



CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Environmental Services Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	February 19, 2021
SUBJECT/REPORT NO:	Moving Hamilton Towards a Zero Plastic Waste Plan (PW21006) (City Wide) (Outstanding Business List Item)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Ryan Kent (905) 546-2424 Ext. 7686
SUBMITTED BY:	Craig Murdoch Director, Environmental Services Public Works Department
SIGNATURE:	

RECOMMENDATION

- (a) That Appendix “A” attached to Report PW21006 respecting the City of Hamilton Strategy to Reduce Single-Use Plastics be approved;
- (b) That staff continue to participate in consultation opportunities and provide comments on behalf of the City, on proposed Federal and Provincial legislation related to single-use plastics; and
- (c) That matter respecting Moving Hamilton Towards a Zero Plastic Waste Plan, be identified as completed and removed from the Outstanding Business List.

EXECUTIVE SUMMARY

At the May 13, 2019, Public Works Committee meeting and approved at Council on May 22, 2019, staff were directed to report back with information on the feasibility of the City of Hamilton (City) creating a Zero Plastic Waste Plan. The purpose of this report is to seek approval of the proposed City of Hamilton Strategy to Reduce Single-Use Plastics outlined in Appendix “A” attached to Report PW21006.

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Single-Use Plastics (SUPs) have become increasingly problematic in recent years. This includes being a major source of litter (and the associated environmental impacts of this) and that most of these products are not recyclable. In addition, most compostable alternatives to SUPs do not fully compost during accelerated composting processes and end up in landfill. These issues have prompted both the federal and provincial governments as well as local and regional municipalities to take action on SUPs. These provincial and federal actions include bans on certain SUPs and the development of policies to reduce the production and consumption of SUPs.

The proposed strategy outlined in Appendix “A” attached to Report PW21006 focuses on what the City can do to reduce the generation of SUPs through its own operations and activities, while at the same time providing guidance to both residents and businesses within the City on how to reduce SUPs. The strategy aims to prevent duplication of work currently drafted in any known provincial or federal plans.

Alternatives for Consideration – N/A

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: All costs associated with promotional and educational materials in the proposed strategy will be provided in existing operating and capital budgets. This cost is estimated to be approximately \$1,000. If, through the implementation of the strategy, it is found to be feasible to install infrastructure upgrades for water fill/hydration stations at City-owned golf courses, these funds will be obtained through the annual capital budget request by the applicable asset owner. The installation of water/fill hydration stations in parks are currently installed at the request of Councillors and would be paid for through alternate funding sources. The installation of water fill/hydration stations installed in City facilities are replaced on an as needed basis based on available capital funds. As such, there is no financial implication to the installation of water fill/hydration stations in parks or within City-owned recreation centres. Each water fill/hydration station inside a building costs approximately \$3,500 - \$4,000 and water fill/hydration stations installed outside cost approximately \$25,000 to \$30,000 (as part of multi-hydration stations).

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND

Provincial discussion paper on Reducing Litter and Waste in our Communities

On March 6, 2019, the Ontario Ministry of Environment, Conservation, and Parks (MECP) released Reducing Litter and Waste in Our Communities: Discussion Paper which included key areas for action on reducing plastic waste going into landfills and waterways and providing rules for compostable products and packaging. Following the release of this discussion paper, on March 18, 2019, Bill 82 - Single-use Plastics Ban Act, passed first reading in the Ontario legislature. The Bill includes measurable targets and timelines for the reduction and eventual elimination of the distribution and supply of SUPs in Ontario and immediate elimination of some SUPs. No further actions on SUPs has occurred at the provincial level.

City of Hamilton Motion to Create a Zero Plastic Waste Plan

On May 22, 2019, Hamilton City Council approved the following motion:

That staff report back to the Public Works Committee with information on the feasibility of the City of Hamilton creating a Zero Plastic Waste Plan that includes:

- (a) Quantify single-use plastics, polystyrene foam and other products that never were or are no longer accepted by our municipal recycling program and identify items that have readily available re-useable or compostable alternatives;
- (b) Investigate options for the City of Hamilton to develop a strategy to enable businesses, City facilities and City permitted events to move towards zero plastic waste when alternatives are available;
- (c) Review regulatory options for the City of Hamilton to limit or eliminate the acceptance of polystyrene foam and single-use plastics at City landfills, including public education, consultation with business, supplementation of provincial regulations and other methods of increasing landfill diversion rates; and,
- (d) Report back with any costs or savings that may be incurred or realized by implementing a City-led Zero Plastic Waste plan.

Federal discussion paper on an Integrated Management Approach to Plastic Products to Prevent Waste and Pollution

On October 7, 2020, the federal government released the discussion paper titled A Proposed Integrated Management Approach to Plastic Products to Prevent Waste and Pollution with the consultation and commenting period ending on December 9, 2020.

This discussion paper included the following four main objectives of the federal government on SUPs:

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- Eliminate certain sources of plastic pollution;
- Strengthen domestic end-markets for recycled plastics;
- Improve the value recovery of plastic products and packaging; and
- Support innovation and the scaling up of new technologies

The discussion paper also included three mechanisms that the federal government is planning to use to meet these objectives:

- Bans and/or restrictions on SUPs – to reduce the purchase/generation of SUPs.
- Performance standards – require a minimum amount of recycled content for certain plastic products and packaging to increase the demand for recycled plastics.
- End-of-life responsibility of SUPs – establish a consistent federal program of extended producer responsibility where producers of all plastics, including SUPs, are responsible for managing their products throughout their lifecycle with, for example, consistent terminology/material categories and meeting recycling targets for the material they produce.

This discussion paper is the most recent step by the federal government towards creating regulations to manage SUPs and has identified that new regulations will be in place sometime in 2021 to support the plan outlined in the discussion paper.

By endorsing the Strategy outlined in Appendix “A” attached to Report PW21006, we will further align with the corporate goals and areas of focus for climate change mitigation and adaptation.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

The recommendations in Report PW21006 comply with the guiding principles of the City’s Solid Waste Management Master Plan, Healthy Food and Beverage Action Plan and the Corporate Climate Change Task Force goals and focus areas.

RELEVANT CONSULTATION

The following groups have been consulted and are supportive of the recommendations included in this report.

Corporate Services Department– Legal and Risk Management Services Division and Financial Services Division

Public Works Department - Environmental Services Division – Recycling and Waste Disposal Section and Parks and Cemeteries Section

Public Works Department - Energy, Fleet and Facilities Management Division

Healthy and Safe Communities Department – Sport Services and Business Support
Waste Management Advisory Committee

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

The following information provides details as requested in the motion approved at the May 22, 2019 Council meeting.

Item (a) of the motion speaks to quantifying SUPs and advising if these items have never been or are no longer accepted in Hamilton’s recycling program and identify items that have readily available re-usable or compostable alternatives. Table 1 identifies common SUPs generated in Hamilton as well as their current and previous status in the City’s blue box program. As shown, most of these items are not currently accepted in the City’s blue box program.

Table 1: Common SUPs in Hamilton

Single-Use Plastic Product	Currently Accepted in Hamilton’s Blue Box Program?	Previously Accepted in Hamilton’s Blue Box Program?
Beverage bottles	Yes	Yes
Black plastic take-out containers	No	Yes
Coffee cups	No	No
Coffee cup lids	No	Yes
Coffee pods	No	No
Plastics dishes (bowls, cups and plates)	Yes	Yes
Plastic grocery bags	Yes	Yes
Plastic straws	No	No
Plastic takeout trays	Yes	Yes
Plastic utensils	No	No
Polystyrene takeout trays, meat trays, plates & cups	No	Yes

Reusable and Compostable Alternatives to SUPs.

Currently, there are reusable alternatives that are readily available for all the items listed in Table 1 (other than takeout trays and containers). Reusable water bottles, shopping bags, coffee mugs, straws and utensils are sold by many retailers and in the case of straws and utensils, are often sold with travel cases and/or tools to assist in cleaning them. However, despite these readily available options, SUPs are still significantly more popular than reusable options.

Compostable alternatives to SUPs are increasing in popularity; however, these items pose their own challenges. As these products are marketed as being compostable, residents dispose of them in the green bin and all materials disposed of through the City’s green bin program are processed at the City’s Central Composting Facility (CCF).

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The CCF has a three-phase process that all material must comply with to be broken down into compost to meet Ontario standards for agricultural use. Phases one and two is where all received material is placed in aerated tunnels to initiate the breakdown of the organic material. Phase three involves first screening the material to remove any material that is either not compostable or that hasn't broken down sufficiently before curing the material. The total amount of time for this process at the CCF is approximately 35 to 42 days.

Currently, there aren't any provincial or federal standards governing what constitutes a compostable product and therefore, when a product is marketed as compostable, it's typically done through an industry certification such as Biodegradable Products Institute (BPI). To obtain this certification a product must break down significantly in 84 days and this is typically done in a lab environment under ideal conditions. Because of the time discrepancy between the CCF process and that of industry certifications, staff carried out tests on 19 products marketed as compostable alternatives to SUPs to determine their suitability with the City's process. During the test, 74% (14) of the products tested were removed during the screening process and all products removed during the screening process ended up in landfill. The screening process removes items that exceed 37mm or 1 ½ inches in size. The five remaining products that were not screened out were designated as problematic by City staff because these products have the potential to contaminate the compost and put it at risk of not passing quality testing. This is because they break down into what could be considered foreign matter/sharps and the current limit of this material in compost is 0.5% based on Ontario compost standards. More detailed information on the testing is included in Appendix "A" attached to Report PW21006.

Notwithstanding that these items will not break down sufficiently in the process at the CCF, they may be appropriate to include in backyard composters or other commercial composting facilities. An important note on the products that were screened out is that although they did not break down sufficiently, the testing concluded that some of these products can provide benefit to the compost by increasing carbon levels, transferring bacteria and adding structure to the composting mass. Examples of these products include bamboo spoons and bowls and paper straws. The results of these tests concluded that there are significant limitations to the benefits of products currently marketed as compostable and most of these products will end up in landfill. The tests concluded that some of the materials that were screened out can be recommended by staff as acceptable alternatives to SUPs. These products if littered, would also not have the same negative effects on the environment as their SUP counterparts. The SUPs that have readily available compostable alternatives found to provide some benefit to the CCF process are listed in Table 2.

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Table 2: SUPs with Staff-Approved Compostable Alternatives

Single-Use Plastic Item	Compostable Alternative(s) Recommended by Staff
Plastic bowls	Bamboo and pressed paper bowls
Plastic plates	Paper plates
Plastic straws	Bamboo or paper straws
Plastic take-out container/tray	Paper or pressed fibre container and clamshells
Plastic utensils	Bamboo cutlery

The SUPs listed in Table 2 are included in the federal discussion paper as items that will most likely be included in a federal ban. In addition to the concern of how slowly compostable alternatives break down is the increased cost to purchase these items compared to SUPs. For example, according to suppliers, at today's prices, plastic straws cost approximately \$0.01/each compared to \$0.05 per paper straw, and plastic plates cost approximately \$0.04 each compared to \$0.16 for each compostable plate. Although this is a significant increase in costs to replace SUPs with compostable alternatives, the use of these alternatives will be required as a result of the implementation of a federal ban on the six SUPs mentioned in the discussion paper and is not associated with the implementation of the strategy as outlined in Appendix "A" attached to Report PW21006. When purchasing compostable alternatives if a federal ban comes into effect, staff will make every effort to procure the most cost-effective alternatives that provide the greatest benefit to the composting process used by the City. In addition, costs for these products should come down due to mass production and purchasing of the compostable alternatives.

Item (b) in the motion directs staff to investigate options for the City to develop a strategy to enable businesses, City facilities and City permitted events to move towards a zero plastic waste plan when alternatives are available. The term zero waste is a difficult goal to achieve; however, staff have developed the strategy as outlined in Appendix "A" attached to Report PW21006 that includes options on how the City can reduce the generation of SUPs and plastic waste at City facilities and City permitted events as well as provide guidance for businesses on how to reduce SUPs. This strategy, will work in conjunction with federal actions described in the discussion paper including providing guidance to businesses on SUPs, as opposed to imposing bans on certain SUPs. Bans on SUPs that businesses would need to comply with are planned to be included in federal legislation.

Item (c) in the motion requests information (c) related to regulatory options for Hamilton to reduce or eliminate SUPs. A growing number of municipalities in Canada have implemented (or are considering implementing) bans on certain SUPs including the following cities: Toronto, Vancouver, Montreal, Victoria and Edmonton. These bans generally select an item such as plastic shopping/grocery bags and require that no retail location within the municipality be permitted to provide these to patrons. After

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consultation with staff in Legal Services, it was determined that this regulatory option would be problematic for the City to implement. This is due to the high probability of legal challenges by either residents or businesses and the difficulty of enforcing such a ban. In October 2019, the Retail Council of Canada sent a letter to the Ontario Minister of Environment, Conservation and Parks voicing concern over how problematic bans on SUPs in different jurisdictions would be to businesses and that such bans should be implemented at a province-wide level. A City-wide ban would also require significant resources prior to implementation as they often require meaningful public consultation. A second regulatory option is for the City to implement a landfill ban on certain SUPs.

These types of bans have been successfully used in other municipalities to increase the capture of divertible materials in blue boxes and green bins. However, landfill bans are only practical if the material being banned has another accessible option for how it can be disposed. In the case of most SUPs (such as plastic straws and cutlery), there aren't any other disposal options for these items other than landfill and including them in a landfill ban would most likely result in residents disposing of them in the blue box. This would result in an increase in the contamination of the blue box and increased costs to the City.

The federal discussion paper proposes a federal ban on six SUPs which, if implemented, would eliminate the need for bans at the municipal level for these items. The items currently identified to be included in a federal ban are included in table 3.

Table 3: SUPs Proposed in Federal Ban

Food packaging and service ware made from plastic that is difficult to recycle (including foamed plastics, black plastic, PCC, oxo-degradable plastic and multiple/composite materials that have one or more plastics)
Plastic cutlery
Plastic stir sticks
Plastic straws
Plastic grocery/take out bags
Six-pack rings

Due to the rationale against implementing regulatory options such as City-wide bans or landfill bans on SUPs, including the federal government's proposed ban on SUPs, staff are not recommending this approach currently. Instead, staff is recommending that the City implement the strategy outlined in Appendix "A" attached to Report PW21006 that focuses on limiting the generation of SUPs through City operations and events on City-owned property and providing residents and businesses with public education on how to reduce their use of SUPs. By reducing the generation and use of SUPs this would reduce the amount of material going to landfill resulting in increased diversion rates.

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The proposed strategy found in Appendix “A” attached to Report PW21006 has two primary objectives. First, to decrease the use and disposal of SUPs within the City’s operations and on City property and second, to provide educational materials to businesses and residents to encourage a shift to reusable and compostable alternatives where practical. These objectives will be met by implementing 14 action items under four Strategic Pillars. In creating this strategy staff have considered the proposed mechanisms included in the federal discussion paper and eliminated any duplication. As noted above, the federal discussion paper includes the banning of six SUPs, enacting mandatory targets for recycled content in plastic products and packaging and establishing a system of extended producer responsibility for plastics. Additionally, the discussion paper includes establishing standards for compostable alternatives to SUPs.

Although staff have not included these items in the proposed strategy, staff support these pieces included in the federal discussion paper. An example of how staff have avoided duplication with the discussion paper is that the City’s proposed strategy doesn’t include any actions to ban or eliminate SUPs that the federal government is planning on including in a ban as seen in Table 3. The strategy instead focusses on two SUPs common in City operations and events on City property: single-use water bottles and single-use coffee cups and lids. The four Strategic Pillars and 14 action items are outlined below.

Strategic Pillar 1 – Promotion and Education

This includes promoting reusable products to residents through presentations that are part of current programs, information imbedded in existing educational material (waste guides and City website) and creating new informational material for businesses and special events. Additionally, staff will create a business recognition program for businesses that follow best practices to reduce SUPs.

Strategic Pillar 2 – City Infrastructure

This will focus on continuing to install water fill/hydration stations in City facilities and parks, as well as staff investigating the value in installing water fill/hydration stations at City-owned golf courses. Water fill/hydration stations in parks will be installed at the request of Councillors and would be paid for through alternate funding sources.

Strategic Pillar 3 – Financial Incentives & Fees

Staff will investigate and implement the most effective method of reducing the consumption of single-use coffee cups (and lids) at City facilities such as arenas and at events on City property. An example of a method that will be investigated would be to reduce the fee to purchase coffee if the patron has their own reusable cup and does not require the purchase of a single use cup provided by the food vendor. Different fees and incentives (including the dollar amount of these) on single-use coffee cups sold at facilities will be investigated with the most effective approach being implemented. To

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reduce single-use coffee cups at events, staff will investigate financial penalties for event organizers that fail to follow the City's guidelines to reduce SUPs.

Strategic Pillar 4 – Bans on SUPs in City Facilities and on City Property

This will focus on how staff and visitors at City facilities can reduce the use of single-use coffee cups and single use plastic water bottles by establishing rules for organizers of events on City property and how staff meetings and other gatherings in City facilities are run. It will also include banning the sale of single-use water bottles at City facilities and on City property where sufficient water fill/hydration stations are present. Reducing the use and/or sale of plastic water bottles on City property is consistent with the Healthy Food and Beverage Policy approved by Council in May 2018.

Item (d) in the motion was to determine costs and savings related to the recommended strategy. The proposed strategy to reduce SUPs has two potential costs. First, is the purchasing and installation of water fill/hydration stations. This cost to install a new outdoor water fill/hydration station is approximately \$25,000 to \$30,000 per each and the cost to install a new indoor water fill/hydration station is approximately \$3,500 - \$4,000 each. If staff determine that it is operationally feasible to install these stations, the cost will be included as part of the annual capital budget process. There is also an ongoing operating cost of outdoor water fill/hydration stations at golf courses of approximately \$5,000 per unit and this cost could be included in the operating budgets of the golf courses where they are installed. The cost of designing and printing promotional and educational material is estimated to be approximately \$1,000 and will be absorbed through existing capital and operating budgets.

ALTERNATIVES FOR CONSIDERATION

N/A

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Clean and Green

Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.

Built Environment and Infrastructure

Hamilton is supported by state-of-the-art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report PW21006 – City of Hamilton Strategy to Reduce Single-Use Plastics.