables put in by others belongs under 12, "Item contamination"
10	Certain items are not recyclable in curbside / private recycling programs	Respondent indicates that certain items are not recyclable either through their curbside program or their condo building / apartment building's private recycling program
11	Certain items are not recyclable at depots	Respondent indicates that local recycling depots do not accept certain recyclables, and this creates a barrier to recycling for them.
12	Items not recyclable in any program	Respondent notes challenges from items that are not recyclable anywhere, including mixed materials, non-recyclable plastics, etc.
13	Item / recycling bin contamination and items going to landfill	Respondent indicates that item contamination creates barriers to recycling items. Contamination may be due to dirty recyclables and/or improper use/sorting in shared recycling bins. Also code comments where response simply identifies concerns about recycling being thrown out, even if it does not specifically identify contamination as the cause.
14	Concern about recycling being sent overseas	Respondent indicates that they have concerns about their recycling being shipped overseas to be recycled
15	Concern that recycled materials don't get used by consumers again	Respondent indicates that they believe most recycled materials don't get used by consumers again anyways, so recycling is not helpful.
16	Insufficient municipal support for volume of recycling	Respondent indicates that recycling programs available to them are insufficient to meet their recycling needs, due to infrequent pickup or small volume limits on recycling pickup.
17	Recycling options outside of home scarce	Respondent indicates that it is difficult to properly recycle items when outside the home, due to limited recycling bins compared to garbage bins.
18	Other	Respondent's comment substantively responds to the question, but cannot be coded to any of the above codes
95	No barriers	Respondent reports having no barriers to recycling
96	Call for reducing plastic use	Respondent's answer calls for reduced use of plastics in everyday life, not a response to the question about barriers to recycling
97	Green waste / composting	Respondent's answer addresses issue of green waste and composting (including lack of options for them to compost), not about plastics
98	Complaint about public cost	Respondent's answer brings up the issue of the cost of recycling programs
99	Unclear meaning or off topic	Respondent's answer is not clear in meaning / could be interpreted multiple ways, or is unrelated to the question

Q3_other: What would help you to recycle more?		
Code Number	Code Name	Description of Code
1	Clear information about what is recyclable and what isn't	Respondent reports wanting better information / more public awareness raising about what items can be recycled and which ones can't
2	Making more products recyclable	Respondent reports that making more types of materials, packaging and products recyclable would increase their recycling
3	Knowing what happens to recycled products	Respondent reports that having a clearer idea of what happens to recycled products would encourage them to recycle more
4	If it was more convenient	Respondent reports that making recycling more convenient (specific ways may vary by respondent) would increase their recycling. This includes the following: increasing convenience of depot-based recycling; increasing the number of items accepted in curbside recycling; and increasing access to curbside recycling at all (some areas do not have it)
10	Raising public awareness of importance of cleaning / avoiding contamination	Respondent reports that making the public more aware of what happens to contaminated recycling would encourage more / better recycling behaviour
11	Financial penalties or incentives aimed at producers / businesses	Respondent suggests financial incentives or penalties to encourage reduction of plastic packaging use at the producer / business level
12	Financial penalties or incentives aimed at end users / citizens	Respondent suggests financial incentives or penalties to encourage greater recycling and / or reduce waste
13	Reduce or ban – all plastics	Respondent suggests a reduction of, or ban on, all plastics
14	Reduce or ban – plastic packaging	Respondent suggests a reduction of, or ban on, plastic packaging
15	Reduce or ban – non-recyclable plastics	Respondent suggests a reduction of, or ban on, non-recyclable plastics
16	More recycling options outside the home	Respondent suggests making recycling options more available at businesses and in public spaces
17	Other	Respondent's comment substantively responds to the question, but cannot be coded to any of the above codes
97	Already recycle fully	Respondent reports that they already recycle, though don't offer any suggestions
98	Compost / green waste	Respondent reports a need for composting / green waste collection to improve their recycling habits
99	Unclear meaning or off topic	Respondent's answer is not clear in meaning / could be interpreted multiple ways, or is unrelated to the question

Q8: What change would make the biggest difference for you when it comes to reducing plastic waste (for example at home, in the workplace, or in stores or restaurants)?

Code Number	Code Name	Description of Code
1	Recycling available at businesses for customers	Respondent identifies a need for making recycling options available to customers at businesses such as restaurants, hotels, coffee shops, etc. Also code for recommendations to require retailers, restaurants, etc. to have in-store recycling options to take back packaging they provide
2	More reusable packaging accepted at retailers and businesses	Respondent identifies a need for allowing customers to use reusable packaging for a wide variety of purposes at retailers e.g., coffee cups, take-out containers, grocery store packaging, etc.
3	Alternatives to plastic packaging at retailers and businesses	Respondent identifies a preference for alternative disposable / compostable single-use packaging options
4	Make all plastics recyclable	Respondent identifies a need to make all plastics recyclable
5	Financial incentives and/or penalties to consumers to reduce use of plastics	Respondent identifies creating financial penalties for end user plastic consumption, and/or financial incentives for consumers to reduce plastic use, recycle plastics (e.g., deposit on plastic containers), etc.
6	Financial incentives and/or penalties to manufacturers / producers / retailers to reduce use of plastics	Respondent identifies creating financial penalties for companies using plastic packaging / plastic in products, and/or financial incentives for companies using alternatives to plastics
7	Encourage recycling among businesses (non-retail)	Respondent identifies businesses and organizations as areas to focus recycling efforts, e.g., regulations on what type of recycling they must use on-site. Note that this code should apply to NON-RETAIL businesses (e.g., offices). If commenting on recycling or plastics use by retailers, restaurants, etc., code elsewhere as 6, 8, 9 etc. as appropriate
8	More recycling options in public spaces	Respondent recommends adding more recycling stations to public spaces to support more recycling. Note that this should be coded only when respondent refers to public spaces like parks and sidewalks. If commenting about recycling options at restaurants, cafes, businesses, etc., code as 1, 7, 8 as appropriate
9	Reduce unnecessary plastic packaging	Respondent identifies needing to reduce unnecessary / excessive packaging as an area for action. NOTE that if the comment identifies pairing excessive packaging with fines or taxes, that should be coded as a 6
10	Ban – select plastics	Respondent suggests banning select plastics (narrower than all single-use plastics)
11	Ban – all single-use plastics	Respondent suggests banning all single-use plastics
12	Ban – all plastic	Respondent suggests banning all plastics entirely
13	Improved curbside recycling	Respondent suggests improving access to curbside recycling and/or making more items recyclable through curbside recycling programs to reduce plastic waste
14	Reduce burden on citizens to recycle	Respondent suggests making recycling easier for individual citizens by doing things like sorting and cleaning at facilities rather than making individuals do it, making recycling depots or drop-offs more available / convenient, etc.
15	Require more post-consumer recycled content in packaging	Respondent suggests regulations or incentives to require packaging to make greater use of recycled materials

Q8: What change would make the biggest difference for you when it comes to reducing plastic waste (for example at home, in the workplace, or in stores or restaurants)?

Code Number	Code Name	Description of Code
16	Clearer information about what is recyclable	Respondent recommends making information more available, easier to find, easier to understand, etc., regarding what can and cannot be recycled
97	Against government intervention / changes	Respondent uses text box to argue against government intervention or changes to support recycling, does not suggest any ways to reduce plastic waste NOTE: if respondent is against government involvement but suggests business- or citizen-led ways to reduce plastic waste, code 1 through 16 as appropriate. This code only applies if respondent ONLY complains about government intervention and does not offer alternatives
98	Already recycle	Respondent says they already recycle, does not actually respond to the question of how to help them reduce plastic consumption
99	Unclear meaning or off topic	Response could be interpreted multiple ways, cannot be made sense of, or is incomplete or not an answer at all

APPENDIX C: SURVEY DATA TABLES

Participant Characteristics and Demographics

Table C1: Participant Type

In what capacity did you respond to this survey?	Frequency	Valid Percent
Public and recyclers ²⁶	33700	96.6%
Business and industry	1019	2.9%
Local government	94	0.3%
Non-governmental organization	72	0.2%
Valid Total	34885	100.0%
Missing	512	-
Total	35397	-

Table C2: Participant Region

In what region of B.C. do you live?	Frequency	Valid Percent
Vancouver Island / Sunshine Coast	13648	39.1%
Lower Mainland / Fraser Valley	13686	39.2%
Thompson / Okanagan	4500	12.9%
Kootenay	1526	4.4%
Cariboo	530	1.5%
Northwest and North Coast	400	1.1%
Nechako	358	1.0%
Northeast	238	.7%
Valid Total	34886	100.0%
Missing	511	-
Total	35397	-

Table C3: Participant Gender

What is your gender?	Frequency	Valid Percent
Male gender	9362	27.0%
Female gender	24721	71.2%
Gender diverse	624	1.8%
Valid Total	34707	100.0%
Missing	690	-
Total	35,397	-

²⁶ Due to apparent confusion among participants regarding the definition of “recycler”, the categories of “general public” and “recycler” were collapsed. Based on review of the data, it appears that some members of the general public identified themselves as recyclers as they participate in their local recycling programs, whereas the intended definition was organizations and businesses that undertake the work of recycling products, such as bottle depots.

Table C4: Participant Age Groups

What is your age?	Frequency	Valid Percent
Under 18	863	2.5%
18 - 39 years	16690	48.0%
40 - 64 years	12536	36.1%
65 - 75 years	3886	11.2%
Over 75 years	781	2.2%
Valid Total	34756	100.0%
Missing	641	-
Total	35397	-

Table C5: Participant Indigenous Identity

Do you identify as Indigenous?	Frequency	Valid Percent
No	33335	96.1%
Yes	1352	3.9%
Valid Total	34687	100.0%
Missing	710	-
Total	35397	-

Overall Survey Responses

Table C6: Concern about Plastic Waste

How concerned are you about the problem of plastic waste?	Frequency	Valid Percent
Not at all concerned	446	1.3%
Slightly concerned	632	1.8%
Somewhat concerned	989	2.8%
Moderately concerned	3527	10.1%
Very concerned	29438	84.0%
Valid Total	35032	100.0%
Missing	365	-
Total	35397	-

Table C7: Barriers to Recycling (Closed-Ended Responses)

What barriers do you face when it comes to recycling?	Frequency	Valid Percent (n=35,397)*
I'm confused about what is recyclable	19,370	54.7%
It's inconvenient to go to a recycling depot	11,873	33.5%
I don't have curbside recycling	3,773	10.7%
It's too much effort	2,629	7.4%

* Respondents were able to select as many responses as they felt were applicable, therefore percentages may add up to more than 100%.

Table C8: Barriers to Recycling (Open-Ended Responses)

What barriers do you face when it comes to recycling?	Frequency	Valid Percent (n=1,952)*
Items not recyclable in any program	452	23.2%
Certain items are not recyclable in curbside / private recycling programs	389	19.9%
Item / recycling bin contamination and items going to landfill	264	13.5%
Other	260	13.3%
Recycling options outside of home scarce	135	6.9%
Certain items are not recyclable at depots	62	3.2%
Insufficient municipal support for volume of recycling	59	3.0%
Concern about recycling being sent overseas	39	2.0%
Concern that recycled materials don't get used by consumers again	10	0.5%
Off-topic: No barriers to recycling [†]	284	-
Off-topic: Call for reducing plastic waste [†]	153	-
Off-topic: Comment about green waste / composting [†]	9	-
Off-topic: Complaint about public cost [†]	23	-
Off-topic: Unclear meaning or does not respond to question [†]	44	-

* Due to the high volume of responses to this question, a random 20% sample of all comments was selected for coding and summary in this table. These counts are not representative of all open-ended comments received in response to this question.

[†] Off-topic comments were not included in the calculation of valid percentages.

Table C9: Needed Support for Recycling (Closed-Ended Responses)

What would help you to recycle more?	Frequency	Valid Percent (n=35,397)*
Making more products recyclable	27,718	78.3%
Clear information about what is recyclable and what isn't	21,005	59.3%
Knowing what happens to recycled products	18,747	53.0%
If it was more convenient	12,837	36.3%

*Participants were able to select as many responses as they felt were applicable, therefore percentages may add up to more than 100%.

Table C10: Needed Support for Recycling (Open-Ended Responses)

What would help you to recycle more?	Frequency	Valid Percent (n=855)*
Other	109	12.7%
Reduce or ban - plastic packaging	87	10.2%
Financial penalties or incentives aimed at producers / businesses	77	9.0%
Reduce or ban - all plastics	68	8.0%
More recycling options outside the home	60	7.0%
Financial penalties or incentives aimed at end users / citizens	45	5.3%
Reduce or ban - non-recyclable plastics	37	4.3%
Raising public awareness of importance of cleaning / avoiding contamination	12	1.4%
Off-topic: Already recycle fully†	68	-
Off-topic: Comment about compost / green waste†	17	-
Off-topic: Unclear meaning or does not respond to question†	30	-

* Due to the high volume of responses to this question, a random 20% sample of all comments was selected for coding and summary in this table. These counts are not representative of all open-ended comments received in response to this question.

† Off-topic comments were not included in the calculation of valid percentages.

Table C11: Support for Considering Bans on Single-Use Plastics

How important is it to you that the provincial government consider bans for: Single-use plastic packaging	Frequency	Valid Percent
Not at all important	1258	3.6%
Slightly unimportant	508	1.4%
Neither important nor unimportant	831	2.4%
Moderately important	3996	11.3%
Very important	28623	81.3%
Valid Total	35216	100.0%
Missing	181	-
Total	35397	-

Table C12: Support for Considering Bans on Styrofoam Packaging

How important is it to you that the provincial government consider bans for: Styrofoam packaging	Frequency	Valid Percent
Not at all important	1023	3.0%
Slightly unimportant	376	1.1%
Neither important nor unimportant	616	1.8%
Moderately important	2756	8.0%
Very important	29776	86.2%
Valid Total	34547	100.0%
Missing	850	-
Total	35397	-

Table C13: Support for Increasing Beverage Deposit Amount to Ten Cents

Please rate your support for increasing the beverage container refundable deposit fee to 10 cents	Frequency	Valid Percent
Not at all supportive	1580	4.5%
Slightly unsupportive	692	2.0%
Neither supportive nor unsupportive	3086	8.8%
Somewhat supportive	4922	14.0%
Very supportive	24713	70.9%
Valid Total	34993	100.0%
Missing	404	-
Total	35397	-

Table C14: Support for Including Milk and Milk-Substitute Containers in the Deposit-Refund Schedule

Do you think milk jugs and other similar containers should have a refundable deposit, even if it means paying 10 cents more at the check-out?	Frequency	Valid Percent
Strongly disagree	1869	5.3%
Disagree	1775	5.0%
Neither agree nor disagree	4037	11.5%
Agree	7054	20.0%
Strongly agree	20263	58.2%
Valid Total	34998	100.0%
Missing	399	-
Total	35397	-

Table C15: Interest in Purchasing Goods with Recycled Content

If you had the choice, how important for you is it to purchase products made with recycled content, even if they might cost you more?	Frequency	Valid Percent
Not at all important	1161	3.3%
Slightly unimportant	706	2.0%
Neither important nor unimportant	2956	8.4%
Moderately important	10607	30.1%
Very important	19573	56.2%
Valid Total	35003	100.0%
Missing	394	-
Total	35397	-

Table C16: Changes Needed to Reduce Plastic Waste

What change would make the biggest difference to you when it comes to reducing plastic waste?	Frequency	Valid Percent
Reduce unnecessary plastic packaging	4,208	23.8%
Alternatives to plastic packaging at retailers and businesses	2,435	13.8%
Ban - select plastics	1,604	9.1%
Ban - all single-use plastics	1,502	8.5%
More reusable packaging accepted at retailers and businesses	1,302	7.4%
Improved curbside recycling	1,201	6.8%
Financial incentives and/or penalties to manufacturers / producers / retailers to reduce use of plastics	1,176	6.6%
Financial incentives and/or penalties to consumers to reduce use of plastics	814	4.6%
Reduce burden on citizens to recycle	756	4.3%
Clearer information about what is recyclable	732	4.1%
Ban - all plastic	551	3.1%
Make all plastics recyclable	372	2.1%
More recycling options in public spaces	303	1.7%
Recycling available at businesses for customers	292	1.7%
Encourage more recycling among businesses (non-retail)	276	1.6%
Require more post-consumer recycled content in packaging	166	.9%
Valid Total*	17,690	100.0%
Off-topic: Against government intervention / changes	19	-
Off-topic: Already recycle	127	-
Off-topic: Unclear meaning or unresponsive to question	827	-

* Due to the high volume of responses to this question, a random 60% sample of all comments was selected for coding and summary in this table. These counts are not representative of all open-ended comments received in response to this question.

Cross-Tabulations: Select Demographic Factors by Select Survey Items

Table C17: Age Group Comparisons

Survey Item	Response Option	What is your age?											
		Under 18		18 - 39 years		40 - 64 years		65 - 75 years		Over 75 years		Total	
		Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %
How concerned are you about the problem of plastic waste?	Not at all concerned	10 _{a,c,d}	1.3%	155 _{a,b}	1.0%	190 _c	1.7%	35 _{b,d}	1.0%	8 _{a,c,d}	1.2%	398	1.3%
	Slightly concerned	12 _{a,b}	1.5%	227 _a	1.5%	247 _b	2.2%	77 _{b,c}	2.2%	11 _{a,b}	1.7%	574	1.8%
	Somewhat concerned	47 _a	5.9%	395 _b	2.6%	376 _c	3.3%	85 _{b,c}	2.4%	10 _{b,c}	1.5%	913	2.9%
	Moderately concerned	158 _a	19.8%	1804 _b	11.9%	978 _c	8.7%	205 _d	5.9%	46 _{c,d}	7.0%	3191	10.2%
	Very concerned	572 _a	71.6%	12537 _b	82.9%	9486 _b	84.1%	3071 _c	88.4%	586 _c	88.7%	26252	83.8%
	Total	799	100.0%	15118	100.0%	11277	100.0%	3473	100.0%	661	100.0%	31328	100.0%
How important is it to you that the provincial government consider bans for: Single-use plastic packaging	Not at all important	35 _{a,c,d}	4.3%	469 _{a,b}	3.1%	488 _c	4.3%	113 _{b,d}	3.2%	21 _{a,c,d}	3.1%	1126	3.6%
	Slightly unimportant	20 _a	2.5%	178 _b	1.2%	210 _{a,c}	1.9%	50 _{a,b}	1.4%	4 _{b,c}	0.6%	462	1.5%
	Neither important nor unimportant	49 _a	6.1%	309 _b	2.0%	302 _c	2.7%	79 _{b,c}	2.3%	13 _{b,c}	1.9%	752	2.4%
	Moderately important	133 _a	16.5%	1896 _b	12.5%	1237 _c	10.9%	295 _d	8.4%	60 _{c,d}	8.8%	3621	11.5%
	Very important	568 _a	70.6%	12313 _b	81.2%	9104 _b	80.3%	2966 _c	84.7%	580 _c	85.5%	25531	81.1%
	Total	805	100.0%	15165	100.0%	11341	100.0%	3503	100.0%	678	100.0%	31492	100.0%
How important is it to you that the provincial government consider bans for: Styrofoam packaging	Not at all important	55 _a	6.9%	433 _b	2.9%	332 _b	3.0%	72 _b	2.2%	13 _b	2.1%	905	2.9%
	Slightly unimportant	28 _a	3.5%	148 _b	1.0%	123 _b	1.1%	43 _b	1.3%	5 _b	0.8%	347	1.1%
	Neither important nor unimportant	61 _a	7.7%	242 _b	1.6%	206 _b	1.9%	54 _b	1.6%	7 _b	1.1%	570	1.8%
	Moderately important	128 _a	16.1%	1192 _b	7.9%	883 _b	8.0%	238 _b	7.2%	59 _b	9.5%	2500	8.1%
	Very important	525 _a	65.9%	13111 _b	86.7%	9530 _b	86.1%	2879 _b	87.6%	538 _b	86.5%	26583	86.0%
	Total	797	100.0%	15126	100.0%	11074	100.0%	3286	100.0%	622	100.0%	30905	100.0%
Please rate your support for increasing the beverage container refundable deposit fee to 10 cents	Not at all supportive	11 _a	1.4%	580 _b	3.8%	627 _c	5.6%	154 _{b,c}	4.4%	23 _{a,b,c}	3.5%	1395	4.5%
	Slightly unsupportive	12 _{a,b}	1.5%	331 _a	2.2%	222 _a	2.0%	42 _b	1.2%	6 _{a,b}	0.9%	613	2.0%
	Neither supportive nor unsupportive	87 _a	10.9%	1538 _a	10.2%	899 _b	8.0%	210 _c	6.1%	43 _{b,c}	6.5%	2777	8.9%
	Somewhat supportive	200 _a	25.0%	2378 _b	15.7%	1448 _c	12.9%	353 _d	10.2%	72 _{c,d}	10.9%	4451	14.2%
	Very supportive	491 _a	61.3%	10309 _b	68.1%	8062 _c	71.6%	2705 _d	78.1%	515 _d	78.1%	22082	70.5%
	Total	801	100.0%	15136	100.0%	11258	100.0%	3464	100.0%	659	100.0%	31318	100.0%
Do you think milk jugs and other similar containers should have a refundable deposit, even if it means paying 10 cents more at the check-out?	Strongly disagree	15 _a	2.1%	624 _b	4.2%	767 _c	6.9%	200 _{c,d}	5.8%	23 _{a,b,d}	3.5%	1629	5.3%
	Disagree	23 _a	3.1%	743 _{a,b}	5.0%	626 _b	5.6%	162 _{a,b}	4.7%	42 _{b,c}	6.5%	1596	5.2%
	Neither agree nor disagree	119 _a	16.3%	2026 _a	13.5%	1106 _b	9.9%	255 _c	7.4%	59 _{b,c}	9.1%	3565	11.5%
	Agree	234 _a	32.0%	3274 _b	21.9%	2027 _c	18.1%	592 _c	17.2%	139 _{b,c}	21.5%	6266	20.2%
	Strongly agree	340 _a	46.5%	8309 _b	55.5%	6669 _c	59.6%	2231 _d	64.9%	385 _{b,c,d}	59.4%	17934	57.9%
	Total	731	100.0%	14976	100.0%	11195	100.0%	3440	100.0%	648	100.0%	30990	100.0%

Survey Item	Response Option	What is your age?											
		Under 18		18 - 39 years		40 - 64 years		65 - 75 years		Over 75 years		Total	
		Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %
If you had the choice, how important for you is it to purchase products made with recycled content, even if they might cost you more?	Not at all important	21 _{a,b}	2.6%	392 _a	2.6%	479 _b	4.3%	136 _{b,c}	3.9%	17 _{a,b}	2.6%	1045	3.3%
	Slightly unimportant	27 _a	3.4%	338 _a	2.2%	226 _{a,b}	2.0%	45 _b	1.3%	10 _{a,b}	1.5%	646	2.1%
	Neither important nor unimportant	118 _a	14.7%	1296 _{b,d}	8.6%	993 _b	8.8%	235 _c	6.8%	37 _{c,d}	5.6%	2679	8.6%
	Moderately important	283 _a	35.3%	4950 _a	32.7%	3250 _b	28.8%	909 _c	26.2%	206 _{a,b,c}	31.3%	9598	30.6%
	Very important	352 _a	43.9%	8152 _b	53.9%	6320 _c	56.1%	2139 _d	61.7%	389 _{b,c,d}	59.0%	17352	55.4%
	Total	801	100.0%	15128	100.0%	11268	100.0%	3464	100.0%	659	100.0%	31320	100.0%

Note: Values in the same row and sub-table not sharing the same subscript are significantly different at $p < 0.05$ in the two-sided test of equality for column proportions. Cells with no subscript are not included in the test. Tests assume equal variances.¹

1. Tests are adjusted for all pairwise comparisons within a row of each innermost sub-table using the Bonferroni correction.

Table C18: Region Comparisons

Survey Item	Response Option	In what region of B.C. do you live?										Cont'd...
		Vancouver Island / Sunshine Coast		Lower Mainland / Fraser Valley		Thompson / Okanagan		Kootenay		Cariboo		
		Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %	
How concerned are you about the problem of plastic waste?	Not at all concerned	167 _{a,b}	1.4%	120 _a	1.0%	82 _b	2.0%	18 _{a,b}	1.3%	7 _{a,b}	1.5%	
	Slightly concerned	241 _a	2.0%	150 _b	1.2%	125 _{c,d}	3.1%	22 _{a,b,c}	1.6%	14 _{a,c,d}	3.0%	
	Somewhat concerned	362 _a	3.0%	310 _a	2.5%	163 _b	4.1%	28 _a	2.1%	21 _{a,b,c}	4.5%	
	Moderately concerned	1201 _a	9.8%	1253 _a	10.0%	450 _{a,b}	11.2%	130 _a	9.7%	61 _{a,b}	13.0%	
	Very concerned	10276 _a	83.9%	10673 _b	85.3%	3191 _c	79.6%	1142 _{a,b}	85.2%	365 _c	78.0%	
	Total	12247	100.0%	12506	100.0%	4011	100.0%	1340	100.0%	468	100.0%	
How important is it to you that the provincial government consider bans for: Single-use plastic packaging	Not at all important	472 _a	3.8%	346 _b	2.8%	205 _c	5.1%	48 _{a,b,c}	3.6%	26 _{a,c,d}	5.6%	
	Slightly unimportant	185 _a	1.5%	160 _a	1.3%	73 _{a,b}	1.8%	17 _a	1.3%	12 _{a,b}	2.6%	
	Neither important nor unimportant	296 _a	2.4%	247 _a	2.0%	137 _{b,c}	3.4%	31 _{a,b}	2.3%	17 _{a,b,c}	3.6%	
	Moderately important	1379 _{a,c}	11.2%	1419 _{a,c}	11.3%	531 _{b,d,e}	13.2%	134 _{a,b}	9.9%	73 _{c,d,e}	15.7%	
	Very important	9995 _a	81.1%	10383 _b	82.7%	3089 _c	76.6%	1118 _{a,b}	82.9%	338 _c	72.5%	
	Total	12327	100.0%	12555	100.0%	4035	100.0%	1348	100.0%	466	100.0%	
How important is it to you that the provincial government consider bans for: Styrofoam packaging	Not at all important	364 _{a,b}	3.0%	309 _a	2.5%	152 _{b,d}	3.9%	38 _{a,b}	2.9%	23 _{b,c,d}	5.1%	
	Slightly unimportant	142 _{a,b}	1.2%	99 _a	0.8%	70 _b	1.8%	11 _{a,b}	0.8%	6 _{a,b,c}	1.3%	
	Neither important nor unimportant	202 _a	1.7%	213 _a	1.7%	104 _{b,c}	2.6%	20 _{a,b}	1.5%	14 _{a,b,c}	3.1%	
	Moderately important	964 _a	8.0%	920 _a	7.4%	402 _b	10.2%	94 _a	7.2%	41 _{a,b}	9.1%	
	Very important	10413 _{a,d}	86.2%	10847 _b	87.6%	3199 _c	81.5%	1151 _{a,b}	87.6%	366 _{c,d}	81.3%	
	Total	12085	100.0%	12388	100.0%	3927	100.0%	1314	100.0%	450	100.0%	
Please rate your support for increasing the beverage container refundable deposit fee to 10 cents	Not at all supportive	541 _a	4.4%	529 _a	4.2%	216 _{a,b}	5.4%	53 _a	4.0%	32 _{a,b}	6.9%	
	Slightly unsupportive	241 _a	2.0%	260 _a	2.1%	74 _a	1.8%	14 _a	1.0%	6 _a	1.3%	
	Neither supportive nor unsupportive	1072 _a	8.7%	1120 _a	9.0%	382 _a	9.5%	102 _a	7.6%	44 _a	9.5%	
	Somewhat supportive	1661 _a	13.6%	1875 _b	15.0%	576 _{a,b}	14.4%	163 _{a,b}	12.2%	57 _{a,b}	12.3%	
	Very supportive	8738 _{a,b}	71.3%	8711 _a	69.7%	2763 _a	68.9%	1007 _b	75.2%	325 _{a,b,c}	70.0%	
	Total	12253	100.0%	12495	100.0%	4011	100.0%	1339	100.0%	464	100.0%	

Survey Item	Response Option	In what region of B.C. do you live?										Cont'd...
		Vancouver Island / Sunshine Coast		Lower Mainland / Fraser Valley		Thompson / Okanagan		Kootenay		Cariboo		
		Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %	
Do you think milk jugs and other similar containers should have a refundable deposit, even if it means paying 10 cents more at the check-out?	Strongly disagree	625 _a	5.1%	647 _a	5.2%	272 _{b,c}	6.8%	53 _a	3.9%	34 _{a,b,c}	7.4%	
	Disagree	605 _{a,c,d}	4.9%	643 _{a,c,d}	5.1%	243 _{a,b}	6.1%	45 _c	3.3%	27 _{a,c,d}	5.9%	
	Neither agree nor disagree	1408 _a	11.5%	1533 _a	12.3%	458 _{a,b}	11.4%	117 _b	8.7%	43 _{a,b}	9.3%	
	Agree	2451 _a	20.0%	2542 _a	20.4%	861 _a	21.4%	240 _a	17.8%	88 _a	19.1%	
	Strongly agree	7155 _a	58.4%	7124 _{a,b,d}	57.0%	2182 _{b,d}	54.3%	895 _c	66.3%	269 _{a,b,c,d}	58.4%	
	Total	12244	100.0%	12489	100.0%	4016	100.0%	1350	100.0%	461	100.0%	
If you had the choice, how important for you is it to purchase products made with recycled content, even if they might cost you more?	Not at all important	412 _a	3.4%	333 _b	2.7%	206 _{c,d}	5.1%	46 _{a,b,c}	3.4%	25 _{a,c,d}	5.4%	
	Slightly unimportant	259 _a	2.1%	238 _a	1.9%	101 _a	2.5%	19 _a	1.4%	15 _a	3.2%	
	Neither important nor unimportant	970 _a	7.9%	1041 _a	8.3%	426 _b	10.6%	102 _a	7.6%	54 _{a,b,c}	11.6%	
	Moderately important	3656 _{a,b}	29.8%	3864 _{a,b}	30.9%	1281 _{a,b}	31.9%	383 _a	28.5%	149 _{a,b}	32.0%	
	Very important	6954 _a	56.8%	7023 _a	56.2%	2001 _b	49.8%	794 _a	59.1%	223 _{b,c}	47.9%	
	Total	12251	100.0%	12499	100.0%	4015	100.0%	1344	100.0%	466	100.0%	

Survey Item	Response Option	In what region of B.C. do you live?							
		Northwest and North Coast		Nechako		Northeast		Total	
		Count	Column %	Count	Column %	Count	Column %	Count	Column %
How concerned are you about the problem of plastic waste?	Not at all concerned	3 _{a,b}	0.9%	4 _{a,b}	1.3%	5 _{a,b}	2.4%	406	1.3%
	Slightly concerned	5 _{a,b,c}	1.4%	5 _{a,b,c,d}	1.6%	13 _d	6.3%	575	1.8%
	Somewhat concerned	11 _{a,b,c}	3.1%	6 _{a,b}	1.9%	18 _c	8.8%	919	2.9%
	Moderately concerned	36 _{a,b}	10.2%	41 _{a,b}	13.0%	37 _b	18.0%	3209	10.2%
	Very concerned	297 _{a,b,c}	84.4%	260 _{a,b,c}	82.3%	132 _d	64.4%	26336	83.8%
	Total	352	100.0%	316	100.0%	205	100.0%	31445	100.0%

Survey Item	Response Option	In what region of B.C. do you live?							
		Northwest and North Coast		Nechako		Northeast		Total	
		Count	Column %	Count	Column %	Count	Column %	Count	Column %
How important is it to you that the provincial government consider bans for: Single-use plastic packaging	Not at all important	11 _{a,b,c}	3.1%	11 _{a,b,c}	3.5%	21 _d	10.2%	1140	3.6%
	Slightly unimportant	3 _{a,b}	0.8%	7 _{a,b}	2.2%	9 _b	4.4%	466	1.5%
	Neither important nor unimportant	7 _{a,b,c}	2.0%	10 _{a,b,c}	3.2%	13 _c	6.3%	758	2.4%
	Moderately important	33 _{a,b,d}	9.3%	38 _{a,b,d,e}	12.0%	41 _e	19.9%	3648	11.5%
	Very important	301 _{a,b}	84.8%	251 _{a,b,c}	79.2%	122 _d	59.2%	25597	81.0%
	Total	355	100.0%	317	100.0%	206	100.0%	31609	100.0%
How important is it to you that the provincial government consider bans for: Styrofoam packaging	Not at all important	5 _{a,b}	1.4%	8 _{a,b,d}	2.6%	15 _d	7.3%	914	2.9%
	Slightly unimportant	3 _{a,b,c}	0.9%	5 _{a,b,c}	1.6%	10 _c	4.9%	346	1.1%
	Neither important nor unimportant	5 _{a,b,c}	1.4%	7 _{a,b,c}	2.3%	12 _c	5.9%	577	1.9%
	Moderately important	34 _{a,b}	9.8%	29 _{a,b}	9.5%	29 _b	14.1%	2513	8.1%
	Very important	299 _{a,b,c}	86.4%	257 _{a,b,c}	84.0%	139 _e	67.8%	26671	86.0%
	Total	346	100.0%	306	100.0%	205	100.0%	31021	100.0%
Please rate your support for increasing the beverage container refundable deposit fee to 10 cents	Not at all supportive	13 _{a,b}	3.7%	9 _a	2.9%	20 _b	9.8%	1413	4.5%
	Slightly unsupportive	9 _{a,b}	2.5%	3 _a	1.0%	12 _b	5.9%	619	2.0%
	Neither supportive nor unsupportive	24 _a	6.8%	30 _a	9.6%	18 _a	8.8%	2792	8.9%
	Somewhat supportive	49 _{a,b}	13.9%	47 _{a,b}	15.0%	35 _{a,b}	17.2%	4463	14.2%
	Very supportive	258 _{a,b}	73.1%	225 _{a,b}	71.7%	119 _c	58.3%	22146	70.5%
	Total	353	100.0%	314	100.0%	204	100.0%	31433	100.0%
Do you think milk jugs and other similar containers should have a refundable deposit, even if it means paying 10 cents more at the check-out?	Strongly disagree	10 _{a,b}	2.8%	15 _{a,b,c}	4.7%	21 _c	10.2%	1677	5.3%
	Disagree	22 _{a,c,d}	6.2%	23 _{b,d}	7.3%	14 _{a,c,d}	6.8%	1622	5.2%
	Neither agree nor disagree	40 _{a,b}	11.3%	31 _{a,b}	9.8%	33 _a	16.1%	3663	11.7%
	Agree	67 _a	18.9%	65 _a	20.5%	42 _a	20.5%	6356	20.2%
	Strongly agree	215 _{a,b,c}	60.7%	183 _{a,b,c,d}	57.7%	95 _d	46.3%	18118	57.6%
	Total	354	100.0%	317	100.0%	205	100.0%	31436	100.0%

Survey Item	Response Option	In what region of B.C. do you live?							
		Northwest and North Coast		Nechako		Northeast		Total	
		Count	Column %	Count	Column %	Count	Column %	Count	Column %
If you had the choice, how important for you is it to purchase products made with recycled content, even if they might cost you more?	Not at all important	10 _{a,b,c,d}	2.8%	11 _{a,b,c,d}	3.5%	17 _d	8.3%	1060	3.4%
	Slightly unimportant	5 _a	1.4%	4 _a	1.3%	9 _a	4.4%	650	2.1%
	Neither important nor unimportant	32 _{a,b}	9.0%	32 _{a,b,c}	10.3%	38 _c	18.5%	2695	8.6%
	Moderately important	116 _{a,b}	32.8%	117 _b	37.6%	68 _{a,b}	33.2%	9634	30.6%
	Very important	191 _{a,b}	54.0%	147 _{b,c}	47.3%	73 _c	35.6%	17406	55.4%
	Total	354	100.0%	311	100.0%	205	100.0%	31445	100.0%

Note: Values in the same row and sub-table not sharing the same subscript are significantly different at $p < 0.05$ in the two-sided test of equality for column proportions. Cells with no subscript are not included in the test. Tests assume equal variances.¹

1. Tests are adjusted for all pairwise comparisons within a row of each innermost sub-table using the Bonferroni correction.

Table C19: Participant Type Comparisons

Survey Item	Response Option	In what capacity are you responding to this survey?									
		Public and recyclers		Business and industry		Local government		Non-governmental organization		Total	
		Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %
How concerned are you about the problem of plastic waste?	Not at all concerned	416 _a	1.2%	13 _a	1.3%	1 _a	1.1%	1 _a	1.4%	431	1.2%
	Slightly concerned	596 _a	1.8%	24 _a	2.4%	0 ¹	0.0%	0 ¹	0.0%	620	1.8%
	Somewhat concerned	955 _a	2.9%	14 _b	1.4%	3 _{a,b}	3.3%	1 _{a,b}	1.4%	973	2.8%
	Moderately concerned	3377 _a	10.1%	84 _a	8.3%	10 _a	10.9%	9 _a	12.7%	3480	10.1%
	Very concerned	28085 _a	84.0%	876 _a	86.6%	78 _a	84.8%	60 _a	84.5%	29099	84.1%
	Total	33429	100.0%	1011	100.0%	92	100.0%	71	100.0%	34603	100.0%
How important is it to you that the provincial government consider bans for: Single-use plastic packaging	Not at all important	1185 _a	3.5%	41 _a	4.0%	2 _a	2.1%	2 _a	2.8%	1230	3.5%
	Slightly unimportant	490 _a	1.5%	12 _a	1.2%	2 _a	2.1%	0 ¹	0.0%	504	1.4%
	Neither important nor unimportant	796 _a	2.4%	16 _a	1.6%	4 _a	4.3%	1 _a	1.4%	817	2.3%
	Moderately important	3835 _{a,b}	11.4%	90 _a	8.9%	11 _{a,b}	11.7%	14 _b	19.4%	3950	11.4%
	Very important	27306 _a	81.2%	856 _a	84.3%	75 _a	79.8%	55 _a	76.4%	28292	81.3%
	Total	33612	100.0%	1015	100.0%	94	100.0%	72	100.0%	34793	100.0%
How important is it to you that the provincial government consider bans for: Styrofoam packaging	Not at all important	960 _a	2.9%	34 _a	3.4%	2 _a	2.2%	3 _a	4.3%	999	2.9%
	Slightly unimportant	362 _a	1.1%	6 _a	0.6%	1 _a	1.1%	0 ¹	0.0%	369	1.1%
	Neither important nor unimportant	599 _a	1.8%	10 _a	1.0%	2 _a	2.2%	0 ¹	0.0%	611	1.8%
	Moderately important	2651 _a	8.0%	58 _a	5.8%	5 _a	5.5%	8 _a	11.4%	2722	8.0%
	Very important	28403 _a	86.1%	889 _b	89.2%	81 _{a,b}	89.0%	59 _{a,b}	84.3%	29432	86.2%
	Total	32975	100.0%	997	100.0%	91	100.0%	70	100.0%	34133	100.0%
Please rate your support for increasing the beverage container refundable deposit fee to 10 cents	Not at all supportive	1484 _a	4.4%	61 _a	6.1%	3 _a	3.2%	1 _a	1.4%	1549	4.5%
	Slightly unsupportive	654 _a	2.0%	26 _a	2.6%	3 _a	3.2%	2 _a	2.9%	685	2.0%
	Neither supportive nor unsupportive	2951 _a	8.8%	90 _a	8.9%	7 _a	7.4%	3 _a	4.3%	3051	8.8%
	Somewhat supportive	4738 _a	14.2%	102 _b	10.1%	10 _{a,b}	10.6%	10 _{a,b}	14.3%	4860	14.1%
	Very supportive	23584 _a	70.6%	728 _a	72.3%	71 _a	75.5%	54 _a	77.1%	24437	70.7%
	Total	33411	100.0%	1007	100.0%	94	100.0%	70	100.0%	34582	100.0%

Survey Item	Response Option	In what capacity are you responding to this survey?									
		Public and recyclers		Business and industry		Local government		Non-governmental organization		Total	
		Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %
Do you think milk jugs and other similar containers should have a refundable deposit, even if it means paying 10 cents more at the check-out?	Strongly disagree	1771 _a	5.3%	58 _a	5.8%	2 _a	2.2%	2 _a	2.8%	1833	5.3%
	Disagree	1717 _a	5.1%	37 _a	3.7%	3 _a	3.2%	1 _a	1.4%	1758	5.1%
	Neither agree nor disagree	3887 _a	11.6%	92 _a	9.1%	13 _a	14.0%	4 _a	5.6%	3996	11.6%
	Agree	6780 _a	20.3%	152 _b	15.1%	19 _{a,b}	20.4%	16 _{a,b}	22.5%	6967	20.1%
	Strongly agree	19260 _a	57.6%	669 _b	66.4%	56 _{a,b}	60.2%	48 _{a,b}	67.6%	20033	57.9%
	Total	33415	100.0%	1008	100.0%	93	100.0%	71	100.0%	34587	100.0%
If you had the choice, how important for you is it to purchase products made with recycled content, even if they might cost you more?	Not at all important	1097 _a	3.3%	37 _a	3.7%	2 _a	2.2%	2 _a	2.8%	1138	3.3%
	Slightly unimportant	675 _a	2.0%	17 _a	1.7%	3 _a	3.2%	0 ¹	0.0%	695	2.0%
	Neither important nor unimportant	2824 _a	8.4%	81 _a	8.0%	9 _a	9.7%	4 _a	5.6%	2918	8.4%
	Moderately important	10226 _a	30.6%	215 _b	21.3%	27 _{a,b}	29.0%	17 _{a,b}	23.6%	10485	30.3%
	Very important	18601 _a	55.7%	659 _b	65.3%	52 _{a,b}	55.9%	49 _{a,b}	68.1%	19361	56.0%
	Total	33423	100.0%	1009	100.0%	93	100.0%	72	100.0%	34597	100.0%

Note: Values in the same row and sub-table not sharing the same subscript are significantly different at $p < 0.05$ in the two-sided test of equality for column proportions. Cells with no subscript are not included in the test. Tests assume equal variances.¹

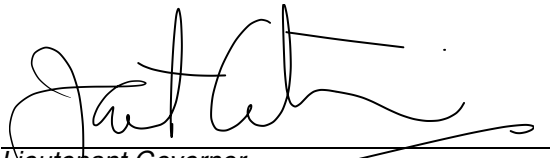
1. Tests are adjusted for all pairwise comparisons within a row of each innermost sub-table using the Bonferroni correction.

ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL

Order in Council No. 370

, Approved and Ordered

June 29, 2020


Lieutenant Governor

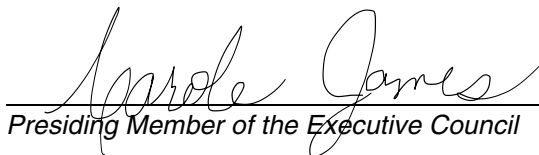
Executive Council Chambers, Victoria

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that

- (a) the Recycling Regulation, B.C. Reg. 449/2004, is amended as set out in the attached Appendix 1,
- (b) section 13 (2) of the Administrative Penalties (*Environmental Management Act*) Regulation, B.C. Reg. 133/2014, is amended by striking out “27 (1) (b) to (d), (2) or (3)” and substituting “27 (1) (b) to (d) or (2) to (4)”,
- (c) effective February 1, 2022, section 1 of Schedule 1 of the Recycling Regulation, B.C. Reg. 449/2004, is amended in the definition of “beverage” by striking out “but does not include milk, milk substitutes, rice milk, soya milk, flavoured milk, infant formulas, meal replacements or dietary supplements”, and
- (d) effective January 1, 2023, the Recycling Regulation is amended as set out in the attached Appendix 2.



Minister of Environment and Climate Change Strategy



Presiding Member of the Executive Council

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section: *Environmental Management Act*, S.B.C. 2003, c. 53, ss. 21 and 139

Other: OIC 995/2004, OIC 426/2014

R20358703

APPENDIX 1

- 1 Section 5 (1) (c) (ii) of the Recycling Regulation, B.C. Reg. 449/2004, is repealed.**
- 2 Section 5 of Schedule 1 is amended**
 - (a) by repealing subsection (1) and substituting the following:**
 - (1) A seller must collect from the purchaser, at the time of sale of a beverage in a container, a deposit in an amount not less than \$0.10. , **and**
 - (b) in subsection (3) by striking out “set out in Table 1” and substituting “required by subsection (1)”.**
- 3 Section 6 of Schedule 1 is amended**
 - (a) by repealing subsection (1) and substituting the following:**
 - (1) A container redemption facility or, subject to subsection (2), a retailer whose premises are not identified in an approved plan, must accept containers for return and pay to the person returning the containers a refund in an amount, per container, not less than
 - (a) \$0.10, or
 - (b) the amount of the deposit collected for those types of containers under section 5 (1), if that amount is more than \$0.10. ,
 - (b) in subsection (5) by striking out “cash refund” and substituting “refund”, and**
 - (c) by adding the following subsection:**
 - (6) A refund owing under subsection (1) is payable as follows:
 - (a) the refund must be paid in cash if
 - (i) requested by the person returning the containers, and
 - (ii) the person accepting the containers is a container redemption facility or a retailer whose premises are not identified in an approved plan, and has staff to collect and redeem containers;
 - (b) if paragraph (a) does not apply, the refund may be paid by another method.
- 4 Section 2 of Schedule 2 is amended**
 - (a) by striking out “and” at the end of paragraph (a) (x),**
 - (b) by adding “and” at the end of paragraph (b), and**
 - (c) by adding the following paragraph:**
 - (c) empty containers for the products described in paragraphs (a) and (b).
- 5 Section 3 (1) of Schedule 2 is amended by adding “, and includes empty containers for those products,” after “(Canada)”.**

6 *Section 4 of Schedule 2 is amended by adding “, and includes empty containers for this gasoline” after “container”.*

7 *Section 5 of Schedule 2 is repealed and the following substituted:*

Pharmaceutical product category

5 (1) In this section, “**drug**” has the same meaning as in the *Food and Drugs Act* (Canada), except without reference to animals or paragraph (c) of that definition.

(2) The pharmaceutical product category consists of

(a) all unused or expired drugs except

(i) unused or expired drugs from a hospital, as defined in section 1 of the *Hospital Act*, or the office of a medical practitioner,

(ii) contact lens disinfectants,

(iii) antidandruff shampoo or products,

(iv) antiperspirants,

(v) antiseptic or medicated skin care products,

(vi) sunburn protectants,

(vii) mouthwashes, and

(viii) fluoridated toothpastes, and

(b) empty containers for the drugs to which paragraph (a) applies.

8 *Section 1 (2) (b) of Schedule 5 is repealed and the following substituted:*

(b) bound reference books, literary books and text books.

APPENDIX 2

1 *Schedule 5 of the Recycling Regulation, B.C. Reg. 449/2004, is repealed and the following substituted:*

SCHEDULE 5

PACKAGING AND PAPER PRODUCT CATEGORY

Packaging and paper product category

1 The packaging and paper product category consists of all of the following:

(a) packaging;

(b) packaging-like products as described in section 2;

(c) paper as described in section 3;

(d) single-use products as described in section 4.

Packaging-like products

- 2** (1) For the purposes of this Schedule, the following are packaging-like products, unless excluded under subsection (2), if ordinarily disposed of after a single use or short-term use, whether or not it could be reused:
- (a) food containers;
 - (b) foil and wraps;
 - (c) bags;
 - (d) boxes;
 - (e) objects purchased by or supplied to consumers expressly for the purpose of protecting, containing or transporting commodities or products.
- (2) Health, hygiene or safety products that, by virtue of their anticipated use, could become unsafe or unsanitary to recycle are excluded.
- (3) For greater certainty, nothing in this section is intended to limit the scope of the definition of “packaging” in the Act.

Paper

- 3** (1) For the purposes of this Schedule, the following are paper unless excluded under subsection (2):
- (a) flyers;
 - (b) brochures;
 - (c) booklets;
 - (d) catalogues;
 - (e) telephone directories;
 - (f) newspapers;
 - (g) magazines;
 - (h) paper fibre;
 - (i) paper used for copying, writing or any other general use;
 - (j) paper of any other description.
- (2) The following are excluded:
- (a) paper products that, by virtue of their anticipated use, could become unsafe or unsanitary to recycle;
 - (b) bound reference books, literary books and text books.

Single-use products

- 4** (1) For the purposes of this Schedule the following are single-use products unless excluded under subsection (2):
- (a) a product that is ordinarily disposed of after a single use or short-term use, whether or not it could be reused;
 - (b) without limiting paragraph (a), the following products, if the product is ordinarily disposed of after a single use or short-term use, whether or not it could be reused:
 - (i) straws and items used to stir beverages;

- (ii) utensils, plates, bowls and cups;
 - (iii) party supplies.
- (2) Health, hygiene or safety products that, by virtue of their anticipated use, could become unsafe or unsanitary to recycle are excluded.

1 INTRODUCTION

Historically, local and Indigenous governments and taxpayers have carried the burden of waste management costs with little incentive for producers to either provide consumers with convenient recycling options or produce more durable and easily recyclable packaging and products.

Since 2004, B.C. has regulated many products through Extended Producer Responsibility (EPR) under the [Recycling Regulation](#)¹ (the regulation). EPR requires producers (manufacturers, distributors and retailers) of designated products to take responsibility for the life cycle of their products, including collection and recycling. This shifts the responsibility from local and Indigenous governments and taxpayers to the producers and consumers of products.

By making regulated producers accountable, EPR programs reduce waste by incentivizing producers to design products that are durable and more recyclable in order that material and components can be recovered for future use instead of going to disposal. EPR is one of the key pillars that supports a circular economy approach to waste management where resources are continually conserved and reused as raw materials. Although B.C. is the North American leader with over 20 EPR programs already in place, more can be done to support B.C. communities and protect the environment.

Expanding Recycling and Recovery

By regulating even more products, EPR can further reduce local and Indigenous governments' waste management costs, make recycling more accessible for consumers with province-wide collection networks, grow B.C. recycling businesses, incent innovation, and create job opportunities.

The ministry is asking for feedback on adding more products to the Recycling Regulation to be recovered and recycled by producers, including:

- Mattresses
- Moderately hazardous products
- Electronic and electrical products and batteries
- Packaging and paper products beyond residential sources

The [CleanBC Plastics Action Plan](#)², released in 2019, received significant feedback from local governments, Indigenous groups and a range of stakeholders expressing a desire to expand EPR. To find out more, see the [Plastics Action Plan What We Heard Report](#)³.

While many products are already covered by EPR, given B.C.'s successful experience, we are now ready to do more and will develop a multi-year strategy, including further outreach, on proposed priorities. Through the release of this Intentions Paper, B.C. is engaging on expanding EPR by including more products under the regulation and other waste reduction policy approaches to ensure that these items are managed responsibly.

Instructions on how to provide comments are provided on the last page of this Intentions Paper and should be submitted by November 20, 2020.

¹ Recycling Regulation - http://www.bclaws.ca/civix/document/id/complete/statreg/449_2004

² CleanBC Plastics Action Plan - https://cleanbc.gov.bc.ca/app/uploads/sites/436/2019/08/CleanBC_PlasticsActionPlan_ConsultationPaper_07252019_B.pdf

³ Plastics Action Plan What We Heard Report - <https://cleanbc.gov.bc.ca/plastics>

2 RECYCLING REGULATION

The regulation sets out the requirements for EPR in B.C., giving producers the flexibility to find efficient and innovative ways to meet regulated outcomes that prevent waste disposal, improve recycling, and support reuse and resource recovery. Producers often come together to form agencies that operate recycling programs on their behalf.

Producers are also responsible for managing and funding their recycling programs, leading to cost-effective business decisions and market-driven solutions. These costs can be covered directly by producers or passed along to consumers through product pricing or applying an additional charge, such as an “eco-fee”.

Reuse, recycling, and remanufacturing creates more jobs than traditional waste disposal and supports a resource-efficient economy⁴. Regulating the management of post-consumer products leads to increased material recovery rates from waste streams, creating economies of scale to better support B.C.’s growing recycling sector and secondary markets. There are substantial economic and environmental benefits from EPR programs operating in B.C. A report commissioned by the ministry in 2016⁵, found that EPR in B.C. created over 900 jobs, and in one year: the value of recovered materials was over \$46 million; 160,000 tonnes of material was diverted from landfill; and greenhouse gas emissions were reduced by over 200,000 tonnes (CO₂e).

3 EXPANDING RECYCLING AND RECOVERY

New products and packaging are added to the regulation through the addition of new or amended Schedules and associated Product Categories. The ministry is currently evaluating the opportunity to add more products through changes to regulation. These products could include:

- Adding mattresses and foundations as a new product category.
- Expanding the residual product category to include more moderately hazardous products, such as single-use propane canisters.
- Expanding the electronic and electrical product category to include more items, such as electric vehicle batteries.
- Expanding the packaging and paper product category beyond residential sources.

3.1 New Schedule for Mattresses

Every year in B.C., approximately 200,000 used mattresses and box springs are recycled by local and Indigenous governments, recycling businesses, and retailers, with inconsistent levels of material recovery depending on how and where they are processed. Though highly recyclable, the large size of mattresses makes them challenging and expensive to manage, costing up to \$40 per unit to recycle. In more remote and rural regions of B.C. where the cost of recycling is too high and in certain urban areas

^{4/5} Assessment of Economic and Environmental Impacts of Extended Producer Responsibility Programs Operating in B.C. - https://www2.gov.bc.ca/assets/gov/environment/waste-management/recycling/recycle/rel-res/2014_assessment_of_economic_environmental_impacts_of_extd_producer_responsibility_programs_bc.pdf

where storage space is limited, mattresses are still being landfilled. Mattresses in landfills damage machinery and take up landfill space costing local governments up to \$340,000 annually in landfill costs alone. Having producers take responsibility for mattresses would provide convenient, free collection services to residents and businesses, replacing the patchwork of recycling options with province-wide coverage.

Jurisdictions in the United States have seen success by regulating producer responsibility for mattresses, which is credited for helping to grow their mattress recycling sector. The recycling infrastructure to manage mattresses is already in place in B.C. with capacity to process more. Adding a new Schedule within the regulation would ensure more consistent standards for recycling all the materials found in mattresses (and foundations or box springs). Most are made of steel, wood, fabric, and foam, while other types such as air mattresses, and camping pads are comprised of plastics. Although regulating other furniture is not part of this consultation, producer responsibility or alternative policy approaches for these items may be considered in the future.

Supporting local and Indigenous governments and British Columbians with more recycling

- Disposal fees and transportation challenges are major reasons why residents illegally dump their used mattresses in alleyways and wilderness areas.
- In Metro Vancouver alone, approximately 10,000 mattresses are abandoned each year, costing municipalities up to \$1.5 million to manage.

Questions:

- Do you have comments or suggestions on the intention to add mattresses and foundations to the regulation?
- Are there exemptions to this new product category that you believe should be considered?

3.2 Update Existing Schedules and Product Categories

3.2.1 Schedule 2 - Residual Product Category

Most products in the Residual Product Category are intended to be used or consumed; however, when households and businesses have residual amounts of product, safe recycling and disposal options are needed. Although many products are already regulated and responsibly managed by producers, including paint, solvents, gasoline, pesticides, pharmaceuticals, and other products, there are gaps in the regulation. Safe management is needed for a broad range of other problematic products, as well as the containers that may be contaminated. These products may include:

- Compressed gas in canisters - fuel and helium
- Fire extinguishers
- Pool and spa chemicals
- More pest control and rodenticides
- Fertilizer and weed control
- Automotive additives and touch-up paint
- More paint, sealers and adhesives
- Bear spray and flares
- Veterinary medicine for pets
- Medical syringes

Unregulated products have resulted in high waste management costs to local and Indigenous governments, and unsafe disposal, such as pool chemicals causing landfill fires and fuel canisters being illegally dumped in curbside recycling, parks, and at marinas. One B.C. regional district reported that the

safe collection and recycling of unregulated materials, such as these, costs approximately \$400,000 each year. Capturing more materials will ensure producers safely manage these products and reduce costs for local and Indigenous governments.

Developing clearly defined product categories in the regulation that capture a broad range of product types will be complicated. Other jurisdictions have also faced challenges when classifying residual products in a manner that allows consumers, retailers and collection facility staff to easily understand what is regulated. For this reason, this consultation provides the opportunity to make suggestions on defining product categories that are comprehensive but remain user-friendly.

Supporting B.C. Businesses

Product Care Recycling, an EPR agency representing obligated producers that safely recycles and manages paint and other regulated wastes (pesticides, gasoline) invested approximately \$9 million to build and operate a modern facility in Delta with 34 employees.

One option to identify products intended for regulation is to use existing warning symbols required on product labels – flammable, corrosive, toxic (poison), and explosive. However, within the residual product category we will also need to capture additional products that are not labelled with these warning symbols on the packaging, but consumers generally consider hazardous and require proper disposal. For example, mineral spirits and furniture strippers may be formulated with different chemicals resulting in different labeling requirements.

Questions:

- Do you have comments or suggestions on the intention to regulate more product types?
- What product types should be prioritized for regulation?
- Do you have comments or suggestions on how to clearly define/classify product categories in the regulation that are user friendly?
- Are there product types you believe should be exempt from the regulation, beyond products such as cleaners that are intended for use down the drain?

3.2.2 Schedule 3 – Electronic and Electrical Product Category

From flashlights to fridges, most consumer electronic and electrical products, along with batteries and lightbulbs, are already regulated in B.C. and managed responsibly by producers. However, the rapid adoption of new trends and emerging technology has led to gaps in product coverage, such as e-cigarettes, vapes, motorized yard decorations, large drones, photovoltaic (solar) panels, and electric vehicle batteries.

Modernizing to keep up with trends

The growing inconsistency between regulated and unregulated products causes confusion for consumers and retailers, adds waste management costs for local and Indigenous governments, and creates inequitable requirements for the producers of similar products. Streamlining the regulation will help eliminate regulatory gaps and provide for better oversight.

B.C.'s experience has demonstrated that legally obligating producers drives proper management and responsible recycling. For example, regulated producers use recycling facilities in B.C. that adhere to leading safety and environmental standards for processing electronic and electrical products. This level

of oversight and diligence is also needed for managing batteries used in new products/applications, including everything from singing balloons and light-up shoes to golf carts and cars. Comprehensive battery management is needed to safeguard workers from fire risks associated with improper disposal in the garbage, residential curbside recycling, or the scrap metal industry.

The intention is to regulate additional electronic and electrical products as well as items that are used with these products, including electrical cords and printer cartridges. Consideration will also be given to exempting products, such as escalators or elevators and other large-scale fixed installations, that may be better managed through alternative policy approaches. Regulated producers in B.C. currently operate nine programs for electronic and electrical products under Schedule 3, covering thousands of products. For more information please visit the B.C. [Electronics and Electrical Recycling](#)⁶ website.

Supporting CleanBC - Electric vehicle batteries, charging equipment, and solar panels

The CleanBC plan and initiatives are supporting the use of electric vehicles, charging equipment, and solar (photovoltaic) systems, which will also necessitate safe reuse and recycling systems for when they are no longer functional.

Electric Vehicle Batteries

Many hybrid and electric vehicles on the road are nearing end-of-life and require safe disposal. However, unlike other vehicle components that are already regulated and responsibly managed by producers, including lead-acid batteries, tires, oil, and antifreeze, a reliable province-wide electric vehicle battery recycling system is not yet developed to meet current demand and anticipated growth. Approximately 50,000 electric vehicles are already on the road in B.C. and by 2040 all new light-duty cars and trucks sold in B.C. will be [Zero Emission Vehicles](#)⁷.

Electric vehicles use specialized batteries that range in weight and chemistry, making them challenging to safely handle and manage – a B.C. recycling company reports that these batteries are labour intensive and costly to process, with over 100 different configurations to date. Vehicle producers are continually redesigning batteries for better performance. Under producer responsibility, recycling costs are reflected in the vehicle producers' design and manufacturing choices, providing an incentive to make batteries that are easier to disassemble for recycling and reuse in applications such as residential and commercial energy storage in communities that may need back-up power. With emerging technologies being developed globally, this opportunity may further support reuse of electrical vehicle batteries in B.C.

Supporting B.C. Businesses

B.C.'s recycling companies have become leaders in processing waste electronics and batteries for recycling. These companies improve safety, protect our environment, and create jobs in B.C. Currently, producer responsibility programs support four facilities located in Delta, Chilliwack and two in Trail.

This has resulted in:

- Over \$13.2 million invested in technology, equipment and infrastructure.
- Over 150 jobs, with many entry level workers gaining valuable skills and training.

⁶ B.C. Electronic and Electrical Recycling - <https://www2.gov.bc.ca/gov/content/environment/waste-management/recycling/extended-producer-responsibility/electronics-and-electrical>

⁷ B.C. Zero-Emission Vehicles Act - <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/clean-transportation-policies-programs/zero-emission-vehicles-act>

Producers need to safely manage their batteries and ensure that the responsibility and costs do not default to local and Indigenous governments and vehicle dismantlers. Over time, there will also be a greater need to help B.C.'s residents and businesses properly manage charging stations at their end of life. For more information on electric vehicles and charging stations refer to the [CleanBC - Go Electric Program](#)⁸.

Solar Technology

Solar technology has a broad range of uses from camping equipment and household rooftop panels to freestanding off-grid power generation systems. Although solar panels are recyclable, producers need to establish collection and recycling programs for homeowners and communities, particularly rural and remote, that otherwise will have limited options to divert from disposal. The recycling industry may benefit from our proximity to Washington State, where producers will be launching their reuse and recycling programs next year.

Questions:

- Do you have comments or suggestions on the intention to regulate more electronic and electrical products, including batteries?
- What product types should be prioritized for regulation?
- Are there product types you believe should be exempt from the regulation and may be better managed through alternative policy approaches?

3.2.3 Schedule 5 - Packaging and Paper Product Category

Residential packaging and paper products

In 2014, B.C. led the nation by being the first province to make producers fully responsible for managing residential packaging and paper products. Being first required a lot of work, with extensive consultation and collaboration taking place with numerous stakeholders. Today, producers successfully operate an efficient province-wide recycling system that collects and manages over 186,000 tonnes of material each year. Most materials are collected through curbside programs, from multi-family residence, or a network of more than 200 recycling depots across B.C. Most beverage containers are managed under the deposit-refund system with different regulatory requirements.

Supporting B.C. Businesses

[Recycle BC](#)⁹, a producer-funded agency, collects 41% of all plastic packaging from the residential stream, while nationally the collection rate of all plastic packaging is estimated to be 23%¹⁰. Additionally, more than 98% of plastics collected by the Recycle BC program, remain in B.C., with a local end-market in Metro Vancouver.

⁸ CleanBC - Go Electric Program - <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/clean-transportation-policies-programs/clean-energy-vehicle-program>

⁹ Recycle BC - <https://recyclebc.ca/about-recyclebc/>

¹⁰ Economic Study of the Canadian Plastic Industry, Markets and Waste - http://publications.gc.ca/collections/collection_2019/eccc/En4-366-1-2019-eng.pdf

Transitioning from the patch work of local and Indigenous government funded programs to a standardized system has improved the supply of clean recycled plastics for re-manufacturing. As a result, B.C. businesses have invested in infrastructure and processing capacity, with more materials continuing to be recycled here, while recycling programs across the rest of North America have been heavily impacted by diminishing export markets.

Packaging and paper products beyond residential sources

Currently, packaging and paper products beyond the residential stream are independently managed and not obligated under the regulation. There are a number of different sectors where these products are found, such as office buildings, warehouses, stadiums, grocery stores and food services, institutions, and agricultural applications. To inform any future decision making, we need to better understand how these products are diverted from landfills for urban and rural areas, and the recycling rates for the broad range of different material types generated from these sectors - collectively referred to as the Industrial, Commercial and Institutional (ICI) sector.

Through the CleanBC Plastics Action Plan engagement process, local governments, Indigenous Nations and a range of stakeholders expressed a desire to expand EPR to include ICI generated waste and recyclables. These groups noted that the ICI sector is a large contributor to overall waste in B.C.

While packaging and paper products from the ICI sector is not regulated under EPR legislation in North America, the European Union has developed a Packaging and Packaging Waste Directive mandating members meet targets for recovery and recycling of all packaging waste. To date, Austria, Netherlands, Belgium and Germany, have passed laws requiring producers, predominantly of industrial and commercial packaging, to fund collection, sorting and recycling. In Germany, for example, producers are responsible for collecting and managing materials at restaurants, hotels, hospitals, educational facilities, sports stadiums, cinemas, and museums.

The ICI sector is complex and may require a measured, phased approach that considers the diversity of the sector. For example, waste diversion from the backend of a grocery store in the greater Vancouver area is very different than waste diversion from a remote mining site. When policy tools, such as extended producer responsibility, are evaluated, it will be important to consider what this may look like for the sub-sectors involved and the different management needs and economic impacts. Through this initial consultation, the ministry is soliciting feedback on approaches to ensure greater waste diversion from landfills and better recycling outcomes, along with more information to fully understand the related waste management challenges in B.C. for the ICI sector.

Supporting B.C. Businesses

- B.C. has seen significant investments by recycling businesses, particularly around the residential packaging and paper program.
- In 2014, this induced \$20 million in capital investment, including a new plant to process plastic containers, with a further \$25 million investment in 2020 for enhanced sorting of packaging, cardboard and paper allowing for greater access to local markets.
- The province-wide collection system for packaging and paper has also helped reduce contamination rates, which helps retain the value of materials and allows access to downstream markets.

Questions:

- While EPR for ICI packaging and paper has been suggested by some stakeholders, there are also other approaches that have been advanced for commercial business waste management. Do you have comments or suggestions on EPR or alternative policy approaches that address the need for greater diversion from landfills and to better manage ICI materials?
- Are there sources of ICI waste that should be the primary focus for better management, such as food services, office buildings, or sports stadiums?

4 MARINE DEBRIS IN B.C – END-OF-LIFE MANAGEMENT OF LOST FISHING GEAR

Lost or abandoned fishing gear in the marine environment from commercial fisheries, aquaculture, and recreational fisheries, such as long lines, nets, traps, and floats, is a significant source of marine pollution in B.C. These items harm our marine environment and impact the fishing and tourism industry, threatening the health and economies of coastal communities throughout the province.

Local governments, Indigenous Nations and environmental organizations have long-raised concerns about the need to more effectively manage lost fishing gear found in our coastal waters and shorelines, and as a result, Premier Horgan asked Sheila Malcolmson, Member of the Legislative Assembly of British Columbia for Nanaimo, Special Advisor for Marine Debris Protection and Parliamentary Secretary for Environment to find solutions to the issues of abandoned vessels, marine debris, and marine-sourced plastics. Parliamentary Secretary Malcolmson met with interested parties affected by marine debris including coastal local governments, Indigenous Nations, industry, and environmental organizations, to understand the issue and discuss potential solutions. Based on this ongoing initiative, an initial [What We Heard on Marine Debris in B.C.](#)¹² report was released in February 2020.

Supporting B.C. Communities

While we continue to develop a long-term approach to manage lost fishing gear, B.C. has launched the [Clean Coast, Clean Waters Initiative Fund](#)¹¹.

This helps small ship tour operators, Indigenous Nations, local communities and others participating in a multi-million dollar clean-up of the shores of the central coast, creating jobs and supporting coastal communities as they recover from the COVID-19 economic downturn impacting tourism.

Parliamentary Secretary Malcolmson's work to date shows that abandoned or lost fishing gear presents a unique set of problems not generally encountered when managing recovery and recycling programs for used fishing gear and other more consumer-facing products. As a result, solving these challenges may require different solutions for the different types of fishing gear and marine debris including multiple and complementary policy approaches. Given the complex and unique challenges associated with managing lost fishing gear, this Intentions Paper builds upon Parliamentary Secretary Malcolmson's initial engagement work by providing further opportunity for a broad range of interested stakeholders to provide feedback on approaches to improve fishing gear collection and management.

¹¹ Clean Coast, Clean Waters Initiative Fund - <https://news.gov.bc.ca/releases/2020ENV0045-001613>.

¹² What We Heard on Marine Debris in B.C. - https://www2.gov.bc.ca/assets/gov/environment/waste-management/zero-waste/marine-debris-protection/marine_debris_what_we_heard_report_final_web.pdf

Question:

- Do you have comments or suggestions on policy approaches to better manage fishing gear?

5 ASSURING COMPLIANCE

The ministry promotes compliance among regulated producers by ensuring they are aware of their regulatory requirements resulting from any changes to the regulation. Compliance promotion will be consistent with past outreach efforts, which included developing and sharing information and educational materials with regulated parties and industry associations.

The ministry's approach to assuring compliance includes a range of tools and actions from written advisories to administrative monetary penalties. Compliance and enforcement is informed by the [Compliance Management Framework](#)¹³ and [Compliance and Enforcement Policy and Procedure](#)¹⁴, which considers the compliance history for the regulated party and the significance of the impact from the non-compliance occurrence.

6 IMPLEMENTATION

The Ministry of Environment and Climate Change Strategy welcomes your input regarding potential products for inclusion in the Recycling Regulation, or other policy initiatives to minimize waste. The ministry will review all consultation comments and feedback to inform the development of a multi-year strategy, including further outreach on proposed priorities, see below.

Question:

- To help inform the development of the multi-year strategy, do you have comments or suggestions on what product categories outlined in this Intentions Paper should be prioritized for regulation?

All comments received through webinars, meetings, mail or email by November 20, 2020 will be compiled for review by ministry staff.

Please visit the [B.C. Extended Producer Responsibility](#)¹⁵ website for more information and the online [Intentions Paper Feedback Form](#)¹⁶. Any future updates will also be posted to this website.

¹³ Compliance Management Framework - https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/reporting/reporting-documents/environmental-enforcement-docs/compliance_mgmt_framework.pdf

¹⁴ Compliance and Enforcement Policy and Procedure - https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/reporting/reporting-documents/environmental-enforcement-docs/ce_policy_and_procedure_2018.pdf

¹⁵ B.C. Extended Producer Responsibility - <https://www2.gov.bc.ca/gov/content/environment/waste-management/recycling/extended-producer-responsibility/recycling-regulation>

¹⁶ Intentions Paper Feedback Form - <https://feedback.engage.gov.bc.ca/574734?lang=en>

7 PROVIDING FEEDBACK

Please submit comments to the ministry by November 20, 2020.

The ministry welcomes comments on the information and proposals outlined in this Intentions Paper, and has provided the following opportunities for feedback:

- By completing the online [feedback form](#)
- Email your comments to: ExtendedProducerResponsibility@gov.bc.ca
- Mail your comments to:
Ministry of Environment and Climate Change Strategy –
Recycling Regulation Amendments
PO Box 9341 Stn Prov Govt
Victoria, BC V8W 9M1

The ministry will conduct a series of webinars in October, 2020. The webinars will review the information contained in this Intentions Paper and provide an opportunity to ask questions and provide comments. If you are interested in participating in a webinar, please contact the email: ExtendedProducerResponsibility@gov.bc.ca

All comments received through webinars, mail or email by November 20, 2020 will be reviewed before developing an outreach strategy, amending the regulation, or pursuing other policy approaches.

All submissions will be treated with confidentiality by ministry staff and contractors when preparing consultation reports. Please note, however, that all submission with opinions and identifiers could be made public if a Freedom of Information request is made under the *Freedom of Information and Protection of Privacy Act*.

Thank you for your time and comments.