



City of Peterborough

Waste Management Master Plan Update: Summary Report

FINAL REPORT

October 31, 2022



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1. Introduction

The City of Peterborough is a medium urban municipality with a population of approximately 85,000 residents situated in 59km². The City is located geographically within the County of Peterborough, which itself has approximately 55,700 residents and an expanse of 4000 km². Peterborough is located in the traditional territory of the Michi Saagig peoples and is part of the land covered by Treaty #20, signed November 1818. Peterborough's traditional name is Nogojiwanong "place at the foot of the rapids" in Anishinaabemowin.

In 2012, the City developed its Waste Management Master Plan (WMMP), which included several program recommendations for increasing the City's diversion rate from 50% in 2010 to 75% by 2030. Many of the recommendations have been implemented, and the City is currently undertaking implementation of its Source Separated Organics (SSO) program, arguably the most complex undertaking recommended in the 2012 WMMP.

Since the 2012 WMMP was approved by City Council, the regulatory landscape for solid waste management in Ontario has evolved. Responsibility for the management of blue box recyclables is shifting from municipalities to producers¹, and municipalities like Peterborough are being required to introduce programs for the diversion of food and organic waste.

It is within this context of evolution and change that the City is undertaking a targeted update of its 2012 SWMP. The purpose of this project was to obtain a clear understanding of the City's waste management performance and identify opportunities for further improvement, particularly those that may have synergy with the planned SSO program. Specifically, its goals were to:

1. Modernize the City's 2012 Waste Management Master Plan (WMMP);
2. Ensure the WMMP meets City's evolving waste management needs;
3. Continue to adopt proven waste management best practices into the City's solid waste management system; and
4. Ensure the City remains a leader in Municipal Solid Waste Management.

This report describes the update to the 2012 WMMP. It includes a summary of the City's current waste management performance, identifies potential options that will help the City moving toward its target of 75% diversion, and provides recommendations for the City's future solid waste management system.

¹ In general, a person or an organization is considered a producer if they supply products into Ontario. Franchisors and marketplace facilitators can also be considered as producers.

2. Goals

The 2012 WMMP identified three fundamental goals for the City's waste management system. These were reviewed in this update and concluded that the three goals are still applicable. Therefore, the three goals of the updated WMMP include:

1. Maximize waste diversion;
2. Minimize waste generation; and
3. Maintain fiscal responsibility.

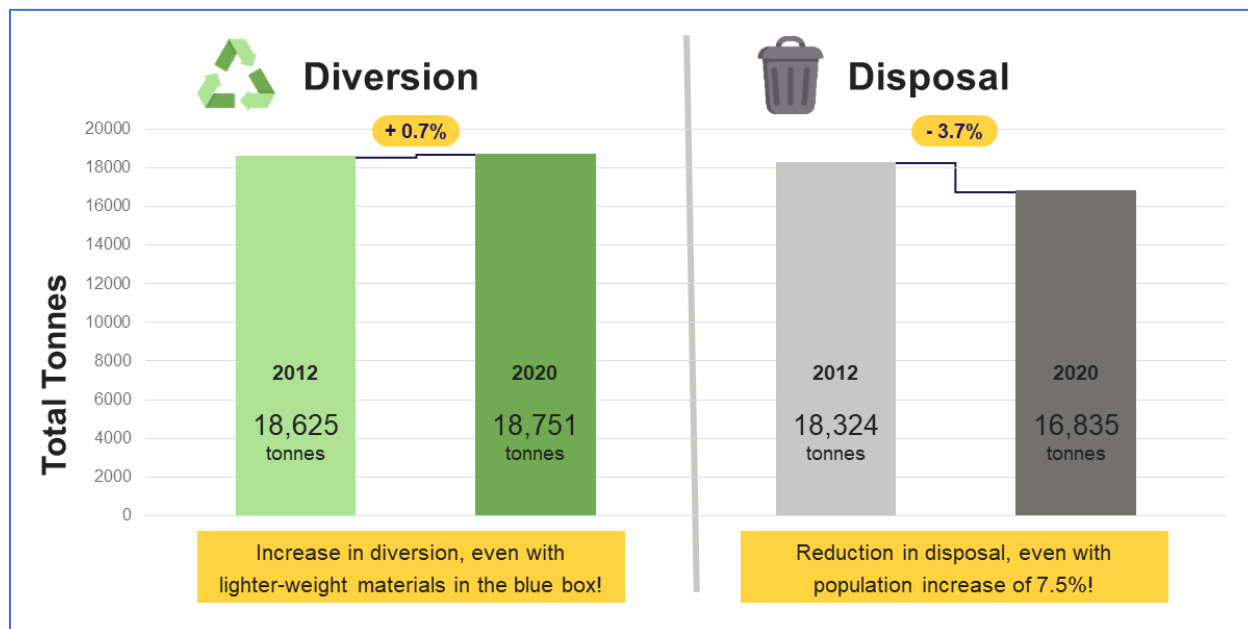
The WMMP Update also seeks to build upon the success of the 2012 WMMP. Table 1 provides a summary of the key recommendations from the 2012 WMMP and their implementation status, with most having been implemented.

Table 1: Implementation Status of Key 2012 WMMP Recommendations

Key Recommendation from 2012 WMMP	Completed	Work in Progress
Expand education & outreach and/or partnership activities	✓	
Meet KPMG Waste Management Best Practices	✓	
Increase residential diversion rate to 75% over 20 years		✓
Implement Source Separated Organics (SSO) collection & processing		✓
Create/expand markets for textiles, bulky items, asphalt shingles, pet waste, construction waste, and wood waste.		✓
Enhance promotion and education programs	✓	
Establish a Reuse Centre at existing waste management facility	✓	
Implement public space recycling	✓	

The following figure demonstrates the success of the City's program. The left side of the figure shows that tonnage of material diverted between 2012 and 2020 has increased marginally. This is considered a success because of how significantly the weight of Blue Box packaging has decreased since the 2012 WMMP was prepared. Overall, the amount of blue box material generated in Ontario has decreased by approximately 30%. Newspapers and newsprint have experienced the most significant decreases of 70% and 85%, respectively.

Most significantly, the total amount of residential waste sent for disposal by the City decreased by 3.7% from 2012 to 2020. While this may not seem like a large amount, it is important to note that this decrease occurred while the City experienced an increase in population of 7.5%.

Figure 1: Changes in Waste Diversion and Disposal (2012 to 2020)

3. Current Waste Management System

3.1. Current Programs

The City of Peterborough is a waste management leader in Ontario and has a robust system for managing residential solid waste. The components of the City's system are as follows:

- **Garbage** - The City offers weekly curbside collection of garbage. Residents are limited to a two lift limit². Residents are also able to take their garbage to the drop off depot at the landfill site (also known as the Peterborough Waste Management Facility). The City also provides collection services to multi-residential buildings.
- **Bulky Waste / Large Item Collection** - The City provides six residential curbside collections for bulky waste and large item collection per year, from April to September. Bulky waste and large items include such things as furniture, large appliances, and mattresses, for example. The City charges \$30 for the first item and \$10 for each additional item, except for mattresses and boxsprings, which are \$30 each. Residents can also take large items to the landfill as well.
- **Blue Box Recycling** - The City offers dual stream, weekly curbside recycling of Blue Box recyclables. The program accepts all designated Blue Box materials except for polystyrene foam (#6). Residents can also drop recyclables off at recycling depots located at the recycling

² A garbage "lift" is defined by the City as one plastic garbage bag, one garbage can, or one item that is less than 1 m long and 23 kgs in weight (e.g., a rolled up piece of carpet).

facility/drop-off depot and the landfill. The City also provides dual stream recycling collection services to multi-residential buildings.

- **Public Space Recycling** - The City has a public space recycling program for its parks and trails. In May 2022, the City's public space recycling education campaign won the Gold award in the Promotion and Education Category at the 2022 Municipal Waste Association Conference.
- **Green Waste** - The City offers weekly curbside collection of residential green waste (i.e., leaf and yard waste) from April to November. Residents can also drop leaf and yard waste off at the landfill.
- **Landfill Depot** - Residents are able to take their waste materials directly to the landfill for drop-off. All materials except for tires and (without rims) and electronics are charged a fee. Materials that can be dropped off at the landfill include:
 - Mixed garbage and bulky wastes/large items;
 - Old corrugated cardboard and other Blue Box materials;
 - Tires (with rims removed);
 - Waste electronics and electrical equipment (WEEE);
 - Scrap metal and appliances (including appliances with freon);
 - Mattresses and box springs;
 - Construction and demo (C&D) waste, including shingles and drywall;
 - Asbestos (requires pre-approval); and
 - Contaminated and cover soil (requires pre-approval).
- **Household Hazardous Waste (HHW) Depot** - The City operates a HHW depot where most hazardous products are accepted at no charge. These products include, for example, paints and stains, oil and oil containers, batteries, sharps and old medications, and mercury items. The depot also accepts WEEE at no charge. Residents are also able to pick up free used paint.
- **Textiles** - Residents can drop off textiles for recycling at the recycling drop-off depot or at the landfill site.
- **Batteries** - The City offers curbside collection of household batteries once per year. Residents can also drop off their household batteries at the HHW depot and at four other community locations.
- **Backyard composting** - The City offers subsidized backyard composters for sale at City Hall, the HHW depot, and at the GreenUp Store³.
- **Reuse Centre** - In addition to offering used paint for reuse, the City has a Reuse Centre located at the landfill site. Residents are able to pick up materials at no charge. However, there is a charge to drop-off materials.

³ The GreenUp Store is a retail store in Peterborough that sells products marketed as sustainable and locally sourced. The store is run by GreenUP, a registered charity. GreenUP's stated mission is "to inspire and empower environmentally healthy and sustainable action in our community" (www.greenup.on.ca/who-we-are/mission-vision-and-values/).

- Stewardship and Take-Back Programs - While not operated by the City, stewardship and take-back programs⁴ provide a positive contribution to waste diversion in the City. These programs include:
 - Ontario Deposit Return Program (Beer Store) for refundable alcohol containers;
 - Used tire programs (formerly known as the Used Tires Program);
 - WEEE take back programs; and
 - Household Hazardous Waste programs (formerly the Orange Dop Program);

Figure 2 (next page) depicts the various residential waste management programs available in the City and the quantities of waste they managed in 2021.

In addition to residential waste, the City also provides garbage and recyclable waste collection services to small commercial businesses, who are able to set out up to four containers for collection per week. Commercial waste (such as C&D waste) is also received at the landfill site for diversion and disposal as appropriate. In 2020, the City managed approximately 3,951 tonnes of commercial waste. The types and quantities of ICI waste diverted and disposed is provided in Table 2.

⁴ Stewardship and take-back programs are those that are funded or operated by manufacturers and/or retail chains.

Figure 2: Overview of the City's 2021 Residential Waste Management System

Table 2: City-Managed ICI Waste Diverted and Disposed (2020)

Material	Diverted (tonnes)	Disposed (tonnes)
Blue Box Recyclables	259	
Scrap Metal	123	
Drywall	333	
Other C&D Recyclables	1,300	
Curbside Garbage		1,936
Total	2,015	1,936

Source: City of Peterborough 2020 Municipal Datacall.

3.2. Residential Waste Diversion Opportunities

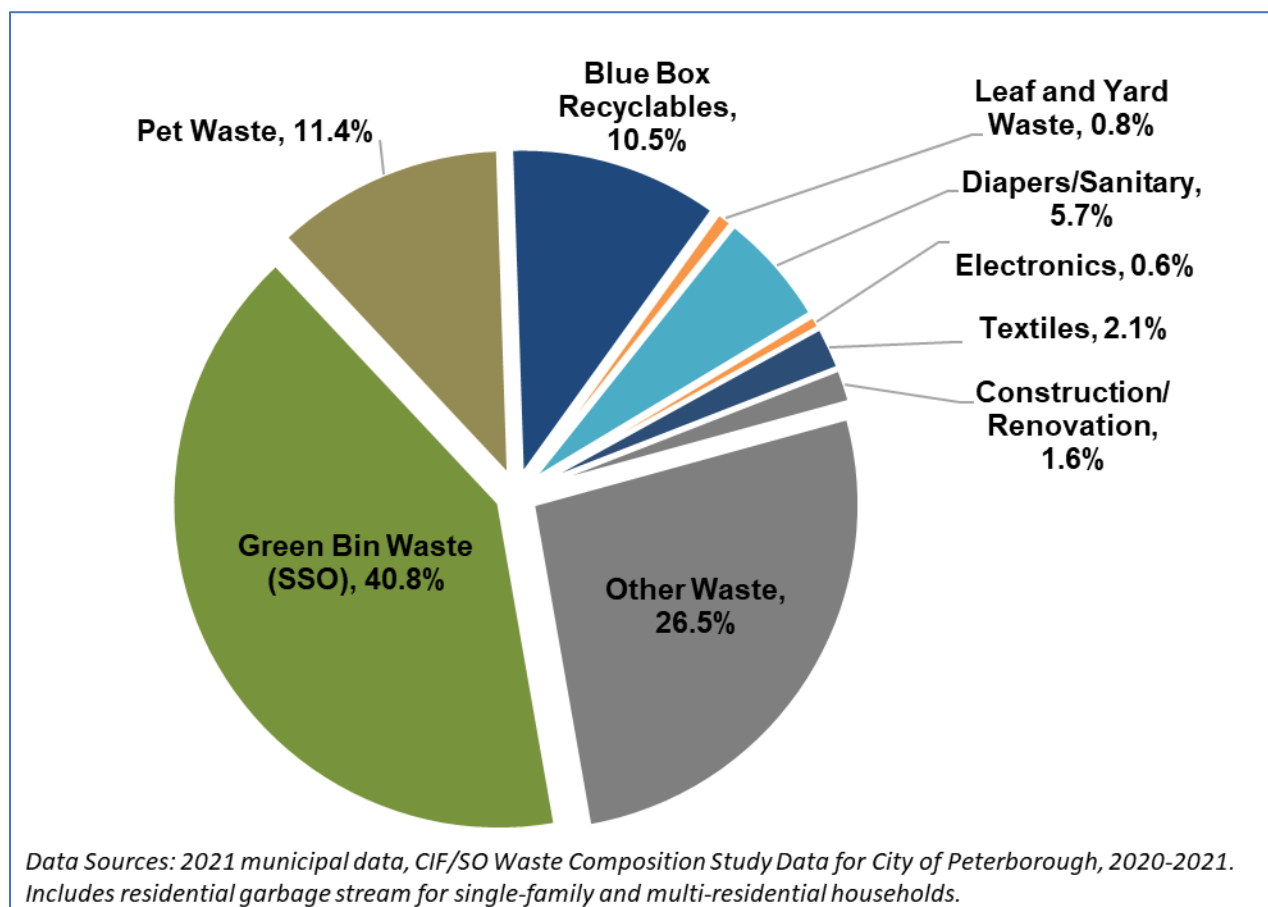
During 2020 and 2021, the City of Peterborough (City) participated in the CIF/Stewardship Ontario Waste Composition Study Program. The waste composition study examined the curbside waste set outs from single-family and multi-residential households within the City over four seasons. The results the waste composition studies were used to identify key opportunities for increasing residential waste diversion in the City⁵.

In 2021, the City collected 13,918 tonnes of garbage from single-family and multi-residential households. Based on the study results, it is estimated that single family households generated 11,668 tonnes of the total and from and multi-residential households generated the remaining 2,230 tonnes.

The single-family and multi-residential waste composition data was used to determine the material composition of the residential garbage waste stream. As Figure 3 shows, green bin waste (i.e., kitchen and food waste) makes up 41% of the residential garbage stream (single-family and multi-residential households combined) and is by far its largest single component. The next largest identifiable group is pet waste (11%) followed by Blue Box recyclables (10%).

Table 3 presents a summary of the identified waste categories in the garbage stream, including their percentage composition within the garbage stream, the estimated tonnage, and how much diversion could potentially be added to the City residential waste diversion rate if this material could be diverted. Of the waste categories listed, those that are most able to be diverted by the City are green bin waste, Blue Box recyclables, leaf and yard waste, electronics and textiles.

⁵ At the time of the writing of this report, data from the fourth waste audit season (Summer 2021) was not yet available. Once available, the data will be incorporated into the analysis.

Figure 3: 2020 Waste Composition of City of Peterborough Residential Curbside Garbage Stream**Table 3: Potential Diversion from Garbage Stream**

Material	Percent in Garbage ^(a)	Tonnes	Potential Addition to Diversion Rate ^(b)
Blue Box Recyclables	10.5%	1,455	Up to 4.1%
Green Bin Waste (SSO) ^(c)	40.8%	5,679	Up to 15.9%
Leaf and Yard Waste	0.8%	108	Up to 0.3%
Pet Waste	11.4%	1,593	Up to 4.5%
Electronics	0.6%	84	Up to 0.2%
Textiles	2.1%	293	Up to 0.8%
Construction/ Renovation	1.6%	229	Up to 0.6%

Notes:

(a) Based on CIF/Stewardship Ontario Waste Composition Data.

(b) Assumes material could potentially be captured. However, some materials may not be feasible for the municipality at this time.

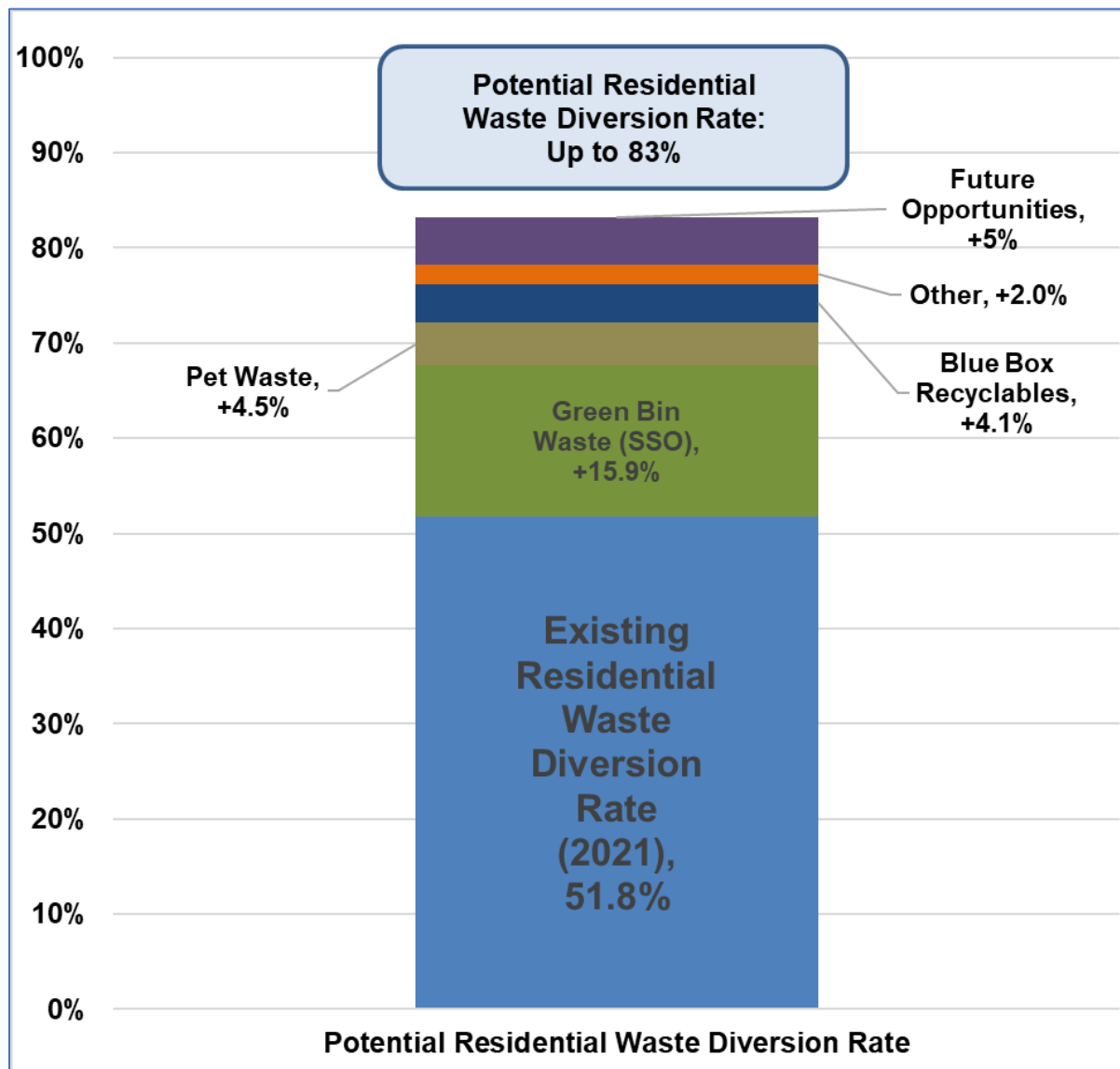
(c) Includes food waste plus tissue and toweling.

Figure 4 shows that the maximum waste diversion rate potentially achievable is about 78.2%, if all of the green bin waste (including pet waste), Blue Box recyclables, leaf and yard waste, electronics and textiles

are able to be diverted. It should be noted, however, that capturing all of this divertible waste is challenging. Therefore, achieving the target of 75% would require maximizing public participation in the City's existing and planned waste diversion programs.

In addition, new opportunities may arise for diversion based on emerging markets for recovered materials and improved recyclability of products and packaging. Assuming this material may account for 5% of the residential waste stream, then the potential future residential waste diversion rate could be up to 83%.

Figure 4: Potential Future Waste Diversion Rate with Existing and Planned Diversion Programs



4. Regulatory Review

4.1. Introduction

The regulatory environment associated with waste management in Ontario has changed significantly in recent years due to a range of environmental pressures. This review is remains intended to take into consideration applicable legislation, provincial policies or guidelines, including the implications of any amendments to the Resource Recovery and Circular Economy Act (2016) and the impacts of Extended Producer Responsibility (EPR). It is intended to ensure the City of Peterborough's Waste Management Master Plan (WMMP) can anticipate and adapt to future EPR programs and legislative changes.

Solid waste management in Ontario has, until recently, been regulated primarily through the EPA and Waste Diversion Act (WDA). Over the last five years, however, the Province has set aspirational goals of achieving zero waste and zero GHG emission from the waste sector and moving towards a circular economy. This action has resulted in significant change in the provincial regulatory framework including the introduction and repeal of several pieces of legislation which will have a direct impact on the City's waste management system.

4.2. The Waste-Free Ontario Act

In 2016, the Province passed the Waste-Free Ontario Act (WFOA), which repealed the WDA and replaced Waste Diversion Ontario with the Resource Productivity and Recovery Authority (RPRA). Despite the replacement of the WDA by the WFOA, regulations enacted under the WDA remain in force under the WFOA unless otherwise amended or repealed. Of significance, the WFOA includes two scheduled statutes known as the Resource Recovery and Circular Economy Act and Waste Diversion Transition Act. The WFOA was created to enact the details within those two statutes. The WFOA provides further detail on the responsibility of corporation holders that design, produce and market products or packaging to sell in Ontario, including that of convenience packaging and waste generated from the transportation of goods.

The Province also has broad discretion under the WFOA to create policies that support specific provincial interests outlined in the Act. Obligations described under the Food and Organic Waste Framework's Policy Statement, outlined below, highlight the fact that the Resource Recovery and Circular Economy Act (RRCEA) can, in some cases, override obligations under other Acts. Municipalities can, as is the case with the noted Policy Statement, be required to amend official plans, zoning by-laws and other by-laws to be consistent with the policy statements contained within the RRCEA.

4.3. The Resource Recovery and Circular Economy Act

The RRCEA replaced the previous 'EPR' model developed under the WDA with a new 'individual producer responsibility' (IPR) framework for waste diversion and resource recovery where producers (i.e., a person or entity that supplies packaging, paper products or packaging-like products comprised of paper, glass, metal or plastic, or a combination thereof to consumers in Ontario) are individually accountable and financially responsible for their products and packaging once consumers dispose of them. The RRCEA provides the basis for development of regulations, establishment of performance outcomes and operating standards. Like its predecessor, the aim of the act is to decrease the need for

waste disposal through various methods such as recycling programs, extended product life cycle, decreased packaging and reduction of hazardous/toxic substances in products/packaging.

4.4. The Waste Diversion Transition Act

By comparison, the WDTA outlines the legislative framework for winding up and transitioning the existing waste diversion programs for tires, electronics, household hazardous waste and Blue Box recyclables to the new IPR framework. It also provides guidance for the operation of waste diversion programs, as well as outlines available funding. To date, the tire program operated by Ontario Tire Stewardship, Waste Electrical, Electronic Equipment program operated by Ontario Electronic Stewardship and the Municipal Hazardous or Special Waste program operated by Stewardship Ontario have been transitioned. Transition of Ontario's Blue Box Program has been initiated.

4.5. Blue Box Transition

Arguably, the most significant legislative change has been the Province's announcement June 3, 2021 that it had finalized O. Reg. 391/21 "Blue Box" (gazetted June 19, 2021). This new regulation has triggered the transition of Ontario's Blue Box Program to an IPR scheme for the management of printed paper and 'packaging-like' products. Under the new system, municipalities will no longer be responsible for provision of Blue Box recycling services and the current funding system will end. Instead, producers will operate the new system to manage this designated waste. The new regulation includes a three-year transition of the current Blue Box Program to the new scheme between 2023 and 2025 (depending on the municipality) and will have direct impacts on municipal waste management services. The City of Peterborough has been informed that its transition date to full EPR is January 1st, 2024.

Municipalities will need to begin preparing to, amongst other things, break or revise collection and processing contracts for Blue Box services, reconfigure how they collect the waste they remain responsible for and effectively communicate the changes to residents. While the details of the producers' transition process have not been made public, past experience suggests they may approach municipalities to enter into contracts to provide specific recycling collection services under 'fee for services' models. Strict terms and conditions with associated financial penalties can be expected and municipalities will need to exercise appropriate caution prior to agreeing to enter into such arrangements. Similarly, it is expected that producers will solicit proposal from municipalities and private entities to enter into agreements to provide transfer and processing capacity for collected materials.

4.6. Food and Organic Waste Framework

Ontario's Food and Organic Waste Framework (Framework) was developed as a key component of the Province's Strategy for a Waste Free Ontario. The Framework is structured in two parts including the Food and Organic Waste Framework Action Plan (Action Plan), and the Food and Organic Waste Policy Statement (Policy Statement). As implied by its title, the Action Plan lays out a series of 17 proposed initiatives intended to:

- Reduce food and organic waste;
- Recover resources from food and organic waste;
- Support resource recovery infrastructure; and

- Promote beneficial uses of recovered organic resources.

The majority of the action items focused on immediate opportunities (i.e., to be implemented between 2018 and 2020) to work with federal and provincial partners to facilitate the goals of the framework. Longer term objectives of significance include commitments to:

- Amend the 3Rs Regulations to include food and organic waste to increase recovery from the IC&I sector;
- Ban food and organic waste from disposal sites;
- Support recovery from multi-unit residential buildings;
- Promote on and off-farm end-use soil amendments from recovered organic resources; and
- Support development of renewable natural gas including consideration for linkages to food and organic waste.

The associated Policy Statement, issued pursuant to Section 11 of the RRCEA, 2016, supports the provincial vision of a circular economy and is an important tool to help move the province towards its aspirational climate change goals. Section 2 of the Policy Statement sets out specific obligations and targets for the diversion of food and organic waste from various persons or entities including certain municipalities, industrial and commercial facilities, multi-unit residential buildings, educational institutions and hospitals. Of particular note, policy 4.3 requires:

Municipalities in Southern Ontario that, as of the effective date, do not provide curbside collection of source separated food and organic waste shall provide curbside collection of food and organic waste to single-family dwellings in an urban settlement area within a local municipality if:

i. The population of the local municipality is greater than 50,000 and the population density of the local municipality is greater than or equal to 300 persons per km².

Furthermore, Section 2.1 requires that Municipalities in Northern Ontario that are subject to policy 4.3 achieve a:

“70% waste reduction and resource recovery of food and organic waste generated by single-family dwelling in urban settlement areas by 2025”.

Policy 4.10 requires that:

“Multi-unit residential buildings shall provide collection of food and organic waste to their residents.” Additionally, Section 2.1 requires that such buildings achieve a “50% waste reduction and resource recovery of food and organic waste generated at the building by 2025.”

The Policy Statement also requires that municipalities and other planning authorities ensure that official plans are consistent with the Policy Statement with amendment of official plans occurring within the next scheduled update. Municipal zoning by-laws must also be amended within three years after the related official plan amendment. By-laws made under other acts related to waste reduction and

resource recovery, as well as relevant prescribed instruments, must also be made consistent with the proposed Policy Statement within two years of the proposed Policy Statement coming into effect.

4.7. The ‘Made-in-Ontario Environment Plan’

The ‘Made-in-Ontario Environment Plan’ was announced by the Province in 2018 to supersede the former government’s ‘Waste-Free Ontario Strategy’. While it continues to support the notion of achieving zero waste and GHG emissions reduction, it places particular emphasis on moving to a circular economy, addressing litter, reducing plastic waste and preparing for climate change. The government envisions taking steps to, amongst other things, update the Strategy for a Waste-Free Ontario, continue to focus on diverting food and other recoverable waste from landfill, address compostable packaging and improve opportunities for landfill gas capture.

4.8. Implications of Identified Provincial Initiatives

At the present time, the details of the Blue Box Transition are to be finalized. Based on the Province’s transition schedule, the City and its neighbouring municipalities are expected to transition their Blue Box programs as of January 1, 2024. Producers will be required to maintain the existing programs until the entire province has transitioned. Whether municipalities will be given the opportunity to remain involved after transition and under what terms and conditions is, as of yet, unknown. A key implication is that the City may cease provision of Blue Box related services once responsibility of Blue Box recycling is transitioned to Producers. The associated financial and operational implications of this are to be determined and will be reviewed by the City as part of its Transition planning.

It should also be noted that, in preparation for transition of the province’s Blue Box Program, Minister of Environment, Conservation and Parks, Jeff Yurek, issued direction on August 15, 2019 that municipalities not reduce or expand their existing level of fundable Blue Box services except to deal with natural growth (i.e., new residential development). As a result, any significant change in service levels considered by the City, prior to transition of its Blue Box program, should be discussed with RPRA to ensure this directive is not breached.

Of equal, and perhaps greater, importance is the implications of the Food and Organic Waste Framework on the City’s waste management system. In accordance with the Policy Statement, the City has begun implementation of a curbside, source separated food waste diversion program to achieve food and organic diversion levels of 70% for single-family dwellings and 50% for multi-unit residential buildings by no later than 2025. Given the potential for producers to expand the use of compostable packaging in the coming years, the WMMP recommends that the City’s Green Bin program make note of the potential for the City to expand the types and materials collected in this program. The City has identified October 31, 2023 as the launch date for the single-family Green Bin Program City-wide rollout (pending receipt of all required permits and approvals).

The transition of Blue Box services and introduction of a new Source Separated Organics (SSO) program will represent a significant change in the operation of the City’s collection and waste management system. As noted above, the City will need to examine its official plan and zoning by-laws to ensure they are consistent with the Food and Organic Waste Framework Policy Statement. It is also recommended that the City consider what controls, if any, it may wish to place on private waste management operations that may be spawned by impending transition of the Blue Box. A review of the City’s waste

collection by-law is also recommended. Other opportunities the City may wish to consider and reflect in the WMMP include involvement with the province's Surplus Food Redistribution Infrastructure Program.

It should also be noted that on October 1, 2021 the new IPR program for Hazardous and Special Products came into effect and will have operational implications for the City's associated program. These changes do not, however, impact the updated WMMP.

5. Public Meetings

Two virtual public meetings were held for this project to provide the public and other interested stakeholders an opportunity to learn about the project and ask questions of the municipal and consultant project team about the WMMP and the options being reviewed.

The first virtual Public Meeting (hosted via Zoom) took place on Tuesday, March 1, 2022 at 7:00 p.m.. Participants had the option of joining by computer or telephone audio. During the meeting, the project team gave a thirty-minute presentation, which was followed by an hour of questions and answers. The meeting was attended by 44 members of the public. The presentation included the following topics:

- An overview of the project's purpose;
- Comparison between the City's 2012 and current waste diversion and disposal rates;
- Progress the City has made implementing the recommendations of the 2012 Waste Management Master Plan;
- Current programs offered at the City to manage the City's waste stream; and
- Planned and considered opportunities to maximize diversion in Peterborough, such as the source separated organics (SSO) composting, using clear bags for garbage, and every-other-week garbage collection.

The second virtual Public Meeting (also hosted via Zoom) took place on Tuesday, May 17, 2022 at 7:00 p.m. The project team gave a thirty-minute presentation, which was followed by about 45 minutes of questions and answers. The meeting was attended by 41 members of the public.

The presentation included the following topics:

- Project overview and update;
- Summary of stakeholder feedback to date;
- Type of waste remaining in City's residential curbside garbage;
- Description of the WMMP recommended initiatives and recommended waste management system;
- Anticipated timing and next steps; and
- How to provide feedback.

Both meetings were recorded and can be viewed via the project website (www.connectptbo.ca/wasteplan2022).

The meeting summaries and slides are provided in Appendix A.

6. Review of Waste Management Options

6.1. Screening of Possible Waste Management Options

A key component of preparing an update to a municipal Solid Waste Management Master Plan is the identification of potential programs for introduction to the current system. A broad review of established and emerging waste management system options found that the City of Peterborough has many of them either currently implemented within its system or is in the process of doing so. Table 4 below lists the options considered and assesses them for further review. Based on the review, the three options identified for consideration into the City's waste management system include:

- Clear bag garbage collection;
- Every-other-week garbage collection⁶; and
- Updated City's waste management by-laws to ensure alignment with vision and terminology of the WMMP.

Table 4: Screening of Potential Options to Improve Waste Diversion

	Option	Option Screening
	WASTE REDUCTION AND REUSE	
1.	Promote on-site management of organics Foster greater uptake of backyard composting and grasscycling.	<ul style="list-style-type: none"> • Currently included in waste management program
	RECYCLING	
2.	Add additional materials to the recycling program Consider the feasibility of adding items to the list of materials accepted in the Blue Box program, specifically plastic film and Styrofoam (or other materials as is feasible). Consider whether material should be collected via curbside or depot, and whether there is an advantage to including polystyrene densification.	<ul style="list-style-type: none"> • CoP already includes a broad list of recyclables based on the today's recycling marketplace. • Given the transition of responsibility of Blue Box programming from municipalities to Producers, the Minister of Environment, Conservation and Parks issued direction in August 2019 that municipalities do not reduce or expand their existing level of fundable Blue Box services except to deal with natural growth. <p>Conclusion: Not recommended</p>

⁶ The City plans to for weekly recycling collection to be maintained and weekly SSO collection to be introduced.

	Option	Option Screening
3.	Textile recycling Consider opportunities for the collection, and recycling or reuse of textiles. This could include collaboration with local textile reuse organizations or the recovery of textiles for recycling into new textiles.	<ul style="list-style-type: none"> Currently included in waste management program.
	ORGANICS MANAGEMENT	
4.	Introduce household (food and kitchen waste) organics collection and composting Consider the implementation of a household (food and kitchen waste) organics collection and composting program.	<ul style="list-style-type: none"> Implementation currently underway; it is in the design and approval stages with a target implementation date of October 31st, 2023. Program is intended for residential sector, with capacity for the ICI sector to use if they desire.
	PROMOTION AND EDUCATION	
5.	Conduct targeted/expanded promotion and education Develop/implement targeted promotion and educational campaigns, and expand the City's current educational activities through a Promotion and Education Strategy. This could include: <ul style="list-style-type: none"> Improving diversion of specific items through targeted campaigns; Implementing incentive/recognition programs for exceptional recycling by households, businesses or organizations; Enlisting the help of "community champions"; Increasing education and presentations to schools and other organizations; Enhancing targeted promotion and education in multi-residential buildings; and Expanding waste management promotions at public events. 	<ul style="list-style-type: none"> City currently has active promotion and education program that can be modified in response to waste management programing needs.

	Option	Option Screening
6.	Encourage Extended Producer Responsibility Encourage greater EPR. Participate in lobby efforts at the provincial and federal level to increased EPR. Promote existing EPR opportunities, such as existing take-backs and provincial EPR programs (e.g., WEEE, MHSW, etc.)	<ul style="list-style-type: none"> City is currently active in EPR discussions with Province and municipal stakeholder organizations. City has received approval to proceed with a single-use plastics reduction strategy, with pilot initiatives to be designed and implemented. The two-year initiative will include hiring a Coordinator for its design and implementation.
	MUNICIPAL POLICY	
7.	Every other Week Residential Garbage Collection	<ul style="list-style-type: none"> With the introduction of the residential source separated organics (SSO) program, the majority of putrescible waste in the residential waste stream can be diverted from the garbage stream. Given the removal of the putrescible waste from the garbage stream and the relatively small amount of remaining garbage, weekly collection of residential garbage can reasonably be changed to every other week (EOW). Diverting the organics portion of the garbage to the weekly SSO program results in a similar service level to the current waste collection program. Reducing weekly garbage collection to EOW collection will help balance the cost to implement an SSO collection program. <p>Conclusion: Recommended for further assessment</p>

	Option	Option Screening
8.	Clear Garbage Bags	<ul style="list-style-type: none"> Switching from opaque to clear garbage bags has been shown to increase the amount of waste diverted through recycling and composting programs. Waste audits completed in 2020/2021 found roughly 10% of material in curbside garbage bags were blue box materials. A Clear Bag program would encourage diversion of this blue box material from the garbage stream and into recycling. Clear bag garbage programs are increasingly common in Ontario and other Canadian municipalities. <p>Conclusion: Recommended for further assessment</p>
9.	Enforcement of waste collection by-laws Update and enforce the applicable elements of the existing waste collection by-law. Add guidelines and administrative monetary penalties (AMPs) to encourage diversion and provide municipal staff with the legal means to enforce desired behaviours (e.g., source separation) and curtail undesired behaviours (e.g., scavenging).	<ul style="list-style-type: none"> Elevated enforcement of the City's waste collection by-laws could help ensure residents set out segregated wastes according to requirements. Elevated enforcement could be a useful tool if promotion and education are found to be insufficient in changing household waste diversion and disposal practices. City's waste collection by-laws could also be used for extreme situations that result in public nuisances or threaten public health. <p>Conclusion: Recommended for further assessment</p>

	Option	Option Screening
	IC&I	
10.	<p>Promotion of waste minimization/diversion in the IC&I sector</p> <p>Develop a strategy to encourage the local Industrial, Commercial and Institutional community to increase waste minimization/diversion. Possible strategy elements may include: a recognition program; incentives for environmental leadership (e.g., becoming registered in RCO's #3RCertified program); forming a sector-specific waste minimization working group; form partnerships with local NGO's to help deliver outreach; distribute/promote already existing tools and resources; include waste diversion/management clauses in municipal permits, etc.</p>	<ul style="list-style-type: none"> City currently has active promotion and education program, which can be updated on an on-going basis as required.
11.	<p>Establish a system for Construction and Demolition (C&D) recycling</p> <p>Develop a strategy for C&D recycling. Elements of the strategy could include partnering with private sector facilities or establishing a depot to receive/sort/process C&D waste for diversion; policy instruments to encourage C&D recycling; promotion of a County program, and implementation of C&D waste diversion best practices.</p>	<ul style="list-style-type: none"> Existing waste management system currently allows for construction and demolition recycling.

6.2. Assessment of Screened Options

Section 5.1 reviewed a long list of options and screened three for further consideration and assessment. These options are discussed below.

6.2.1. Clear Bags

A 'clear bag' program refers to the use of a garbage bag that is transparent or see-through. Use of clear bags for garbage encourages waste diversion in several ways:

- Clear bag Programs improves worker safety and allows Transfer Station attendants the ability to conduct a quick assessment of the contents within the clear bag(s) to ensure that no recyclable or hazardous items are in the bag.
- Clear bags can serve as a reminder if people forget to separate out these materials from their garbage, as the clear bag allows residents to see what is being thrown out.

- Clear bags prompt people to reflect on their waste disposal habits and encourage them to consider waste diversion options.
- Clear bags can assist in with the enforcing of municipal material disposal bans by allowing waste collectors to monitor for compliance and reject any bags containing banned items.

Use of clear bags for garbage collection is becoming increasingly common in Ontario. For example, the CIF's Clear Bag Garbage Program Implementation Toolkit, which was released in 2015, notes that 40 municipalities in Ontario have implemented clear bag garbage collection programs, including the City of Markham and Dufferin County⁷. That number has grown since then, including the City of Orillia (implemented 2022), the City of Kawartha Lakes (implemented 2017), and Tay Valley (implemented 2016).

In addition, all municipalities within the County of Peterborough - except for the City of Peterborough - have implemented clear bag garbage programs (see Figure 5).

Clear bag programs have been found to increase diversion. For example:

- A Stewardship Ontario-funded study examined 22 municipalities with clear bag programs and concluded that this option could have a considerable increase on diversion rates. It noted that 13 Nova Scotia municipalities reportedly experienced, on average, a 41% decrease in residential waste, a 35% increase in residential recycling and a 38% increase in residential organics collection. One region from Nova Scotia experienced a 71% increase in tonnes of material collected for recycling. It is important to note that these averages were based on programs with existing recycling and organics diversion programs and therefore most of the gains can be directly attributed to clear bags⁸.
- Halifax Regional Municipality (Nova Scotia) switched to clear garbage bags in 2015. A staff report in 2020 noted that the program resulted in an immediate 25% reduction in garbage tonnages from the residential sector that has been maintained in the following years⁹.
- The Township of McMurrich-Monteith introduced a clear bag program in 2012. Recycling tonnage increased by 62% from 2011 to 2013¹⁰.

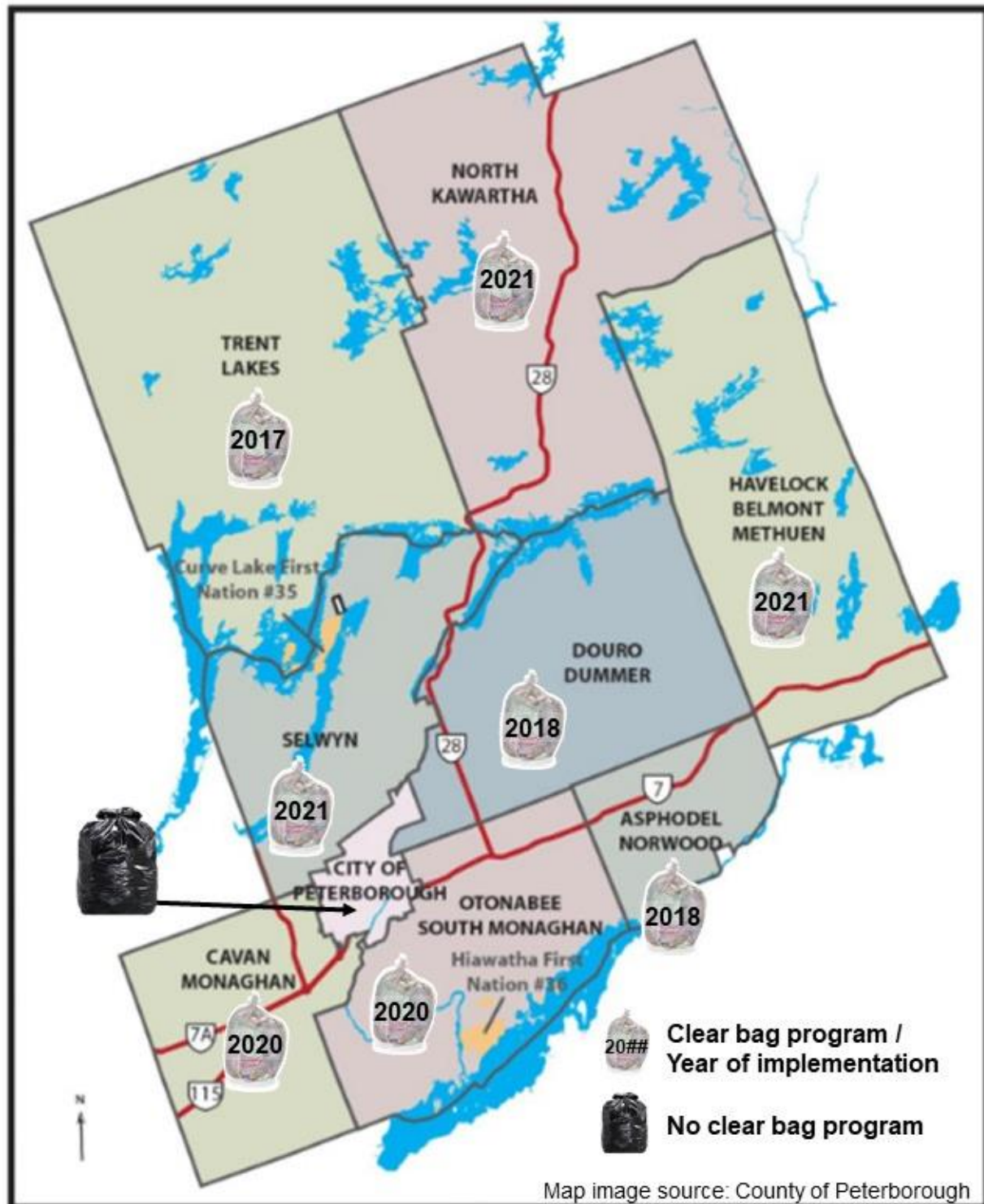
⁷ CIF. Clear Bag Garbage Program Implementation Toolkit: A municipal step-by-step guide. CIF Project 748. 2015.

⁸ Quinte Waste Solutions. The Use of Clear Bags for Garbage as a Waste Diversion Strategy: Background Research on Clear Garbage Bag Programs across North America. 2008.

⁹ Brad Anguish. Cart Based Garbage and Recycling Collection. Halifax Regional Council Information Report. March 11, 2020.

¹⁰ CIF 2015.

Figure 5: Location of Clear Bag Garbage Collection Programs within Peterborough County



The literature review identified a number of key considerations that would need to be included when designing and implementing a clear bag program. These include:

- **Privacy concerns** - Perceived lack of privacy can be a significant issue for some members of the public, as they have concerns about others being able to view the contents of their garbage. Privacy issues must be addressed before implementing a program. Most municipalities permit an opaque bag(s) of some sort, which is commonly referred to as a 'privacy bag'. Most clear bag programs allow placing of one or two privacy bags in the clear bags. Items going into privacy bags may include sanitary products, diapers, incontinence products, personal information that cannot be shredded and recycled, medical objects (not including sharps, or any other unsafe medical items, which should be disposed of in a sharps container provided by your pharmacy or medical professional).
- **Clarity of what is and is not acceptable in the clear bag** - An easily understandable list of what materials are acceptable in the clear bags and what materials are not needs to be prepared and circulated amongst the residents,
- **Inadequate retailer supply of clear bags** - The insufficient supply of clear bags is a common concern. Retailers should be given sufficient notice to ensure that they have enough clear bag supplies to meet the demand (ideally, 8 to 10 months of lead time to deplete inventories of opaque bags and to stock clear bags). As an alternative, the City could also consider selling clear bags to address the initial bag shortage.
- **Stockpile of opaque bags** - Sufficient notice must be given to the public to help them with the transition and to give them a chance to use up their solid coloured / non-transparent bags. The recommendations vary from giving a transition of time of four to six months or to allowing the residents to finish their supply of solid-coloured bags during implementation of the clear bag program, before making the transition.
- **Enforcement concerns** - Residents may get concerned about overlooking residual recyclable materials remaining in the clear bags. Normally, an allowable level of 10 to 15% of recyclables is permitted in the clear bags. This determination is qualitative, and the curbside waste collector is typically the one who would make the determination of acceptable level (as is typically done for curbside collected materials).

For many programs, enforcement is a key element. Non-compliant bags are rejected at curbside for all clear bag programs surveyed with municipal-arranged curbside collection/ or refused to be dumped at transfer station. Recycling by-laws and/or a landfill bans that address recycling and other materials can help increase the success of clear bag programs, as the presence of a by-law may encourage residents to follow set-out requirements.

The capital costs associated with implementing a clear bag policy are minimal, as no major infrastructure investments are required. Most of the cost would be for promotion and education of the program.

Table 5: Clear Garbage Collection Bags - Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Shown to increase diversion of materials from garbage. • Improves worker safety by increasing the visibility of dangerous materials (e.g., syringes, broken glass) in the garbage. • Low municipal capital investment. • No significant setout changes for residents to learn. • No significant cost implications to residents. 	<ul style="list-style-type: none"> • A potentially controversial issue, primarily around the issue of privacy. • Potential concerns among residents about whether clear bags will be used to police garbage collection. • Potential concerns among residents about stranded stockpiles of opaque garbage bags. • Requires cooperation of retailers to provide stock of clear garbage bags.
Conclusion	
<ul style="list-style-type: none"> • Implementation of a clear bag garbage collection program is recommended for the following reasons: <ul style="list-style-type: none"> • Option provides a cost-effective opportunity for the City and its residents to increase waste diversion and minimize the amount of waste disposed. • Opportunity to further protect the occupational health and safety of waste collection staff. • Opportunities to manage potential issues through strategic promotion and education, use privacy bags, retailer engagement, and provision of adequate lead-time. 	

6.2.2. Every Other Week Residential Garbage Collection

Many municipalities in Ontario with SSO programs have transitioned from weekly residential garbage collection to Every-Other-Week (EOW) garbage collection. Diversion of recyclable and compostable materials from residential waste will leave a small portion of garbage remaining that requires collection. Collection efficiency increases if this material can be collected EOW instead of weekly. This approach would also encourage residents to make greater use of available diversion programs.

EOW is considered a best practice in Ontario, and experience in Ontario jurisdictions demonstrates that it is an effective mechanism to increase diversion. Niagara Region is an example of an Ontario municipality that recently switched from weekly to EOW garbage collection. Niagara Region provides weekly blue box and SSO collection and transitioned to EOW garbage collection in October 2020. In May 2021, the Region reported that, six months after the start of the program, the amount of organics and recycling collected from curbside increased by 47 to 46 per cent¹¹. The Region also reported that EOW

¹¹ Alison Powell, Niagara Region. Every Other Week (EOW) Garbage Collection Diversion Impact Analysis. PWC-C 19-2021. May 11, 2021.

garbage collection provides opportunities for cost avoidance, as EOW collection on average was found to cost about \$1.1M less than weekly collection¹².

Similarly, the Region of Waterloo achieved annual contract savings of \$1.5M when implementing EOW garbage collection in 2017¹³.

In British Columbia, municipalities in Metro Vancouver that have implemented both organics collection and EOW garbage collection have seen a 25 to 40% reduction in the residential garbage stream and an increase of diversion rates to over 70%¹⁴.

A study prepared for the Alameda County Source Reduction and Recycling Board (United States) considered collection frequencies in 13 jurisdictions in Canada and the United States. It found that communities with EOW garbage collection had higher diversion rates than communities with weekly collection, and residents in EOW communities generated less overall waste materials. The study also notes that their background review and interviews conducted with EOW jurisdictions indicate that EOW collection can significantly lower the costs of waste collection services¹⁵.

Despite the potential cost savings and diversion benefits of EOW collection, potential concerns include:

- **Perception of reduced service levels** - However, the actual reduction in collection service is minimal, as most of residents' waste would still be collected weekly through the weekly recycling and SSO collection.
- **Additional holding time of garbage due to missed collections** - Residents that miss an EOW garbage collection date would be required to hold on to their garbage for an additional two weeks. This may be a concern if the waste contains odorous wastes such as dog feces or used diapers. This could potentially be alleviated by providing convenient access for residents to drop off garbage.
- **Potential for increased odour issues** - Some residents may feel that collection of garbage EOW may increase odours. While compostable waste will be able to be collected weekly, some odour-generating wastes such as pet waste and used diapers may have the potential to create odours and sanitation issues. When Durham Region switched to EOW collection in 2006 and 2009, it supported the new program with promotion and education on the program goals and how to package diapers and other potentially odour-generating materials (e.g., double-bagging the materials)¹⁶. The City of Ottawa addresses this issue through its Special Consideration waste program. The program was created for residents requiring collection of diapers and incontinence products on the weeks without scheduled garbage collection. The participating households can place one bag of waste diapers and incontinence products out for collection on

¹² Alison Powell, Niagara Region. Considerations of City of Niagara Falls Withdrawing from Regional Waste Management Services. PW 14-2020. March 10, 2020.

¹³ Brad Whitelaw, Niagara Region. 2019.

¹⁴ Tetra Tech. Review of Solid Waste Collection Programs. Prepared for the Township of Langley. July 2015.

¹⁵ SAIC and SERA. 2012 Five Year Program Audit. Prepared for the Alameda County Source Reduction and Recycling Board. July 2013.

¹⁶ Peter Gorrie. Making The Move To Alternate Week Trash Collection. BioCycle August 2012, Vol. 53, No. 8, p. 25.

the alternating week from garbage collection. Participants are required to register and renew annually¹⁷.

The City currently has a garbage lift limit of two lifts per week. Implementation of EOW collection in combination with the clear bag program could allow for the elimination of the bag limit by ensuring the garbage set out for collection is actually garbage and waste that should be diverted to other waste collection programs.

Table 6: Every Other Week Garbage Collection - Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> • Shown to increase diversion of materials from garbage. • Potential savings on garbage collection costs. • No significant cost implications to residents. 	<ul style="list-style-type: none"> • Potential perception of service reductions. • Potential concerns among residents about increased odours from garbage held on site for two weeks, particularly among those residents disposing of odourous materials. • Potential concern over stockpiled garbage among those residents who may miss a collection.
Conclusion	
<ul style="list-style-type: none"> • Implementation of a EOW garbage collection is recommended for the following reasons: <ul style="list-style-type: none"> • Option provides a cost-effective opportunity for the City and its residents to increase waste diversion and minimize the amount of waste disposed. • Option provides an opportunity for potential cost savings on garbage collection services. • Perceptions of issues can be managed through promotion and education. Experience of EOW collection in other municipalities does not suggest the potential issues noted above to be a significant or persistent detriment. 	

6.2.3. Updates to Solid Waste Collection By-Law

Waste collection is regulated in the City of Peterborough by By-Law Number 18-103 (Being a By-law to Regulate the Collection of Solid Waste in the City of Peterborough and to repeal By-law 13-113). The by-law includes definitions for garbage, green waste (i.e., yard waste), and recyclable material and the allowed containers for each, and the maximum permissible number of garbage containers (i.e., “bag limits”), among other provisions. SSO is not mentioned in the by-law.

¹⁷ City of Ottawa. Diapers and incontinence products collection. <https://ottawa.ca/en/3-1-1/apply-or-register/diapers-and-incontinence-products-collection>. Accessed April 22, 2022.

While the by-law does include definitions for garbage, green waste and recyclable material, it does not include any requirement for segregating the materials. Updates to the By-law 18-103 that include requirements for segregation would be required if the clear bag program were to be enforceable and effective.

An example of such language can be found in the Township of Selwyn's By-law 2019-088, also referred to as the Waste By-law. The by-law came into force December 10th, 2019, nearly three months before the Township's clear bag program came into effect on March 1, 2020. Key features of the by-law that have applicability to the City:

- The by-law's definitions for containers include date provisions, whereas effective March 1, 2020 the definition for containers is updated to include clear bags.
- Waste collection contractors are not allowed to collect garbage in containers that do not meet the by-law's definition. This in effect prohibits the collectors from collecting garbage set out in opaque garbage bags. However, the Enforcement and Penalty section of the by-law includes clear bag provisions that provide some leeway based on the date. Between March 1, 2020 to August 31, 2021, non-compliant properties are to be identified by collection contractors and the Township provide direct outreach to these properties through educational materials or follow-up letters. After September 1, 2021, the by-law states that non-compliant containers will be left at the curb with a tag affixed to it. This provided residents with a six-month grace period to get used to the new program.
- Privacy bags are defined.
- Definitions are provided for different waste streams, similar to the City of Peterborough's by-law. The Township's by-law, however, requires that recyclable material be separated from garbage and non-recyclable material. The by-law also states that the waste will not be collected unless the recyclable materials have been separated.
- The by-law provides a provision for fines, noting that "Every person who contravenes any of the provisions of this By-law is guilty of an offence and is liable, upon conviction, to a fine as provided for in the Provincial Offences Act".

It is recommended that the City's Waste Collection by-law be updated to ensure:

- Definitions and provisions within the by-law align with the specifics of the proposed clear bag program and EOW garbage collection modifications and the City's planned SSO program;
- Provisions adequately describe set out and collection requirements for solid waste; and
- There is adequate ability for corrective action, including collection refusal, education, enforcement and penalties.

Specific examples of potential updates to the by-law include (but is not limited to):

- A date-based definition for garbage container for the clear bag program, with the date to reflect when the program comes into effect;
- Definition of a privacy bag;
- Definition of SSO and SSO container in support of the SSO program;

- Requirements for the segregation of wastes into their appropriate containers; and
- Corrective measures (including grace periods) for non-compliance with the by-law.

6.2.4. Exploration of Additional Diversion Opportunities

The waste management landscape is a continuously changing, and the City will remain open to capitalizing on new opportunities for materials that currently are being disposed.

Carpet is a material of interest with limited recycling opportunities in Ontario. A desktop search for service providers found a single company: Viking Recycling. According to the company's website (<https://www.vikingrecycling.ca/>), the company offers removal and recycling services for carpet and ceiling tile. The company provides a line of products made from recycled carpet and ceiling tiles, such as carpet reuse, processed fibres (e.g., nylons, PET), equestrian footing for use in equestrian rings and arenas, and punching bags. The company has locations in Toronto and Montreal.

In addition to carpet, the assessment of the residential garbage stream identified that pet waste and diapers and sanitary waste make up a sizable portion of the waste stream. While opportunities for these materials are not readily available, the City will continue to review and assess new innovations for managing these and other waste materials.

Opportunities to provide educational support to the ICI sector could also be considered. Many small ICI businesses may not have access to the in-house or external expertise to incorporate food waste diversion into their facilities. The City should monitor for available support from the Province to help the ICI sector incorporate SSO programs into their facilities, and then identify any informational support to fill information gaps.

7. Recommended Waste Management System

Based on the City's current program and options reviewed above, Table 7 presents the recommended waste management system for the City.

Table 7: Recommended Waste Management System

Program	Targeted Materials	Service Change
CURBSIDE COLLECTION		
Garbage Collection <ul style="list-style-type: none"> • Every-other-week collection (with the introduction of SSO) • Clear Garbage Collection Bag Policy 	<ul style="list-style-type: none"> • Garbage 	<ul style="list-style-type: none"> • Switch from weekly to every-other-week after implementation of SSO • Introduction of clear bag policy
Bulky Garbage / Large Item Collection <ul style="list-style-type: none"> • Monthly, from April to September 	<ul style="list-style-type: none"> • Bulky Waste • Large Items • Large appliances 	<ul style="list-style-type: none"> • No change
Curbside Recycling Collection <ul style="list-style-type: none"> • Weekly, dual stream collection 	<ul style="list-style-type: none"> • Blue Box Recyclables 	<ul style="list-style-type: none"> • No change¹⁸
Source Separated Organics <ul style="list-style-type: none"> • Weekly collection 	<ul style="list-style-type: none"> • Household organics 	<ul style="list-style-type: none"> • Under implementation
Leaf and Yard Waste Curbside Collection <ul style="list-style-type: none"> • Weekly, from April to November 	<ul style="list-style-type: none"> • Green Waste (Leaf and Yard Waste) 	<ul style="list-style-type: none"> • No change
Battery Recycling <ul style="list-style-type: none"> • Annual curbside collection 	<ul style="list-style-type: none"> • Batteries 	<ul style="list-style-type: none"> • No change
Christmas Tree Collection <ul style="list-style-type: none"> • Seasonal curbside collection 	<ul style="list-style-type: none"> • Christmas Trees 	<ul style="list-style-type: none"> • No change
DROP OFF SERVICES		
Recycling Facility/Drop-Off Depot <ul style="list-style-type: none"> • Drop off of recyclable materials at the depot 	<ul style="list-style-type: none"> • Blue Box Recyclables 	<ul style="list-style-type: none"> • No change¹⁷

¹⁸ Transition of Blue Box program to Producers is planned to occur January 1, 2024. Program changes implemented by the Producers may occur once Transition occurs.

Program	Targeted Materials	Service Change
Household Hazardous Waste (HHW)/Electronics Depot <ul style="list-style-type: none"> Drop-off service for HHW and electronics Free paint for reuse 	<ul style="list-style-type: none"> HHW Waste Electronics and Electrical Equipment (WEEE) Household Batteries 	<ul style="list-style-type: none"> No change
Textile/Clothing Recycling <ul style="list-style-type: none"> Drop-off sites at the recycling drop-off depot and the landfill 	<ul style="list-style-type: none"> Textiles Clothing 	<ul style="list-style-type: none"> No change
Community Drop-off Sites¹⁹ <ul style="list-style-type: none"> GreenUp Store Kingan Home Hardware Peterborough Public Library Wellness Centre 	<ul style="list-style-type: none"> Household Batteries 	<ul style="list-style-type: none"> No change
Landfill (Peterborough Waste Management Facility) <ul style="list-style-type: none"> Drop off of various materials at landfill 	<ul style="list-style-type: none"> Garbage Bulky/Large Items and Appliances Scrap Metal Cardboard Green Waste Tires Construction and Demolition Waste Soils 	<ul style="list-style-type: none"> No change
PROMOTION AND EDUCATION / WASTE REDUCTION AND REUSE		
Reuse Store	<ul style="list-style-type: none"> Household items for reuse 	<ul style="list-style-type: none"> No change
Backyard Composting <ul style="list-style-type: none"> Subsidized backyard composters 	<ul style="list-style-type: none"> Household organics 	<ul style="list-style-type: none"> No change

¹⁹ This program is managed through a partnership with RMC (<https://www.rawmaterials.com/>).

Program	Targeted Materials	Service Change
Promotion and Education <ul style="list-style-type: none"> Targeted strategic promotion and education programing Education tools (waste collection calendar, waste management guide, waste collection app, etc) 	<ul style="list-style-type: none"> All materials 	<ul style="list-style-type: none"> Iterative program, updated as required

In addition to the programs noted above, residents of the City are able to recycle and/or safely dispose of special wastes at stewardship collection sites. These special wastes include:

- Batteries;
- Hazardous and Special Products (e.g., automotive materials, oil filters and containers, solvents, paints, thermo stats, among others);
- Tires;
- Waste Electrical and Electronic Equipment;
- Lighting (e.g., light bulbs, light emitting diode (LED), high intensity discharge (HID) lamps, among others).

It is recommended the City continue to explore new opportunities for waste diversion as the recycling marketplace continues to evolve. This may include materials for processing such as carpet, reuse opportunities through special bulky waste collection, or other opportunities not yet known.

8. Recommendations

Garbage Collection

1. Implement a clear bag garbage collection program for curbside residential garbage collection.
2. Implement EOW garbage collection for curbside residential garbage.

Green Bin Program

3. The City's Green Bin program should ensure it allows for the potential for the City to expand the types and materials collected in the Green Bin program as the more packaging materials are designed to be composted in municipal systems.

Blue Box Recycling

4. In preparation for Blue Box Transition, the City should consider what controls, if any, it may wish to place on private waste management operations that may be spawned by impending transition of the Blue Box.

Waste Management By-Law

5. Update the City's Waste Collection by-law to ensure:
 - a. Definitions and provisions within the by-law align with the specifics of the proposed clear bag program and EOW garbage collection modifications and the City's planned Green Bin program;
 - b. Provisions adequately describe set out and collection requirements for solid waste; and
 - c. There is adequate ability for corrective action, including collection refusal, education, enforcement and penalties.

Other Waste Diversion

6. Continue active exploration of additional waste diversion opportunities as new markets and partnerships become available.

9. Conclusion

A review of the City's existing and planned waste management programs, potential options, and the City's waste composition data shows that the City has in place an evolving, comprehensive system for maximizing waste diversion. Once implemented, the planned SSO program will provide the City with a mechanism for realizing the single greatest opportunity available for increasing waste diversion. The suggested modifications of clear bag and EOW garbage collection will help to maximize the potential available through both the SSO program but also other diversion programs such as Blue Box and hazardous waste.

Appendix A: Public Meeting Summaries



City of Peterborough

Waste Management Master Plan Update: Public Meeting #1 Summary

Project Number
BRM-21021944-A0

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Date Submitted
March 10, 2022



EXP Quality System Checks	
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Type of Document: Final	Revision No.: 1
Prepared By: JL Gaudet / Alyssa Broadfoot	
Reviewed By: John Smith	

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Appendix A: Presentation Slides

1. Introduction

The City of Peterborough has retained EXP Services Inc., with the assistance of Subject-matter experts Sherry Arcaro (ReMM Group), Mike Birett (Birett and Associates) and Alyssa Broadfoot (AB), to complete a review and update of the City's 2012 Waste Management Master Plan (WMMP). A virtual public meeting was held on Tuesday, March 1, 2022 at 7:00 p.m. to describe the project to the public and request their feedback.

This report provides a summary of the meeting, including its promotion, agenda, and the questions and comments provided by meeting participants.

2. Meeting Format

The Virtual Public Meeting was hosted via Zoom. Participants had the option of joining by computer or telephone audio. During the meeting the project team gave a thirty-minute presentation, which was followed by an hour of questions and answers. The meeting was attended by 44 members of the public¹.

The presentation included the following topics:

- An overview of the project's purpose;
- Comparison between the City's 2012 and current waste diversion and disposal rates;
- Progress the City has made implementing the recommendations of the 2012 Waste Management Master Plan;
- Current programs offered at the City to manage the City's waste stream; and
- Planned and considered opportunities to maximize diversion in Peterborough, such as the source separated organics (SSO) composting, using clear bags for garbage, and every-other-week garbage collection.

The meeting was recorded and can be viewed via the project website.

3. Promotion

The Virtual Public Meeting was promoted through a number of mediums, including:

- Notification on the project website (www.connectptbo.ca/wasteplan2022);
- A press release;
- Newspaper ad; and
- Social media posts.

Examples of the promotion are shown below.

¹ 55 people registered, but at least 44 stayed until the end of the presentation and the start of the question period.



The screenshot shows the City of Peterborough website with a header featuring the city logo and navigation links: "I Want To...", "What are you looking for?", "Our Websites", "City Services", "Explore and Play", "Doing Business", and "City Hall". The main content area is titled "Virtual public meeting: Waste Management Master Plan" and includes a sub-header "Posted on February 25, 2022" and a "Back to Search" link. A large image of a pile of waste is displayed. The text of the press release invites residents and stakeholders to a virtual public meeting on Tuesday, March 1, 2022, at 7 p.m. to discuss the City's review and update of its 2012 Waste Management Master Plan. It provides a registration link (www.connectptbo.ca/wasteplan2022) and a phone number (705-742-7777 ext. 1724). The text also mentions that the City will consider proven waste diversion programs and that recommendations will go to City Council. It notes the City's strong landfill diversion rate of 53 per cent and its status as a leader in Ontario for waste diversion. The press release concludes by stating that the numbers released on January 13, 2022, reflect data for 2020.

Residents and stakeholders are invited to attend a virtual public meeting on Tuesday, March 1, 2022 at 7 p.m. to learn about the City's review and update of its 2012 Waste Management Master Plan and to give input. To register for the meeting, please visit www.connectptbo.ca/wasteplan2022 or call 705-742-7777 ext. 1724.

Through updating the Plan, the City will consider proven waste diversion programs, policies and strategies that have been implemented successfully in other jurisdictions across Ontario.

Recommendations on waste management activities generated through the review process will go to City Council to consider updates to the City's Waste Management Master Plan.

The Plan looks to improve on the City's already strong landfill diversion rate of 53 per cent, which puts the City among the leaders in Ontario for waste diversion. Numbers are released as part of the annual Resource Productivity and Recovery Authority Datacall, Ontario's standardized waste reporting and calculation process. The numbers released on January 13, 2022 reflect data for 2020.

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Figure 1: Press Release prior to Virtual Public Meeting



Figure 2: Newspaper Ad: Public Meeting #1 Notice

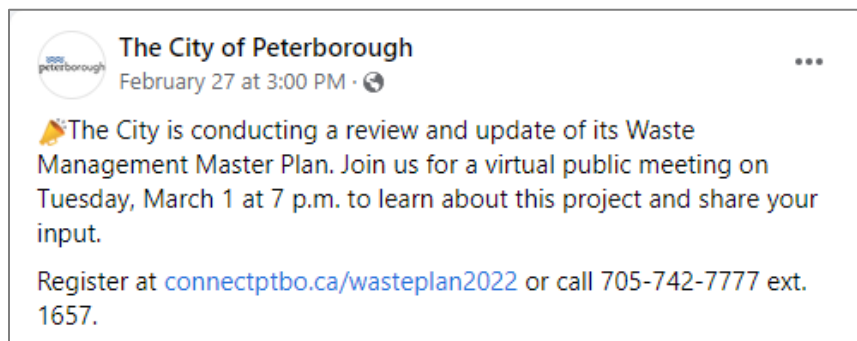


Figure 3: Social Media Post prior to Virtual Public Meeting

Immediately following the Virtual Public Meeting, a press release and social media posts were issued with a call-to-action to participate in the feedback form.

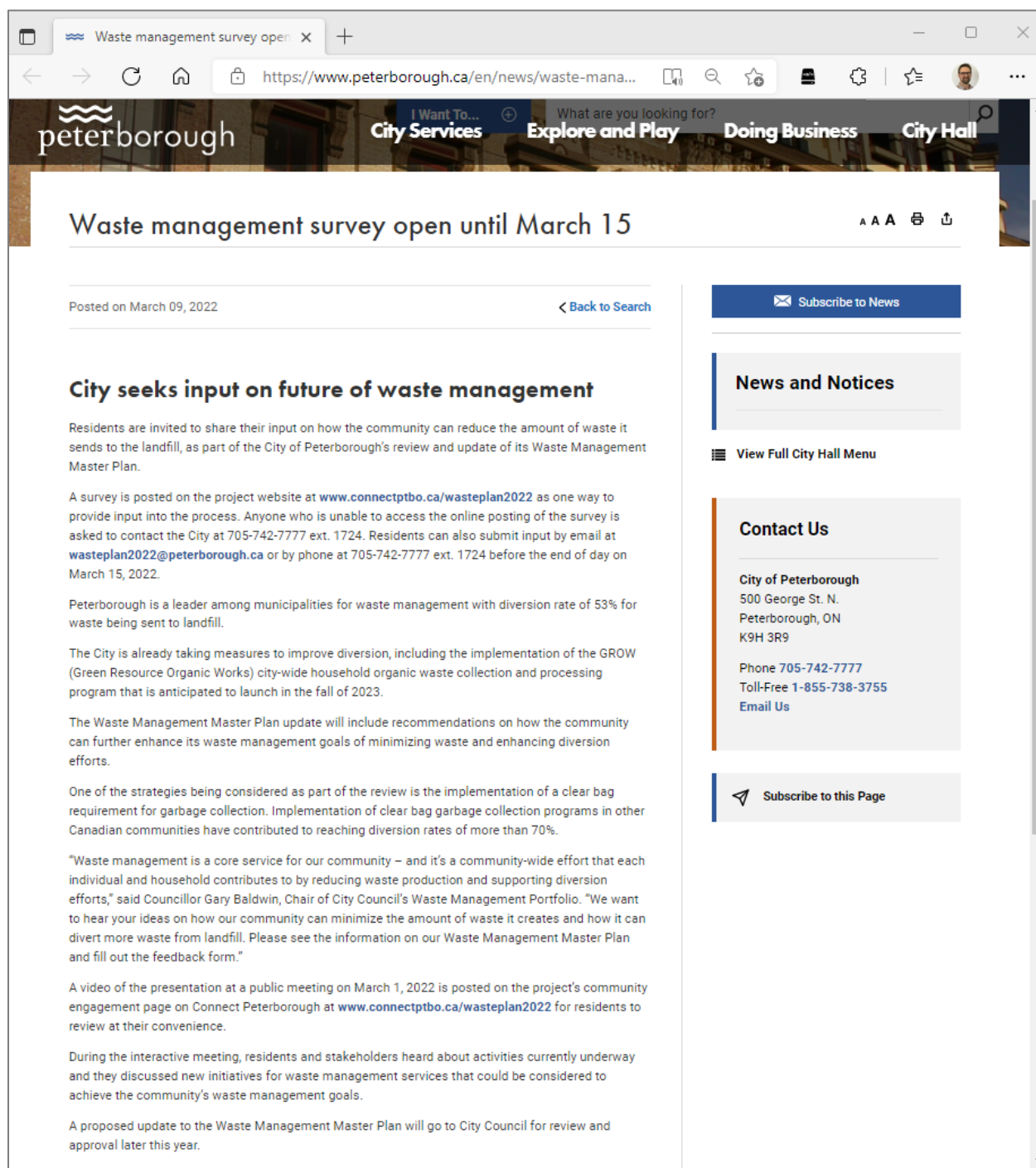


Figure 4: Press Release following Virtual Public Meeting



Figure 5: Social Media Post following Virtual Public Meeting

4. Feedback

4.1. Polls

Polls were used to engage meeting participants and obtain feedback in real time.

The first poll asked participants “How did you hear about this Public Meeting?” The options included:

- City Facebook posts;
- Newspaper advertisements;
- PtboCanada posts;
- City website; and
- Other.

The most common response was “Other” followed by “City Facebook Posts”. The results of Poll #1 are shown below.

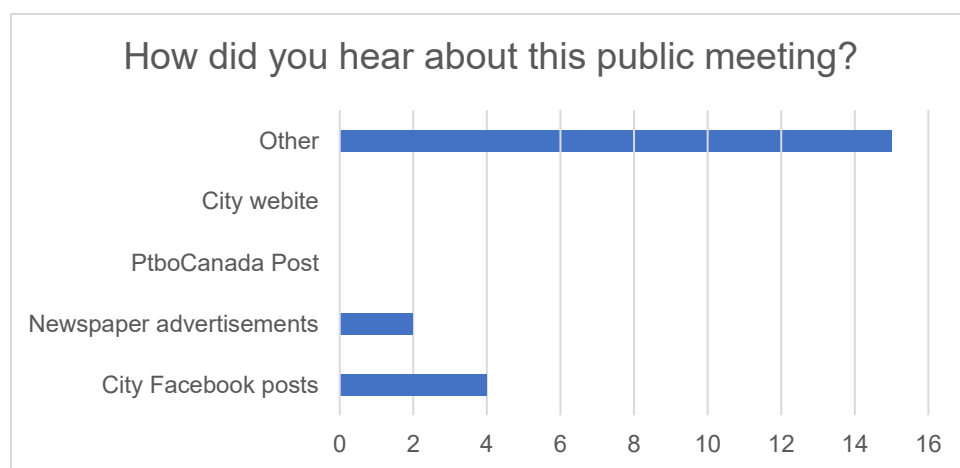


Figure 6: Poll #1 Results

The second poll asked “Based on your own experience, do you think we are all doing enough to achieve our goals?”, with the possible responses being:

- I think we could be doing more;
- I think we are doing the right amount; and
- I think we are doing too much.

The most common answer was “I think we could be doing more.” The results of Poll #2 are shown below.

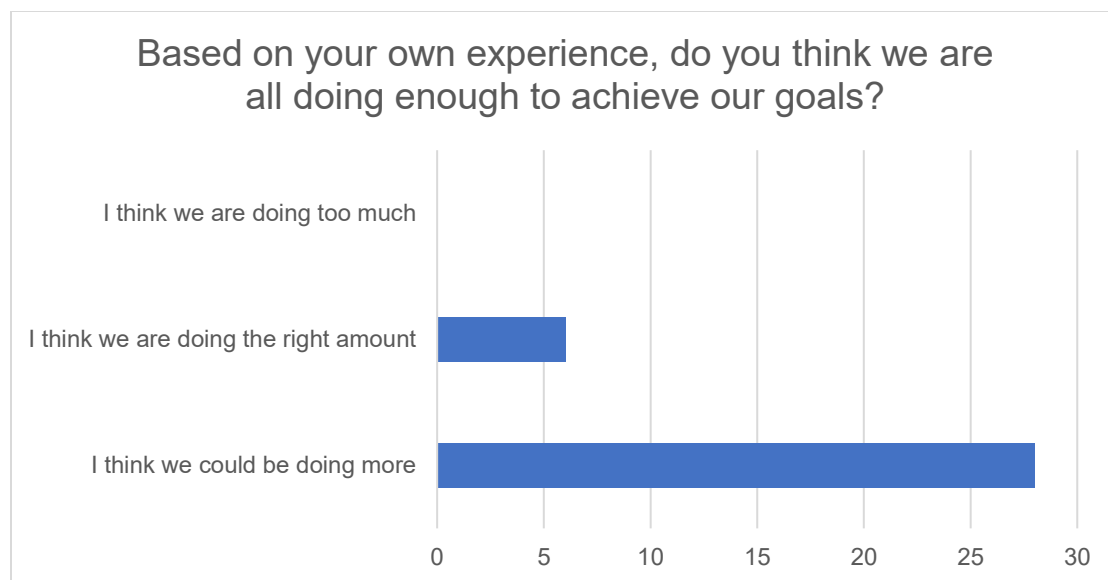


Figure 7: Poll #2 Results

4.2. Questions and Comments during the Public Meeting

A question-and-answer session after the presentation was moderated by the project team. Meeting participants were able to ask a question live or type their question or comment in the chat window. The questions received and their responses are summarized below, organized by topics.

Source Separated Organics (SSO)

- **Was Peterborough the recipient of Green Bin funding in 2008? It seems like a lengthy delay in implementation.**
 - Yes, the City received \$70M in funding from Climate Action. Since the funding was received, the City has been involved in completing various background studies on siting and impact assessments, zoning, and technologies. The City has also been consulting with other municipality on their potential requirements to manage organics.
- **Will the organics program be available to restaurants, the commercial sector and condominiums?**
 - The City will collect organics from the single-family and multi-residential buildings where they currently provide curbside collection service. For the ICI sector, they will be able to have private haulers collect their organics and send it to the City facility. The facility will be able to accommodate that feedstock, as well as feedstock from other municipalities.

- **Did the City consider using the SSO as feedstock for renewable energy generation (i.e. renewable natural gas)?**
 - The City's waste diversion program will work towards reducing the amount of garbage to 25%, which will need to be addressed. Disposal will be looked at as part of a separate future process. The landfill currently has about 13 years left of capacity. At the 10-year mark, the City will begin exploring disposal options, which may include Energy from Waste.
- **What will happen to SSO residues?**
 - The City will not be allowing plastics into the organics collection stream. Large pieces of wood would be screened out and reintroduced into the composting process.
- **The green cart organics program is applauded. But why is not on-site diversion of organics (i.e., backyard composting) being considered?**
 - The City currently promotes backyard composting and offers backyard composters for sale at a discount. The City will continue to do this, as at-home diversion of organics will continue to be an important part of waste diversion. The curbside organics program will be able to accept the materials that cannot go into a backyard composter, such as meat, fish and bones. Curbside collection of organics will also help residents in multi-residential buildings, who cannot backyard compost (although vermicomposting may be an option for some). The City has also worked with lawnmower producers and retailers to distribute mulching blades to encourage grasscycling.

Recycling

- **I live in an apartment building. If I run out of black garbage bags, can I currently use clear bags for garbage? Also, should I put shredded paper in a clear bag or should I put it loose in the recycling bin?**
 - With respect to garbage, you can use the larger clear bag, which is similar in size to standard garbage bag. When the City introduces the clear bag program, residents will be able to include a privacy bag, as the City knows there will times when residents want to do that. With respect to shredded paper, it should be placed in a clear bag and tied, and not placed loose in the recycling bin. Collection and processing staff do not want the loose shredded spreading out. Loose papers such as envelopes can also be placed in a clear bag, but the bag can be left open for loose papers.
- **If the recycling bins in my apartment are full, can I put the overflow (like extra containers and packaging) in clear bags?**
 - The recycling facility does not have an automated debagger to extract the recyclables from the plastic bag, so please do not place overflow recyclables in clear bags.

- **Where do the plastics that are collected end up? How much is actually exported to other landfills? Does the City know what happens to the plastics after it leaves Peterborough?**
 - Plastics are separated into resin types, baled, and then shipped off to commodity markets. Once the materials reach the market, the bales are then opened and the plastics are washed, shredded, turned into pellets or flakes, and then made into new materials, such as new blue boxes. About 80% of the plastic water bottles that are collected go to one place in Ontario and are recycled into new ones. It's a closed loop system. There is some contamination in bales, which may include recyclable or non-recyclable materials. Some places will extract other recyclable material from the bales (such as metal or missorted plastics) and send them on for other recycling. Materials that cannot be recycled is typically then sent for conversion to energy.
- **I would like to see all types of plastic labeled better on how to properly recycle or dispose it. There are so many different types of plastic food packaging.**
 - The main issue with the labelling of packaging is that producers are preparing packaging that will be distributed across North America. While producers place the label on the package, it is up to the municipality to communicate where the package should go, because municipal diversion programs differ across North America.
- **Can the City look at advanced recycling technology for multi-laminate plastics? Rather than focusing on EFW, which is more linear, Peterborough should look to keep the plastics in the circular economy by investing in advanced recycling technology.**
 - Brand owners / producers will soon be responsible for plastics recycling in Ontario (this is called the Transition). They will need to take this packaging back and find a recycling solution for it. Producers will improve their economies of scale for recycling this material as they collect more of it. Two possible options are mechanical recycling and advanced recycling. Mechanical recycling breaks the material down and shreds it. Advanced recycling melts the material down and separates the materials chemically. After Transition, this will be the producers' responsibility.
- **Will the city consider a deposit for bottles to encourage recycling?**
 - Deposits on bottles - also known as deposit-return programs - are an excellent way to get materials back to retailer. However, deposit return systems need to be set up at the provincial level, not at the municipal level. This is because of the large administrative set-up costs involved.
- **Has the City considered banning plastic bags from stores been considered?**
 - The banning of materials that are hard to recycle is being considered at the federal level. Municipalities have to deal with the materials that are created by producers that are looking at regulations set at the provincial and/or national level.

- **How much of the City's blue box material is "contaminated" and gets redirected to landfill?**
 - The City collects its recyclables in two streams to help reduce the amount of contamination present in the collected materials. The City has a contamination rate of less than 13%. The City works closely with its recycling marketers and ensures it goes to reputable end markets, most of which are in North America.
- **Is bagged shredded paper emptied when it goes into the recycling truck?**
 - It is kept in the bag, even when it is baled. Otherwise, the shredded paper goes everywhere.
- **Is there a video available on the City's website that explains how to recycle properly? There seem to be a lot of questions about that.**
 - No. The City has worked with a Trent University student on a video about the landfill. When GFL took over the collection contract, all of the old equipment was taken out of recycling facility and replaced with new and better equipment. Staff have installed some signage and are looking to producing an online video tour of the facility. The City's website has lots of information about how to recycle properly, such as the waste stream guides and the calendar. Staff are also available to answer residents' questions.

Clear Garbage Bags

- **Do clear plastic bags have a lower environmental impact than black bags?**
 - Both clear black garbage bags are from LDPE. In black bags, dyes are used to turn them black. The benefit that is achieved by using clear bags is in the incremental diversion from landfill.
- **What privacy considerations (e.g., allowance for a privacy bag) will be considered when switching to clear bags?**
 - This is a common question. The City will allow for a small privacy bag within the clear bag. This is done by many municipalities that have clear garbage bag programs.
- **When the clear bag program is implemented, many people may have a stockpile of black garbage bags. It is recommended that the program is implemented over a two-year period so that people can use up their bags over time. This phase-in period will allow residents slowly accept the new program, use up their garbage bags, and transition to clear bags.**
 - The City agrees that transition will be a key part of the program. It is recognized that some people will have gone out and bought a large stock of bags. The City will look to work with retailers during the transition process.

- **Has there been any consideration for those who may have more waste requiring privacy than what would fit in a grocery bag (for example, those who suffer from medical related issues)? Will there be a way of obtaining an exemption?**
 - The City is aware of this issue and medical exemptions may be available on a case-by-case basis.

Other Questions and Comments

- **Question: Where do collected textiles actually go?**
 - Answer: The City has partnership with Diabetes Canada, and they receive the collected textiles.
- **Participant delivered some remarks on the value of Energy from Waste and recommended that it be considered in this process. He recommended against plasma arc and gasification technologies given issues he has observed in various plants.**
 - Thank you for the input. As noted previously, this process is focused on waste diversion. Disposal options will be explored in a future study.
- **What about offering a city-run Repair Cafe to teach how to fix broken items that are still useable, and possibly a "free Market" at Pido Road or the dump where reasonable items can be brought for people to re-use without cost?**
 - That is a good idea, and the City wants to engage local organizations for grass-roots style waste diversion.

In addition to the comments and questions noted above, there were some posted in the chat that were not answered during the presentation. These are summarized in the table below with responses from the project team.

Table 1: Responses to Additional Comments and Questions

Comment or Question	Project Team Response
Source Separated Organics	
1) Durham has had “green bins” for over a decade, with the compost being given away for free to residents. 2) I am not happy with the possible switch to clear bags.	Noted. Thank you sharing your information during the meeting and your comment.
What technology did you go with for organics processing?	The City Organics facility will be using Gore Technology.
Recycling	
How can fast food locations recycle more efficiently?	Large volume commercial recycling is not managed by the City. Regulation or mandates to enforce recycling at commercial properties is the responsibility of the Ontario Ministry of the Environment, Conservation and Parks.
Where do plastics go for energy?	The City does not send plastics to energy from waste facilities and therefore cannot provide this information.
Do you have pictures of the recycling plant?	
How will we meet recycling targets if we have an energy from waste?	As of 2025 the Blue Box recycling system in Ontario will be fully funded and operated by the Producers of printed paper and packaging. Energy from Waste is not an allowable diversion method for recyclables under the Provincial Regulation governing the program.
How much does city charge for extra recycling bins?	Blue boxes can be purchased for \$3
Every Other Week Collection	
Oshawa has recycling and blue box pick up every week and every other week for garbage. It helped people use the composting pick up, so their garbage didn't stink!	Noted. Thank you for sharing during the meeting.
Other Diversion	
What happens to fiberglass?	There are currently no sustainable markets for the recycling of fiberglass. The City is always researching additional diversion opportunities and will keep this material on the list for the future as technology improves.

4.3. Commenting Period

The public was invited to provide comments by March 15, 2022. A summary of the comments received will be included in a future iteration of this report.

5. Online Questionnaire

A questionnaire in the format of a feedback form was posted on the project website to collect input on the WMMP Update process. The questionnaire is scheduled to run until March 15, 2022. Results of the questionnaire will be provided in a separate report.

6. Conclusion

Engagement of stakeholders is a key component of this project. The meeting attendance and the variety of questions and comments indicates that there is an active interest in how Peterborough's solid waste is managed. The public will continue to be engaged throughout this process via the project website, an online survey and a second public meeting. Public feedback will be reviewed and considered by the City and its consulting team when developing the recommendations for the WMMP Update.

Appendix A: Presentation Slides








Virtual Public Meeting:
**Waste Management
Master Plan Update**

Tuesday, March 1, 2022
7:00 p.m.



Photo credit: Sherry Arcaro

Welcome & Introductions



John Smith, Project Lead, exp

Jean-Louis Gaudet, Technical Analyst, exp

Sherry Arcaro, Technical Expert, ReMM

Mike Birett, Technical Expert, Birett & Associates

Alyssa Broadfoot, Communications Specialist

Dave Douglas, Manager - Waste Diversion Section,
City of Peterborough



Outline


How to participate

- Project purpose
- Progress since 2012
- Current programs
- Maximizing the 3Rs
- Questions
- Next Steps

How to Participate

During the meeting

- Poll questions
- Raise hand feature
- Chat box



After the meeting

- Find the slides and recording at connectptbo.ca/wasteplan2022
- Send feedback by March 15, 2022
 - **Feedback form:** connectptbo.ca/wasteplan2022
 - **Email:** wasteplan2022@peterborough.ca
 - **Voicemail:** 705-742-7777 ext. 1724

Poll #1

How did you hear about this Public Meeting?

- ☐ City Facebook posts
- ☐ Newspaper advertisements
- ☐ PtboCanada posts
- ☐ City website
- ☐ Other



How to participate

Project purpose

Progress since 2012

Current programs

Maximizing the 3Rs

Questions

Next Steps

Project Purpose

- Modernize the City's 2012 Waste Management Master Plan (WMMP)
- Ensure WMMP meets City's evolving waste management needs
- Continue to adopt proven best practices in waste management
- Ensure City remains a leader in Municipal Solid Waste Management



**Maximize
diversion**



**Minimize
generation**



**Maintain
fiscal responsibility**



How to participate

Project purpose

Progress since 2012

Current programs

Maximizing the 3Rs

Questions

Next Steps

Progress on recommendations from 2012 Master Plan

Expand education & outreach and/or partnership activities



Meet KPMG Waste Management Best Practices



Increase residential diversion rate to 75% over 20 years



Implement Source Separated Organics (SSO) collection & processing



Create/expand markets for textiles, bulky items, asphalt shingles, pet waste, construction waste, and wood waste.



Enhance promotion and education programs



Establish a Reuse Centre at existing waste management facility

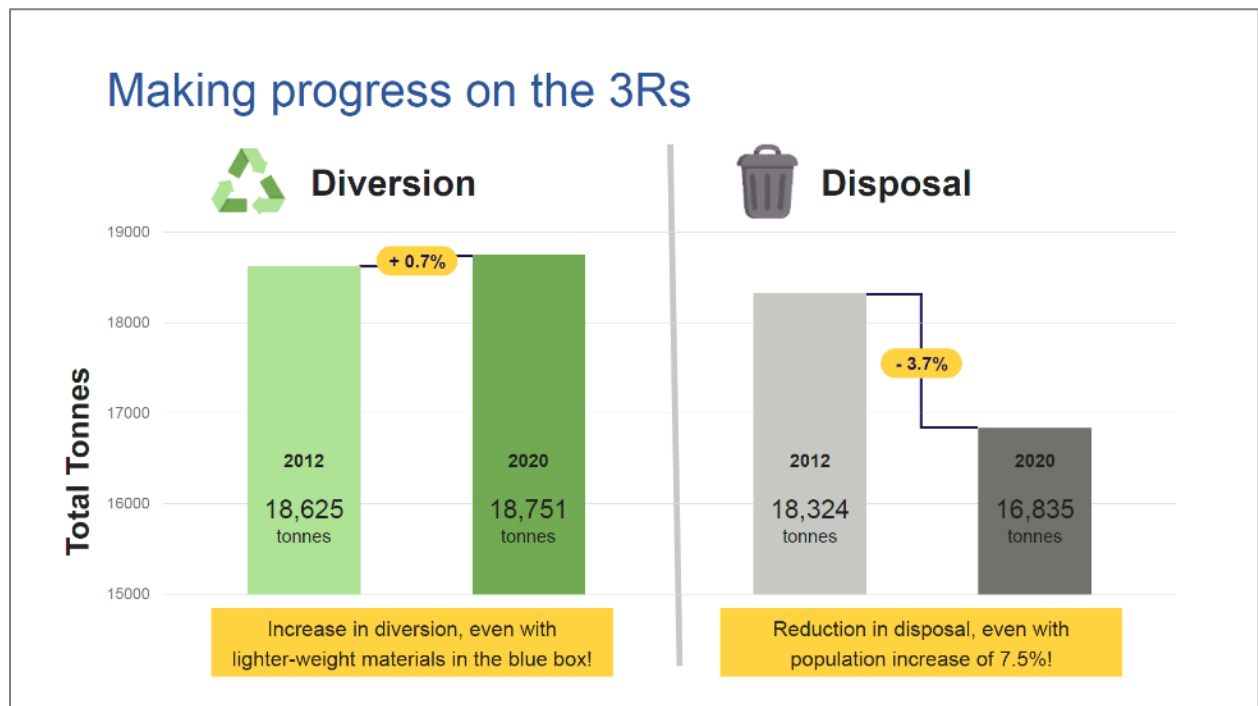


Implement public space recycling



Waste stream is evolving...






Poll #2

Based on your own experience, do you think we are all doing enough to achieve our goals?

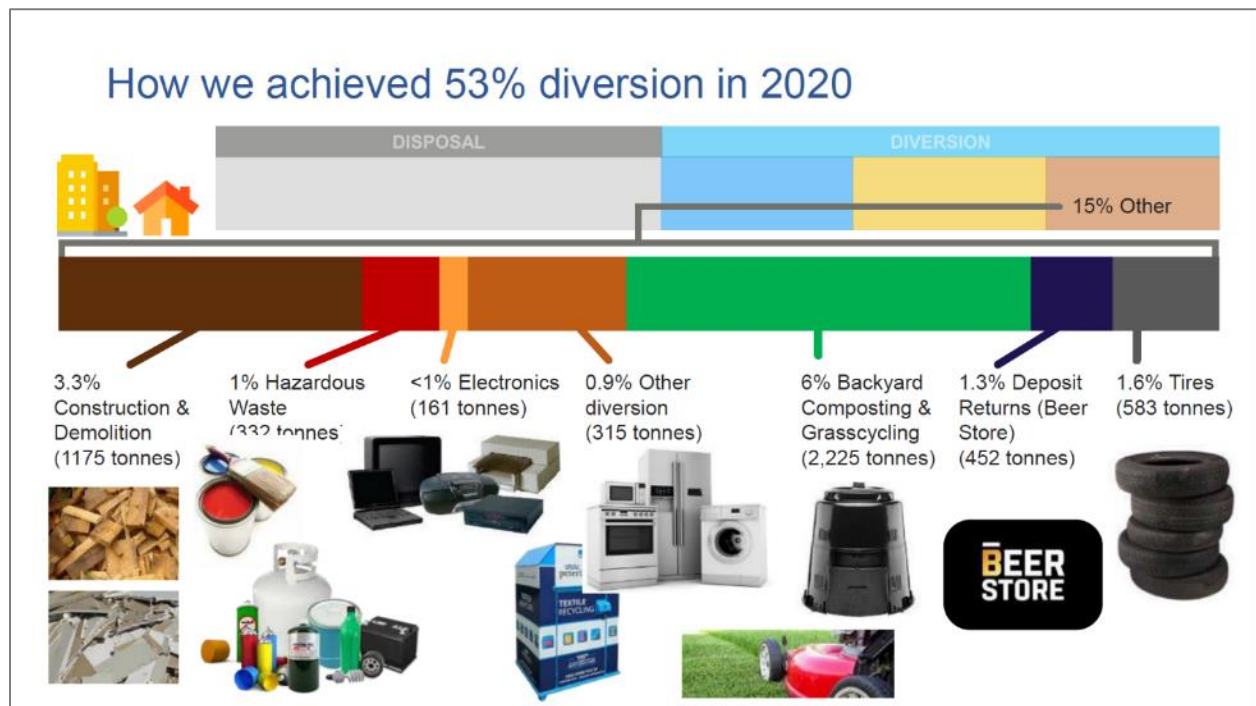
- I think we could be doing more
- I think we are doing the right amount
- I think we are doing too much



Outline

- How to participate
- Project purpose
- Progress since 2012
- Current programs**
- Maximizing the 3Rs
- Questions
- Next Steps



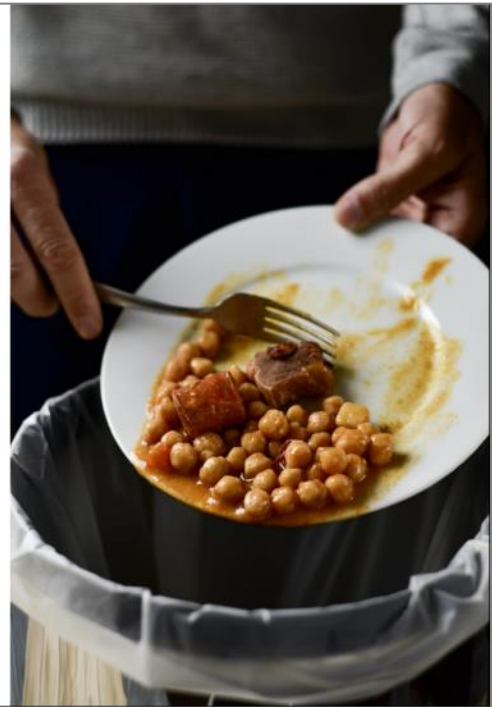


Outline

- How to participate
- Project purpose
- Progress since 2012
- Current programs
- Maximizing the 3Rs**
- Questions
- Next Steps

Maximizing diversion: **Source Separated Organics**

- **Action:** implement organics collection program
- Already underway – launch expected in Fall 2023
- Common in Ontario municipalities
- Best practice to increase waste diversion
- Peterborough's best opportunity for diversion ~15-20%



Maximizing diversion: **Clear Bags for Garbage**

- **Proposed action:** require clear bags for garbage collection
- Maximizes the diversion potential of other programs
- Allows for education
- Increases worker safety
- Widely used in Ontario & across Canada
- Best practice to increase waste diversion

Maximizing diversion: **Efficient collection frequencies**

- **Proposed action:**
 - Weekly – recycling & organics
 - Weekly Apr-Nov – yard waste
 - Bi-Weekly – garbage
- Encourages waste diversion
- Increased collection efficiency
- Commonly used across Ontario
- Best practice to increase waste diversion



Photo credit: Dufferin County

Maximizing diversion: **Enhance other waste diversion programs**

- Support Industry take-back & recycling programs
 - Electronic waste
 - Small appliances
 - Household hazardous waste
 - Batteries
 - Sharps & pharmaceuticals
- Explore/expand other diversion opportunities
 - Carpets, textiles
 - Large items - furniture, appliances

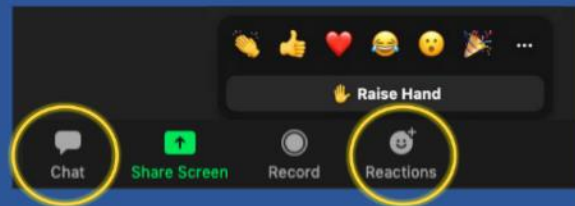


Getting to **75% diversion** and beyond...

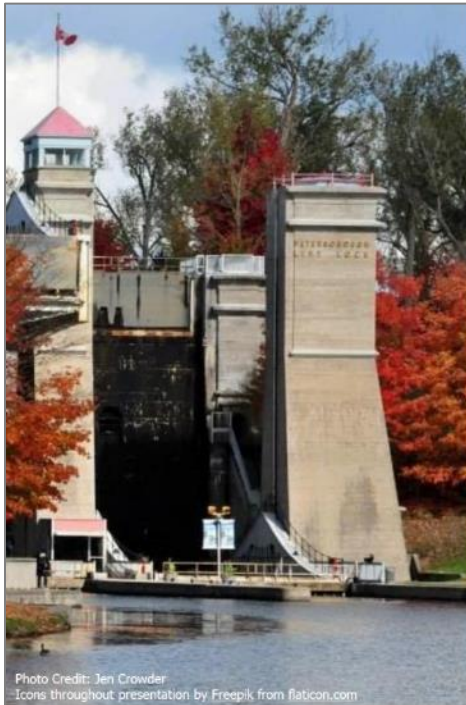
How to participate
 Project purpose
 Progress since 2012
 Current programs
 Maximizing the 3Rs
Questions
 Next Steps

Questions?

Type in Chat or Raise Hand



How to participate
Project purpose
Progress since 2012
Current programs
Maximizing the 3Rs
Questions
Next Steps



Thank you!

- Find the slides and recording at connectptbo.ca/wasteplan2022
- Send feedback by March 15, 2022
 - **Feedback form:** connectptbo.ca/wasteplan2022
 - **Email:** wasteplan2022@peterborough.ca
 - **Voicemail:** 705-742-7777 ext. 1724
- Watch for notice of 2nd Public Meeting!





City of Peterborough

Waste Management Master Plan Update: Public Meeting #2 Summary

Project Number
BRM-21021944-A0

Prepared By
EXP Services Inc.
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Date Submitted
June 3, 2022



EXP Quality System Checks	
Project No.: BRM-21021944-A0	Date: June 3, 2022
Type of Document: Final	Revision No.: -
Prepared By: JL Gaudet	
Reviewed By: John Smith	

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Appendix A: Presentation Slides

1. Introduction

The City of Peterborough has retained EXP Services Inc., with the assistance of Subject-matter experts Sherry Arcaro (ReMM Group), Mike Birett (Birett and Associates) and Alyssa Broadfoot (AB), to complete a review and update of the City's 2012 Waste Management Master Plan (WMMP). A virtual public meeting was held on Tuesday, May 17, 2022 at 7:00 p.m. to provide the public with an update to the project, to describe the WMMP recommendations, and to ask for the public's feedback. This was the second public meeting in the WMMP process.

This report provides a summary of the meeting, including its promotion, agenda, and the questions and comments provided by meeting participants.

2. Meeting Format

The Virtual Public Meeting was hosted via Zoom. Participants had the option of joining by computer or telephone audio. During the meeting the project team gave a thirty-minute presentation, which was followed by about 45 minutes of questions and answers. The meeting was attended by 41 members of the public.

The presentation included the following topics:

- Project overview and update;
- Summary of stakeholder feedback to date;
- Type of waste remaining in City's residential curbside garbage;
- Description of the WMMP recommended initiatives and recommended waste management system;
- Anticipated timing and next steps; and
- How to provide feedback.

The meeting moderator noted that the purpose of the meeting was to review and discuss the WMMP process and its recommendations and requested that meeting participants limit their questions to the meeting topic. He noted that questions and comments about other waste-related topics (such as the siting of the organics processing facility or disposal options) would be forwarded on to the relevant City staff following the meeting. This approach was adopted for the second PIC because attendees trying to participate in the first PIC expressed frustration with participants tabling matters that were 'out of scope' for the master plan update. The use of the 'chat' feature to receive comments and queries from participants during virtual meetings is a common and routine practice to aid session organizers managing meetings of larger groups of participants. It allows organizers to group questions and comments into logical themes and respond accordingly.

The meeting was recorded and can be viewed via the project website.

3. Promotion

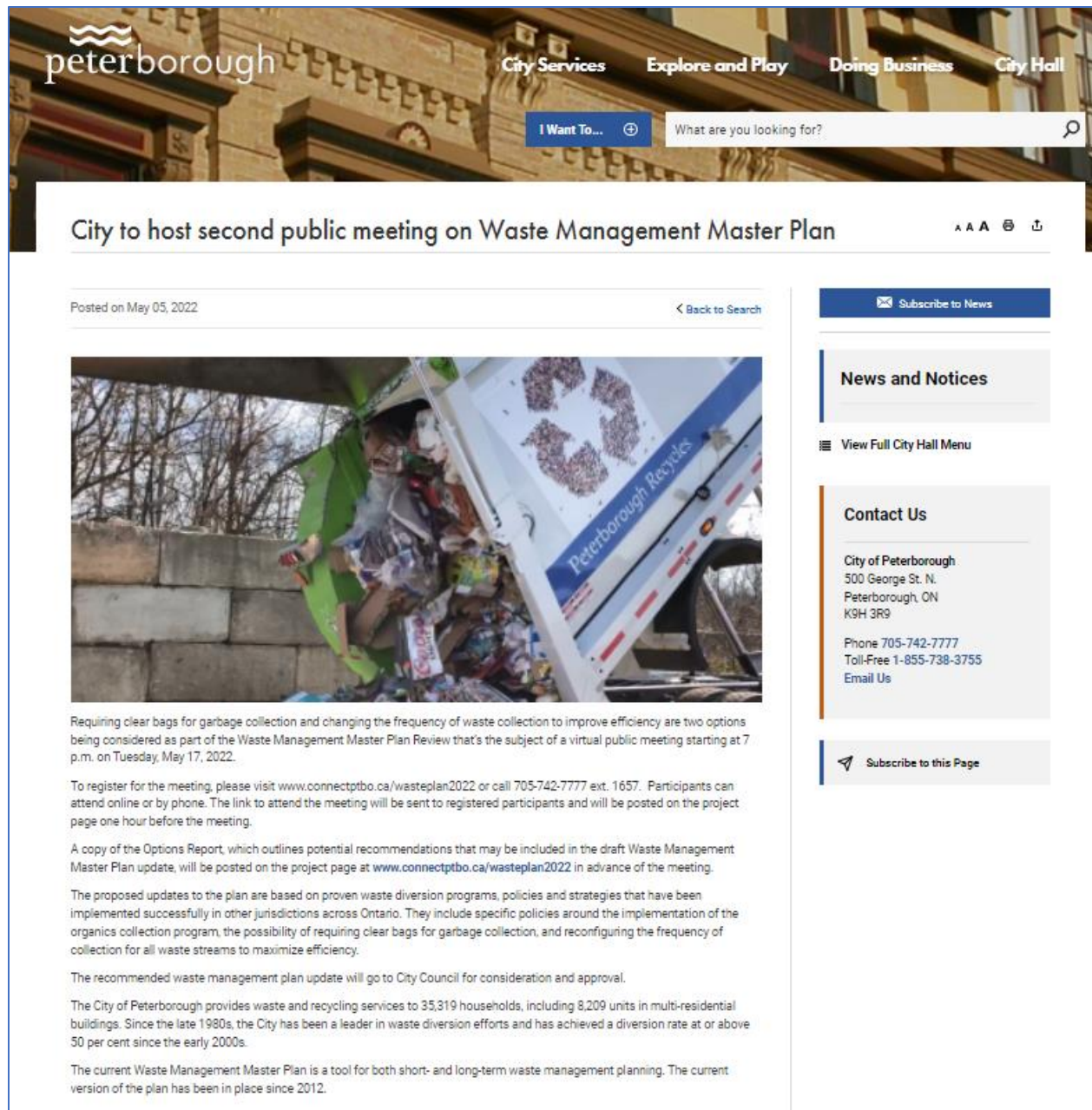
The Virtual Public Meeting was promoted through a number of mediums, including:

- Notification on the project website (www.connectptbo.ca/wasteplan2022);
- A press release;
- Newspaper ad; and
- Social media posts.

The following figures provide examples of the promotion.



Figure 1: Public Meeting #2 Ad




peterborough City Services Explore and Play Doing Business City Hall

I Want To... What are you looking for?

City to host second public meeting on Waste Management Master Plan

Posted on May 05, 2022 < Back to Search



Requiring clear bags for garbage collection and changing the frequency of waste collection to improve efficiency are two options being considered as part of the Waste Management Master Plan Review that's the subject of a virtual public meeting starting at 7 p.m. on Tuesday, May 17, 2022.

To register for the meeting, please visit www.connectptbo.ca/wasteplan2022 or call 705-742-7777 ext. 1657. Participants can attend online or by phone. The link to attend the meeting will be sent to registered participants and will be posted on the project page one hour before the meeting.

A copy of the Options Report, which outlines potential recommendations that may be included in the draft Waste Management Master Plan update, will be posted on the project page at www.connectptbo.ca/wasteplan2022 in advance of the meeting.

The proposed updates to the plan are based on proven waste diversion programs, policies and strategies that have been implemented successfully in other jurisdictions across Ontario. They include specific policies around the implementation of the organics collection program, the possibility of requiring clear bags for garbage collection, and reconfiguring the frequency of collection for all waste streams to maximize efficiency.

The recommended waste management plan update will go to City Council for consideration and approval.

The City of Peterborough provides waste and recycling services to 35,319 households, including 8,209 units in multi-residential buildings. Since the late 1980s, the City has been a leader in waste diversion efforts and has achieved a diversion rate at or above 50 per cent since the early 2000s.

The current Waste Management Master Plan is a tool for both short- and long-term waste management planning. The current version of the plan has been in place since 2012.

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Figure 2: Press Release prior to Virtual Public Meeting



Figure 3: Social Media Post prior to Virtual Public Meeting

4. Feedback

4.1. Polls

Polls were used to engage meeting participants and obtain feedback in real time.

The first poll asked participants “Should the GROW Peterborough program include pet waste?” The options included:

- Yes;
- No; and
- Don’t care either way.

There were 37 responses, with the most common response being “Yes” followed equally by “No” and “Don’t care either way”. The results of Poll #1 are shown below.

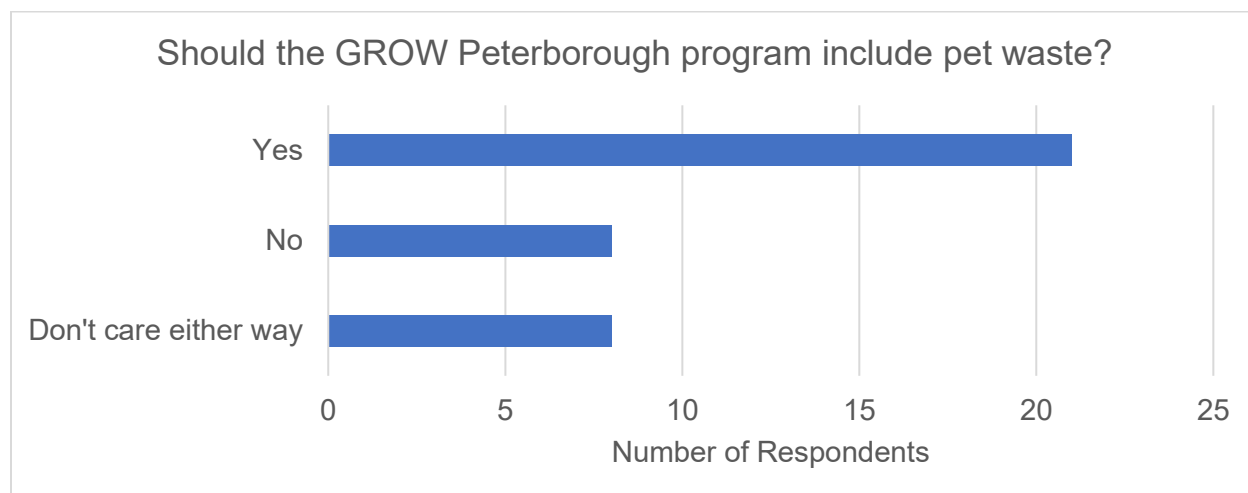


Figure 4: Poll #1 Results

The second poll asked “Did you attend the first Virtual Public Meeting?”, with the possible responses being:

- Yes;
- No; and
- No, but I reviewed the slides online.

There were 27 responses, with the most common answer being “No.” The results of Poll #2 are shown in the following figure.

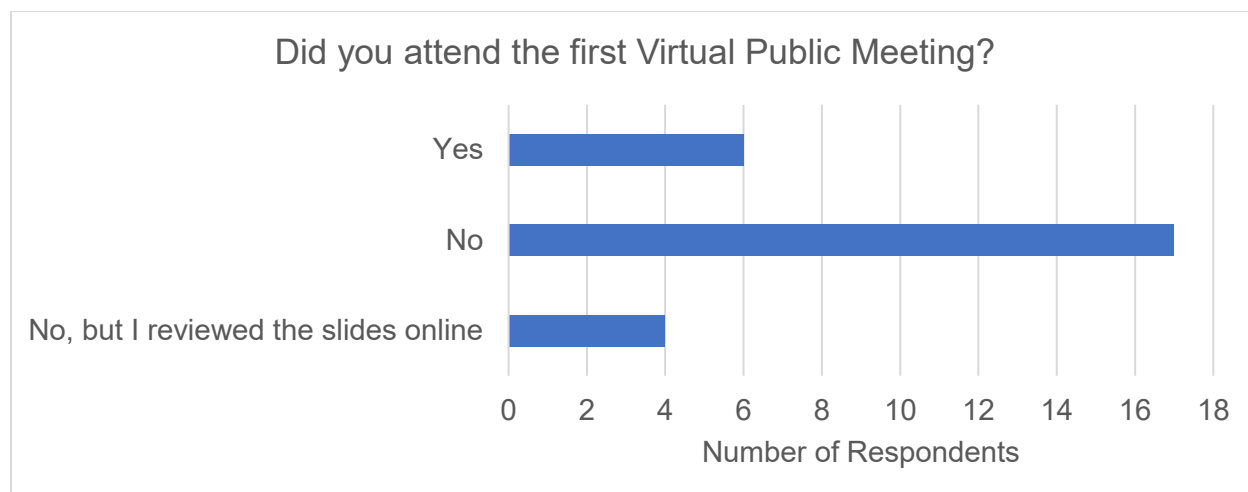


Figure 5: Poll #2 Results

4.2. Questions and Comments during the Public Meeting

A question-and-answer session after the presentation was moderated by the project team. Meeting participants were invited to submit questions or comments about the WMMP update and its recommendations using the chat function. Participants were reminded by the project team that the focus of the public meeting was the recommendations for the WMMP update, and that questions or comments about other topics would be forwarded to the relevant staff for follow-up. The participants' questions and comments about the WMMP update and its recommendations and project team responses are summarized below.

Clear Bags

- **Question:** Can the garbage be placed in a garbage can instead of a clear bag?
 - Yes, a can instead of a clear garbage bag could be used. A household could also place their clear bag inside of a can if they wish.
- **Question:** What provisions will there be for those with adult diapers? One privacy bag wouldn't hold everything.
 - This is something that the City is sensitive to and is being looked at as part of the implementation. Some municipalities have exemptions that are sensitive to medical-related issues and an individual's privacy. For example, some municipalities have a medical exemption container that could be used to house such materials.
- **Question:** how would apartments participate?
 - The City will be engaging the MR sector in the diversion program. Apartments offer a special challenge compared to curbside collection. When a curbside resident sets their materials at the curb, there is a sense of ownership. But when people in apartments drop off their materials, that sense of ownership is gone. The SSO program will be implemented

in Phases. The first phase will be for single-family dwellings, and then move to apartments. Education will be a key component. For the clear bag program, it will be challenging to implement in apartments, so education will also be key. But the intent is to allow residents in apartment buildings to participate in these diversion programs.

- **Question:** Twice since I moved to Peterborough in 2015 some unidentified person left their garbage at the end of my driveway on collection day. Fortunately, the collection people picked it up, even though this represented a third bag (in addition to my two) and there is a two-bag limit in the city. I doubt, however, that the collection people will pick up such "rogue" bags if they're opaque or if they're clear and obviously contain recyclable material. I don't relish having to go through this anonymous person's garbage to take out anything recyclable, particularly in the COVID era. Will I be required to do so?
 - That situation currently happens. The City will try to help residents get that resolved. If it's a continuous problem, the City will go through the garbage to try and determine who is dropping it off and then contact the owner.

Collection of Source Separated Organics

- **Question:** Two questions 1) will there be a plan to educate or a future education or community video to share. 2) will a business be able to put green bin to road with recycle carts.
 - 1 - The team is still at high level in developing the promotion and education initiatives. But videos and other social media will be considered.
 - 2 - The initial focus for the SSO program will be on the single-family collection program. But businesses that wish to participate in the program will be able to engage a private hauler to collect the material for processing at the City's planned SSO processing facility. The City intends to provide educational materials to ensure businesses know what is accepted.
- **Question:** What containers would be used? how to keep out animals? I don't have a garage to keep large container in.
 - This is a common concern, and bins have evolved and become better at keeping animals out since municipalities have started SSO programs. The SSO containers will have animal-proof locks on them.
- **Question:** Have you visited a composting facility before?
 - Dave Douglas noted that he has visited at least 50 different compost facilities and at one time was on the board of directors of the Composting Council of Canada.

Every-Other-Week (EOW) Garbage Collection

- **Question:** Would businesses within the Downtown Business Improvement Area (DBIA) be required to switch to EOW garbage collection?
 - No. There is no plan to change the frequency of collection in the DBIA.
- **Question:** Will the City be requiring people to use garbage bins?
 - No, but households can use them if they wish.

Promotion and Education

- **Question:** Will the City Waste App be updated to be able to support these changes? in particular in Search function to know what item goes where?
 - Yes. The City will be expanding all of its information to include these materials.

Other Questions

- **Question:** The decision is made by Peterborough Council and OSM Council?
 - This will be for the City of Peterborough to approve.
- **Question:** What percentage of blue box material collected finds a buyer and gets recycled?
 - The City acknowledged recent media reports about and the general public concern over where the collected material goes. In Peterborough, the City receives revenue for the material that gets recycled. About 85% to 90% of the material collected through the City's recycling program gets recycled. Much of the material that is collected but not recycled is material that is either contaminated, material that should not have been placed in the blue box, or is otherwise not recyclable.

In addition to the above comments, three participants noted their dissatisfaction with the meeting format, in particular the lack of a public chat function and no discussion on the topics of the organics facility site and energy-from-waste (as noted previously, participants were advised that questions regarding the organics facility site and energy-from-waste would not be addressed within the meeting, and they have instead been forwarded onto City staff).

4.3. Commenting Period

The public was invited to provide comments by June 30, 2022. A summary of the comments received will be included in a future iteration of this report.

5. Online Questionnaire

A questionnaire in the format of a feedback form was posted on the project website to collect input on the WMMP Update process. The questionnaire is scheduled to run until June 30, 2022. Results of the questionnaire will be provided in a separate report.

6. Conclusion

Engagement of stakeholders continues to be a key component of this project. The attendance at this second public and the variety of questions and comments indicates that there is an active interest in the management of Peterborough's solid waste. The public will continue to be engaged throughout this process via the project website and the current online survey. Public feedback will be reviewed and considered by the City and its consulting team when finalizing the recommendations for the WMMP Update.

Appendix A: Presentation Slides



Virtual Public Meeting #2: **Waste Management Master Plan Update**

Tuesday, May 17, 2022
7:00 p.m.



Welcome & Introductions



John Smith, Project Lead, exp

Jean-Louis Gaudet, Technical Analyst, exp

Sherry Arcaro, Technical Expert, reMM

Mike Birett, Technical Expert, Birett & Associates

Alyssa Broadfoot, Communications Specialist

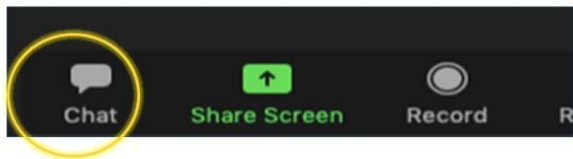
Dave Douglas, Manager - Waste Diversion Section,
City of Peterborough



How to Participate

During the meeting

- Poll questions
- Chat box



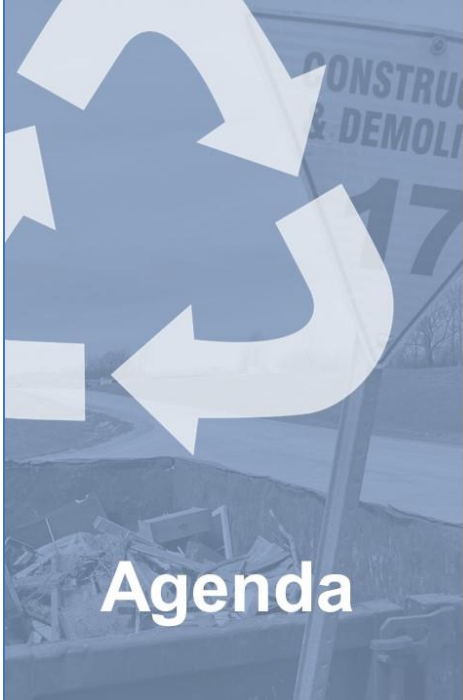
After the meeting

- Find the slides and recording at connectptbo.ca/wasteplan2022
- Send feedback by June 30, 2022
 - **Feedback form:** connectptbo.ca/wasteplan2022
 - **Email:** wasteplan2022@peterborough.ca
 - **Voicemail:** 705-742-7777 ext. 1724

Poll #1

Did you attend PIC #1?

- ☐ Yes
- ☐ No
- ☐ No, but I reviewed the slides online



Agenda

Project Overview & Update

Recommendations & Rationale

Timing and Next Steps

Questions

Project Overview

- Modernize the City's 2012 Waste Management Master Plan (WMMP)
- Ensure WMMP meets City's evolving waste management needs
- Continue to adopt proven best practices in waste management
- Ensure City remains a leader in Municipal Solid Waste Management



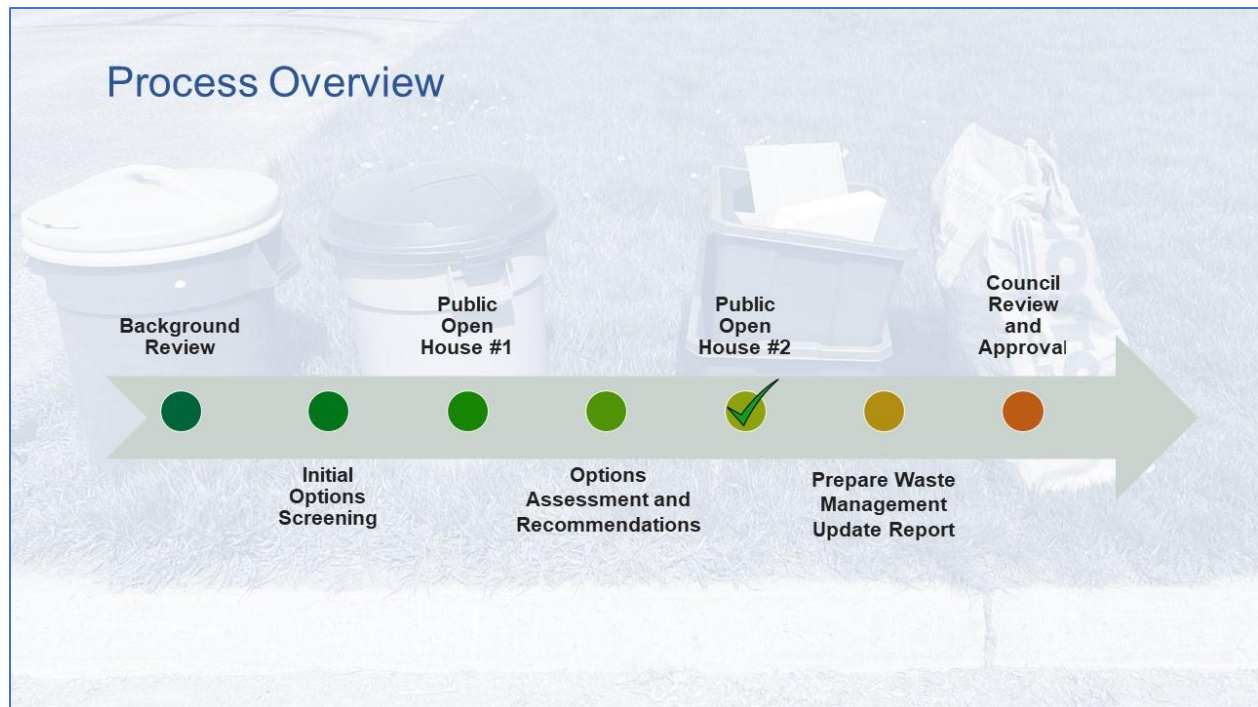
Maximize
diversion



Minimize
generation



Maintain
fiscal responsibility



Stakeholder Feedback so Far...

- GROW Peterborough Initiative
 - What's in & what's out?
- Clear, effective communication is important
 - How to do it
 - Results
- Consider accessibility in program planning
 - Bin design
 - Visibility of clear bags
- Increase diversion from construction sector



GROW = Green Resources Organics Works



Stakeholder Feedback so Far...

- Most agree goals are consistent with 2012 WMMP
- Highest ranked diversion policies:
 - Kitchen/food waste collection (GROW)
 - More opportunities for reuse drop-off
 - Buy products with less packaging
- Every-Other-Week (EOW) garbage collection:
59% respondents in favour
- Key comments about Clear Bags:
 - Use of privacy bags
 - Price of clear bags
 - Retail availability



Project Overview & Update

Recommendations & Rationale

Timing and Next Steps

Questions

Diversion in 2021



Diversion rate based on City's submitted 2021 Waste Diversion Datacall.

Diversion in 2021



Diversion rate based on City's submitted 2021 Waste Diversion Datacall.

Diversion Potential

Curbside and multi-residential garbage only: 13,918 tonnes
(~39% of entire waste stream)



Waste composition data based on four-season waste audit for curbside waste and apartment buildings in the City of Peterborough

Divertible Waste:

- 41% - Kitchen/Food Waste (organics)
- 10% - Blue Box Materials
- 5% - Other Divertible Material (Textiles, Construction and Demolition, Leaf and Yard Waste, Electronics)

Remaining Waste:

- 27% - Other Waste
- 11% - Pet Waste
- 6% - Diapers & Sanitary Products

Other waste = misc. waste materials, such as wooden fruit basket, vacuum bags, wax candles, furnace filters, etc.

Diversion Potential

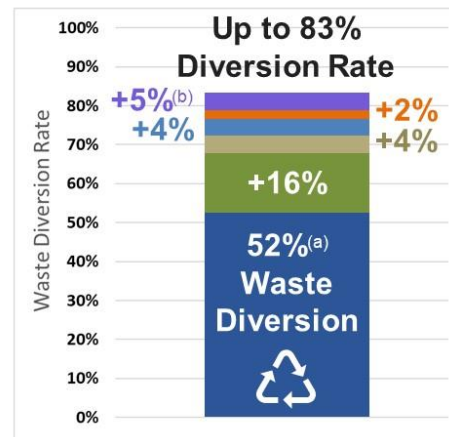
Curbside and multi-residential garbage only: 13,918 tonnes
(~39% of entire waste stream)



Notes:

(a): Based on Submitted 2021 Waste Diversion Datacall.

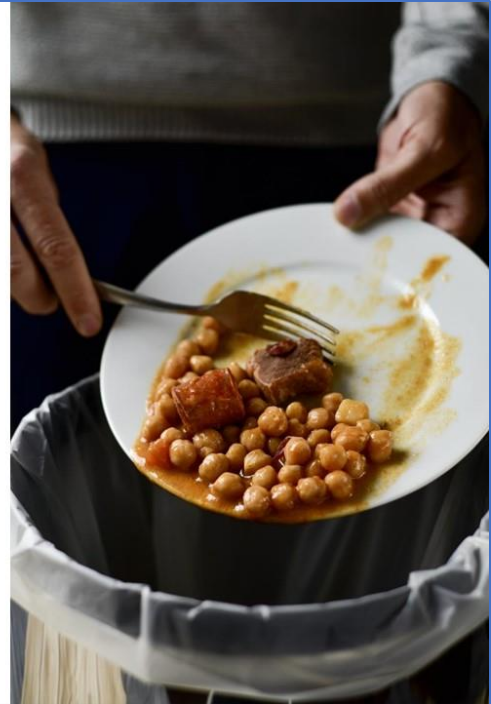
(b): Up to +5% diversion through future partnerships and other diversion opportunities



Maximizing diversion: **Source Separated Organics**

- **Action:** implement organics collection program
- Already underway (GROW Peterborough)
– launch planned for November 2023
- Common in Ontario municipalities
- Best practice to increase waste diversion
- Peterborough's best opportunity for additional diversion (+15-20%)

<https://www.peterborough.ca/en/city-hall/organic-waste-collection-and-processing.aspx>



Poll #2

Should the GROW Peterborough program include pet waste?

- ☐ Yes
- ☐ No
- ☐ Don't care either way



Maximizing diversion:

Clear Bags for Garbage

- **Proposed Update:** Require clear bags for garbage collection

Advantages

- Increases worker safety, allows visibility of sharp items in garbage
- Demonstrated to increase diversion of other programs
- No significant municipal capital costs or costs to residents



Maximizing diversion:

Clear Bags for Garbage

Implementation

- To occur with implementation of weekly organics and every-other-week (EOW) garbage collection
- Will include option for privacy bag
- Will include transition period
 - Promotion and education about change
 - Allow use of stockpiled black garbage bags
- City, suppliers to engage retailers

Maximizing diversion: **Efficient collection frequencies**

• **Proposed Update:**

- Weekly – recycling & **organics**
- Weekly Apr-Nov – yard waste
- **Every Other Week** – garbage

Advantages

- Municipal best practice that encourages waste diversion (Commonly used across Ontario)
- Increased collection cost efficiency
- 68% of regular household waste to be collected weekly



Photo credit: Dufferin County

Maximizing diversion: **Efficient collection frequencies**

Implementation

- Every-other-week garbage collection to occur with implementation of weekly organics & clear bags
- Promotion and education in advance about program changes and timelines



Photo credit: Dufferin County

Maximizing diversion:

Exploration of Additional Diversion Opportunities

- Ongoing monitoring for new recycling and waste diversion opportunities
- Explore innovations and partnerships for remaining parts of waste stream
- Continuous evaluation and improvement



Maximizing diversion:

Support other waste diversion & reuse

- Continue to support Industry take-back & recycling programs
 - Electronic waste
 - Small appliances
 - Household hazardous waste
 - Batteries
 - Sharps & pharmaceuticals
- Support local reuse efforts
 - Textile recycling
 - Local thrift & second-hand stores
 - Gather data to measure diversion



Recommended System



Single-Family & Multi-Residential Households

<p>Weekly Blue Box</p>	<p>Weekly Organics (GROW)</p>	<p>EOW Garbage (Clear Bag)</p>	<p>Seasonal Green Waste</p>	<p>Backyard Composting/Grasscycling</p>	<p>Depot/Drop-off</p>	<p>Take-Back</p>
<p>Bulky Waste (scheduled collections)</p>						



Project Overview & Update
Recommendations & Rationale
Timing and Next Steps
Questions

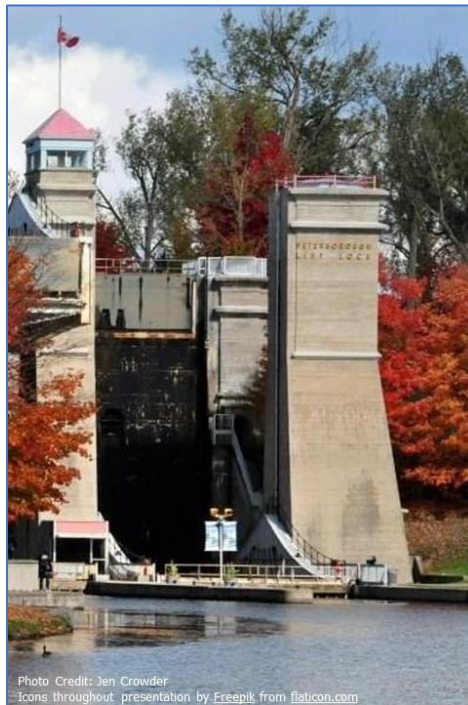
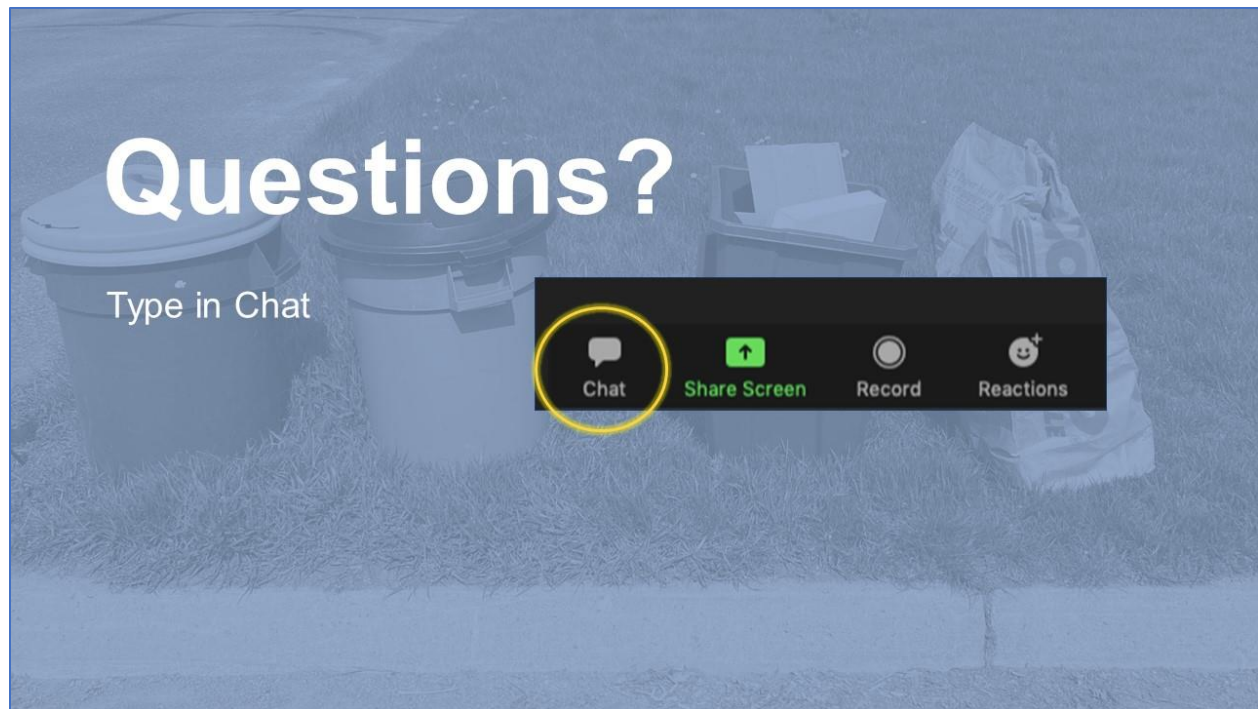
Anticipated Timing



Next Steps

- Collect feedback by June 30, 2022
- Prepare Waste Management Master Plan Update Report
- Council endorsement
- Implementation





Thank you!

- Find the slides and recording at connectptbo.ca/wasteplan2022
- Send feedback by June 30, 2022
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