Options for Reducing the TDSB's Distribution of Single-Use Plastic Items

To: Program and School Services Committee

Date: 19 February, 2020

Report No.: 02-20-3826

Strategic Directions

- Create a Culture for Student and Staff Well-Being

Recommendation

It is recommended that the report on the options for reducing the TDSB's distribution of single-use plastic items be received.

Context

At its June 5, 2018 meeting, the Environmental Sustainability Community Advisory Committee (ESCAC) made a recommendation to the Program and School Services Committee (PSSC) that the distribution of single-use plastic water bottles and straws be discontinued at the Toronto District School Board (TDSB).

This recommendation was presented to PSSC at its June 6, 2018 meeting, prompting PSSC to recommend that the following be referred to staff for a report back: that the distribution of single-use plastic items, water bottles and straws be discontinued at the Toronto District School Board.

The following report will outline the types and quantities of single-use plastic items distributed by the TDSB and propose the most viable options for reducing their distribution.

Climate Action at the TDSB

The threats to our environment today, are urgent and real. As communities across the globe continue to experience the effects of climate change, youth are rallying for decision makers to take action.

The TDSB has been engaged in climate action for almost 20 years. During this time, it has gradually reduced greenhouse gas emissions from buildings, spearheaded the EcoSchools movement spreading across Canada, and established numerous programs and partnerships to support and enhance environmental education. In 2000, the TDSB formalized its environmental policy and revised it in 2010 to explicitly address climate change.

Developing a strategy to reduce the TDSB's distribution of single-use plastic items would be well supported in the local, regional and international context, as described later in this report, and would help to further demonstrate the TDSB's on-going commitment to climate action.

Plastic is derived from fossil fuels such as oil and coal, which are non-renewable resources that contribute to greenhouse gas emissions when processed. The growing global dependency on plastic is indeed a climate issue.

The Problem with Single-Use Plastic

In 2018 'single-use' was named Collins Dictionary's Word of the Year[1], underscoring the pervasiveness of disposable products in the 21st century.

Single-use plastics are most commonly found in packaging and products designed to be used once, typically away from home, and then thrown away. These items are generally not biodegradable and are made of a variety of different plastics making them more difficult to recycle. Many of these items end up in landfills or as litter in the environment. Discarded single-use plastics may also enter waterways and eventually the oceans, seriously impacting marine life. Appendix A provides more background on the environmental impacts of single-use plastic.

[1] Collins Dictionary. (2018, November 7). Collins 2018 word of the year shortlist. Retrieved from: https://www.collinsdictionary.com/word-lovers-blog/new/etymology-corner-collins-word-of-the-year-2018,449,HCB.html

The Legislation of Single-Use Plastic Reductions

In June 2019, the government of Canada announced its intention to ban single-use plastics beginning in 2021. Several Canadian provinces, including Ontario, are now investigating the feasibility of a similar ban. Locally, the City of Toronto has begun public consultations on what a ban might look like, and the types of items that could be included. These Canadian initiatives mirror policies being implemented in other countries and jurisdictions around the world. Appendix B provides more detail on current government positions on the reduction of single-use plastics.

Single-Use Plastics in School Settings

Many TDSB schools have already taken steps to reduce single-use plastics such as straws and plastic water bottles; the same is true in schools across Canada and the globe.

Throughout the country, several other school boards are developing strategies to reduce single-use plastics. The Vancouver School Board is a progressive example, largely due to the influence of the city of Vancouver's regulations that limit the use of these items throughout the municipality. Internationally, the Maldives banned all single-use plastics in schools as of April 2018. The United Kingdom and France have also taken steps to limit single-use plastics in schools. Appendix C provides more examples.

The TDSB's Distribution of Single-Use Plastic

Single-use plastic items distributed by the TDSB include bottled water, juice, and milk, straws, cutlery, cups, pre-packaged food (e.g., cheese, crackers, yogurt), plastic wrap, plastic bags, coffee cup lids, and gloves for sanitation. Appendix D quantifies the TDSB's distribution of these items.

These items are distributed through a variety of channels including student nutrition programs, cafeterias, the TDSB's Distribution Centre, vending machines, and the Science and Technology Resource Program. On occasion, items may also be purchased externally by schools and central departments. More detail on these distribution channels can be found in Appendix E.

In recent years, some efforts have been made to reduce the TDSB's consumption of single-use plastics:

- EcoSchools' Project Refill provides free water-bottle refill stations to schools that develop targeted initiatives that raise awareness around water issues and the importance of waste reduction specific to plastic water bottles.
- TDSB cafeterias no longer distribute straws unless requested.
- New plastic coffee lids purchased for TDSB cafeterias are now white, as opposed to black. In the City of Toronto, black plastic is not currently recyclable.
- The Science and Technology Resource Program has piloted non-consumable straws to replace single-use plastic straws in one of its structure kits.
- Numerous TDSB schools have implemented campaigns to eliminate or reduce single-use plastic items within their local communities. For example, in the 2018/19 school year, students at Northern Secondary School surveyed some of their peers on their preferences for eliminating single-use plastics and designed a petition based on the results that was then presented to school administration.

However, to mitigate the environmental impact caused by the TDSB's consumption of single-use plastics, broader strategic actions will be required. Legislation may also soon mandate further changes by the TDSB.

Discontinuing the distribution of single-use plastic items will have implications for the TDSB. The degree to which this is the case will vary depending on the approach taken. Reducing the distribution of these items could result in a loss of revenue for the TDSB (e.g., eliminating the sale of plastic water bottles in cafeterias), necessitate costlier alternatives (e.g., paper straws) or require increased capital investment (e.g., retrofitting sink facilities to accommodate current Toronto Public Health food-handling requirements).

A Strategy for Reducing the TDSB's Distribution of Single-Use Plastics: Exemptions, Options and Impacts

The strategy for reducing the TDSB's distribution of single-use plastic items that follows was developed through collaboration between the TDSB's Business Services, the Science and Technology Resource Program and the Sustainability Office. During the development of this strategy, the Joint Management/Labour Environment Committee (JMLEC) and the Toronto School Administrators Association (TSAA) Business Services Liaison Committee were also consulted.

Staff recommend that some items should be exempted from a plan to discontinue the distribution of single-use plastic items at the TDSB for the time being. These items are listed in Appendix F.

Most Viable Options

The following proposes the most viable options for reducing the TDSB's distribution of single-use plastics. More detail on the benefits and drawbacks of these proposed options can be found in Appendix G.

These options have been identified based on the understanding that in some instances existing conditions would make a full withdrawal of certain single-use plastic items difficult for the TDSB to sustain and/or enforce at this point in time.

1. Plastic straws
    a. Deplete the Distribution Centre's existing plastic straw stock and replenish with paper straws.
    b. Deplete the Science and Technology Resource Program's existing plastic straw stock and replenish with alternative (e.g., paper straw with plastic insert).
    c. Prohibit staff from purchasing plastic straws externally.

2. Plastic water bottles
    a. Eliminate plastic water bottles in vending machines.
    b. Eliminate plastic water bottles in cafeterias and replace with water in alternative packaging (e.g., cartons).
    c. Prohibit staff from purchasing plastic water bottles externally, with the exception of special circumstances (e.g., field trips) where water may be unavailable or unreliable or the safety of a student or staff is at risk.

3. Plastic juice bottles
    a. Eliminate plastic juice bottles from vending machines.
    b. Eliminate plastic juice bottles from cafeterias and replace with a juice product in alternative packaging (e.g., cartons).
    c. Continue to encourage student nutrition programs to provide fresh fruit instead of juice in plastic bottles.

4. Plastic milk bottles
    a. Eliminate plastic milk bottles from vending machines.

5. Plastic cups
    a. Deplete existing stock of plastic cups in cafeterias and replace with alternative (e.g., paper cups lined with plastic).

b. Deplete Science and Technology Resource Program's existing stock of plastic cups and replace with alternative (e.g., paper cups lined with bio-plastic).

6. Pre-packaged food
    a. Encourage all student nutrition program sites with appropriate facilities (e.g., two-compartment sink/dishwasher and dedicated hand-washing sink) to purchase food in bulk and prepare on-site.
    b. Subject to available funding and where possible, retrofit up to 60 student nutrition program sites with 'limited facilities' to allow the preparation of food on-site.

Impact

If the proposed options are supported, based on available data it is estimated that the TDSB's annual distribution of single-use plastic items would be reduced by the following amounts. Refer to Appendix D for more detail on the assumptions made in calculating these amounts.

		Number of Individual Units Reduced
Plastic straws		
1a.	Deplete the Distribution Centre's existing plastic straw stock and replenish with paper straws.	437,500
1b.	Deplete the Science and Technology Resource Program's existing plastic straw stock and replenish with alternative (e.g., paper straw with plastic insert).	635,000
1c.	Prohibit staff from purchasing plastic straws externally.	unknown
	Subtotal	**1,072,500+**
Plastic water bottles		
2a.	Eliminate plastic water bottles in vending machines.	9,445
2b.	Eliminate plastic water bottles in cafeterias and replace with water in alternative packaging (e.g., cartons).	117,161*
2c.	Prohibit staff from purchasing plastic water bottles externally.	unknown
	Subtotal	**126,606+**
Plastic juice bottles		
3a.	Eliminate plastic juice bottles from vending machines.	7,391
3b.	Eliminate plastic juice bottles from cafeterias and replace with a	60,162*

	juice product in alternative packaging (e.g., cartons).	
3c.	Continue to encourage student nutrition programs to provide fresh fruit instead of juice in plastic bottles.	unknown
	Subtotal	**67,553+**

Plastic milk bottles		
4a.	Eliminate plastic milk bottles from vending machines.	2,780
	Subtotal	**2,780**

Plastic cups		
5a.	Deplete existing stock of plastic cups in cafeterias and replace with alternative (e.g., paper cups lined with plastic).	1,156*
5b.	Deplete Science and Technology Resource Program's existing stock of plastic cups and replace with alternative (e.g., paper cups lined with bio-plastic).	64,000
	Subtotal	**65,156**

Pre-packaged food		
6a.	Encourage all student nutrition program sites with appropriate facilities to purchase food in bulk and prepare on-site.	unknown
6b.	Subject to available funding and where possible, retrofit up to 60 student nutrition program sites with 'limited facilities' to allow the preparation of food on-site.	unknown
	Subtotal	**unknown**
	Total	**1,334,595+**

***** Amount estimated based on the assumption that the number of single-use plastic items distributed by external caterers would be proportionate to that of the TDSB's internal caterer. Of the 74 cafeterias currently in operation at the TDSB, 42 are operated by external caterers.

Action Plan and Associated Timeline

If the Board chooses to restrict the distribution of single-use plastics and all options (1 – 6) are supported, the following action plan will be implemented.

- **Action #1** - The Board's direction on single-use plastic items will be communicated to the system. (Spring 2020)
- **Action #2** - Straws that are exclusively plastic will no longer be procured by the Distribution Centre and Science and Technology Resource Program. (September 2020)

- **Action #3** - Staff will be prohibited from purchasing plastic straws and plastic water bottles externally. (September 2020)

- **Action #4** - Plastic water bottles, juice bottles and milk bottles will be eliminated from vending machines. (September 2020)

- **Action #5 -** Plastic water bottles and juice bottles will no longer be procured for TDSB cafeterias. (September 2020)

- **Action #6 -** Plastic cups will no longer be procured for TDSB cafeterias and Science and Technology Resource Programs. (September 2020)

- **Action #7** - Student nutrition programs will be encouraged to provide fresh fruit instead of juice in plastic bottles and those with appropriate facilities will be encouraged to purchase food in bulk and prepare on-site. (September 2020)

- **Action #8** - Begin to retrofit student nutrition program sites with 'limited facilities', subject to available funding and where possible. (September 2020)

Resource Implications

Assuming consumption practices remain the same as they were in 2018/19 and all options (1 – 6) are implemented, the following are the estimated resource implications. These costs would be annual with the exception of costs associated with retrofitting student nutrition programs with limited facilities.

In the table below, 'TDSB' refers to an impact that would be absorbed by the TDSB's central budget. An 'end user' could either be a school (e.g., buying straws from the Distribution Centre) or an individual consumer (e.g., a customer buying juice in a cafeteria). More detail on the resource implications of these proposed options can be found in Appendix G.

		Impacted User		**Resource Implications**	
		TDSB	**End User**	**Amount**	**Description**
1a.	Deplete the Distribution Centre's existing plastic straw stock and replace with paper straws.		✓	$0.027/unit	Cost increase
1b.	Deplete the Science and Technology Resource Program's existing plastic straw stock and replenish with alternative (e.g., paper straw with plastic insert).	✓		$2,611	Cost increase
1c.	Prohibit staff from purchasing plastic straws externally.		✓	n/a	

2a.	Eliminate plastic water bottles in vending machines.	✓		*-$1,905*	Revenue loss
2b.	Eliminate plastic water bottles in cafeterias and replace with alternative (e.g., cartons).		✓	*$0*	Cost remains the same
		✓		*-$9,960**	Revenue loss
		✓		-$3,715	Rebate loss
2c.	Prohibit staff from purchasing plastic water bottles externally.		✓	n/a	
3a.	Eliminate plastic juice bottles from vending machines.	✓		*-$2,146*	Revenue loss
3b.	Eliminate plastic juice bottles from cafeterias and replace with alternative (e.g., cartons).		✓	-$0.75/unit	Cost decrease
		✓		-$19,512*	Revenue loss
		✓		-$5,486	Rebate loss
3c.	Continue to encourage student nutrition programs to provide fresh fruit instead of juice in plastic bottles.		✓	unknown	
4a.	Eliminate plastic milk bottles from vending machines.	✓		-$687	Revenue loss
5a.	Deplete existing stock of plastic cups in cafeterias and replace with alternative (e.g., paper cups lined with plastic).	✓		-$57	Cost decrease
5b.	Deplete existing stock of plastic cups in Science and Technology Resource Kits and replace with alternative (e.g., paper cups lined with bio-plastic).	✓		$3,502	Cost increase
6a.	Encourage all student nutrition program sites with appropriate facilities to purchase food in bulk and prepare on-site		✓	unknown	
6b.	Subject to available funding and where possible, retrofit the approximately 60 student nutrition program sites with 'limited facilities'	✓		unknown†	

* These amounts only take into account revenue loss to the TDSB's internal caterer. The TDSB could experience an additional loss of revenue if external caterers expect reduced commissions due to decreased sales. Additionally, the calculation of these amounts is based on the assumption that consumption practices remain the same as they were in 2018/19. If carton sales result in decreased consumption, the TDSB can expect an even greater revenue loss.

† The provincial government is currently reviewing its facility regulations for student nutrition programs. See appendix G for more detail.

Communications Considerations

A system message outlining the direction of the Board as a result of this report will be required.

Board Policy and Procedure Reference(s)

N/A

Appendices

Appendix A: What is the problem with single-use plastic?

Appendix B: Government policy on single-use plastic

Appendix C: Single-use plastic bans in other school districts

Appendix D: Quantifying the TDSB's distribution of single-use items

Appendix E: TDSB single-use plastic distribution channels

Appendix F: Single-use plastic items for exemption

Appendix G: Benefits and drawbacks of proposed options

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Appendix A - What is the problem with single-use plastic?

On a global scale, single-use plastics are widely used for their versatility, convenience, light weight for shipping and low production costs.

Of the 6,300 metric tonnes of plastic waste estimated to have been produced globally as of 2015, a mere 9% was recycled, 12% was incinerated, and the remaining 79% accumulated in landfills or the natural environment.[1] Recycling rates in Canada are shown to be relatively consistent with this trend.[2]

Single-use plastics are designed to be used once, often away from home, and disposed of after a brief use.[3] These items include packaging for food and other consumer products such as plastic bags, disposable cups, lids, straws, cutlery, and beverage bottles.

Different types of plastic materials make up single-use plastics, and the ability to recycle these items varies between jurisdictions.

Single-use plastics as litter

A survey of large litter conducted by the City of Toronto in 2016 found that littering in the city is on the rise.[4] Plastics represented about 31.1% of all large litter found, with water bottles at 2.5% and plastic lids and straws at about 6.4%. By weight, recyclable polyethylene terephthalate (PET) beverage bottles made up 15.4% of all litter collected in the study. To tackle Toronto's litter problem, the report recommended that the city enhance litter abatement programs, review its waste management practices and policies, and launch a public awareness campaign focusing on the most commonly found items.

Plastic debris and marine environments

Much of the literature regarding single-use plastics focuses on the impact plastics have on marine environments. Plastic litter enters waterways through drains, rivers and creeks and eventually reaches larger bodies of water such as the Great Lakes and oceans. The presence of plastics in a marine ecosystem can negatively impact the

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[1] Geyer, R., Jambeck, J.R., & Law, K.L. (2017). Production, use, and fate of all plastics ever made. *Science Advances*, 3 (7). Retrieved from: https://advances.sciencemag.org/content/3/7/e1700782.full

[2] Environmental Defence. (2018, October). Talking Trash: Canada's Plastic Pollution Problem. Retrieved from: https://environmentaldefence.ca/canadas-plastic-pollution-problem/

[3] European Commission. (2018, May 29). Commission Staff Working Document Impact Assessment - Reducing Marine Litter: action on single use plastics and fishing gear. Retrieved from: https://data.consilium.europa.eu/doc/document/ST-9465-2018-ADD-2/en/pdf

[4] AET Group. (2016, October 27). Toronto Litter Audit Summery Report. Prepared for the City of Toronto. Retrieved from: https://www.toronto.ca/wp-content/uploads/2017/10/8ed5-Toronto-Litter-2016-Final-Report_App_Final.pdf

living things that inhabit it. Marine animals may mistakenly ingest plastics or become entangled in plastic debris, resulting in injury or death.[5]

It is estimated that 10,000 metric tonnes of plastic end up in the Great Lakes each year.[6] While Toronto is not located in close proximity to an ocean, plastic litter from the city enters Lake Ontario, eventually reaching the Atlantic Ocean by way of the St. Lawrence River. This in turn, contributes to global marine plastic debris. In Europe, plastics represent more than 80% of all marine litter, and this has provided the basis for action on banning select single-use plastics across the European Union[7].

As plastics break down, eventually turning into microplastics, they are more likely to interfere with food webs.[8] Although research is still emerging regarding the effects of microplastics on living organisms, studies have found that microplastics that are ingested or inhaled by humans can cause harm to cells and tissues.[9]

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[5] National Oceanic and Atmospheric Administration (2016, June). Marine Debris Impacts on Coastal and Benthic Habitats. Retrieved from: https://marinedebris.noaa.gov/sites/default/files/publications-files/Marine_Debris_Impacts_on_Coastal_%26_Benthic_Habitats.pdf

[6] Rochester Institute of Technology. (2016, December 19). Researchers estimate 10,000 metric tons of plastic enter Great Lakes every year, Retrieved from: https://www.sciencedaily.com/releases/2016/12/161219151752.htm

[7] European Commission. (2018, May 28). Single-use plastics: New EU rules to reduce marine litter. Retrieved from: https://europa.eu/rapid/press-release_IP-18-3927_en.htm

[8] Nature. (2013, Feb 13). Classify plastic waste as hazardous. Retrieved from: https://www.nature.com/articles/494169a

[9] Nature. (2013, Feb 13). Classify plastic waste as hazardous. Retrieved from: https://www.nature.com/articles/494169a

Appendix B- Government policy on single-use plastic

The environmental, health and economic costs of single-use plastic consumption are becoming more widely recognized and there is a growing commitment across jurisdictions to phase out or ban its production and use. Currently, the governments of Canada and Ontario are looking into strategies to ban or limit single-use plastics, as is the City of Toronto. The work being done in Canada mirrors an international move to tackle plastic waste, much of which ends up in the oceans.

Government of Canada

In June 2019, the Government of Canada announced its intentions to ban select single-use plastic items such as plastic bags, straws, cutlery, plates, and stir sticks by 2021.[1] The federal government also committed to work with provinces and territories to introduce standards and targets for companies that manufacture plastic products or sell items with plastic packaging to ensure producer responsibility for plastic waste. All of these measures are intended to be grounded in scientific evidence and aligned with similar actions being taken in the European Union and other countries.

In 2018, the Canadian Council of Ministers of the Environment (CCME) released a Strategy on Zero Plastic Waste.[2] This Strategy aligns with the international Oceans Plastics Charter, an initiative of the Government of Canada during its G7 presidency, that has been adopted by many countries as a blueprint for action to reduce plastic waste.

Government of Ontario

In March 2019, the Government of Ontario released a discussion paper entitled, “Reducing Litter and Waste in Our Communities”, identifying steps the government plans to take to make waste reduction, reuse, and recycling easier for Ontarians.[3] In the report, the government committed to working with other provinces and levels of government on the development of an action plan to implement a Canada-wide

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[1] Trudeau, J. (2019, June 10). Canada to ban harmful single-use plastics and hold companies responsible for plastic waste. Retrieved from : https://pm.gc.ca/eng/news/2019/06/10/canada-ban-harmful-single-use-plastics-and-hold-companies-responsible-plastic-waste

[2] Canadian Council of Ministers of the Environment. (2018, November 23). Retrieved from: https://www.ccme.ca/files/Resources/waste/plastics/STRATEGY%20ON%20ZERO%20PLASTIC%20WASTE.pdf

[3] Ontario Ministry of the Environment, Conservation and Parks. 2018. Reducing Litter and Waste in Our Communities: Discussion Paper. Retrieved from: https://prod-environmental-registry.s3.amazonaws.com/2019-03/Reducing%20Litter%20and%20Waste%20in%20Our%20Communities%20Discussion%20Paper_0.pdf

strategy. The province also plans to work with producers and municipalities to harmonize the Blue Box program across Ontario, which may have some implications for single-use plastics[4].

The *Single-Use Plastics Ban Act, 2019,* passed the first reading in the Ontario Legislative Assembly in March 2019. The Bill amends the *Resource Recovery and Circular Economy Act, 2016* by requiring the Minister of Environment, Conservation and Parks to include a plan for the immediate reduction and eventual elimination of the distribution and supply of single-use plastics in Ontario and the immediate elimination of certain single-use plastics.

City of Toronto

The City of Toronto's TransformTO climate action strategy sets a goal to divert 95 per cent of waste from landfill by 2050[5]. The City has been considering limiting single-use plastics for several years, and in 2018 commissioned a public consultation to gauge the public's support for a ban or other measure to reduce their use. The consultation which included over 20,000 individuals from businesses, health organisations, NGO's and citizens, found very strong support (87-93%) for the reduction of expanded foam containers, plastic bags, black plastic containers, disposable cold & hot to-go cups, plastic straws, disposable cutlery, and white, clear or other plastic containers[6].

Other Canadian Municipalities

- Vancouver City Council approved the city's Single-Use Item Reduction Strategy in June 2018, following extensive consultation with over 8,000 residents and hundreds of businesses.[7] The strategy focuses on reducing, and in some cases banning, a number of single-use items over several years including: plastic and paper shopping bags, polystyrene foam cups and foam take-out containers,

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[4] Province of Ontario. (2019, August 23). Waste Management. Retrieved from: https://www.ontario.ca/page/waste-management

[5] City of Toronto. (2019). TransformTO Overview. Retrieved from: https://www.toronto.ca/services-payments/water-environment/environmentally-friendly-city-initiatives/transformto/transformto-climate-action-strategy/

[6] City of Toronto. (2019, May 6). Executive Summary – Public Consultation Report on Phase 1 Consultation Regarding Sinlge0use and Takeaway Item. Retrieved from: https://www.toronto.ca/legdocs/mmis/2019/ie/bgrd/backgroundfile-132912.pdf

[7] City of Vancouver. (2018). Single-use Item Reduction Strategy. Retrieved from: https://vancouver.ca/green-vancouver/single-use-items.aspx

disposable hot and cold drink cups, take-out food containers, plastic straws, and utensils.[8]

- As part of a pilot project to encourage residents to drink water instead of sugary drinks, in 2017 the City of Guelph set up vending machines in two community centres to sell stainless steel re-usable bottles for drinking water at a subsidized cost. It was expected that the project would have a short life span but sales continue to do well and the city is looking at options to expand to other public spaces.[9]

International Examples

Many jurisdictions around the world are similarly engaged in efforts to reduce single-use plastics. Some examples include:

- In October 2018, the European Commission approved new European Union (EU)-wide rules to target the 10 single-use plastic products most often found on Europe's beaches and seas, as well as lost and abandoned fishing gear. The EU will adopt a phased approach with more time being given to find alternatives for some items, but the law is expected to go into effect across the EU by 2021.[10]
- In June 2019, the Parliament of Rwanda passed a draft law prohibiting the manufacture, importation, use and sale of single-use plastic items in Rwanda including plastic bags, cups, straws, coffee stirrers, soda and water bottles, and most food packaging materials. The country banned all plastic bags in 2008.[11]
- In June 2018 the Indian Prime Minister Narendra Modi, announced that India will eliminate all single-use plastic in the country by 2022.[12]

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[8] City of Vancouver. (2018, June 5). City of Vancouver Single-use Item Reduction Strategy 2018-2025. Retrieved from: https://vancouver.ca/files/cov/single-use-item-reduction-strategy-with-amendments.pdf

[9] Guelph Mercury. (2017, August 2). Guelph vending machines promote drinking tap water over juice and pop. Retrieved from: https://www.guelphmercury.com/community-story/7483914-guelph-vending-machines-promote-drinking-tap-water-over-juice-and-pop/

[10] BBC. (2018, October 24). Single-use plastics ban approved by European Parliament. Retrieved from: https://www.bbc.com/news/world-europe-45965605

[11] The New Times. (2019, June 13). House passes bill to ban single-use plastics. Retrieved from: https://www.newtimes.co.rw/news/house-passes-bill-ban-single-use-plastics

[12] The Guardian. (2018, June 5). India will abolish all single-use plastic by 2022, vows Narendra Modi. Retrieved from: https://www.theguardian.com/environment/2018/jun/05/india-will-abolish-all-single-use-plastic-by-2022-vows-narendra-modi

Appendix C – Single-use plastic bans in other school districts

Many school districts, both within Canada and internationally, have taken steps to reduce the presence of single-use plastics:

Canada

Algonquin Lakeshore Catholic District School Board (ALCDSB)

ALCDSB has adopted a policy to reduce and where possible, eliminate commercially produced single-use plastic water bottles and provide viable alternatives for board sites and school communities.[1]

District School Board of Niagara (DSBN)

DSBN has initiated a ban of single-use plastics in their Education Centre and have informed the cafeteria of this new direction. Staff are also working with their vendors to remove single-use plastics from their online catalogues.

Greater Essex County District School Board (GECDSB)

At it's September 17, 2019 Board meeting, the GECDSB recommended that the Board establish a single-use reduction committee to: develop a phased in strategy over a 1-3 year period that targets the most problematic single-use plastics as identified in its baseline procurement assessment; develop a school and community awareness programme; and report on the reduction strategy to the Board.[2]

Hamilton Wentworth Catholic District School Board (HWCDSB)

In November 2016, HWCDSB approved a policy that promotes the use of municipal water sources at all Board meetings, professional development sessions, and special events. This policy also eliminates the sale of single-use

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[1] Algonquin & Lakeshore Catholic District School Board. (2019, April). Commercially bottled water policy statement. Retrieved from: (http://www.alcdsb.on.ca/Board/Policies/Documents/Administration/Commercially%20Bottled%20Water%20A-2019-04-4/01.%20Policy%20Statement%20-%20Commercially%20Bottled%20Water.pdf#search=water%20bottles

[2] Greater Essex County District School Board. 2019, September 17). Board Meeting Agenda. Retried from: https://www.publicboard.ca/Board/Meetings/Documents/19-20%20Agenda%20Packages/19%2009%2017%20-%20Agenda%20-%20Public%20Board%20Meeting.pdf

plastic water bottles by contracted services (e.g., cafeteria service providers, vending machines).[3]

Peel District School Board (PDSB)

In September 2019, the Board of Trustees at PDSB approved a motion to work towards eliminating single-use plastics (e.g., plastic bottles, disposable cutlery and other serviceware) in all schools and workplaces by December 2020.[4]

Greater Saskatoon Catholic Schools (GSCS)

GSCS approved a policy in 2015 to eliminate commercially bottled water from school cafeterias and vending machines, its division office and school events.[5]

Toronto Catholic District School board (TCDSB)

As a result of student leadership and activism, in 2011 the Board of Trustees at the TCDSB passed a motion to promote the elimination of bottled water, including the sale and distribution of bottled water, in its offices and schools.[6]

Waterloo Regional District School Board (WRDSB)

In 2016, the WRDSB introduced a ban on water bottles that applied to all board sites, and individuals and companies that operate contracts within schools (e.g., cafeteria, vending). The policy calls for all sites to make water available, and to encourage all personnel to use reusable water containers. Some exceptions are made for field trips to sites where water may be unavailable or unreliable or the safety of a student or staff is at risk.[7].

Vancouver School Board (VSB)

In June 2018, the City of Vancouver approved restrictions on several single-use plastic items and this in turn has influenced the VSB's consumption of single-use

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[3] HWCDSB. (2016, November 22). Single-use Water Bottles Policy Statement. Retrieved from: https://www.hwcdsb.ca/board/policies/?fileID=288286

[4] Peel District School Board. (2019, September 9). Briefing. Retried from: http://www.peelschools.org/trustees/boardhighlights/Pages/Article.aspx?art-id=2616

[5] Saskatoon StarPhoenix. (2015, June 24). Catholic schools to eliminate bottled water. Retrieved from: https://thestarphoenix.com/news/local-news/catholic-schools-to-eliminate-bottled-water

[6] TCDSB. Water: Our gift, our responsibility, our opportunity. Retrieved from: https://www.tcdsb.org/Board/environment/water/Pages/default.aspx

[7] WRDSB. (2019, September). Single-use commercially bottled water. Retrieved from: https://www.wrdsb.ca/wp-content/uploads/4980-Single-Use-Commercially-Bottled-Water.pdf

plastics. VSB cafeterias have eliminated Styrofoam products, plastic straws, and bottled water sales, and have switched to biodegradable food containers.

International Examples

Maldives

In April 2018 the Maldives banned all single-use plastics in schools, including plastic bags and water bottles that children bring from home. Students are encouraged to use re-usable lunch boxes and bottles instead.[8].

France

In September 2018 the French National Assembly voted unanimously to adopt a law amendment that bans plastic containers used for cooking, heating, and serving food in child care, school, and university catering services. This ban will take effect in January 2025[9].

England

In December 2018, the British Education Secretary urged all schools across the country to eliminate their use of single-use plastics by 2022, including items such as plastic bags, straws, bottles and food packaging in favour of sustainable alternatives. This announcement is in-line with the UK's strategy to eliminate avoidable plastic by 2042.[10]

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[8] Maldives Times. (2018, April 4). Maldives to ban single-use plastics in schools. Retrieved from: https://maldivestimes.com/maldives-to-ban-single-use-plastics-in-schools/

[9] Food Packaging Forum. (2018, September 19). France bans plastics in school canteens. Retrieved from: https://www.foodpackagingforum.org/news/france-bans-plastic-fcms-in-school-canteens

[10] Government of the United Kingdom. (2018, December 27). Retrieved from: https://www.gov.uk/government/news/schools-challenged-to-go-single-use-plastic-free-by-2022

Appendix D – Quantifying the TDSB's distribution of single-use items

The following table quantifies the estimated amount of single-use plastic items distributed by the TDSB in the 2018/19 school year.

Note to reader:

- Amounts do not account for single-use plastic items that may be distributed though other channels of which there is no available data (e.g., plastic water bottles purchased for a school event).
- Student nutrition programs are volunteer-run and purchase program supplies independently. For this reason, it is challenging to accurately estimate the number of single-use items distributed through this channel and any potential for reduction.
- The number of single-use items distributed by vending machines does not account for individual agreements for vending services that may have been arranged for locally.
- Of the 74 cafeterias currently in operation at the TDSB, 42 are operated by external caterers. Amounts listed below for external caterers are estimated, based on the assumption that the number of single-use plastic items distributed by external caterers would be proportionate to that of the TDSB's internal caterer.

	Distribution Channel	Individual Units Distributed in 2018/19
Plastic Straws	Cafeterias – internal caterer	20,000
	Cafeterias – external caterers	26,250*
	Distribution Centre – general consumption	437,500
	Science and Tech. Resource Program (regular)	500,000
	Science and Tech. Resource Program (milkshake)	135,000
	Total	**1,118,750**

Plastic Water Bottles	Cafeterias – internal caterer (330 mL)	30,744
	Cafeterias – external caterers (330 mL)	40,352*
	Cafeterias – internal caterer (500 mL)	19,920
	Cafeterias – external caterers (500mL)	26,145*

	Vending Machines (330 mL)	3,613
	Vending Machines (500 mL)	5,832
	Total	**126,606**

Plastic Juice Bottles	Cafeterias – internal caterer (300 mL)	26,016
	Cafeterias – external caterers (300 mL)	34,146*
	Vending Machines	7,391
	Student Nutrition Programs (114 mL)	Unknown
	Total	**67,553+**

Plastic Milk Bottles	Vending Machines	2,780
	Student Nutrition Programs	Unknown
	Total	**2,780+**

Plastic Cups	Cafeterias – internal caterer (8 oz.)	500
	Cafeterias – external caterers (8 oz.)	656*
	Science and Tech. Resource Program (5 oz.)	50,000
	Science and Tech. Resource Program (9 oz.)	14,000
	Total	**65,156**

Pre-packaged Food	Student Nutrition Programs	Unknown
	Total	**Unknown**

Plastic Cutlery	Cafeterias – internal caterer	495,000
	Cafeterias – external caterers	649,688*
	Distribution Centre	753,940
	Total	**1,898,628**

Plastic Wrap	Distribution Centre (100 ft.)	420
	Cafeterias – internal caterer (100 ft.)	2,585
	Cafeterias – external caterers (100 ft.)	3,438*
	Student Nutrition Programs (100 ft.)	Unknown
	Total	**6,443**

Coffee Lids	Cafeterias – internal caterers	22,000
	Cafeterias – external caterers	28,875*
	Total	**50,875**

Re-sealable Plastic Bags	Distribution Centre	1,364,805

Plastic Waste Bags	Distribution Centre	6,750
	Board Approved Vendor	3,105,900
	Total	**3,112,650**

Plastic Gloves	Distribution Centre	880,000
	Cafeterias – internal caterer	12,800
	Cafeterias – external caterer	16,800*
	Student Nutrition Programs	Unknown
	Total	**909,600+**

***** Estimated based on internal caterer's distribution amounts.

Appendix E – TDSB single-use plastic distribution channels

While not an exhaustive list, the following captures the channels in which single-use plastics are most commonly distributed by the TDSB:

1. Student Nutrition Programs
   During the school year, the Toronto Foundation for Student Success supports approximately 580 breakfast, morning meal and lunch programs at 424 schools, providing approximately 150,000 students per day with regular access to healthy food options. These community-based programs, are run by volunteers and have the ability to purchase program supplies locally or from food suppliers.

2. Cafeterias
   The TDSB's catering services provide options for food and beverage purchases for students, staff and visitors. In 2018/19, cafeteria services were delivered at 82 TDSB sites, provided by two external caterers and one internal caterer (Nutrition Services). In 2019/20, cafeteria services are delivered by the TDSB's internal caterer at 32 sites and by external caterers at 42 sites.

3. Distribution Centre
   The TDSB's Distribution Centre offers "one-stop shopping" for TDSB schools, administrative departments, Facility Services and external clients (e.g., child care centres, denominational schools), providing access to over 2,650 cost-effective classroom, office and caretaking supplies sourced through a competitive public tendering process.

4. Vending Machines
   As of July 2019, the TDSB had 114 vending machines at 82 sites, dispensing both beverages and snacks that are held by a central contract. This number does not include individual agreements for vending services that may have been arranged for locally.

5. Science and Technology Resource Program
   The TDSB's Science and Technology Resource Program loans kits and manuals to educators to enrich their science, technology, engineering and math (STEM) programs in primary, junior and secondary classrooms. In 2018/19, 11,173 resource kits were loaned to schools, covering 46 different titles. Single-use plastic items such as straws and cups are included in many of these kits to provide students with hands-on learning experiences.

6. Board Approved Vendors
   Board approved vendors are established through competitive procurement processes compliant with provincial directives to provide certain goods/services to the TDSB. Supplies and materials that are not available through the Distribution Centre Catalogue can also be sourced through Board approved vendors.

7. External Purchases
   On occasion, items are purchased by schools and central departments outside of the channels listed above. These types of purchases are intended to be reserved for unforeseeable situations of urgency or emergency.

Appendix F – Single-use plastic items for exemption

For the time being, staff recommend that the following items should be exempted from a plan to discontinue the distribution of single-use plastic items at the TDSB. Rather than substituting these items with alternative materials, the TDSB should instead focus its efforts on waste reduction where possible.

1. Plastic cutlery
    a. Given that clean plastic cutlery can be recycled and at present, alternatives such as wooden or compostable cutlery cannot be processed in Toronto's organics or recycling waste streams, the TDSB should continue to distribute plastic cutlery in its cafeterias, the Distribution Centre and student nutrition programs on an as-needed basis.

2. Plastic coffee lids
    a. TDSB cafeterias have phased out black plastic coffee lids, which cannot be recycled in Toronto, and replaced them with recyclable white plastic coffee lids. Given than compostable coffee lids cannot currently be processed in Toronto's organics or recycling waste streams, the TDSB should continue to distribute plastic coffee lids on an as-needed basis.

3. Plastic gloves
    a. For health and safety purposes, the TDSB should continue to use/distribute plastic gloves.

4. Plastic waste bags
    a. For health an safety purposes, the TDSB should continue to use plastic bags for waste disposal.

5. Plastic straws
    a. Serving size restrictions for elementary-aged students limit alternative packaging options for juice. For this reason, the TDSB should continue to distribute plastic straws that accompany carton beverages (e.g., juice boxes).

6. Plastic water bottles
    a. In special circumstances (e.g., field trips) where water may be unavailable or unreliable or the safety of a student or staff is at risk, the TDSB should allow staff to use their professional judgement to determine when providing access to single-use plastic water bottles would be appropriate.

7. Re-sealable plastic bags
    a. Schools use re-sealable bags for health and safety purposes (e.g., ice) and often more than once (e.g., library book bag). For this reason, the TDSB should continue to distribute plastic re-sealable bags from the Distribution Centre.

8. Plastic food wrap
    a. In TDSB cafeterias, some food items must be individually packaged for health and safety purposes. Additionally, student nutrition programs with “limited facilities” are not able to use re-useable containers for food storage. For these reasons, the TDSB should continue to use plastic food wrap in cafeterias and student nutrition programs and encourage the use of re-useable containers where possible.

Appendix G – Benefits and drawbacks of proposed options

The following outlines the implications for the options deemed to be most viable for reducing the TDSB's distribution of single-use plastics. The costs listed below are approximate and assume that consumption practices remain the same as they were in 2018/19.

1. Plastic straws
   a. Deplete the Distribution Centre's existing plastic straw stock and replenish with paper straws for general consumption.

Implications	• 437,500 plastic straws will no longer be distributed by the TDSB. • Cost increase of $0.027/unit for end user. • If consumption practices remain the same as they were in 2018/19, the total difference in price for all straws purchased from the Distribution Centre would be $11,615.

   b. Deplete the Science and Technology Resource Program's existing plastic straw stock and replenish with alternative (e.g., paper straw with plastic insert).

Implications	• 635,000 plastic straws will no longer be distributed by the TDSB. • Straws will still need to be placed in the garbage, as they will contain traces of plastic. • Cost increase of $2,611 to the TDSB.

2. Plastic water bottles
   a. Eliminate plastic water bottles in vending machines.

Implications	• 9,445 plastic water bottles will no longer be distributed by vending machines at the TDSB. • Revenue loss of $1,905 annually to the TDSB. • Could result in the elimination of beverage vending machines from the system.

b. Eliminate plastic water bottles in cafeterias and replace with water in alternative packaging (e.g., cartons).

Note: For health and safety reasons, glass bottles are not considered a viable alternative due to the susceptibility of breaking.

Implications	• 117,161 plastic water bottles will no longer be distributed in TDSB cafeterias. • 330 mL would be replaced with a 200 mL carton for the same cost to the end user. • External caterers could expect a relief through reduced commissions if there is an impact on their revenue. • Revenue loss of $9,960 to the TDSB if consumption practices remain the same. • Rebate loss of $3,715. • Could result in the closure of cafeterias that are already struggling financially.

3. Plastic juice bottles

a. Eliminate plastic juice bottles from vending machines.

Implications	• 7,391 plastic juice bottles will no longer be distributed by vending machines at the TDSB. • Revenue loss of $2,146 annually to the TDSB if consumption practices remain the same.

b. Eliminate plastic juice bottles from cafeterias and replace with a juice product in alternative packaging (e.g., cartons).

Implications	• 60,162 plastic juice bottles will no longer be distributed in TDSB cafeterias. • Could result in the closure of cafeterias that are already struggling financially. • 300 mL could be replaced with a 200 mL carton at a decreased cost to consumer. • External caterers could expect a relief through reduced commissions if there is an impact on their revenue. • Revenue loss of $19,512 for the TDSB if consumption practices remain the same. • Rebate loss of $5,486 annually.

c. Continue to encourage student nutrition programs to provide fresh fruit instead of juice in plastic bottles.

Implications	• Higher nutritional value. • Alternative will come at a higher cost to student nutrition programs. • Challenging to enforce.

4. Plastic milk bottles
   a. Eliminate plastic milk bottles from vending machines.

Implications	• 2,780 plastic milk bottles will no longer be distributed by vending machines at the TDSB. • Revenue loss of $687 annually to the TDSB

5. Plastic cups
   a. Deplete existing stock of plastic cups in cafeterias and replace with alternative (e.g., paper cups lined with plastic)

Implications	• 1,156 plastic cups will no longer be distributed in TDSB cafeterias. • Paper cups will need to be placed in the garbage. • Cost decrease of $57 for the TDSB.

   b. Deplete Science and Technology Resource Program's existing stock of plastic cups and replace with alternative (e.g., paper cups lined with bio-plastic).

Implications	• 64,000 plastic cups will no longer be distributed by Science and Technology Resource kits. • Paper cups will need to be placed in the garbage. • Cost increase of $3,502 for the TDSB.

6. Pre-packaged food
   a. Encourage all student nutrition program sites with appropriate facilities (e.g., two-compartment sink/dishwasher and dedicated hand-washing sink) to purchase food in bulk and prepare on-site.

Note: Since student nutrition programs are considered food premises, they are currently subject to the requirements of the Ontario Food Premises Regulation, which stipulates structural and/or equipment requirements for food preparation.

Implications	• Food purchased in bulk and prepared on-site is more cost effective and offers better nutritional value. • Food preparation would require more volunteer time. • Challenging to enforce.

b. Subject to available funding and where possible, retrofit approximately 60 student nutrition program sites with “limited facilities” to allow the preparation of food on site.

Note: In October 2019, the Ministry of Health announced that the province will be revisiting its facility regulations for charities involved in community feeding such as student nutrition programs. The province’s intent is to remove unnecessary barriers related to structural and/or equipment requirements for these programs. The Ontario Food Premises regulation was amended in late December 2019 to allow some exemptions to sites that offer “low-risk food items”. However, additional clarification regarding what is considered a “low-risk food item” is being sought from the Ministry of Health.

Implications	• Cost increase currently unknown. Without formally assessing the needs of each individual site, it is not possible to generate an accurate cost estimate. Some sites may only require modest modifications, whereas others could require a complete drainage upsize.

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