



The Case for Reform: British Columbia Must Regulate Single-Use Plastics

A submission to Premier John Horgan and Minister George Heyman

An ELC Clinic report prepared for: Kids for a Plastic Free Canada

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In addition to this report, the ELC has produced two other reports on addressing plastic pollution:



“Seven reforms to address marine plastic pollution” (Victoria:

Environmental Law Centre, April 2017) online:

http://www.elc.uvic.ca/wordpress/wp-content/uploads/2018/04/2017-01-11_National-Marine-Plastics-Strategy-FINAL.pdf



A National Strategy to Combat Marine Plastic Pollution: A Blueprint for Federal Action (Victoria: Environmental Law Centre, April 2018)

http://www.elc.uvic.ca/wordpress/wp-content/uploads/2018/04/2017-01-11_National-Marine-Plastics-Strategy-FINAL.pdf

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SUMMARY OF RECOMMENDATIONS

RECOMMENDATION 1

The Province of British Columbia should enact laws and policies regarding single-use plastic waste that establish a fundamental paradigm shift. The new laws and policies should accord with the Waste Management Hierarchy and follow this order of relative priority:

1. Avoid unnecessary single-use items
2. Reduce single-use items
3. Re-use items whenever possible
4. Recycle

RECOMMENDATION 2

The Province of British Columbia should:

- Develop provincial standards for compostable single-use items ensuring that they are fully biodegradable if littered in the natural environment;
- Ensure that any standards and certifications for compostability are aligned with provincial composting infrastructure; and
- Ensure that compostable single-use items are collected and managed through an Extended Producer Responsibility program that covers the residential and commercial sectors as well as materials from the public realm.

Until the Province establishes such standards and certification for truly “compostable” and “biodegradable” plastics, such plastics should not be exempted from the broad single-item plastic prohibitions proposed.

RECOMMENDATION 3

The Province of British Columbia should establish a comprehensive single-use item reduction strategy. The strategy should include a broad ban on at least three separate categories of products:

- Single-use carrier plastic bags at checkout (accompanied by a fee charged for substituted paper bags);
- Plastic straws, plastic utensils, and plastic drink accessories such as stirrers and drink plugs (from vendors of food and drink); and
- Polystyrene foam cups and take-out containers for prepared food and beverages.

RECOMMENDATION 4

The Province of British Columbia should:

- **Require businesses to have reduction plans for disposable cups and disposable food containers (both plastic and paper);**
- **Restrict the default use of disposable cups for in-house beverages;**
- **As far as non-plastic disposable utensils are concerned, ban the routine distribution of disposable utensils made from all materials (including paper, bamboo, etc.), limiting distribution to situations where the customer requests them;**
- **Act to change the take-out paradigm: Encourage, support and facilitate systems that help retailers provide for convenient and practical re-use of take-out containers; and**
- **Require vendors to charge a fee for every disposable cup provided.**

RECOMMENDATION 5

The Province of British Columbia should act to create a society-wide partnership to transition away from the throw-away society. The Province should:

- **Invest in collaborative initiatives with the public, universities, retail businesses, entrepreneurs, scientists, and engineers to explore practical and innovative methods to replace single-use plastic items;**
- **Encourage innovative technologies and systems, pilot programs, and civil society collaboration;**
- **Support public education programs to educate consumers on what they can do to aid the transition; and**
- **Carefully consult, consider and support affected businesses to assist in the transition away from unnecessary and harmful waste.**

RECOMMENDATION 6

The Province of British Columbia should substantially increase the deposit required for beverage containers.

1. Introduction

Canadians strongly support the regulation of single-use plastics. A recent CBC poll showed that nine out of 10 Canadians are concerned about the impact of plastic waste on the environment—and 82% believe that the government should do more to deal with the problem.¹ Similarly, 86% of Vancouver residents recognize the importance of reducing single-use items.²

Fortunately, government leaders are responding. Last December, the House of Commons unanimously passed a resolution calling for a national plastics strategy that would, among other things, deal with single-use plastics.³ The Government of Canada followed up by pledging to ban harmful single-use plastics as early as 2021.⁴ The Canadian Council of Ministers of Environment has now approved in principle a Canada-wide Strategy on Zero Plastic Waste, with implementation to be implemented by all appropriate jurisdictions.⁵

In British Columbia, the Union of BC Municipalities passed a 2018 resolution calling on the Province to establish a single-use item reduction strategy.⁶ These Mayors and Councillors of BC municipalities have also unanimously voted for a province-wide ban on plastic shopping bags, and approved a resolution asking the Province to pass laws to reduce disposable plastic packaging.⁷ Vancouver City Council unanimously voted to ask the Province to adopt a comprehensive

¹ Luke Denne, “82% of Canadians urging government action to tackle plastic pollution: CBC poll” (5 April 2019), online: *CBC News* <<https://www.cbc.ca/news/business/marketplace-poll-on-plastics-1.5084301>>.

² NRG Research, Public Opinion Poll for City of Vancouver, as cited in City Staff Presentation to Standing Committee of Council on City Finance and Services, April 24, 2019 slide show, slide #9.

³ See CBC News, “B.C. MP celebrates ‘tremendous’ victory as plastics pollution motion passes House” (5 December 2018), online: <<https://www.cbc.ca/news/canada/british-columbia/b-c-mp-celebrates-tremendous-victory-as-plastics-pollution-motion-passes-house-1.4934361>>. See the following for the role of Kids for a Plastic Free Canada in getting this motion passed: Gord Johns and Murray Rankin, “Comment: MPs’ motion important step toward eliminating plastic pollution” (22 December 2018), online: *Times Colonist* <<https://www.timescolonist.com/opinion/op-ed/comment-mps-motion-important-step-toward-eliminating-plastic-pollution-1.23555257>>. For the role of the ELC in this successful initiative, see: Jack Knox “PM’s plastics band rooted at UVic” (13 June 2019), online: *The Daily Courier* <http://www.kelownadailycourier.ca/opinion/article_e8098fce-8e2c-11e9-9a4a-475f5edfb242.html>.

⁴ Justin Trudeau, Prime Minister of Canada, “News Release: Canada to ban harmful single-use plastics and hold companies responsible for plastic waste” (10 June 2019), online: <<https://pm.gc.ca/en/news/news-releases/2019/06/10/canada-ban-harmful-single-use-plastics-and-hold-companies-responsible>>.

⁵ Government of Canada, “Zero plastic waste: Canada’s actions” (modified 26 July 2019, accessed 13 September 2019), online: <<https://www.canada.ca/en/services/environment/pollution-waste-management/zero-plastic-waste/canada-action.html>>. Also see: City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject: *Single-Use Item Reduction Strategy By-laws – Consultation Update*, April 16, 2019 at pp. 5-6. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

⁶ City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject of Single-Use Item Reduction Strategy By-laws – Consultation Update, April 16, 2019 at pp. 5-6 and 11. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

⁷ CTV Vancouver, “Municipal leaders call for provincial ban on plastic bags” (13 September 2018), online: <<https://bc.ctvnews.ca/municipal-leaders-call-for-provincial-ban-on-plastic-bags-1.4093722>>. Union of British Columbia Municipalities, “2018 UBCM Resolutions” (accessed 30 April 2019) at Resolution B29 at 116 (PDF p 46), online: <<https://www.ubcm.ca/assets/Resolutions~and~Policy/Resolutions/2018%20UBCM%20Resolutions%20Book.pdf>>.

province-wide single-use item reduction strategy.⁸ The federal New Democratic Party has called for a single-use plastic ban by 2022.⁹

Similarly, jurisdictions around the world are responding to the groundswell of concern that plastic waste threatens our oceans, our climate and the future of kids. The European Union recently voted overwhelmingly (560 to 35) to ban harmful single-use plastics. And literally hundreds of local, state and national governments have acted to regulate plastic waste. (See below.)

It is time for the Province of British Columbia to act to regulate single-use plastics. Local BC governments such as Vancouver and Victoria have taken laudable action, but such efforts have been frustrated by limited legal jurisdiction, and limited geographical jurisdiction. For example, Victoria's plastic bag bylaw has been struck down by the courts on jurisdictional grounds. And both Victoria and Vancouver bylaws would not affect adjacent municipalities—leading to inconsistent rules for competing businesses in the same metropolitan region.

The British Columbia government needs to take provincial legislative action against single-use plastics, in order to create a strategy that applies uniformly across all of British Columbia. BC must not wait for federal action. The Province has clearer legal jurisdiction than the federal government to take the measures proposed in this report—and there is no guarantee that the federal government will finally deliver on the single-use plastics action it has promised.

It is time for the Government of British Columbia to recognize that our grandchildren's right to a healthy planet takes precedence over our right to heedlessly "consume and throw away." It is time to regulate the profligate waste of single-use plastics. Almost 50 years ago, BC led by instituting Canada's first deposit-refund system for beverage containers.¹⁰ It is time for the Province to again show that type of visionary environmental leadership.

Therefore, we submit the following key recommendations for reform.

⁸ City of Vancouver, Standing Committee of Council on City Finance and Services, Minutes of April 24 and 29 Meetings, p. 7.

⁹ NDP, "NDP: Let's ban single-use plastics by 2022" (12 February 2019), online: <<https://www.ndp.ca/news/ndp-lets-ban-single-use-plastics-2022>>.

¹⁰ In 1970 BC instituted Canada's first beverage container deposit-refund system: see CM Consulting "Who Pays What: An Analysis of Beverage Container Collection and Costs in Canada 2016," online: <<https://www.cmconsultinginc.com/wp-content/uploads/2016/12/WPW2016-FINAL-with-cover.pdf>>, under "Canada".

2. The Plastic Pollution Problem

Global Context

Our current throw-away plastic economy leads to unsightly litter in our communities, the clogging of our stormwater systems and the overfilling of our waste bins and landfills. Perhaps more important, the wasteful use of plastic consumes vast amounts of oil and gas and threatens the world's climate. Finally, this waste is a major cause of the mounting pollution crisis in our waterways and oceans.

The plastics problem becomes ever more urgent. The demand for plastics doubled in the last 20 years—and is expected to *double again* in the next 20 years.¹¹ If the issue of plastic waste is not addressed, the accelerating use and production of plastics could spell disaster for our oceans and our climate.

A fundamental issue is that the “throw-away” plastics economy is a colossal profligate waste of resources. An estimated 95% of plastic value is lost to the economy after only a single use.¹² And this unnecessary waste of plastics necessitates never-ending production of *new* plastics. Currently, plastics-related industry consumes 7-8% of the world's oil and gas production.¹³ By 2050 experts estimate that the plastics industry overall could be consuming 20% of total world oil production—and 15% of the global annual carbon budget.¹⁴ It is now widely recognized that reducing plastic waste is an essential part of the fight against global climate change.¹⁵

Another key issue is that far too many plastics end up in the ocean, where they are wreaking havoc. Over a six-week period, one group of volunteers collected over 10 tonnes of plastic from just 13 kilometres of British Columbia's coastline.¹⁶ Almost 10,000 tonnes of plastic debris

¹¹ World Economic Forum, “The New Plastics Economy: Rethinking the future of plastics” (January 2016), online: <<http://newplasticseconomy.org/report-2016>>, at p 7. See also: PlasticsEurope, *Plastics – the Facts 2016*, at p 33, online: <<http://www.plasticseurope.org/cust/documentrequest.aspx?DocID=67651>> and Jessica Midbust et al., “Reducing Plastic Debris in the Los Angeles and San Gabriel River Watersheds” (April 2014), at p 10, online: <http://www.bren.ucsb.edu/research/2014Group_Projects/documents/Bren-Group-Project-Thesis-Reducing-Plastic-Debris-in-the-Los-Angeles-and-San-Gabriel-Riv_000.pdf>.

¹² World Economic Forum, “The New Plastics Economy: Rethinking the future of plastics” (January 2016), at 7, online: <<http://newplasticseconomy.org/report-2016>>.

¹³ Plastics consume 4% of the world's oil and gas production, and an additional 3-4% of world oil and gas is used for plastics manufacture: Jefferson Hopewell, Robert Dvorak and Edward Kosior, “Plastics recycling: challenges and opportunities” (2009) 364:1526 *Philosophical Transactions of the Royal Society B*, online: <<http://rstb.royalsocietypublishing.org/content/364/1526/2115>>. For a discussion of economic impacts of marine plastics, see United Nations Environment Programme, *Marine Litter Legislation: A Toolkit for Policymakers* (2016), at p 3, online (PDF): <http://apps.unep.org/publications/index.php?option=com_publication&task=download&file=012253_en>.

¹⁴ World Economic Forum, “The New Plastics Economy: Rethinking the future of plastics” (January 2016), online: <<http://newplasticseconomy.org/report-2016>>, at p 22.

¹⁵ The European Union has projected that its single-use plastic ban will avoid the emission of 3.4 million tonnes of CO₂. See: European Commission, “Single-use plastics: Commission welcomes ambitious agreement on new rules to reduce marine litter” (19 December 2018), online: <http://europa.eu/rapid/press-release_IP-18-6867_en.htm>.

¹⁶ Randy Shore, “Volunteers keep waves of plastic debris out of landfills” (28 October 2018), online: *Vancouver Sun* <<https://vancouver.sun.com/news/local-news/plastic-debris-arrives-in-waves-volunteers-send-ocean-waste-for-new-packaging-by-the-tonne>>.

enter the Great Lakes annually.¹⁷ Globally, up to 20 million tons of debris enters the world's oceans every year.¹⁸ Single-use plastic items such as: bags; bottles; caps; lids; straws and stirrers; food containers; and wrappers all find their way to the ocean, carried by urban runoff, wind, sewage and careless people.¹⁹ Indeed, single-use plastic items are among the most commonly found items in marine cleanups, even though they tend to have a very short useful life.²⁰ (For example, plastic bags are used for an average of 12 minutes before they become garbage, and a straw's useful life may be less.²¹)

According to UNESCO, currently every square mile of ocean contains 46,000 pieces of floating plastic.²² It is estimated that if trends continue, in 2050 the world's oceans could contain more plastic than fish.²³ As plastic ends up in the ocean, it poses unique risks to marine animals. Marine animals swim into plastic bags and wrapping and can be entrapped or suffocated—or ingest the plastic and die. Plastics can also smother ocean floor habitat and serve as a transport mechanism

¹⁷ According to a Government of Ontario discussion paper discussed in: Allison Jones, "Ontario government proposing ban on single-use plastics" (10 March 2019), online: *Global News* <<https://globalnews.ca/news/5040533/ontario-government-plastics-ban/>>.

¹⁸ The 20 million ton figure comes from Natural Resource Defence Council expert Leila Monroe: "The Oceans, and Job Hunters, Can Benefit from Recycling Boom (Op-Ed)" (14 March 2014), online: LiveScience <<http://www.livescience.com/44098-recycling-boom-benefits.html>>. The UN Environment Program has recently estimated the figure at 20 million tonnes: UN News, "Biodegradable plastics are not the answer to reducing marine litter, says UN" (17 November 2015), online: <<http://www.un.org/apps/news/story.asp?NewsID=52583#.WRtwlmjyuUk>>. However, some sources estimate the volume of plastic debris at around eight million tons annually.

¹⁹ Pathways to the ocean include run-off, stormwater systems, rivers, etc. Sewage effluent also delivers a vast amount of microplastic fibres to the environment from laundering of clothes and textiles. See: Mark Gold *et al.*, "Stemming the Tide of Plastic Marine Litter: A Global Action Agenda," Emmett Institute on Climate Change & the Environment" (2013) 5: Pritzker Brief, at p 3 online:

<https://law.ucla.edu/~media/Files/UCLA/Law/Pages/Publications/CEN_EMM_PUB%20Pritzker_5_Stemming_Tide.ashx/?filedownload=1>. Also see Jean-Pierre Desforges *et al.*, "Ingestion of Microplastics by Zooplankton in the Northeast Pacific Ocean," *Archives of Environmental Contamination and Toxicology*, 2015 Oct; 69(3):320-30, Abstract.

²⁰ United Nations Environment Programme, "Single-Use Plastics: A Roadmap for Sustainability" (2018), online: <https://wedocs.unep.org/bitstream/handle/20.500.11822/25496/singleUsePlastic_sustainability.pdf?isAllowed=y&sequence=1>.

²¹ Center for Biological Diversity, "The Problem with Plastic Bags" (accessed 13 September 2019), online: <https://www.biologicaldiversity.org/programs/population_and_sustainability/sustainability/plastic_bag_facts.html>.

²² United Nations Educational, Scientific and Cultural Organization, "Facts and Figures on Marine Pollution" (2017), online: <<http://www.unesco.org/new/en/natural-sciences/ioc-oceans/focus-areas/rio-20-ocean/blueprint-for-the-future-we-want/marine-pollution/facts-and-figures-on-marine-pollution/>>.

²³ Compared by weight. See: World Economic Forum, *The New Plastics Economy: Rethinking the future of plastics* (January 2016), online: <<http://newplasticseconomy.org/report-2016>> at p. 14 and Graeme Wearden "More plastic than fish in the sea by 2050, says Ellen MacArthur" (19 January 2016), online: *The Guardian* <<https://www.theguardian.com/business/2016/jan/19/more-plastic-than-fish-in-the-sea-by-2050-warns-ellen-macarthur>>.

for invasive species.²⁴ Already, every year plastic litter kills one million seabirds and 100,000 turtles and marine mammals such as dolphins, whales and seals.²⁵

A further problem is that when most plastic degrades, it does not biodegrade, but instead simply breaks down into smaller tiny particles called ‘microplastics,’ which are generally invisible and impossible to clean up.²⁶ Studies have found that 90% of plastics found in the open ocean are not large visible pieces of plastic, but are tiny (<5 mm) microplastics.²⁷ Single-use plastics are a major contributor to the growing microplastic problem.²⁸

And microplastic particles have become omnipresent. For example, in the Strait of Georgia, between Vancouver Island and mainland BC, over 3,000 particles of plastic have been found *per cubic metre* of seawater analyzed—with higher densities found in Queen Charlotte Sound.²⁹ Of 16 samples of commercial sea salt recently analyzed from eight different countries, all but one contained plastic particles.³⁰

²⁴ See: Government of Western Australia, Department of Parks and Wildlife, “Marine Park protectors – Facts about marine litter” (25 November 2015), online: <<https://www.dpaw.wa.gov.au/management/marine/marine-parks-wa/398-marine-park-protectors?showall=&start=3>> and UN News Centre, “UN Declares War on Ocean Plastic” (23 February 2017), online: <<https://www.unenvironment.org/news-and-stories/press-release/un-declares-war-ocean-plastic-0>>. See also Mark Gold *et al.*, “Stemming the Tide of Plastic Marine Litter: A Global Action Agenda,” Emmett Institute on Climate Change & the Environment” (2013) 5: Pritzker Brief, at p 3 online: <https://law.ucla.edu/~media/Files/UCLA/Law/Pages/Publications/CEN_EMM_PUB%20Pritzker_5_Stemming_Tide.ashx/?filedownload=1>. And see Jessica Midbust *et al.*, “Reducing Plastic Debris in the Los Angeles and San Gabriel River Watersheds” (April 2014), at pp 32-33, online: <http://www.bren.ucsb.edu/research/2014Group_Projects/documents/Bren-Group-Project-Thesis-Reducing-Plastic-Debris-in-the-Los-Angeles-and-San-Gabriel-Riv_000.pdf>. A description of plastic ingestion killing marine animals is found in *IFL Science*, “For Ocean Animals, ‘Death by Plastic’ Could be Occurring More Frequently” (nd), online: <<http://www.iflscience.com/environment/ocean-animals-%E2%80%98death-plastic%E2%80%99-could-be-occurring-more-frequently/>> and a description of plastics-related whale deaths is at Renaud de Stephani, “As main meal for sperm whales: Plastics debris” *Marine Pollution Bulletin*, Vol 69, Issues 1–2, 15 April 2013, 206-214, online: <<http://www.sciencedirect.com/science/article/pii/S0025326X13000489>>.

²⁵ Government of Western Australia, Department of Parks and Wildlife, “Marine Park protectors – Facts about marine litter” (25 November 2015), online: <<https://www.dpaw.wa.gov.au/management/marine/marine-parks-wa/398-marine-park-protectors?showall=&start=3>>.

²⁶ “Seven charts that explain the plastic pollution problem” (10 December 2017), online: *BBC News* <<https://www.bbc.com/news/science-environment-42264788>>. There are two types of microplastics: primary microplastics and secondary microplastics. Primary microplastics are small plastic particles that are manufactured to be smaller than 1mm and are generally found in cosmetic products and industrial cleaners. Secondary microplastics are plastic particles smaller than 1mm that result from the breakdown of larger plastic debris. See Mark Gold *et al.*, “Stemming the Tide of Plastic Marine Litter: A Global Action Agenda,” Emmett Institute on Climate Change & the Environment” (2013) 5: Pritzker Brief, at pp 3-5, online: <https://law.ucla.edu/~media/Files/UCLA/Law/Pages/Publications/CEN_EMM_PUB%20Pritzker_5_Stemming_Tide.ashx/?filedownload=1>.

²⁷ United States Environmental Protection Agency, “State of the Science White Paper: A Summary of Literature on the Chemical Toxicity of Plastics Pollution to Aquatic Life and Aquatic-Dependent Wildlife” (December 2016), online: <<https://www.epa.gov/sites/production/files/2016-12/documents/plastics-aquatic-life-report.pdf>> at p.10.

²⁸ In addition to single-use plastics, the break-down of other plastic items, such as dock floats, fishing nets and gear, etc. can contribute to the microplastic problem. In addition, large numbers of microplastic fibres are released into the environment when fleece and other synthetics are laundered and laundry waters go down the drain.

²⁹ Jean-Pierre Desforges *et al.*, “Widespread Distribution of Microplastics in Subsurface Seawater in the NE Pacific Ocean,” *Marine Pollution Bulletin*, 79 (2014) 94-99, at pp.94-98.

³⁰ The countries where the salt was gathered included Australia, France, Iran, Japan, Malaysia, New Zealand, Portugal and South Africa. Only one sample from France was plastic-free. See: Michael Allan, “There’s Probably Plastic in Your Sea

Fish, shellfish and mammals are ingesting these microplastics. Zooplankton mistake plastic for food and eat the particles, which then work their way up the food chain. A Vancouver Aquarium study found widespread plastic at the zooplankton level in the Northeast Pacific Ocean.³¹ It is estimated that returning BC adult salmon may be ingesting up to 90 particles of plastic per day.³² Another study of Vancouver Island shellfish found microplastics in every batch of shellfish studied.³³ It is estimated that by 2050, 99% of sea birds will have ingested plastic.³⁴

These tiny plastic particles have the potential to disrupt digestive and reproductive processes and harm animal health.³⁵ A recent review of 101 peer reviewed papers on marine microplastic pollution concluded:

*All of the marine organism groups are at an eminent risk of interacting with microplastics according to the available literature... This type of [microplastic] pollution is ubiquitous and persistent in the world's oceans and openly threatens marine biota.*³⁶

Furthermore, as plastics degrade, they can release carcinogens and endocrine inhibitors and can absorb and concentrate contaminants from the water, such as: PCBs, PAHs, DDT, PBDES, and BPA. In these ways, plastics can expose marine wildlife to toxins.³⁷ Thus, in addition to causing immediate harm to marine wildlife, plastic debris could potentially have long-term harmful

Salt," (8 May 2017), *Hakai Magazine* <<https://www.hakaimagazine.com/article-short/theres-probably-plastic-your-sea-salt>>. See also the study described at Akshat Rathi "Even your sea salt is almost certainly contaminated with plastic" (9 May 2017), online: *Quartz* <<https://qz.com/979101/sea-salt-is-likely-to-contain-microparticles-of-plastic-according-to-a-new-study/>>.

³¹ Plastic was found in one out of every 34 copepods and in one in every 17 euphausiids: Yuliya Talmazan, "Vancouver Aquarium study sounds the alarm about the effects of microplastics in local waters" (30 June 2015), online: *Global News* <<https://globalnews.ca/news/2084785/vancouver-aquarium-study-sounds-the-alarm-about-the-effects-of-microplastics-in-local-waters/>>.

³² Jean-Pierre Desforges *et al.*, "Ingestion of Microplastics by Zooplankton in the Northeast Pacific Ocean," *Archives of Environmental Contamination and Toxicology*, 2015 Oct; 69(3):320-30, Abstract.

³³ Cassandra Lee Murphy, Thesis submitted to Royal Roads University "A Comparison of Microplastics in Farmed and Wild Shellfish near Vancouver Island and Potential Implications for Contaminant Transfer to Humans" (February 2018) at p. 44, online: <https://viurrspace.ca/bitstream/handle/10613/5540/Murphy_royalroads_1313O_10512.pdf?sequence=1&isAllowed=y>.

³⁴ do Sul, J. A. I., & Costa, M. F. (2014). "The present and future of microplastic pollution in the marine environment." *Environmental Pollution*, 185, 352-364, Introduction.

³⁵ "Microplastics: A Threat to BC Marine Ecosystems", Garth Covernton UVic Master's Thesis Discussion, Air and Waste Management Association Technical Luncheon (16 May 2017), Victoria, BC.

³⁶ do Sul, J. A. I., & Costa, M. F. (2014). "The present and future of microplastic pollution in the marine environment." *Environmental Pollution*, 185, 352-364, Introduction.

³⁷ Mark Gold *et al.*, "Stemming the Tide of Plastic Marine Litter: A Global Action Agenda," *Emmett Institute on Climate Change & the Environment*" (2013) 5: Pritzker Brief, at p 5, online: <https://law.ucla.edu/~media/Files/UCLA/Law/Pages/Publications/CEN_EMM_PUB%20Pritzker_5_Stemming_Tide.ashx/?filedownload=1>. Contaminants adsorbed by microplastics include PCBs, PAHs, DDT, PBDES, and BPA: Jean-Pierre Desforges *et al.*, "Widespread Distribution of Microplastics in Subsurface Seawater in the NE Pacific Ocean," *Marine Pollution Bulletin*, 79 (2014) 94-99, at p. 95. Jessica Midbust *et al.*, "Reducing Plastic Debris in the Los Angeles and San Gabriel River Watersheds" (April 2014), at p 34, online: <http://www.bren.ucsb.edu/research/2014Group_Projects/documents/Bren-Group-Project-Thesis-Reducing-Plastic-Debris-in-the-Los-Angeles-and-San-Gabriel-Riv_000.pdf>.

impacts to the entire food chain, including what humans eat.³⁸ There is concern that the presence of these toxins in humans could result in significant health implications.³⁹

Local Impacts—Landfills, Litter, and Taxpayers

In addition to threatening the world's oceans and climate, single-use plastics also fill municipal landfills, foul municipal storm water systems, spread litter across the landscape, cost taxpayers millions to clean up, and cause assorted environmental harms.

For example, a City of Vancouver report states:

Every week, 2.6 million disposable cups⁴⁰ and 2 million plastic bags are thrown in the garbage in Vancouver. Cups and take-out containers make up about 50% of all items collected in public waste bins and are a significant portion of litter on Vancouver streets. Despite their convenience, it costs Vancouver taxpayers \$2.5 million per year to collect these items from public waste bins and to clean up when they become litter.”⁴¹

A 2017 audit of Vancouver's street litter found that 34% of large litter collected was plastic.⁴² The City of Vancouver estimates that 22% of large litter in the city's streets, parks and public places are from cups, lids and sleeves.⁴³ The City also estimates that 9% of items collected in shoreline cleanups are small foam pieces, largely from take-out containers. It further estimates that 3% of shoreline litter is plastic bags—and that 2% of shoreline litter is plastic straws and stirrers.⁴⁴

A City of Victoria report estimated that more than 17 million plastic bags were being distributed by Victoria businesses every year, of which—by one estimate—many thousands may be littered and not collected.⁴⁵

³⁸ Mark Gold *et al.*, “Stemming the Tide of Plastic Marine Litter: A Global Action Agenda,” Emmett Institute on Climate Change & the Environment” (2013) 5: Pritzker Brief, at p 6, online:

<https://law.ucla.edu/~media/Files/UCLA/Law/Pages/Publications/CEN_EMM_PUB%20Pritzker_5_Stemming_Tide.ashx/?filedownload=1>. See also Wright, S. L., Thompson, R. C., & Galloway, T. S. (2013). “The physical impacts of microplastics on marine organisms: a review”, *Environmental Pollution*, 178, 483-492.

³⁹ Melanie Bergmann, Lars Gutow & Michael Klages, *Marine Anthropogenic Litter* (Germany: University of Gothenburg, 2015) at 356.

⁴⁰ Including both plastic and plastic-lined paper cups.

⁴¹ City of Vancouver, “Single-Use Item Reduction Strategy – updated with amendments” (June 2018), at p. xi, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

⁴² Dillion Consulting, *City of Vancouver Street Litter Audit 2017 Results* (November 2017) at p. 7 online: <<https://vancouver.ca/files/cov/street-litter-audit-survey-report-2017.pdf>>.

⁴³ Note that the cups and lids are either plastic or paper with plastic linings.

⁴⁴ City of Vancouver, “Single-Use Item Reduction Strategy 2018-2025: A Priority Action in Zero Waste 2040” (5 June 2018), at 2, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

⁴⁵ Bill Cleverley, “Victoria's plastic bag bylaw upheld by B.C. Supreme Court” (19 June 2018), online: *Times Colonist* <<https://www.timescolonist.com/news/local/victoria-s-plastic-bag-bylaw-upheld-by-b-c-supreme-court-1.23341862>>. According to a City of Victoria report, approximately 4.65% of bags in the EU end up as litter. The Victoria report states: “If similar rates were experienced in the City, more than 780,000 bags would escape collection yearly (based on the 200 per capita rate, above).” City of Victoria, *Single-Use Plastics Retail Bags – Waste Management Review*, by Fraser Work

Clean up of such litter is costly for taxpayers. For example, a US Environmental Protection Agency study estimated that it costs local governments more than \$500 million dollars every year—\$13 per resident—to clean up trash from beaches of 90 towns in Washington, Oregon, and California.⁴⁶ Another California study estimated that California communities spent more than \$428 million annually to clean up and control ocean litter through waterway and beach cleanup, street sweeping, installation of stormwater capture devices, storm drain cleaning and maintenance, manual litter cleanup, and public education.⁴⁷

Single-use plastics strain expensive landfill facilities as well. A City of Vancouver audit showed that approximately 18% of single-family residential waste is made up of single-use plastic, packaging, and plastic film products. The waste profile in Victoria is similar.⁴⁸ This unnecessarily stresses local solid waste management programs.

Thus, it is little wonder that last year British Columbia’s mayors and councillors voted unanimously to endorse a resolution to request that the Province “introduce uniform, province-wide business regulations in relation to disposable plastic packaging to substantially reduce the volume of disposable plastic packaging in local solid waste streams.”⁴⁹

The European Union’s initiative to ban single-use plastic (discussed below) was a response to the European Commission’s finding that more than 80% of marine litter is plastics and the targeted single-use items make up 70% of marine litter.⁵⁰ In implementing its single-use plastics ban, the EU estimated that it will avoid 22 billion euros of environmental damage costs by 2030.⁵¹

(Committee of the Whole Report For the Meeting of May 19, 2016) at p. 12, online:

<<https://www.victoria.ca/assets/Departments/Engineering~Public~Works/Checkout~Bags/Plastic%20bags%20May%202016.pdf>>.

⁴⁶ Barbara Stickel *et al.*, “The cost to west coast communities of dealing with trash, reducing marine debris”, (September 2012), online: <<https://www.coastal.ca.gov/publiced/coordinators/WestCoastCommsCost-MngMarineDebris.pdf>>.

⁴⁷ California Ocean Protection Council and National Oceanic and Atmospheric Administration Marine Debris Program, *California Ocean Litter Prevention Strategy: Addressing Marine Debris from Source to Sea* (June 2018), at p. 38, online: <https://marinedebris.noaa.gov/sites/default/files/publications-files/2018_California_Litter_Strategy.pdf>.

⁴⁸ City of Victoria, *Single-Use Plastics Retail Bags – Waste Management Review*, by Fraser Work (Committee of the Whole Report For the Meeting of May 19, 2016) at p. 7, online: <<https://www.victoria.ca/assets/Departments/Engineering~Public~Works/Checkout~Bags/Plastic%20bags%20May%202016.pdf>>.

⁴⁹ Union of British Columbia Municipalities, “2018 UBCM Resolutions” (accessed 30 April 2019) at Resolution B29 at 116 (PDF p 46), online:

<<https://www.ubcm.ca/assets/Resolutions~and~Policy/Resolutions/2018%20UBCM%20Resolutions%20Book.pdf>>; Bill Cleverley, “B.C. municipalities back Victoria’s call for ban on disposable plastic packaging” (12 September 2018), online: *Times Colonist* <<https://www.timescolonist.com/news/local/b-c-municipalities-back-victoria-s-call-for-ban-on-disposable-plastic-packaging-1.23429349>>.

⁵⁰ European Commission, “Fact Sheet: Single-use plastics: New EU rules to reduce marine litter” (28 May 2018), online: <http://europa.eu/rapid/press-release_MEMO-18-3909_en.htm>.

⁵¹ European Parliament “News Release: Parliament seals ban on throwaway plastics by 2021” (27 March 2019), online: <<http://www.europarl.europa.eu/news/en/press-room/20190321IPR32111/parliament-seals-ban-on-throwaway-plastics-by-2021>>; the text adopted is listed here: <http://www.europarl.europa.eu/doceo/document/TA-8-2019-0305_EN.html>.

Overview of Our Proposed Reform Package

In the submissions below, we develop a number of recommendations to address the single-use plastic problem. First, we address two fundamental waste-reduction principles that must guide a provincial strategy: to give priority to reduction and re-use of items; and to ensure “compostable” plastics are actually compostable.

Then we review what other jurisdictions have done, with a focus on key European Union and North American initiatives—and on the leading roles that the cities of Vancouver and Victoria have played.

The report goes on to recommend that the Province generally prohibit the following key categories of single-use plastic use:

- Single-use carrier plastic bags at checkout;
- Plastic straws, plastic utensils, and plastic drink accessories such as stirrers and drink plugs (from vendors of food and drink); and
- Polystyrene foam cups and take-out containers for prepared food and beverages.

We make this recommendation because these three categories have been identified as some of the highest contributors of unnecessary plastic waste, with a low rate of recycling.⁵² Numerous jurisdictions have already acted to ban the above categories.

However, mere selective bans are not a full solution. They may well just result in other materials replacing plastic and causing new pollution and waste problems. Therefore, this submission incorporates findings from Vancouver’s Single-Use Item Reduction Strategy (discussed below) and recommends that the Province act to:

- Require vendors to reduce the use of all single-use disposable cups and food containers (including those made of paper and other materials); and
- Facilitate systems that enable convenient re-use of in-house take-out cups and food containers.

In order to achieve overall reduction of waste from single-use items, we recommend that the Province act proactively to:

- Establish partnerships with the public, universities, retail businesses, entrepreneurs, scientists, and engineers to explore practical and innovative methods to replace single-use items;

⁵² Lorraine Chow, “10 Most Common Types of Beach Litter Are All Plastic” (27 June 2018), online: *EcoWatch* <<https://www.ecowatch.com/beach-litter-plastics-ocean-conservancy-2581760475.html>>. The top ten items collected during the International Beach Clean Up were: cigarette butts, food wrappers, plastic beverage bottles, plastic bottle caps, plastic grocery bags, other plastic bags, straws and stirrers, plastic takeaway containers, plastic lids, and foam takeaway containers; see also Jenny Griffin and Janaya Wilkins, “Plastic Pollution” (updated 7 August 2019), online: *SLO active* <<https://sloactive.com/plastic-pollution/>>. The top eight items found during beach clean ups were: plastic grocery bags, plastic lids, plastic straws and stirrers, glass beverage bottles, cigarette butts, plastic beverage bottles, plastic bottle caps, and food wrappers; see also Sarah King, “And the Top 5 Plastic Polluters are...” (9 October 2018), online: *Greenpeace* <<https://www.greenpeace.org/canada/en/story/5346/and-the-top-5-plastic-polluters-are/>>.

- Encourage innovative technologies and systems, pilot programs, and civil society collaboration;
- Support public education programs to educate consumers on what they can do to aid the transition; and
- Carefully consult, consider and support affected businesses to assist in the transition away from unnecessary and harmful waste.

3. First Principles: Recycling and “Green” Plastics Cannot be Excuses for Continued Profligate Waste

Obviously, we need to do something about the harm that profligate distribution of single-use plastics creates. However, some argue that a ban on harmful single-use plastics is not necessary because the problem can be addressed in other ways—*e.g.*, with recycling, or by replacing conventional plastics with “compostable” or “green” alternative plastics. These arguments are pipe dreams, as discussed below.

The Problem with Recycling Single-Use Plastics

Recycling plastic is to saving the Earth what hammering a nail is to halting a falling skyscraper. You struggle to find a place to do it and feel pleased when you succeed. But your effort is wholly inadequate and distracts from the real problem of why the building is collapsing in the first place. The real problem is that single-use plastic—the very idea of producing plastic items like grocery bags, which we use for an average of 12 minutes but can persist in the environment for half a millennium—is an incredibly reckless abuse of technology. Encouraging individuals to recycle more will never solve the problem of a massive production of single-use plastic that should have been avoided in the first place.

Matt Wilkins, PhD, *Scientific American*⁵³

Key harmful uses of single-use plastics need to be banned, because recycling is not the solution. First, relatively little plastic is likely to be recycled. As noted by Minister of Environment Catherine McKenna,⁵⁴ currently only about 9% of Canada’s plastic is actually recycled,⁵⁵ while the rest goes into the traditional waste stream.⁵⁶ Furthermore, even *if* these products end up being recycled,

⁵³ Matt Wilkins, “More Recycling Won’t Solve Plastic Pollution” (6 July 2018), online: *Scientific American* <<https://blogs.scientificamerican.com/observations/more-recycling-wont-solve-plastic-pollution/>>.

⁵⁴ Mia Rabson and Michael Tutton, “Provinces, federal government bringing in first step of ‘action plan’ for plastics recycling” (27 June 2019), online: *CBC News* <<https://www.cbc.ca/news/politics/provinces-federal-government-plastics-plan-1.5192802>>.

⁵⁵ Laura Parker, “A whopping 91% of plastic isn’t recycled” (20 December 2018), online: *National Geographic* <<https://www.nationalgeographic.com/news/2017/07/plastic-produced-recycling-waste-ocean-trash-debris-environment/>>.

⁵⁶ This is consistent with figures cited in a City of Victoria report, which states that the portion of plastic bags recycled in US cities runs from 3-12%: City of Victoria, *Single-Use Plastics Retail Bags – Waste Management Review*, by Fraser Work (Committee of the Whole Report For the Meeting of May 19, 2016) at p. 12, online: <<https://www.victoria.ca/assets/Departments/Engineering~Public~Works/Checkout~Bags/Plastic%20bags%20May%202016.pdf>>.

95% of the damage has already occurred before the product is even used—during oil and gas extraction and manufacturing, with their attendant pollution and greenhouse gas releases.⁵⁷

One of the big problems with recycling single-use plastics is that so many plastics are contaminated with food and drink waste.⁵⁸ For example, polystyrene (“Styrofoam”) food containers, plastic straws, utensils, and plastic drink accessories are difficult to recycle as they are usually contaminated by food.⁵⁹ Such contamination can actually **undermine** the recycling of other clean plastics and cost taxpayers enormous sums. For example, each percentage point of recycling contamination costs City of Toronto taxpayers \$600,000 to \$1 million per year⁶⁰

Indeed, City of Toronto officials have documented how well-intentioned recycling of single-serve coffee pods badly contaminates their plastic recycling stream and costs the City enormous sums to manage. As a result, the City has attempted to bar such products from the recycling system.⁶¹ City officials have noted that an audit of coffee pods found in the recycling system found that 97% of pods were improperly cleaned and contained coffee grounds. This contamination caused by the improper recycling of such coffee pods has caused serious problems for the recycling system and imposed significant additional costs on City taxpayers.⁶² Similar problems arise with contamination of plastic and polystyrene foam food and drink containers.

Furthermore, it is expensive and sometime impossible to separate and properly process truly recyclable plastics from non-recyclables.⁶³ This is a labour-intensive and difficult challenge for both municipal recycling systems and those recovering and recycling plastic from the environment.⁶⁴ For example, in its cleanup of British Columbia beaches, Ocean Legacy has found that plastic items

⁵⁷ According to Professor Daniel Hoornweg, former waste management advisor to the World Bank, and professor of energy systems at the University of Ontario Institute of Technology in Oshawa. See: Charles Wilkins, “Canada’s dirty secret” (4 November 2017), online: *Canadian Geographic* <<https://www.canadiangeographic.ca/article/canadas-dirty-secret>>.

⁵⁸ Emily Chung, “Many Canadians are recycling wrong, and it’s costing us millions” (6 April 2018), online: *CBC News* <<https://www.cbc.ca/news/technology/recycling-contamination-1.4606893>>.

⁵⁹ City of Vancouver, “Single-Use Item Reduction Strategy 2018-2025: A Priority Action in Zero Waste 2040” (5 June 2018), at 31, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

⁶⁰ Each percentage point of recycling contamination costs Toronto \$600,000 to \$1 million a year: Emily Chung, “Many Canadians are recycling wrong, and it’s costing us millions” (6 April 2018), online: *CBC News* <<https://www.cbc.ca/news/technology/recycling-contamination-1.4606893>>.

⁶¹ Toronto Solid Waste Management Service Toronto Report PW 28.9 “Review of Single-Serve Coffee Pods”.

⁶² David Rider, “Grounds for a brouhaha?: Keurig, Toronto spar over whether coffee pods belong in blue bin” (22 April 2018), online: *Toronto Star* <<https://www.thestar.com/news/gta/2018/04/20/grounds-for-a-brouhaha-keurig-toronto-spar-over-whether-coffee-pods-belong-in-blue-bin.html>>.

⁶³ Michael Corkery, “As costs skyrocket, more U.S. cities stop recycling” (16 March 2019), online: *New York Times* <<https://www.nytimes.com/2019/03/16/business/local-recycling-costs.html>>.

⁶⁴ See: Earth Institute, “Columbia University’s discussion of the difficulties faced by municipal recycling systems in separating plastics”, online: <<https://blogs.ei.columbia.edu/2012/01/31/what-happens-to-all-that-plastic/>>. Also see: <<https://education.seattlepi.com/plastics-separated-recycled-3530.html>>. For a discussion of related problems facing municipal recycling systems, see pages 37-38 of Meaghan Partridge and Calvin Sandborn, “Seven reforms to address marine plastic pollution” (Victoria: Environmental Law Centre, April 2017) online: <http://www.elc.uvic.ca/wordpress/wp-content/uploads/2018/04/2017-01-11_National-Marine-Plastics-Strategy-FINAL.pdf>.

have commonly lost the resin code numbers necessary to differentiate the recyclable from the non-recyclable.⁶⁵

The simple fact is that many single-use plastic items, especially polystyrene foam and contaminated plastic, will never be recycled on a large scale.⁶⁶ This is particularly true in light of the sea change occurring in the market for recyclable plastics. China and other countries are closing their doors to Canadian recycled materials. In light of this, recycling our way out of the single-use plastic problem becomes ever more impractical.⁶⁷

More fundamentally, it has long been universally recognized that sound waste management should follow a paradigm of the “Three Rs”: reduce, re-use and recycle. Recycling should be a lesser priority than the priority actions of reducing and reusing. As the US Environmental Protection Agency points out: “The most effective way to reduce waste is to not create it in the first place.”⁶⁸ This approach is inherent in the Circular Economy Principle, which has been endorsed by the European Union, the G7, the World Economic Forum, and federal Environment Minister Catherine McKenna.⁶⁹

The City of Vancouver’s Single-Use Item Reduction Strategy is premised on prioritizing reduction and re-use over recycling. The City’s overarching strategic approach is a “Zero Waste Approach” that specifically sets out the relative priority of actions to be taken. And in that hierarchy, **recycling** is the **fourth** priority, after:

- **Avoiding** single-use items;
- **Reducing** single-use items; and
- **Re-using** items whenever possible.⁷⁰

⁶⁵ Plastics are sorted by resin code, the number that indicates the composition of the plastic and determines which materials can be recycled together. When the code is missing, it is difficult to allot the material to the correct sorting pile. In their cleanups Ocean Legacy has found that many hard and mixed plastics are missing these key resin codes: Randy Shore, “Volunteers keep waves of plastic debris out of landfills” (28 October 2018), online: *Vancouver Sun* <<https://vancouversun.com/news/local-news/plastic-debris-arrives-in-waves-volunteers-send-ocean-waste-for-new-packaging-by-the-tonne>>.

⁶⁶ See the discussion of this in the World Economic Forum report, *The New Plastics Economy: Catalysing Action* report, as summarized in Meaghan Partridge and Calvin Sandborn, “Seven reforms to address marine plastic pollution” (Victoria: Environmental Law Centre, April 2017), at pp 37-38, online: <http://www.elc.uvic.ca/wordpress/wp-content/uploads/2018/04/2017-01-11_National-Marine-Plastics-Strategy-FINAL.pdf>.

⁶⁷ Frances Bula, “China’s tough new recycling standards leaving Canadian municipalities in a bind” (8 January 2018), online: *Globe and Mail* <<https://www.theglobeandmail.com/news/national/chinese-ban-on-foreign-recyclables-leaving-some-canadian-cities-in-the-lurch/article37536117/>> and Adam Minter, “Now China refuses to be dumping ground for the world’s waste, where on Earth will it all go?” (9 July 2018), online: *Post Magazine* <<https://www.scmp.com/magazines/post-magazine/long-reads/article/2154105/now-china-refuses-be-dumping-ground-worlds-waste>>.

⁶⁸ United States Environmental Protection Agency, “Reducing and Reusing Basics” (updated 16 October 2018), online: <<https://www.epa.gov/recycle/reducing-and-reusing-basics>>.

⁶⁹ Meaghan Partridge and Calvin Sandborn, “Seven reforms to address marine plastic pollution” (Victoria: Environmental Law Centre, April 2017), at pp. 36-38, online: <http://www.elc.uvic.ca/wordpress/wp-content/uploads/2018/04/2017-01-11_National-Marine-Plastics-Strategy-FINAL.pdf>. Minister McKenna has announced that Canada will host the World Circular Economy Forum in 2020 “Canada to host the 2020 World Circular Economy Forum (4 June 2019), online: *Cision* <<https://www.newswire.ca/news-releases/canada-to-host-the-2020-world-circular-economy-forum-856122504.html>>.

⁷⁰ City of Vancouver, “Single-Use Item Reduction Strategy”, June 5, 2018, p. 10, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

Recycling becomes a priority only after the above three. It is profoundly flawed public policy to prioritize recycling above avoiding, reducing and re-using items.

For the single-use plastics addressed by our recommendations below, waste can be dealt with by:

- Avoiding use of plastic bags, plastic straws, plastic utensils and plastic drink accessories;
- Avoiding use of polystyrene foam cups and take-out containers for prepared food and beverages; and
- Reducing the numbers of take-out cups (both plastic and paper) and re-using cups instead.

Rather than dealing with the problem of waste disposal *after* we create mountains of plastic waste at Tim Hortons or Starbucks or at our office building, we must be more proactive. It is more efficient to deal with the issue at the root -- the use of unnecessary single-use throw-away plastics in the first place. As will be discussed below, the City of Vancouver is taking the lead in applying this “Waste Management Hierarchy” to single-use items in a pragmatic and workable way.

It is important to note that Vancouver City Council unanimously voted to ask the Province to adopt a comprehensive province-wide single-use item reduction strategy,⁷¹ with City staff recommending that the provincial strategy emphasize **reduction and reuse**.⁷²

The solution to the single-use plastic problem must go to the root of the problem. The solution must be proactive and comprehensive, not reactive and piecemeal. As a coalition including the Government of Canada, the Recycling Council of Ontario, and *Canadian Geographic* has stated:

*What we require is a paradigm shift: a complete re-evaluation of our use of this material.*⁷³

Recommendation 1

The Province of British Columbia should enact laws and policies regarding single-use plastic waste that establish a fundamental paradigm shift. The new laws and policies should accord with the Waste Management Hierarchy and follow this order of relative priority:

1. **Avoid unnecessary single-use items**
2. **Reduce single-use items**
3. **Re-use items whenever possible**
4. **Recycle**

⁷¹ City of Vancouver, Standing Committee of Council on City Finance and Services, Minutes of April 24 and 29 Meetings, p. 7.

⁷² City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject of Single-Use Item Reduction Strategy By-laws –Consultation Update, April 16, 2019 at Appendix E. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

⁷³ From *10,000 Changes*, a government and non-government partnership that includes the Government of Canada, the Recycling Council of Ontario, Canadian Geographic and Strutcreative. See: <<https://10000changes.ca/en/about/>>.

The Problem with Exempting “Green” Alternative Plastics

Some argue that a ban on single-use plastics should exempt certain alternative plastics—so-called ‘compostable’ or ‘biodegradable’ plastic. However, these alternative plastics are not a silver-bullet solution to the single-use plastics problem. They should not be exempted from a single-use plastic ban until the following serious issues are fully addressed.

First, if compostable plastics are thrown away as litter, they can have similar impacts on the marine environment as traditional plastics. According to the United Nations Environment Programme, compostable plastics can take just as long as regular plastics to biodegrade in marine environments. And even then, they remain as microplastics and so affect marine animals in the same way as regular plastic.⁷⁴

The UN Environment Programme report concluded:

*...the adoption of plastic products labelled as ‘biodegradable’ will not bring about a significant decrease either in the quantity of plastic entering the ocean or the risk of physical and chemical impacts on the marine environment, on the balance of current scientific evidence.*⁷⁵

Similarly, a City of Vancouver staff report cited the downside of reliance on “biodegradable” bags:

*Adopting any biodegradable bag alternative may not result in a shift to more sustainable habits, and worse, could actually result in more littering due to a common misperception that the bag will degrade more quickly and pose little environmental damage.*⁷⁶

City of Vancouver experts cite research indicating the following problems with compostable plastics:

- *Not designed to break down if littered or in marine environments;*
- *Does not break down quickly enough in most local compost facilities;*
- *[Must be] screened out and disposed;*
- *Contaminates compost and recycling streams;*

⁷⁴ Kimberly Amaral, “Plastics in our Ocean” part of Thesis project for Woods Hole Oceanographic Institution (nd, copyright 1995; accessed 14 September 2019), online:

<<https://www.whoi.edu/science/B/people/kamaral/plasticsarticle.html>>.

⁷⁵ See United Nations Environment Programme “*Biodegradable Plastics and Marine Litter: Misconceptions, Concerns and Impacts on Marine Environments*” (2015), at p 3 (PDF p 7) online:

<[https://wedocs.unep.org/bitstream/handle/20.500.11822/7468/-](https://wedocs.unep.org/bitstream/handle/20.500.11822/7468/-Biodegradable%20Plastics%20and%20Marine%20Litter.pdf)

[Biodegradable Plastics and Marine Litter Misconceptions, concerns and impacts on marine environments-2015BiodegradablePlasticsAndMarineLitter.pdf](https://wedocs.unep.org/bitstream/handle/20.500.11822/7468/-Biodegradable%20Plastics%20and%20Marine%20Litter.pdf)>.

⁷⁶ *Single-Use Plastics Grocery Bags – Waste Management Review (Committee of the Whole Report)* (19 May 2016), Annex A, at 13, available online: <https://businessdocbox.com/Green_Solutions/83634614-City-of-vancouver-waste-audit-2015-data-total-plastic-film-in-single-family-garbage-equals-approximately-10-18.html>.

- *Province regulates what can be accepted in compost facilities; and*
- *Compostable plastic currently not an acceptable material under regulation.*⁷⁷

A key problem is that such “compostable” plastics can be highly problematic if they are put into plastic recycling by mistake. Such plastics can contaminate the regular plastic recycling – and make the other recycled plastics unsaleable.⁷⁸ Thus, if improperly disposed of, they can actually be a risk to the recycling system.

As City of Vancouver staff have noted:

It is challenging for both residents and composting facilities to tell compostable plastics apart from non-compostable plastic. In the process of working to ensure compost quality, plastics of all types will get treated as a "contaminant" and end up being sent to landfill or incinerator.

*The same issues apply to public waste bins and recycling receptacles. There is no way to separate compostable from non-compostable plastics. Compostable plastics and recyclable plastics are two different types of products and mixing one with the other in a recycling stream results in them all needing to go to disposal. Any compostable plastics disposed in public waste bins are sent to landfill. If compostable plastics are placed in public recycling receptacles that contain other types of recyclable plastics, the whole container may end up needing to be disposed as garbage.*⁷⁹

Furthermore, if compostable plastics are thrown into the garbage and landfilled, they may emit greenhouse gases.⁸⁰ In addition, it is questionable whether advertised “compostable” plastics are less damaging than regular plastic in landfill conditions—there is no evidence that such plastics are environmentally superior to regular plastics in landfills.⁸¹

Even if “compostable” plastics are not thrown away as litter, mistakenly recycled, or thrown into the landfill, there may be serious problems. Even when properly placed in composting containers, they may not truly compost. A key issue is that many advertised “compostable” plastics are **only** compostable in specialized high temperature composting facilities.⁸² Unfortunately, there are very few facilities in British Columbia that meet the specific conditions necessary for processing such

⁷⁷ City Staff Presentation to Standing Committee of Council on City Finance and Services, April 24, 2019 slide show, slide #26.

⁷⁸ John Vidal, “‘Sustainable’ bio-plastic can damage the environment” (26 April 2008), online: *The Guardian* <<https://www.theguardian.com/environment/2008/apr/26/waste.pollution>>.

⁷⁹ City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject: *Single-Use Item Reduction Strategy By-laws – Consultation Update*, April 16, 2019 at p.8 <https://council.vancouver.ca/20190424/documents/cfsc2.pdf>, p. 8.

⁸⁰ John Vidal, “‘Sustainable’ bio-plastic can damage the environment” (26 April 2008), online: *The Guardian* <<https://www.theguardian.com/environment/2008/apr/26/waste.pollution>>.

⁸¹ John Vidal, “‘Sustainable’ bio-plastic can damage the environment” (26 April 2008), online: *The Guardian* <<https://www.theguardian.com/environment/2008/apr/26/waste.pollution>>.

⁸² J.H. Song et al., “Biodegradable and compostable alternatives to conventional plastics” (2009) 364:1526 *Philosophical Transactions of the Royal Society B* 2127 at 2134.

so-called “compostable” plastics. Most municipal recycling authorities in Metro Vancouver do not accept such “compostable” plastic.⁸³ For example, compostable and biodegradable plastics are not currently accepted in City of Vancouver green bins. And the provincial *Organic Matter Recycling Regulation*⁸⁴ does not designate compostable plastics as acceptable composting material.⁸⁵

When such industrially compostable plastics are placed into common municipal composting stream (such as Vancouver’s green bins), such plastics will not break down. Too often, they must be manually removed from the compost and put into the garbage. This is a current issue in Metro Vancouver, which must now go to the expense of removing intact “compostable plastic” from green bins and placing them in the garbage. This is one reason that most local governments do not accept such plastics in composting.⁸⁶

The crux of the problem is this: **For composting to work, you need truly compostable materials being reliably placed into an appropriate composting system that will actually break down those materials.** However, there is a highly varied spectrum of ‘compostable’ and ‘biodegradable’ plastics. Terms like “compostable” and “biodegradable” are not clearly defined. For example, there is not always a clear distinction between compostable/biodegradable materials that are environmentally acceptable— and ‘oxo-fragmentable’ plastics that are technically “degradable,” but actually degrade into long-lasting and problematic microplastics.⁸⁷

On the other hand, there are many types of composting processes, ranging from simple home composting to industrial composting, with processes involving a wide range of different temperatures, bacteria and duration. Too often, plastics labelled as “compostable” fail to actually compost in the composting facilities available to the consumer. And when that composting fails, it causes problems for the existing composting system.

Currently, it is difficult for consumers to assess the broad diversity of “biodegradable” and “compostable” materials – and to determine which ones are actually beneficial and which ones are not. For example, many consumers are unaware that some “green” plastics simply break down into problematic and long-lasting microplastics. Consumers are not able to tell which ones could be beneficial if properly disposed of, and which ones are more problematic.⁸⁸ They do not know if the advertised product actually composts in the composting facility available to the consumer. And

⁸³ Susana da Silva, “Don’t put compostable plastics in green bins, Metro Vancouver says” (16 May 2018), online: *CBC News* <<https://www.cbc.ca/news/canada/british-columbia/compostable-items-confusion-more-infrastructure-needed-1.4665757>>.

⁸⁴ *Organic Matter Recycling Regulation*, B.C. Reg. 18/2002, at Schedule 12.

⁸⁵ City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject: *Single-Use Item Reduction Strategy By-laws – Consultation Update*, April 16, 2019 at p.8 <https://council.vancouver.ca/20190424/documents/cfsc2.pdf>, Appendix F, p. 2.

⁸⁶ Susana da Silva, “Don’t put compostable plastics in green bins, Metro Vancouver says” (16 May 2018), online: *CBC News* <<https://www.cbc.ca/news/canada/british-columbia/compostable-items-confusion-more-infrastructure-needed-1.4665757>>.

⁸⁷ “What is the difference between oxo-fragmentable and biodegradable plastics?” (2 March 2016), online: <<https://www.european-bioplastics.org/faq-items/what-is-the-difference-between-oxo-fragmentable-and-biodegradable-plastics/>>.

⁸⁸ See: J. H. Song *et al.*, “Biodegradable and compostable alternatives to conventional plastics” (27 July 2009), online: <<https://royalsocietypublishing.org/doi/10.1098/rstb.2008.0289>>.

they don't know the environmental harm that they can cause by depositing such "green" plastics into regular plastic recycling or directly into the environment.

Thus, there is a critical need for **standardized testing and criteria** to allow for certification to allow consumers to know if the "green" plastic they are buying can actually be composted in reality. **Until that certification is available, a company's mere claim that a product is "compostable" should not exempt it from a single use plastic ban.**

Noting that "compostable" plastic does not break down in most local composting facilities – nor when littered – and contaminates both composting and recycling streams, Vancouver City Council has called on the provincial government to:

- Develop provincial standards for compostable single-use items ensuring that they are fully biodegradable if littered in the natural environment;
- Ensure that any standards and certifications for compostability are aligned with provincial composting infrastructure; and
- Ensure that compostable single-use items are collected and managed through an "Extended Producer Responsibility"⁸⁹ program that covers the residential and commercial sectors as well as materials from the public realm.⁹⁰

This latter measure is particularly necessary, to ensure that truly compostable plastic does not mistakenly contaminate regular plastic recycling streams.

Recommendation 2

The Province of British Columbia should:

- **Develop provincial standards for compostable single-use items ensuring that they are fully biodegradable if littered in the natural environment;**
- **Ensure that any standards and certifications for compostability are aligned with provincial composting infrastructure; and**
- **Ensure that compostable single-use items are collected and managed through an Extended Producer Responsibility program that covers the residential and commercial sectors as well as materials from the public realm.**

Until the Province establishes such standards and certification for truly "compostable" and "biodegradable" plastics, such plastics should not be exempted from the broad single-item plastic prohibitions proposed.

⁸⁹ Extended producer responsibility "aims to make producers responsible for the environmental impacts of their products throughout the product chain, from design to the post-consumer phase": OECD, *Extended Producers Responsibility: Updated Guide for Efficient Waste Management* (Paris: OECD Publishing, 2016), at 13.

⁹⁰ City of Vancouver, Standing Committee of Council on City Finance and Services, Minutes of April 24 and 29 Meetings, p. 5, "Final Motion as Approved".

4. Precedents for Action: Single-Use Plastic Reduction Efforts Around the World

In recent years, there has been overwhelming public support for a prohibition on single-use plastic products. This has resulted in a range of legislative action, from local to international governments. The United Nations, the G7, and the European Union have all prioritized reducing plastic pollution. A unanimous vote in the Canadian House of Commons called for the establishment of a national plastic waste reduction strategy, and the federal government followed with a promise to ban harmful single-use plastics. And around the world, towns, cities, states, provinces and countries have taken action towards banning single-use plastics.

Global plastic reduction efforts began in response to one of the most visible and environmentally detrimental forms of single-use plastic: the plastic shopping bag. However, in the short time since this movement started, reduction strategies have begun to include other single-use items, including plastic straws and stirrers, Styrofoam food containers, and disposable utensils. The following sections provide a brief overview of examples and potential templates for action.

The call for action has obviously been taken up world-wide. It is time for British Columbia to follow suit.

European Union: Law Prohibiting Single-Use Plastic Items

In March 2019 the European Parliament approved a Directive that “**promotes** circular approaches that give priority to **sustainable and non-toxic** re-usable products and re-use systems **rather than to single-use products, aiming first and foremost to reduce the quantity** of waste generated” [original emphasis]. Effectively, this Directive will prohibit certain single-use plastic products—and seeks to reduce the consumption and increase recycling of others (“EU Law”).⁹¹ The European Union contains 28 member states, all of which will be covered by the EU Law.

Though the EU Law came into force at the beginning of July 2019, member states have until July 3, 2021 to bring into force all the laws, regulations and administrative provisions necessary to comply with the Directive. Instead of putting a blanket ban on single-use plastic items, the Directive divides and classifies products into various categories that each require different actions, including: reducing consumption; banning placing certain items on the market; requiring certain products to meet specific requirements before they are permitted to go to market; requiring certain products to have marking requirements for education and waste disposal stream purposes; and requiring member states to organize separate collection for certain categories of items. Associated annexes list the items that fall into each category. The items restricted from being put on the market include: single-use plastic cutlery (forks, knives, spoons and chopsticks); single-use

⁹¹ European Parliament “News Release: Parliament seals ban on throwaway plastics by 2021” (27 March 2019), online: <<http://www.europarl.europa.eu/news/en/press-room/20190321IPR32111/parliament-seals-ban-on-throwaway-plastics-by-2021>>; the text adopted is listed here: European Parliament, Texts adopted Wednesday, 27 March 2019, online: <http://www.europarl.europa.eu/doceo/document/TA-8-2019-0305_EN.html>.

plastic plates; plastic straws; cotton bud sticks made of plastic (“Q-tips”); plastic balloon sticks; and oxo-degradable plastics and food containers and expanded polystyrene cups.⁹²

The EU Law also requires member states to collect 90% of plastic bottles by 2029, and that plastic beverage bottles up to three litres contain at least 25% of recycled content by 2025 and 30% by 2030.⁹³ The EU Law places a considerable degree of responsibility on producers. The producers of the products that are covered by the Directive are required to contribute to the costs of waste-management and clean-up—and the Directive sets out labelling requirements for certain products, requiring information such as the negative environmental impact of the improper disposal of the product.⁹⁴ Last, the EU Law establishes Extended Producer Responsibility schemes that place further requirements on producers that are already laid out as the minimum requirements in Directive 2008/98/EC.⁹⁵ One specific example of this is that producers of tobacco products and fishing gear must pay for the costs of collecting and disposing of their products.⁹⁶

The EU Law also allows for the potential use of compostable plastics, as long as they comply with the European Standard EN 13432:2000, “requirements for packaging recoverable through composting and biodegradation” (the “EU Compostable Packaging Standard”). The standard also includes a test scheme and evaluation criteria for determining whether different materials/packaging types meet the requirement.⁹⁷ The EU Compostable Packaging Standard sets minimum biodegradability, disintegration, and allowable contamination requirements that must be met to be deemed compostable.

Further, the EU, as well as bioplastics producers, are beginning to recognize the need for a standard logo or label to indicate its acceptability under the EU Compostable Packaging Standard. The Seedling Logo, trademarked under European Bioplastics, is currently being used by a number of companies and countries.⁹⁸

⁹² European Parliament, *Directive 2019/904 of the European Parliament and of the Council*, 12 June 2019, online: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1568925197719&uri=CELEX:32019L0904>>.

⁹³ European Parliament, *Directive 2019/904 of the European Parliament and of the Council*, 12 June 2019, online: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1568925197719&uri=CELEX:32019L0904>>.

⁹⁴ European Parliament, *Directive 2019/904 of the European Parliament and of the Council*, 12 June 2019, online: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1568925197719&uri=CELEX:32019L0904>>.

⁹⁵ European Parliament, *Directive 2019/904 of the European Parliament and of the Council*, 12 June 2019, online: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1568925197719&uri=CELEX:32019L0904>>; Directive 2008/98/EC was adopted in 2008 as part of the start of the European Union’s Plan for a Circular Economy. This Directive established extended producer responsibility for certain products in order to push the EU closer to a ‘recycling society’, which seeks to avoid waste altogether. The requirements for extended producer responsibility, as well as the areas this concept will be applied to, is amplified and expanded in Directive 2019/904. See European Parliament, *Directive 2008/98 of the European Parliament and of the Council*, 19 November 2008, online: <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0098>>.

⁹⁶ European Parliament “News Release: Parliament seals ban on throwaway plastics by 2021” (27 March 2019), online: <<http://www.europarl.europa.eu/news/en/press-room/20190321PR32111/parliament-seals-ban-on-throwaway-plastics-by-2021>>.

⁹⁷ European Commission, “Packaging and Packaging Waste – Harmonized standards for packaging” (July 2019), online: <<https://ec.europa.eu/environment/waste/packaging/standards.htm>>.

⁹⁸ European Bioplastics, “EN 13432 Certified Bioplastics Performance in Industrial Composting, Background” (April 2015), online: <https://docs.european-bioplastics.org/publications/bp/EUBP_BP_En_13432.pdf>.

The EU Law was passed with an overwhelming majority of MEPs, with a vote of 560-35 (28 abstentions),⁹⁹ clearly reflecting the extremely high level of public support for acting on single-use plastics. In fact, the European Commission specifically notes that a benefit to an EU-wide law is a leveled playing field for all businesses within the EU market.¹⁰⁰

The EU Law is an excellent example of a high-level jurisdiction imposing uniform restrictions on all its member states, recognizing that the problem must be dealt with by higher authorities. Coordination between markets and jurisdictions is simplified significantly, and consistency ensured, with overarching guidance. It also addresses the issues raised by alternative bio-based plastics. As such, this report recommends that the Province enact similar comprehensive regulations to benefit all of British Columbia's local governments.

FRANCE – DEFINING “HOME COMPOSTABILITY”

In its implementation of the EU Law, France has chosen to require that compostable products must be **home compostable**, which is more stringent than the EU law that requires industrial compostability. France has created its own standards for home compostability.”¹⁰¹

California and USA: Laws Prohibiting Plastic Bags, Straws and Polystyrene Foam

Responding to multitudinous California municipalities that had already acted to ban plastic shopping bags, in 2014 the State of California became the first US state to prohibit retailers from handing out plastic bags at checkouts.¹⁰² Under this law, businesses are still permitted to offer paper bags and thicker plastic bags as long as they charge at least 10 cents per item. The purpose of the legislation is to encourage patrons to bring their own bags and reuse them.¹⁰³ The plastic

⁹⁹ European Parliament “News Release: Parliament seals ban on throwaway plastics by 2021” (27 March 2019), online: <<http://www.europarl.europa.eu/news/en/press-room/20190321PR32111/parliament-seals-ban-on-throwaway-plastics-by-2021>>.

¹⁰⁰ European Commission, “Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of the Circular Economy Action Plan” Brussels, 4.3.2019 COM(2019) 190 final (4 March 2019), online: <https://ec.europa.eu/environment/circular-economy/pdf/report_implementation_circular_economy_action_plan.pdf>.

¹⁰¹ The term ‘home-compostable’ has been defined in NF T 51-800 “Plastics — Specifications for plastics suitable for home composting. See: European Bioplastics, “What are the required circumstances for a compostable product to compost?” (2 March 2016), online: <<https://www.european-bioplastics.org/faq-items/what-are-the-required-circumstances-for-a-compostable-product-to-compost/>>.

¹⁰² The Times Editorial Board, “California banned plastic bags: now it’s up to consumers to stop being wasteful” (23 November 2016), online: *LA Times* <<https://www.latimes.com/opinion/editorials/la-ed-beyond-bag-ban-20161121-story.html>>. See the California legislation at US, SB 270, *An Act to Add Chapter 5.3 (commencing with Section 42280) to Part 3 of Division 30 of the Public Resources Code, relating to Solid Waste, and Making an Appropriation Therefor*, 2013-14, Reg Sess, Cal, 2014).

¹⁰³ Joshua Smith, “Nation’s first statewide plastic-bag ban now in effect across California” (13 November 2016), online: *The San Diego Union-Tribune* <<https://www.sandiegouniontribune.com/news/environment/sd-me-plastic-bags-20161111-story.html>>.

bag prohibition has been highly effective: data from 2017 showed that plastic bag litter dropped by 72% when compared to 2010.¹⁰⁴

Since California acted, at least seven other states have legislated some form of plastic bag ban – including Hawaii, New York, Connecticut, Delaware, Maine, Oregon and Vermont,¹⁰⁵

SAN FRANCISCO – A BROAD SINGLE-USE PLASTICS BYLAW WITH DEFINED COMPOSTABILITY STANDARDS

Effective July 2019, the City of San Francisco, California has enacted a law that bans food and drink vendors from distributing plastic straws, beverage plugs, cocktail sticks, stirrers and toothpicks. The City also imposed a broad ban on polystyrene foam, extending further than just food containers and takeaway cups. Further, the law prohibits vendors from automatically providing chopsticks, condiment packages, lids, napkins, sleeves, and utensils. Vendors may provide these latter items upon request only.¹⁰⁶

San Francisco has recognized the major difficulties presented by compostable plastics and stated the ban includes uncertified compostable plastics because “they act like conventional plastic in our environment if littered.”¹⁰⁷ San Francisco specifies that any alternatives products must meet their “Compostable Foodware Criteria” before being distributed by vendors. They have chosen to use the Biodegradable Products Institute Compostable Logo and Certification.¹⁰⁸ This approach is somewhat similar to the French version of the EU Directive, which permits specific **certified home compostable** products to be exempted from the ban.

The San Francisco law banning polystyrene foam products is notable. As discussed below, polystyrene foam is particularly problematic because it is difficult to recycle and quickly breaks down into small pieces of plastic that are hard to clean up, yet endure for many years as small pieces and microplastics. The San Francisco ban on polystyrene foam is broad. It prohibits the following items made of polystyrene foam: food ware, meat and fish trays, egg cartons, packing materials, coolers, beach toys, and unprotected polystyrene foam dock floats.¹⁰⁹ The ban of this

¹⁰⁴ Abby Hamblin, “New York plastic bag ban? Here’s what happened after California’s ban” (23 April 2018), online: *The San Diego Union-Tribune* <<https://www.sandiegouniontribune.com/opinion/sd-new-york-plastic-bag-ban-california-20180423-htmlstory.html>>.

¹⁰⁵ See National Conference of State Legislatures, “State Plastic and Paper Bag Legislation” (August 15, 2019), online: <<http://www.ncsl.org/research/environment-and-natural-resources/plastic-bag-legislation.aspx>>. Also see: Clean Water Action, “Plastics & Single-Use Foodware Ordinance - Activist Toolkit” (nd), at “State Legislation Pending” heading, online: <<https://www.cleanwateraction.org/plastics-toolkit>>.

¹⁰⁶ SF Environment “Plastic, Litter, and Toxics Reduction Law” (nd), online: <<https://sfenvironment.org/reduceplastic>>. Note that the San Francisco law restricts the distribution of single-use plastic straws, including compostable plastic straws. Acceptable single-use straws (such as paper straws) can only be made available upon request. A single-use plastic straw may only be provided to a customer who specifically requests a plastic straw to accommodate a disability or medical need. Food & beverage vendors may no longer provide the following single-use plastic accessories: Plastic beverage plugs; Plastic cocktail sticks; Plastic stirrers; Plastic toothpicks.

¹⁰⁷ SF Environment “Plastic, Litter, and Toxics Reduction Law” (nd), online: <<https://sfenvironment.org/reduceplastic>>.

¹⁰⁸ SF Environment “Plastic, Litter, and Toxics Reduction Law” (nd), online: <<https://sfenvironment.org/reduceplastic>>; see also Ordinance 294-18, Environment Code – Single-Use Food Ware Plastics, Toxics, and Litter Reduction, Amended in Committee 29 October 2018, online: <<https://sfbos.org/sites/default/files/o0294-18.pdf>>.

¹⁰⁹ See Food Service and Packaging Waste Reduction Ordinance, *San Francisco Environment Code*, Chapter 16, online: <[http://library.amlegal.com/nxt/gateway.dll/California/environment/environmentcode?f=templates\\$fn=default.htm\\$3](http://library.amlegal.com/nxt/gateway.dll/California/environment/environmentcode?f=templates$fn=default.htm$3)>.

last item may be instructive in BC – the disintegration of old polystyrene foam **dock floats** into hundreds of ever-smaller irretrievable pieces is a common and significant problem on the lakes and coast of BC.

San Francisco’s law is being emulated. For example, the City of Palo Alto, California has adopted a similar city ordinance banning plastic straws, utensils, stirrer sticks, drink plugs, produce bags, and other disposable plastic items.¹¹⁰

[Q\\$vid=amlegal:sanfrancisco_ca\\$anc=JD_Environment](#)>. SF Environment Factsheet, “San Francisco Food Service and Packaging Waste Reduction Law”, online:

<http://sfenvironment.org/sites/default/files/fliers/files/sfe_zw_polystyrene_faq.pdf>.

¹¹⁰ City of Palo Alto, “Disposable Foodware Items Reduction” (updated 20 August 2019), online:

<<https://www.cityofpaloalto.org/gov/depts/pwd/zerowaste/projects/foodware.asp>>.

5. Additional Jurisdictions with Bans on Specific Products

Plastic Bag Bans

In addition to the eight US states that have regulated the provision of plastic shopping bags, bans on plastic shopping bags have been implemented in hundreds of other jurisdictions around the world. *Forbes Magazine* lists 300 American cities that already have a plastic bag ban in place, including New York City, Los Angeles, Chicago, Honolulu, Austin and Seattle.¹¹¹

Numerous countries have also banned plastic shopping bags, including countries as diverse as Australia, Chile, China, Costa Rica, India, Ireland, Kenya, Mexico, Morocco, and Rwanda.¹¹² More jurisdictions will be moving soon. In 2018, a Taiwanese Environmental Protection Agency official announced a plan for a nation wide blanket ban on single-use plastic bags, straws and cups.¹¹³ And India's Prime Minister announced his intent to eliminate all single-use plastic in the country by 2022.¹¹⁴

Plastic Straws and Utensils Bans

In our recommendations below, we recommend a ban on plastic straws and plastic utensils (as well as other plastic drink accessories such as stirrers and drink plugs).

Many jurisdictions have acted to ban plastic straws and utensils. We have already discussed the comprehensive actions taken by the European Union and the City of San Francisco. In addition, jurisdictions such as the City of Seattle and the United Kingdom have banned restaurants from distributing plastic straws, stirrers and cotton buds. Seattle has acted to ban the distribution of plastic utensils.¹¹⁵

There are many additional examples of jurisdictions acting to ban or greatly restrict the use of plastic straws and utensils. The Earth Day Network provides a brief overview of some of the countries, state/provincial governments, and local governments that have implemented policy or legislation regarding plastic straws and utensils. For example, laws have been passed in Costa

¹¹¹ Trevor Nace, "Here's A List Of Every City In The US To Ban Plastic Bags, Will Your City Be Next?" (20 September 2018), online: *Forbes* <<https://www.forbes.com/sites/trevornace/2018/09/20/heres-a-list-of-every-city-in-the-us-to-ban-plastic-bags-will-your-city-be-next/#17b4a3e83243>>.

¹¹² Earth Day Network, "Global Efforts to End Plastic Pollution: Single-Use Plastics" (nd), online: <<https://www.earthday.org/plasticban/>>.

¹¹³ Joe McCarthy, "Taiwan Announces Ban on All Plastic Bags, Straws, and Utensils" (22 February 2018), online: <<https://www.globalcitizen.org/en/content/taiwan-ban-on-plastic-bags-straws-utensils-contain/>>.

¹¹⁴ Brian Clark Howard, *et al.*, "A running list of action on plastic pollution" (10 June 2019), online: <<https://www.nationalgeographic.com/environment/2018/07/ocean-plastic-pollution-solutions/>>.

¹¹⁵ CBS News, "Seattle becomes first U.S. city to ban plastic utensils and straws" (2 July 2018), online: <<https://www.cbsnews.com/news/seattle-becomes-first-u-s-city-to-ban-plastic-utensils-and-straws/>>; Government of UK, "Press Release: Gove takes action to ban plastic straws, stirrers, and cotton buds" (22 May 2019), online: <<https://www.gov.uk/government/news/gove-takes-action-to-ban-plastic-straws-stirrers-and-cotton-buds>>.

Rica; the Seychelles; Hawaii; New Mexico; New York; South Carolina; Washington; San Pedro La Laguna, Guatemala; New Delhi, India; and Neuchatel, Switzerland.¹¹⁶

The trend to implement bans on plastic straws and utensils has been particularly strong in coastal towns and communities, likely because their citizens see the direct detrimental effects of marine plastic pollution in their daily lives. For example, the following coastal municipalities have created ordinances regarding plastic straws and utensils: City of Calabasas, California;¹¹⁷ Malibu, California;¹¹⁸ Seattle, Washington;¹¹⁹ Long Beach, California; Manhattan Beach, California; Oakland, California;¹²⁰ Santa Barbara, California;¹²¹ Fort Myers, Florida;¹²² Hallandale Beach, Florida;¹²³ and Delray Beach, Florida.¹²⁴

Disposable Cups, Take-out Containers and Polystyrene Foam Bans

There are many reasons why polystyrene (including polystyrene foam) is being targeted as a single-use plastic that must be significantly reduced or eliminated. Two important reasons are:

- Polystyrene foam is only recyclable if clean, un-dyed and uncontaminated. Most commonly used as food containers, this means little to none of this product is recycled;¹²⁵ and

¹¹⁶ Earth Day Network, “Global Efforts to End Plastic Pollution: Single-Use Plastics” (nd), online: <<https://www.earthday.org/plasticban/>>. Note that California passed the relatively weak Assembly Bill 1884, which prohibits the routine distribution of plastic straws at restaurants – but allows plastic straws if a customer requests one, or if the restaurant is a fast food restaurant.US, AB 1884, *An Act to Add Chapter 5.2 (commencing with Section 42270) to Part 3 of Division 30 of the Public Resources Code, relating to Food Facilities*, 2017-18, Reg Sess, Cal, 2018. Also see: Ralph Ellis and Sarah Moon, “California bans plastic straws in full-service restaurants – unless customers request one” (20 September 2018), online: *CNN* <<https://www.cnn.com/2018/09/20/us/plastic-straws-banned-in-california/index.html>>.

¹¹⁷ City of Calabasas, “Starting April 30, 2019, Calabasas will Prohibit the Sale and Distribution of Plastic Straws, Stirrers, and Cutlery” (nd), online: <<https://www.cityofcalabasas.com/plastic-straw-ban.html>>.

¹¹⁸ City of Malibu News, “Malibu City Council Passes Historic Ban on Single-Use Plastic Straws, Stirrers and Cutlery to Reduce Plastic Pollution” (15 February 2018), online: <https://www.crayoncollection.org/wp-content/uploads/2018/08/Straws_Ban_PressRelease_2_12_18.pdf>.

¹¹⁹ CBS News, “Seattle becomes first U.S. city to ban plastic utensils and straws” (2 July 2018), online: <<https://www.cbsnews.com/news/seattle-becomes-first-u-s-city-to-ban-plastic-utensils-and-straws/>>.

¹²⁰ Brenna Houck “How the Plastic Straw Ban Became the Biggest Trend of 2018” (27 December 2018), online: *Eater* <<https://www.eater.com/2018/12/27/18156734/plastic-straw-ban-biggest-trend-2018>>.

¹²¹ City of Santa Barbara, “Approved Restrictions on the Provision of Plastic Beverage Straw, Stirrers, and Cutlery” (nd), online: <<https://www.santabarbaraca.gov/services/recycling/newsdetail.asp?NewsID=1606&TargetID=27>>.

¹²² Ordinance No. 17-13, “An Ordinance of the Town of Fort Myers Beach, Florida prohibiting the distribution of Plastic Straws, as defined, by any Person, as defined, within the Town; providing for penalties for any such distribution; providing for codification, severability, scrivener errors, conflicts of law and an effective date” (6 November 2017), online: <<https://www.fortmyersbeachfl.gov/DocumentCenter/View/12895/17-13-Prohibition-Plastic-Straws>>.

¹²³ City of Hallandale Beach, “Straw Ordinance” (nd), online: <<https://hallandalebeachfl.gov/1237/Straw-Ordinance>>.

¹²⁴ City of Delray Beach, Florida, “Straw Ban Ordinance” (7 February 2019), online: <<https://www.delraybeachfl.gov/Home/Components/News/News/106/395>>.

¹²⁵ Ashley Wallis, “Styrofoam is polluting our environment. Let’s #BanTheFoam.” (19 October 2018), online: Environmental Defence Canada <<https://environmentaldefence.ca/2018/10/19/banthefoam/>>.

- Polystyrene foam fragments extremely easily and is then extremely difficult, if not impossible, to clean up.¹²⁶

In addition to San Francisco, the states of Vermont, Maryland, Maine, New York and the District of Columbia have already legislated bans on single-use polystyrene foam.¹²⁷ The Surfrider Foundation provides a list of over 65 US municipalities that have acted to ban single-use polystyrene uses.¹²⁸

¹²⁶ Plastic Pollution Coalition, “Coastal Cleanup Goes #FoamFree” (11 September 2017), online: <<https://www.plasticpollutioncoalition.org/blog/2017/9/11/coastal-cleanup-goes-foamfree>>.

¹²⁷ Natural Resources Council of Maine, “Maine is First State in the Nation to Ban Foam Food Containers” (30 April 2019), online: <<https://www.nrcm.org/sustainability/maine-first-state-nation-ban-foam-food-containers/>>; City of New York, “News Release: De Blasio Administration Bans Single-Use Styrofoam Products in New York City Beginning July 1, 2015” (8 January 2015), online: <<https://www1.nyc.gov/office-of-the-mayor/news/016-15/de-blasio-administration-bans-single-use-styrofoam-products-new-york-city-beginning-july-1-2015>>; Amendment to the Clean and Affordable Energy Act, DC Act 20-385, approved 29 July 2014, online: <<http://lms.dccouncil.us/Download/30722/B20-0573-SignedAct.pdf>>; and see: Clean Water Action, “Plastics & Single-Use Foodware Ordinance - Activist Toolkit” (nd), at “State Legislation Pending” heading, online: <<https://www.cleanwateraction.org/plastics-toolkit>>.

¹²⁸ Surfrider Foundation, “Polystyrene Ordinances” (nd), online: <<https://www.surfrider.org/pages/polystyrene-ordinances>>.

6. The Call for Change in Canada

Motion M-151 Calling for a National Strategy

In November 2017 Courtenay-Alberni MP Gord Johns tabled private member's bill M-151 in the House of Commons. It called for a national strategy for plastic waste reduction and highlighted important steps for implementing the strategy, one of which was reducing the use of single-use plastics.¹²⁹ The bill was inspired by a 16-year-old student from Vancouver Island, Anastasia Castro, who is also one of the founders of Kids for a Plastic Free Canada¹³⁰ (we recommend that you read Anastasia's *Times Colonist* op-ed, "Don't Dismiss Power of Youth in Stopping Plastic Pollution"¹³¹).

Motion M-151 gathered support from all members and was passed unanimously.¹³² Along with polls showing that 82% of Canadians believe government should do more about plastic waste, this reflects the overwhelming public consensus that government must act with vigour to deal with single-use plastics. The overwhelming vote for the single-use plastic bans in the European Union reflects the same state of public awareness. People around the world understand that our throw-away society is causing serious harm, for very little benefit.

Canadian Federal Promise to Ban Harmful Single-Use Products

In June 2019 the Government of Canada pledged to ban 'harmful single-use plastics as early as 2021 where supported by scientific evidence and warranted.' Further, government promised to introduce standards and targets for companies to become responsible for their plastic waste. Prime Minister Trudeau and Minister of Environment Catherine McKenna have made it clear that action must be taken.

However, the federal promise lies in the future and contains little detail. The Province has clearer constitutional jurisdiction to institute many of the bans on single-use plastics recommended below

¹²⁹ CBC News, "B.C. MP celebrates 'tremendous' victory as plastics pollution motion passes House" (5 December 2018), online: <<https://www.cbc.ca/news/canada/british-columbia/b-c-mp-celebrates-tremendous-victory-as-plastics-pollution-motion-passes-house-1.4934361>>.

¹³⁰ Gord Johns and Murray Rankin, "Comment: MPs' motion important step toward eliminating plastic pollution" (22 December 2018), online: *Times Colonist* <<https://www.timescolonist.com/opinion/op-ed/comment-mps-motion-important-step-toward-eliminating-plastic-pollution-1.23555257>>.

¹³¹ Anastasia Castro, "Island Voices: don't dismiss power of youth in stopping plastic pollution" (16 December 2018), online: *Times Colonist* <<https://www.timescolonist.com/opinion/op-ed/island-voices-don-t-dismiss-power-of-youth-in-stopping-plastic-pollution-1.23538751>>.

¹³² CBC News, "B.C. MP celebrates 'tremendous' victory as plastics pollution motion passes House" (5 December 2018), online: <<https://www.cbc.ca/news/canada/british-columbia/b-c-mp-celebrates-tremendous-victory-as-plastics-pollution-motion-passes-house-1.4934361>>.

(see Appendix A and the University of Victoria Environmental Law Centre publication *A National Strategy to Combat Marine Plastic Pollution: A Blueprint for Federal Action*¹³³).

UNION OF BC MUNICIPALITIES

A compelling reason for the Province to act on this issue is simple: British Columbia municipal leaders have demanded that the provincial government do so.

In September 2018 British Columbia’s mayors and councillors voted unanimously to endorse a resolution to request that the Province “introduce uniform, province-wide business regulations in relation to disposable plastic packaging to substantially reduce the volume of disposable plastic packaging in local solid waste streams.”¹³⁴ The Union of BC Municipalities also passed a resolution calling on the Province to establish a single-use item reduction strategy.¹³⁵ These municipal lawmakers clearly recognize the costs imposed on local taxpayers for dealing with single-use plastics. And they recognize that the Province must take a leadership role in implementing a uniform single-use plastics rule across all local boundaries—so that all businesses face a level playing field and all consumers are clear about the rules.

FEDERAL NDP’S CALL FOR A PROHIBITION ON SINGLE-USE PLASTICS

In February 2019, the federal NDP called for a prohibition on single-use plastics by 2022.¹³⁶ The NDP decried the absence of constructive federal action since the passing of M-151 and urged the federal government to act by declaring the pressing need for a prohibition. Today the provincial government has the opportunity to address this issue across British Columbia.

¹³³ Meaghan Partridge, Nick Acker, Renata Colwell and Calvin Sandborn *A National Strategy to Combat Marine Plastic Pollution: A Blueprint for Federal Action* (Victoria: Environmental Law Centre, April 2018). See: http://www.elc.uvic.ca/wordpress/wp-content/uploads/2018/04/2017-01-11_National-Marine-Plastics-Strategy-FINAL.pdf

¹³⁴ Union of British Columbia Municipalities, “2018 UBCM Resolutions” (accessed 30 April 2019) at Resolution B29 at 116 (PDF p 46), online: <https://www.ubcm.ca/assets/Resolutions~and~Policy/Resolutions/2018%20UBCM%20Resolutions%20Book.pdf>; *Times Colonist* <<https://www.timescolonist.com/news/local/b-c-municipalities-back-victoria-s-call-for-ban-on-disposable-plastic-packaging-1.23429349>>.

¹³⁵ City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject of Single-Use Item Reduction Strategy By-laws –Consultation Update, April 16, 2019 at pp. 5-6 and 11. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

¹³⁶ NDP, “NDP: Let’s ban single-use plastics by 2022” (12 February 2019), online: <<https://www.ndp.ca/news/ndp-lets-ban-single-use-plastics-2022>>.

7. Leading Canadian Plastic Reduction Efforts— BC Should Follow Their Examples

In addition to the federal government’s pledge on single-use plastic items, a variety of Canadian jurisdictions are acting. For example:

- The Retail Council of Canada lists more than 35 Canadian municipalities that have plastic bans.¹³⁷
- In 2016 the City of Montreal passed a bylaw prohibiting the retail distribution of certain plastic and biodegradable shopping bags.¹³⁸
- Reacting to a survey showing that 87% of the population supported a plastic bag ban, this year the Government of Newfoundland and Labrador introduced legislation to ban plastic bag usage in stores and other retail outlets.¹³⁹
- Tofino and Ucluelet, BC recently enacted bans on plastic straws and single-use bags.¹⁴⁰
- Wood Buffalo, Alberta; Leaf Rapids, Manitoba; Thompson, Manitoba; Deux Montagnes, Quebec; and Hudson, Quebec have also already legislated plastic bag bans in their municipalities.¹⁴¹ In January 2019 Halifax passed a motion to draft a plastic bag bylaw.¹⁴²
- Prince Edward Island adopted legislation to prohibit plastic bags, effective July 1, 2019.¹⁴³ PEI adopted the language from Victoria’s plastic bag bylaw (below) almost word-for-word.
- In 2019 the Mayor of Montreal announced that the City intends to ban most single-use plastics, including polystyrene foam cups, plates and containers; disposable plastic cups; plastic utensils and takeout containers.¹⁴⁴ The City said that it was “inspired by jurisdictions such as Vancouver.”¹⁴⁵

¹³⁷ With specifications of the ban; the exemptions to the ban; and the date each ban became effective. See: Retail Council of Canada, “Shopping bag regulations across Canada” (nd; accessed 13 September 2019), online: <https://www.retailcouncil.org/resources/quick-facts/regulations-and-bylaws-on-shopping-bags-in-canada/>.

¹³⁸ The bylaw was set to become effective January 1, 2018. City of Montreal, No 16-051, *By-law Prohibiting the Distribution of Certain Shopping Bags in Retail Stores* (30 August 2016), at s. 3, online: <http://ville.montreal.qc.ca/sel/sypre-consultation/afficherpdf?idDoc=27530&typeDoc=1>.

¹³⁹ The Canadian Press, “Newfoundland and Labrador to become 2nd province to ban plastic bags” (10 April 2019), online: *Global News* <<https://globalnews.ca/news/5150307/newfoundland-ban-plastic-bags/>>.

¹⁴⁰ Laura Sciarpetti, “Tofino and Ucluelet become 1st B.C. municipalities to ban plastic straws, single-use bags” (11 June 2019), online: *CBC News* <<https://www.cbc.ca/news/canada/british-columbia/tofino-ucluelet-plastic-ban-straws-bags-1.5170506>>.

¹⁴¹ All About Bags, “Canada Update—Trends in Managing Plastic Shopping Bags” (nd; accessed 13 September 2019), online: <<http://www.allaboutbags.ca/canadaupdate.html>>.

¹⁴² Alicia Draus, “2 Atlantic provinces are banning plastic bags — so where do the others stand?” (10 April 2019), online: *Global News* <<https://globalnews.ca/news/5152821/atlantic-region-plastic-bag-ban/>>.

¹⁴³ Bill 114, *Plastic Bag Reduction Act*, 3rd Sess, 65th Leg, Prince Edward Island, 2018.

¹⁴⁴ The City intends to hold public consultations later this year, releasing a bylaw in spring 2020. See: Brendan Kelly, “Montreal seeks to ban single-use plastic items as of 2020” (24 April 2019), online: *Montreal Gazette* <<https://montrealgazette.com/news/local-news/montreal-declares-war-on-single-use-plastic-items>>.

¹⁴⁵ The Canadian Press, “Montreal wants to ban single-use plastics and polystyrene foam containers” (24 April 2019), online: *Times Colonist* <<https://www.timescolonist.com/montreal-wants-to-ban-single-use-plastics-and-polystyrene-foam-containers-1.23801368>>.

Clearly the Cities of Vancouver and Victoria are leading the way towards thoughtful, comprehensive reform. The Province can learn much from the consultation processes those cities have undertaken, the studies they have conducted, and the actions they are taking.

Vancouver, BC: The Smartest Strategy to Reduce Single-Use Items

The City of Vancouver has created a comprehensive strategy to move towards becoming a zero-waste community by 2040.¹⁴⁶ This encompassing approach also includes a Single-Use Item Reduction Strategy, which aims to significantly reduce single-use items (including plastic and non-plastic items¹⁴⁷) by 2025. The proposed regulated items include: plastic and paper shopping bags; polystyrene foam cups and take-out containers; disposable hot and cold drink cups; take-out food containers; and disposable straws and utensils (including plastic, wood and bamboo)—making this a world-leading initiative.

Vancouver City Council has already approved the following “Priority Actions”:

- **Ban polystyrene foam cups and polystyrene foam take-out containers (for prepared food and beverage);**
- **Ban unnecessary use of plastic straws—with exceptions for accessibility and healthcare needs (bendable straws for people with disabilities are exempted from the ban);**
- **Require that disposable utensils (made of all materials) can only be given out if customers ask for them, rather than customers receiving them automatically;**
- **Require businesses to have reduction plans for disposable cups (both plastic and paper);**
- Require businesses to have reduction plans for both plastic and paper shopping bags; and
- Provide education and outreach, collaboration and dialogue to support businesses, and infrastructure and programs for reuse.¹⁴⁸

The City has launched into an extensive consultation with the public and businesses about how to implement the Vancouver Single-Use Item Reduction Strategy and its Priority Actions. However, it has already begun to legislate key elements of the approved Vancouver Single-Use Item Reduction Strategy. As of August 2019, **Council unanimously enacted a polystyrene foam bylaw provision,**

¹⁴⁶ City of Vancouver, “Zero Waste 2040” (2019), online: <<https://vancouver.ca/green-vancouver/zero-waste-vancouver.aspx>>.

¹⁴⁷ The strategy recognizes that alternative materials for single use items (such as paper, wood, and bamboo) can have their own environmental impacts, and that waste should be generally reduced.

¹⁴⁸ City of Vancouver, City Staff Presentation to Standing Committee of Council on City Finance and Services, April 24, 2019 slide show, slide #15. And see: City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject: *Single-Use Item Reduction Strategy By-laws –Consultation Update*, April 16, 2019 at Appendix A. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

which will come into force January 2020.¹⁴⁹ The new provision will ban food vendors from selling or providing prepared food or beverage in polystyrene foam cups or take-out containers.¹⁵⁰

In addition, the City of Vancouver has noted that its straw bylaw is under development and “can confirm **a ban on unnecessary plastic straws will begin April 2020.**”¹⁵¹ Bendable plastic straws for accessibility and healthcare needs will be exempted from the ban.

Furthermore, the City of Vancouver expects that by the end of November 2019 staff will propose to Council individual bylaws governing:

- Plastic and paper bags;
- Disposable cups;
- Disposable utensils; and
- The final plastic straw bylaw.¹⁵²

A unique aspect of the Vancouver Single-Use Item Reduction Strategy is the fact that it recognizes that all types of single-use items (including paper, wood, bamboo, etc.) have environmental impacts. Therefore, it is aimed at reducing all types of single-use waste, including wasteful production of single-use items made from a variety of materials. As City Staff experts have noted:

The strategy recognizes the significant concerns around marine plastics and goes beyond to cover single-use items made from all types of material that are littered and disposed to landfill or incinerator, not just plastic. No matter what they are made of, single-use items are often not recycled or composted, take up valuable space in our landfill, have a lasting impact on our environment long after being used for a short period of time, and require a significant amount of resources to produce.¹⁵³

Additionally, the Vancouver Single-Use Item Reduction Strategy focuses on helping businesses transition away from single-use items. Highlighting the importance of assisting consumers and businesses during the transition, the City of Vancouver has committed to “a public awareness, education, and outreach campaign to support the public, food vendors, charitable food providers, and suppliers in the transition away from foam cups and foam take-out containers, [which] will

¹⁴⁹ Through an addition to the existing City of Vancouver, by-law No. 4450, *A By-law to provide for the issuing of licenses and regulations of business, trades, professions and other occupations with the City of Vancouver*. Also see the City of Vancouver, “Single-Use Item Reduction Strategy” (accessed 30 April 2019), online: <<https://vancouver.ca/green-vancouver/single-use-items.aspx>>

¹⁵⁰ City of Vancouver, *A By-law to amend License By-Law No.4450 regarding polystyrene foam* (25 April 2019), online: <<https://council.vancouver.ca/20190424/documents/bylaw1.pdf>>.

¹⁵¹ Hospitals and community care facilities are exempt from this ban, and charitable food providers have until January 2021 to eliminate food ware containing polystyrene foam. See the City of Vancouver, “Single-Use Item Reduction Strategy” (accessed 30 April 2019), online: <<https://vancouver.ca/green-vancouver/single-use-items.aspx>>.

¹⁵² City of Vancouver, “Single-Use Item Reduction Strategy” (accessed 30 April 2019), online: <<https://vancouver.ca/green-vancouver/single-use-items.aspx>>.

¹⁵³ City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject of Single-Use Item Reduction Strategy By-laws –Consultation Update, April 16, 2019 at pp. 5. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

launch in fall 2019” as part of their bylaw transitioning away from foam cups and foam take-out containers.¹⁵⁴

The Vancouver Single-Use Item Reduction Strategy is ambitious, but realistic, and tackles the single-use plastics issue head on. We recommend that the Province develop a plan that similarly encompasses the worst offenders of the single-use plastics world in an overarching regulation to eliminate such environmentally detrimental waste. A coordinated provincial effort could make this strategy more effective.

It is important to note that Vancouver City Council unanimously voted to ask the Province to adopt a comprehensive province-wide single-use item reduction strategy.¹⁵⁵

City staff experts recommended that the provincial strategy:

- Operate in parallel with the provincial Extended Producer Responsibility Policy;¹⁵⁶
- Emphasize reduction and reuse;
- Cover single-use items generated by all sectors and made of all material types; and
- Include but not be limited to plastic and paper shopping bags, disposable drink cups, take-out containers, straws and utensils, but exclude single-use items needed for medical use or accessibility needs.¹⁵⁷

Victoria, BC: Bylaw Prohibiting Plastic Shopping Bags

In July 2018 Victoria implemented a bylaw that prohibited businesses from offering plastic shopping bags to customers.¹⁵⁸ It also prohibited stores from offering or selling plastic bags to patrons, but allowed stores to offer paper or reusable bags for a cost.¹⁵⁹ Exceptions from the ban were made for plastic bags to package bulk items, as well as for meat, prescriptions, and dry cleaning.

Influenced by Victoria, its neighbouring municipality, the District of Saanich, began working towards implementing a bylaw to prohibit single-use shopping plastic bags.¹⁶⁰ In order to ensure consistency for consumers and businesses across both municipalities, the bylaw was expected to mirror the Victoria bylaw. In addition, once a plastic bag prohibition was implemented, Saanich

¹⁵⁴ City of Vancouver, “Single-Use Item Reduction Strategy” (accessed 30 April 2019), online: <<https://vancouver.ca/green-vancouver/single-use-items.aspx>>.

¹⁵⁵ City of Vancouver, Standing Committee of Council on City Finance and Services, Minutes of April 24 and 29 Meetings, p. 7.

¹⁵⁶ For information on BC’s Extended Producer Responsibility Policy, see: Government of British Columbia, “Product Stewardship” (accessed 24 September 2019), online: <<https://www2.gov.bc.ca/gov/content/environment/waste-management/recycling/product-stewardship>>.

¹⁵⁷ City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject of Single-Use Item Reduction Strategy By-laws – Consultation Update, April 16, 2019 at Appendix E. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

¹⁵⁸ City of Victoria, By-law No 18-008, *Checkout Bag Regulation By-law* (1 July 2018).

¹⁵⁹ Chad Pawson, “Bylaw prohibits businesses from offering plastic bags to consumers” (17 December 2017), online: *CBC News* <<https://www.cbc.ca/news/canada/british-columbia/victoria-plastic-bag-ban-to-start-july-1-2018-1.4453617>>.

¹⁶⁰ “Saanich expected to approve ban on single-use plastic bags” (7 January 2019), online: *CTV News* <<https://vancouverisland.ctvnews.ca/saanich-expected-to-approve-ban-on-single-use-plastic-bags-1.4243457>>.

Council was considering similar legislation addressing polystyrene foam, plastic cutlery, coffee cups and straws.¹⁶¹ A number of other Greater Victoria Area municipalities were also considering plastic bag prohibitions¹⁶² to increase consistency across the greater Victoria area.

However, the British Columbia Court of Appeal recently set aside Victoria's plastic bag ban bylaw. The Court ruled that the main purpose of Victoria's bylaw was to protect the environment, not to regulate business. In order for the City of Victoria to enact bylaws pertaining to the environment, they are required to seek approval from the Ministry of Environment. As the City did not do this, the bylaw was quashed.¹⁶³

The decision of the Court of Appeal to set aside Victoria's bylaw on jurisdictional grounds clearly demonstrates the need for the Province to act. All of the municipalities in the Greater Victoria Area (as well as in the Province) face the same jurisdictional challenges as Victoria.

In contrast, there is no question that the Province has full jurisdiction to act effectively, and is best situated to pass uniform legislation across British Columbia (see Appendix A for a brief jurisdictional analysis). The Province of British Columbia can clearly act on this issue.

And there is no question that British Columbians are demanding such action. To paraphrase President Harry Truman, the sustainability buck now stops at the Premier's desk.

¹⁶¹ Cindy Harnett, "Saanich has 2020 vision: Council hopes to ban plastic bags by Jan. 1" (9 January 2019), online: *Times Colonist* <<https://www.timescolonist.com/news/local/saanich-has-2020-vision-council-hopes-to-ban-plastic-bags-by-jan-1-1.23586034>>.

¹⁶² Tim Collins "Sooke prepares to revisit plastic bag debate" (30 April 2019), online: *Oak Bay News* <<https://www.oakbaynews.com/news/sooke-prepares-to-revisit-plastic-bag-debate/>>.

¹⁶³ *Canadian Plastic Bag Association v. Victoria (City)*, 2019 BCCA 254.

8. Recommendations for Provincial Law Reform

Regulating single-use plastics is a complicated issue. As seen above, there is a great diversity of single-use plastic items and a variety of solutions implemented elsewhere. It is vitally important that provincial legislation be focused on appropriate regulation of the appropriate product categories. The City of Vancouver has carefully studied the municipal waste stream and the possible solutions that could apply locally. Through broad consultations and with expert advice, Vancouver has developed a sophisticated, practical strategy that takes into account the many interests involved.

For these reasons, we recommend that the Province heed the Vancouver Single-Use Item Reduction Strategy in terms of the products to which it applies and the regulations that should be implemented. It is also important to note that Vancouver has not acted in a vacuum. The products being regulated by Vancouver are broadly similar to the categories being regulated in the European Union. And, as demonstrated in the discussions above, each regulated category included in our Recommendation 3 below has already been regulated by many other jurisdictions.

Provincial action is crucially important. As City of Vancouver expert staff have noted:

If municipalities are left to fill the policy gap, there is a risk of creating a patchwork of regulations across the province, resulting in compliance challenges for businesses... [Author's Note: For example, a business with locations in multiple jurisdictions would have to accommodate different regulations in each jurisdiction. And businesses just down the road from each other could face different rules.]

...Inconsistent programs across the province could also create public confusion, which impedes widespread consumer behaviour change and a movement to reduce single-use items.¹⁶⁴

The local governments of British Columbia have emphasized the need for province-wide regulation—and are calling upon the Province to now act on single-use plastics. For example, the Union of BC Municipalities Convention endorsed the following resolution directed to the Province:

Provincial Single-Use Item Reduction Strategy

Therefore be it resolved that the Province of British Columbia engage the packaging industry to develop a provincial Single-Use Item Reduction Strategy as part of a provincial Zero Waste Strategy, which would include but not necessarily be limited to plastic and paper shopping bags, polystyrene foam cups and polystyrene foam take-out containers, other hot and cold drink cups and take-out containers, straws and utensils, but

¹⁶⁴ City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject: *Single-Use Item Reduction Strategy By-laws – Consultation Update*, April 16, 2019 at Appendix E. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

would exclude all single-use items needed for medical use or for people with disabilities.¹⁶⁵

The public of British Columbia is clearly demanding provincial action on this issue.

Recommendation 3

The Province of British Columbia should establish a comprehensive single-use item reduction strategy. The strategy should include a broad ban on at least three separate categories of products:

- Single use carrier plastic bags at checkout (accompanied by a fee charged for substituted paper bags);
- Plastic straws, plastic utensils, and plastic drink accessories such as stirrers and drink plugs (from vendors of food and drink);
- Polystyrene foam cups and take-out containers for prepared food and beverages.

Further Discussion

PLASTIC BAGS

We recommend (above) that the Province follow the example of California and seven other states and regulate distribution of plastic shopping bags. The Province should implement a full prohibition on businesses providing plastic bags, mirroring the Victoria bylaw's original prohibition. As outlined above, the Victoria bylaw would have created a prohibition on the distribution of plastic shopping bags. Further, the Victoria bylaw required that reusable and paper

¹⁶⁵ City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject: *Single-Use Item Reduction Strategy By-laws – Consultation Update*, April 16, 2019 at p. 11. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

bags were only to be provided when requested by the customer—and are subject to a charge.¹⁶⁶ Similarly, California mandates that retailers charge a fee for paper and other substitute bags.¹⁶⁷

The rationale for charging a fee for paper shopping bags comes from the understanding that, ultimately, paper bags also cause environmental damage. Paper production processes are resource-intensive (logging) and polluting (pulp mill pollution). In addition, paper bags are heavier than plastic bags and require more fuel to be transported.¹⁶⁸ Further, the Vancouver Single-Use Item Reduction Strategy suggests that paper bags are only the better choice when they are reused four to seven times, which is unlikely to happen as they are not very durable. Recognizing this, placing a charge on paper bags incentivizes customers to bring their own reusable alternative.

PLASTIC STRAWS, UTENSILS, AND PLASTIC DRINK ACCESSORIES

We recommend that the Province consider the innumerable jurisdictions that have already regulated these items and ban food vendor distribution of these items, with narrow reasonable exceptions (for example, the Vancouver Single-Use Item Reduction Strategy allows a plastic straw exemption for accessibility and healthcare needs).

Plastic straws are particularly egregious, and should clearly be banned, subject to the accessibility exemption. For most people, it is simple enough to either do without a straw or bring their own reusable or paper straw.

Following the EU and San Francisco laws, the Province should also outlaw vendor distribution of plastic utensils. However, exemptions for compostable items must be more rigorous than in the EU and San Francisco. To be exempted, such utensils must meet true “compostability” standards. A BC law should not exempt “compostable” items unless they meet environmental criteria (e.g., are compostable if littered. See the discussion above.)¹⁶⁹

As far as non-plastic disposable utensils are concerned, the Province should ban the routine distribution of disposable utensils made from all materials (including paper, bamboo, etc.)—

¹⁶⁶ City of Victoria, By-law No 18-008, *Checkout Bag Regulation By-law* (1 July 2018), at s. 3(2); This report further suggests that the Vancouver Strategy’s re-evaluation of plastic bag usage after three years in order to assess if a complete prohibition is needed is unnecessary. Instead, recommending a full prohibition from the start. The Vancouver Strategy cites as a reason for its staged approach the fact that the Victoria bylaw has been challenged and that a plastic bag prohibition in Rwanda has resulted in a black market being created for purchasing plastic bags. First, the challenge to the Victoria bylaw is now understood and can this be mitigated in future, and the Province clearly has the constitutional jurisdiction to implement a prohibition. Second, it is unlikely that a similar black market would arise within Canada as the socioeconomic context is more similar to that of California than Rwanda, and California has not run across such an issue with its legislation. See City of Vancouver, “Single-Use Item Reduction Strategy 2018-2025: A Priority Action in Zero Waste 2040” (5 June 2018), at 18, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

¹⁶⁷ National Conference of State Legislatures, “State Plastic and Paper Bag Legislation” (August 15, 2019), online: <<http://www.ncsl.org/research/environment-and-natural-resources/plastic-bag-legislation.aspx>>.

¹⁶⁸ City of Vancouver, “Single-Use Item Reduction Strategy 2018-2025: A Priority Action in Zero Waste 2040” (5 June 2018), at 18, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

¹⁶⁹ European Parliament “News Release: Parliament seals ban on throwaway plastics by 2021” (27 March 2019), online: <<http://www.europarl.europa.eu/news/en/press-room/20190321IPR32111/parliament-seals-ban-on-throwaway-plastics-by-2021>>. See the Vancouver recommendations on compostable plastics for the argument for this requirement that compostable plastics compost if littered in the environment.

limiting distribution to situations where the customer requests them.¹⁷⁰ This is consistent with the Vancouver City Council Priority Action to that effect. Routine distribution of such items is enormously wasteful. For example, many take-out restaurants provide plastic utensils by default—even when the food will be consumed at home. This is nonsensical, as customers undoubtedly have utensils in their home.

DISPOSABLE CUPS AND TAKEOUT CONTAINERS

We recommend the Province prohibit vendor distribution of polystyrene foam disposable cups and takeout containers for prepared food and beverages, because polystyrene foam is particularly problematic and difficult to recycle.¹⁷¹ This is why so many jurisdictions such as San Francisco and Vancouver have banned this material in single-use items.

Shifting the Profligate Waste Paradigm

In banning plastic items, it is important to address the underlying problem of heedless waste. We must do more than just blindly *substitute* paper and other materials for items like polystyrene foam cups. This is crucial, because other types of disposable cups can also pose major difficulties¹⁷²— for example, in Vancouver over 2.6 million plastic-lined *paper* cups are thrown in the trash every week.¹⁷³ These cups are almost always subject to food and other contamination.¹⁷⁴ Substituting the commonly used plastic-lined paper cups for polystyrene foam will just perpetuate the waste problem. It is pointless to replace one environmentally harmful single-use item (plastic) with another made of a different material (e.g., paper) with its own environmental impacts. The key is to reduce waste of materials and resources of all types.

¹⁷⁰ City of Vancouver, “Single-Use Item Reduction Strategy 2018-2025: A Priority Action in Zero Waste 2040” (5 June 2018), at 31, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

¹⁷¹ For example, Vancouver has no municipal collection system in place for polystyrene. Polystyrene foam is often contaminated with food, and only 6% of Vancouver residents take their polystyrene cups and containers to the recycling depot. See City of Vancouver, “Single-Use Item Reduction Strategy 2018-2025: A Priority Action in Zero Waste 2040” (5 June 2018), at 21, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

¹⁷² City of Vancouver, “Single-Use Item Reduction Strategy 2018-2025: A Priority Action in Zero Waste 2040” (5 June 2018), at 24, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

¹⁷³ City of Vancouver, “Single-Use Item Reduction Strategy 2018-2025: A Priority Action in Zero Waste 2040” (5 June 2018), at 2, online: <https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf> Also see: “Plastic recycling: Why are 99.75% of coffee cups not recycled?” (17 April 2018), online: [BBC News <https://www.bbc.com/news/science-environment-43739043>](https://www.bbc.com/news/science-environment-43739043).

¹⁷⁴ City of Vancouver, “Single-Use Item Reduction Strategy 2018-2025: A Priority Action in Zero Waste 2040” (5 June 2018), at 24, online: <<https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf>>.

For all take-out containers, the focus must be on prioritizing **reduction** of waste, and **re-use** of all containers. The Province should follow the City of Vancouver’s lead, and adopt the City’s Priority Action and:

- **Require businesses to have reduction plans for disposable cups (both plastic and paper)**¹⁷⁵

A first step could be to regulate and restrict the use of disposable cups when people are drinking coffee in a shop or restaurant. A disposable cup should not be the default choice every time a customer orders an in-house coffee.

In addition, the Province should act to change the paradigm—to encourage re-use of take-out containers and encourage systems that provide for convenient and practical re-use of containers.

If we are to make real progress against a wasteful throw-away society, there is a pressing need for an alternative takeout system that encourages re-use of containers. Fortunately, there are a variety of systems that have already been developed to encourage re-use of take-out cups and containers. Examples the Province should consider and encourage include:

- **The OZZI** Cups and food containers system operates at McGill University. The Ozzi system works as a deposit-refund system. The customer pays for a reusable container to take out food or beverages and gets their money back (or a token) when the container is returned.¹⁷⁶
- **UBC Mugshare program** at the University of British Columbia is a student-led initiative which works on a ‘circular sharing model’ where mugs are returned and can be used again and again by different people. The system is to buy a drink at a partner location and pay a \$2 refundable deposit for a mugshare cup. When you return the cup to partner locations you are given your \$2 deposit back. The used mug is then washed and sanitized at the location where it was returned—and then loaned out to the next person.¹⁷⁷
- **Vessel Works** is a company using a very similar approach in order to “lead the re-use revolution.” The main difference is that Vessel Works is a free service, with the caveat that a user will have their credit card charged \$15 for a lost mug or \$2 for a lost mug lid.¹⁷⁸ This works because Vessel Works provides tech-enabled stainless steel reusable cups, which allows for “seamless user interaction, real-time inventory tracking, [and] impact metrics.”¹⁷⁹

¹⁷⁵ City of Vancouver, City Staff Presentation to Standing Committee of Council on City Finance and Services, April 24, 2019 slide show, slide #15. And see: City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject: *Single-Use Item Reduction Strategy By-laws –Consultation Update*, April 16, 2019, at Appendix A. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

¹⁷⁶ McGill University, “The Ozzi System & Reusable Containers” (nd; accessed 14 September 2019), online: <<https://www.mcgill.ca/foodservices/sustainability/ozzi-system-reusable-containers>>.

¹⁷⁷ University of British Columbia Sustainability, “Mugshare” (accessed 13 Sept 2019) online: <<https://sustain.ubc.ca/mugshare>>.

¹⁷⁸ Vessel Works, “Frequently Asked Questions” (accessed 13 Sept 2019) online: <<https://vesselworks.org/faq>>.

¹⁷⁹ Vessel Works, “Leading the Reuse Revolution” (accessed 13 Sept 2019) online: <<https://vesselworks.org/>>.

- **GO Box** is another reusable container exchange program, which is currently being employed in Portland, Oregon and San Francisco, California. The program works by getting users to download an app for \$3.95 per month. The app gives up-to-date information about where participating vendors are located, as well as where to return GO Boxes. The main distinction with this program is that the GO Box team collects, cleans and sanitizes the containers from ‘drop site’ locations as opposed to them being dealt with by the vendors.¹⁸⁰
- **Tiffin Containers in India** are a kind of round stainless steel lunch box, with three to four stacking compartments which seal firmly with a side clip—and have a handle for carrying from the top. ‘Tiffin culture’—carrying a tiffin to provide a compact, portable, homemade lunch—is now pervasive throughout India.¹⁸¹ In addition, there are programs and systems in place throughout India¹⁸² that allow for the tiffin containers to feature in the waste-free delivery of hot meals to businesses and workers. Tiffin containers are now replicated by Western manufacturers,¹⁸³ allowing them to be more accessible in Canada and the rest of North America.

The Province needs to encourage and facilitate such re-use systems. This can be done. For example, Vancouver City Council has called on staff to seek expressions of interest in “Made in Vancouver” single-use item solutions such as a city mug program and reusable straws.¹⁸⁴ The Province should do likewise.

In addition, government should encourage universities to work with entrepreneurs to create systems that facilitate re-use of cups and containers. For example, coffee shops often rely heavily on disposable cups and containers because they lack adequate dishwashing facilities. It may be useful to develop centralized dishwashing facilities available to a number of shops, in order to encourage re-use of containers. The Province could encourage green innovation investments through tax incentives and other policy measures.

Similarly, government should pursue other initiatives to shift the social paradigm towards re-use of containers. For example, the provincial Ministry of Health is now working to develop provincial health guidelines that would allow customers to bring their own re-usable containers for take-out orders. This is a progressive development, and should be encouraged.¹⁸⁵

¹⁸⁰ GO Box, “How to Go Green with GO Box” (accessed 13 Sept 2019) online: <<https://www.goboxpdx.com/>>.

¹⁸¹ The Guardian, “Time for tiffin: the history of India’s lunch in a box” (17 August 2014) online: <<https://www.theguardian.com/lifeandstyle/2014/aug/17/tiffin-the-history-of-indias-lunch-in-a-box-mumbai>>.

¹⁸² One example of this is the one run by the Mumbai Tiffin Box Suppliers’ Association, which allow for the waste free delivery of over 200,000 hot meals per day. The Guardian, “Time for tiffin: the history of India’s lunch in a box” (17 August 2014), online: <<https://www.theguardian.com/lifeandstyle/2014/aug/17/tiffin-the-history-of-indias-lunch-in-a-box-mumbai>>.

¹⁸³ One example of this is Onyx Containers. Onyx Containers “Manufacturer and wholesaler of non-plastic storage containers” (accessed 13 Sept 2019) online: <<http://www.onyxcontainers.com>>.

¹⁸⁴ City of Vancouver, Administrative Report from General Manager of Engineering Services to Standing Committee on City Finances and Services on the Subject: *Single-Use Item Reduction Strategy By-laws –Consultation Update*, April 16, 2019 at p. 3. See: <<https://council.vancouver.ca/20190424/documents/cfsc2.pdf>>.

¹⁸⁵ City of Vancouver, “Single-Use Item Reduction Strategy” (accessed 30 April 2019), online: <<https://vancouver.ca/green-vancouver/single-use-items.aspx>>.

The Province can also do its part by creating disincentives to wasteful use of cups. For example, Berkeley, California has passed an ordinance requiring vendors to charge 25 cents for every disposable cup provided.¹⁸⁶

Recommendation 4

The Province of British Columbia should:

- **Require businesses to have reduction plans for disposable cups and disposable food containers (both plastic and paper);**
- **Restrict the default use of disposable cups for in-house beverages;**
- **As far as non-plastic disposable utensils are concerned, ban the routine distribution of disposable utensils made from all materials (including paper, bamboo, etc.), limiting distribution to situations where the customer requests them;**
- **Act to change the take-out paradigm: Encourage, support and facilitate systems that help retailers provide for convenient and practical re-use of take-out containers; and**
- **Require vendors to charge a fee for every disposable cup provided.**

Supporting and Encouraging Change

Change is hard. Our system of offering take-out food and drink has taken years to develop, and is socially-embedded. New practical and innovative systems need to be developed, and they need to meet the needs of consumers, businesses and governments.

This may require a society-wide partnership – and collaborative initiatives involving the public, scientists, universities, retail businesses, entrepreneurs, and engineers. The Province should take a leadership role in creating partnerships of key players to deal with the single-use item waste issue. The Province can also encourage innovative technologies and systems, pilot programs, and civil society collaboration. Provincial support for public education programs will be key – to educate consumers and businesses on what they can do to transition to a Zero Waste society.

Supporting businesses through the transition will also be crucial. As recognized by the City of Vancouver and the European Union, the Province must recognize that businesses will require

¹⁸⁶ Council of the City of Berkeley, *Ordinance No. 7639-N.S. – Adding Chapter 11.64 to the Berkeley Municipal Code to Adopt a Single Use Foodware and Litter Reduction Ordinance*, (19 February 2019) online: <https://www.cityofberkeley.info/recordsonline/paFiles/cqFiles/index.html>.

assistance through the plastic reduction transition, because single-plastics have become so integrated into all our daily lives and our economy.

The Province should set a reasonable timeline for continued reduction of single-use plastics and include checks similar to the Vancouver Single-Use Item Reduction Strategy to monitor its progress. This will allow for flexibility in implementing reduction, and will also allow businesses to adjust and work towards completely avoiding the use of single-use plastics in their business operations.

The Province should also consider offering an Economic Hardship Exemption for the first two years. This would allow certain businesses to receive an exemption when they can show that eliminating specific products under the single-use plastics ban would cause an unreasonable economic burden. This approach would support businesses as they transition to increased sustainability. For example, small businesses could be exempted while shared centralized dishwashing facilities are being developed in the community.

The aim should not be to punish anyone, but to all work together towards a better and more sustainable society.

Recommendation 5

The Province of British Columbia should act to create a society-wide partnership to transition away from the throw-away society. The Province should:

- **Invest in collaborative initiatives with the public, universities, retail businesses, entrepreneurs, scientists, and engineers – to explore practical and innovative methods to replace single-use plastic items;**
- **Encourage innovative technologies and systems, pilot programs, and civil society collaboration;**
- **Support public education programs to educate consumers on what they can do to aid the transition; and**
- **Carefully consult, consider and support affected businesses to assist in the transition away from unnecessary and harmful waste.**

A Final Issue: The Need to Substantially Increase the Deposit on Beverage Containers

In 1970, British Columbia led Canada in developing the first beverage container deposit refund system, and it has been quite successful. However, the deposits being collected and the refunds paid are far less in constant dollars than when the system was first established—and the number of containers being returned falls far short of what could be achieved with a higher deposit/refund amount.

As Nima Dorji, a PhD student at the Faculty of Law at the University of Victoria, has noted:

There are claims that higher deposit level will result in higher return rate. It is claimed that most successful schemes tend to have higher deposits.¹⁸⁷ While it may not be the only factor contributing to the higher return rate, it certainly appears to be one of the important factors. German DRS has a flat Euro 0.25 (equivalent to C\$.38) per bottle and it has return rate of 98% in 2015.¹⁸⁸ Norway also has higher deposit fee Euro 0.21 – 0.32 (deposit fee increased in 2018) per bottle. From 2016 to 2018, return rates reported in Norway are 88.2%, 87.8% and 95% respectively. In Canada, Alberta and Saskatchewan have deposit fees of 10-25 cents, while British Columbia has 5-20 cents. Alberta has a return rate of 85.5% (for plastic containers of all sizes), Saskatchewan has a 78% return rate, and British Columbia has only a 71.2% return rate.¹⁸⁹

The Environmental Law Centre has not fully researched this issue at this time. However, Ocean Legacy has written an extensive report documenting the millions of containers that go missing because of the current inadequate container deposit. See Ocean Legacy's *British Columbia's Beverage Container Legacy: The Missing Millions*¹⁹⁰ for more information on this important issue

Recommendation 6

The Province of British Columbia should substantially increase the deposit required for beverage containers.

¹⁸⁷ M Cordle, *et al*, "A Deposit Refund System for the Czech Republic: Final Report" (15 January 2019), online: <<https://www.zalohujme.cz/wp-content/uploads/2019/01/A-Deposit-Refund-System-for-the-Czech-Republic.pdf>>.

¹⁸⁸ CM Consulting, "Deposit Systems for One-Way Beverage Containers: Global Overview 2018," pp 17-18, online: <<https://reloopplatform.eu/wp-content/uploads/2018/05/BOOK-Deposit-Global-27-APR2018.pdf>>.

¹⁸⁹ Nima Dorji, "A Comparative Study of the Implementation of Plastic and Container Deposit Refund Schemes: Can Canada Learn from German and Norwegian Experiences?" unpublished study for the University of Victoria Environmental Law Centre.

¹⁹⁰ Ocean Legacy Foundation, *British Columbia's Beverage Container Legacy: The Missing Millions*, (2018), online: <http://www.bcdepot.info/wp-content/uploads/2019/04/Missing_Millions-OLF_2019-REPORT.pdf>.

