



Solid Waste Management Strategy: System Review and Solid Waste Management Options Recommendations

City of Clarence Rockland

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Executive Summary

Introduction

The City of Clarence-Rockland (the Municipality) has prepared an update to the City's 2015 Solid Waste Management Strategy (SWMS). The purpose of this SWMS update was to complete a thorough evaluation of the Municipality's current existing waste management services, explore new and innovative ways to support the community's waste management needs, and develop an updated plan for promoting sustainable waste management practices, reducing waste generation, and increasing waste diversion.

This report presents the updated SWMS for the Municipality. It contains a snapshot of the Municipality's current waste management system, its performance, and the recommended options for updating the Municipality's solid waste management system.

About Clarence Rockland

The City of Clarence-Rockland is located in south-eastern Ontario, within the United Counties of Prescott and Russell. The City is comprised of seven smaller towns and villages that include Bourget, Cheney, Clarence Point, Clarence Creek, Hammond, Rockland and Saint-Pascal-Baylon. The City was formed In January 1998 when the Town of Rockland amalgamated with Clarence Township. The City is predominately rural, with Rockland being the main urban area.

The City has an estimated population of about 26,505 (in 2021), and it provides waste collection services and diversion programs to approximately 10,316 total households. This includes 7,525 single family homes and 1,972 multi-residential family units. It also provides garbage bin collection services for 312 small commercial establishments and 88 large businesses.

Existing Solid Waste Management System

Key waste management services provided by the City to residents include:

- **Curbside Garbage Collection:** Weekly residential collection with a maximum of three containers per household, plus additional bags with a purchased bag tags. In 2024, the City collected 7,122 tonnes of waste were collected, including residential and IC&I garbage and bulky waste.
- **Curbside Recycling:** Transitioned to Circular Materials Ontario (CMO) in July 2023. In 2023, 1,782 tonnes of Blue Box materials were collected (data for 2024 is not available).
- **Deposit-Refund Program:** Ontario's Deposit-Refund program recycles about 602 tonnes of beverage containers from Clarence-Rockland annually.
- **Yard Waste and Chipped Wood:** Seasonal curbside collection started in 2023, with 1,306 tonnes managed in 2024. This included 875 tonnes of wood chipped, of which 275 tonnes were sent for agricultural reuse.
- **On-site Waste Diversion (Organics):** An estimated 592 tonnes of organics diverted through backyard composting and grasscycling in 2024, including food waste and yard waste.
- **Commercial Waste Collection:** About 1,058 tonnes collected in 2024, primarily from health care, restaurants, apartments, and retail.
- **Landfill Disposal:** The City owns and operates its own landfill site, used for the disposal of solid waste managed by the City. Residents are also able to drop off other wastes for diversion or disposal, such as household hazardous waste, household construction and demolition waste, scrap metal, tires, electronics, mattresses and textiles.

Waste Composition and Opportunities for Diversion

In 2024, Clarence-Rockland generated an estimated 19,118 tonnes of solid waste, of which 28.8% was diverted from disposal. About 33% of the waste generated was curbside residential solid waste (e.g, garbage, blue box), followed by garbage dropped off at the landfill (28%), commercial waste (13%), yard waste (13%), construction and demolition waste (6%), and various other wastes (7%), such as electronics, mattresses and tires.

The composition of residential curbside garbage was determined to identify key opportunities for residential waste diversion. The composition analysis found that more than half (52%) of the material going into curbside residential garbage is household organics (such as food waste and paper tissue and paper towels). Blue Box recyclables make up another 14%, followed by textiles (3%). Based on the composition analysis, the materials providing the greatest opportunity for diverting solid waste from landfill include:

- Source-separated organics (SSO): 2,382 tonnes per year.
- Blue Box materials: 621 tonnes per year.
- Textiles: 122 tonnes per year.
- Scrap metal: 42 tonnes per year.

These materials represent significant potential for increasing the City’s waste diversion rate.

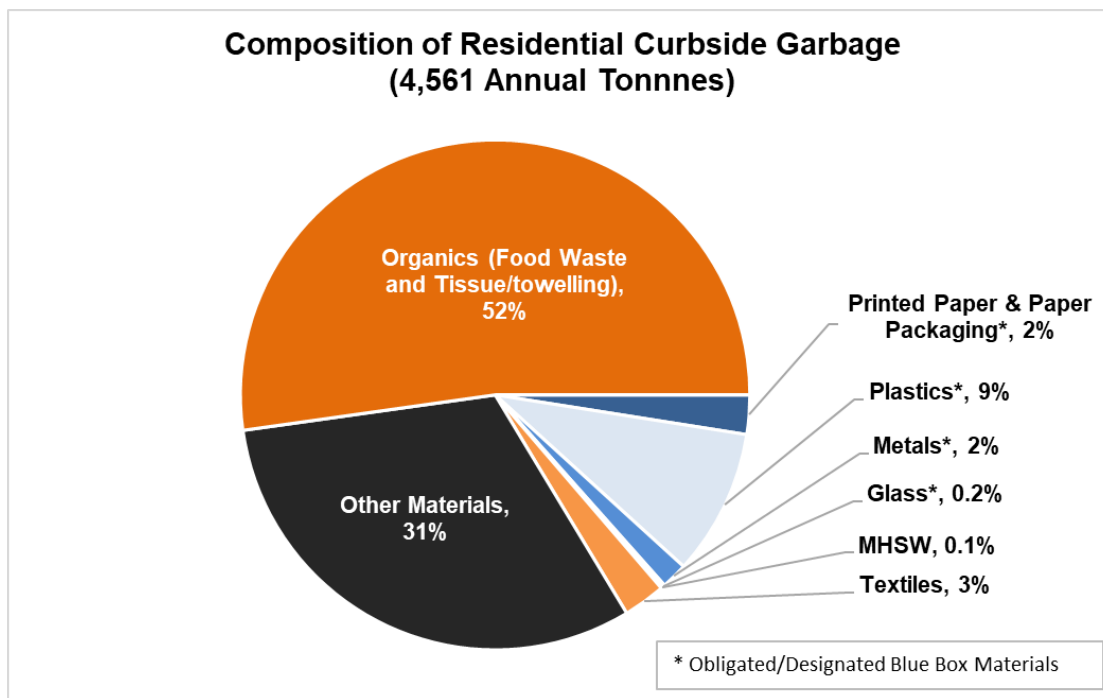


Figure ES-1: Typical Composition of Curbside Residential Garbage

Recommended Solid Waste Management System Updates

The recommended updates for the SWMS were selected based on a review and evaluation of various options for solid waste management. An initial long list of options was prepared and screened based on diversion potential, cost efficiency, implementation cost, and innovation/reliability. The resulting short list was then further reviewed and evaluated to identify the recommended updates. The table below

presents a summary of the recommendations, including if they are to be implemented in the short term (i.e., the next five years), the mid-term (in five to ten years), or in the long term (after ten years).

Table ES-1: Summary of Solid Waste Management Strategy Recommendations

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
WASTE REDUCTION AND REUSE				
Promote on-site management of organics	<ol style="list-style-type: none"> 1. Reintroduce the sale of subsidized backyard composters and associated products, including compost aerators and digesters. 2. Include promotion and education of backyard composting within the City's Waste Diversion Promotion and Education Strategy. 	✓		
Supporting Waste Minimization and Diversion at Special Events	<ol style="list-style-type: none"> 3. Work with the City's facility managers to develop and implement a protocol to be used in helping event organizers at City facilities incorporate waste minimization into their planning. This would include: <ol style="list-style-type: none"> a. Identify an existing Zero Waste Event (or similar) planning guide suitable for use in Clarence-Rockland to include in the protocol. b. Develop (or identify) a directory of providers that provide goods and services suitable for Zero Waste Events at City facilities. This effort could potentially be undertaken by a non-governmental organization in the Ottawa or eastern-Ontario area. 4. Incorporate these items into a Waste Management Promotion and Education Strategy. 	✓		
Support Community Reduce and Reuse Programs	<ol style="list-style-type: none"> 5. Promote Community Reduce and Reuse Programs through the City's solid waste communications. This could include a searchable directory of programs and drop-off locations. 	✓		
Curbside Give Away Weekends	<ol style="list-style-type: none"> 6. Continue and expand the Curbside Give-away event. 	✓		
RECYCLING				
Increase the number of waste diversion special events	<ol style="list-style-type: none"> 7. In lieu of holding waste diversion special events, promote the use of existing retail and depot drop-off locations. 	✓		
Add additional materials to the municipal recycling program	<ol style="list-style-type: none"> 8. Continue to be open to opportunities for diverting additional materials from disposal. Assess the opportunities based on their logistical and economical sustainability and diversion potential. 9. Once sufficient time has passed with management of the Blue Box program under management by Circular Materials and an organics diversion program is in place, actively pursue new opportunities and innovations for waste diversion. 		✓	

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
Textile recycling	10. Actively promote community textile reuse and recycling programs through the City's solid waste communications. This could include a searchable directory of programs and drop-off locations.	✓		
	11. Undertake a pilot program for the curbside collection of textiles, based on the experiences of the pilot in the Kawartha Lakes.		✓	
Curbside battery recycling	12. Include curbside battery collection as an option within the next solid waste collection tender.	✓		
ORGANICS MANAGEMENT				
Introduce household (food and kitchen waste) organics collection and composting	13. Initiate the planning process for curbside SSO collection in the first 5-year timeframe.	✓		
	14. Implementation of the program in the subsequent 5-year timeframe		✓	
Conduct further pilot testing of foodcycler-style home composting appliances.	15. Run a focused pilot using Foodcycler-style appliances within a measurable area, with support from a provider of the appliance or other funding source.	✓		
Develop and Implement a Food Waste Reduction Strategy	16. Continue to follow the food-waste reduction programs underway in Ontario.		✓	
	17. As necessary, incorporate messaging into the on-going promotion and education.			
	18. Develop a strategy in the mid-term to coincide with organics roll-out.			
WASTE COLLECTION/RECEIVING				
Assess garbage collection frequency (also includes assessment of collection using carts, Radio-frequency Identification (RFID) Technology on Waste Collection Containers, and Zero or low emissions solid waste fleet)	19. Assess every-other-week (EOW) garbage collection as well as use of carts and fleet considerations in greater detail as part of the implementation of the SSO program development.		✓	
	20. Either implement in concert with an SSO program or incorporate as required into a future solid waste collection contract.			
PROMOTION AND EDUCATION				
Solid Waste Management Promotion and Education Strategy (includes branding for the Solid Waste Management Section / Program, Enhance Social Media Presence and use of Apps, and Promote "Green" purchasing and Green Procurement)	21. Develop and implement a comprehensive Solid Waste Management Promotion and Education Strategy.	✓		

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
Encourage extended producer responsibility	22. Continue to monitor and participate in product stewardship and EPR activities. 23. Monitor for potential gaps in how stewardship waste diversion programs are promoted in Clarence-Rockland and address through the City's communications initiatives.	✓		
Conduct periodic multi-season waste audits	24. Undertake sorted waste audits every two to four years. 25. Undertake visual waste audits as required for issue areas.	✓		
MUNICIPAL POLICY				
Introduce maximum bag limits	26. Introduce a maximum bag limit for how many bags or containers of waste can be set out for collection.	✓		
Increase Cost of Bag Tags	27. Monitor need for bag tag cost increases annually with operational and capital budget reviews. 28. Obtain curbside set-out data assessing the number of households that set out 1, 2, 3, and 4 or more bags/containers of garbage. 29. Decrease the limit of garbage bags allowed for set out without a bag tag, from three bags to two. 30. Annually review the suitability of the garbage tag fee in conjunction with a review of the number households setting out 1, 2, 3 and 4 or more garbage bags out for collection per week.	✓		
Transition to full user pay	31. Undertake feasibility assessment for full user pay for garbage collection. Assessment should consider: <ul style="list-style-type: none"> • Implementation timing with garbage collection contract and curbside organics collection. • Fee structures for cost recovery. • Recommendations for implementation. 32. Depending on results from feasibility assessment, prepare implementation plan for transition to full user pay.		✓	

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
Enforcement of Waste Collection By-Law	33. Monitor waste collection bylaw semi-annually to ensure bylaw clauses align with desired waste management practices and provincial legislation. 34. Update the Waste Collection By-Law to ensure it accurately describes how solid waste should be segregated and set out for collection. The update should ensure there are adequate provisions and penalties to allow for the bylaw's enforcement. 35. Supply bylaw enforcement staff with guidelines to encourage diversion. Provide municipal staff with the legal means to enforce desired behaviours (e.g., source separation) and curtail undesired behaviours (e.g., scavenging). 36. Review and coordinate solid waste related-fee schedules.	✓		
Clear garbage bags	37. Initiate the transition of the City's garbage collection program to require use of clear garbage bags. Prepare an implementation plan that considers: <ul style="list-style-type: none"> • Preferred timing of the transition to clear bags, in consideration of other changes to the City's solid waste management system (e.g., implementation of weekly organics collection and EOW garbage collection). • Use of a transition period that allows for promotion and education about the change and allows residents to use up stockpiled black garbage bags. • Engagement of retailers and bag suppliers. 	✓		
Reduction Strategies and Bans for Single-use Items	38. Develop a strategy to eliminate or reduce single-use plastics. 39. Ensure the Solid Waste Management Promotion and Education Strategy supports activities and initiatives related to reduction strategies and bans for single-use items.	✓		
Update waste performance metrics	40. Identify a suite of key performance indicators (KPIs) for evaluating the City's solid waste management program. 41. Incorporate the KPI into the City's waste management evaluation and reporting.	✓		
IC&I				
Reduction in Provision of Waste Collection Services to IC&I sector	42. Extract the City from providing solid waste collection services to IC&I sector clients. As feasible, assist the clients with transitioning to alternative private sector service providers.	✓		

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
Establish a system for Construction and Demolition (C&D) recycling	43. Develop a strategy for C&D recycling. Elements of the strategy could include: <ul style="list-style-type: none"> • Partnering with or promoting of private sector facilities. • Establishment of a specialized depot to receive, sort and process C&D waste for diversion. • Policy instruments to encourage C&D recycling. • Implementation of C&D waste diversion best practices. • Disposal bans for C&D waste at the City’s landfill, or discouragement of their disposal at the City’s landfill through increased tip fees. 		✓	
Other opportunities				
Explore multi-municipal partnerships for waste management services	44. Continue exploring multi-municipal partnerships for the collection and processing of waste, as well as other aspects of managing solid waste in Clarence-Rockland.	✓		
DISPOSAL				
Future Expansion of Landfill Site	45. Review options for purchasing land adjacent to the landfill boundaries.	✓		
	46. Review the need for and suitability of landfill expansion in subsequent SWMS updates.			✓
Export garbage to a different landfill	47. Review the need for and suitability of waste export for disposal in subsequent SWMS updates.			✓

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1 Introduction

The City of Clarence-Rockland (the Municipality) has prepared an update to the City's 2015 Solid Waste Management Strategy (SWMS). The purpose of this SWMS update was to complete a thorough evaluation of the Municipality's current existing waste management services, explore new and innovative ways to support the community's waste management needs, and develop an updated plan for promoting sustainable waste management practices, reducing waste generation, and increasing waste diversion.

This report presents the updated SWMS for the Municipality. It contains a snapshot of the Municipality's current waste management system, its performance, and the recommended options for updating the Municipality's solid waste management system.

2 About Clarence Rockland

The City of Clarence-Rockland is located in south-eastern Ontario, approximately 30km east of the City of Ottawa. Located in the United Counties of Prescott and Russell, the City is comprised of seven smaller towns and villages that include: Bourget, Cheney, Clarence Point, Clarence Creek, Hammond, Rockland and Saint-Pascal-Baylon. The City was formed In January 1998 when the Town of Rockland amalgamated with Clarence Township. The City is predominately rural, with Rockland being the main urban area.

Through its Operations Department, the City is responsible for providing waste services to all residents and to some industrial, commercial and institutional (IC&I) establishments.

In 2021, the City had an estimated population of 26,505 and waste collection services and diversion programs were provided to approximately 10,316 total households, which included 7,525 single family homes and 1,972 multi-residential family units¹. In addition to this, the City provides garbage bin collection services for 312 small commercial establishments and 88 large businesses. The City only provides this service if they have a private recycling contract (with the large businesses being required to provide confirmation of their recycling contracts). The City provides the following services and facilities using private contractors and municipal services:

- Weekly collection of residential waste at curbside and from apartment dumpsters;
- Curbside collection for leaf and yard waste (April to November) and drop-off at the landfill site;
- Scrap metal depot drop-off (at landfill site);
- Scrap tire depot drop-off (at landfill site) ;
- Curbside Christmas Tree collection;
- Monthly bulky goods curbside collection;
- Waste Electrical and Electronic Equipment (WEEE) depot drop-off (at landfill site);
- Drop-off of construction and demolition (C&D) waste at the landfill site (where some is diverted for reuse by landfill site staff);
- Municipal Hazardous Special Waste (MHSW) depot drop-off (at landfill site);
- Mattress and textile drop off;
- Fall Clean-up event; and
- Fall Give Away Weekend.

The City also operates a landfill site in the community of Bourget.

¹ Statistics Canada

The City’s most recent Solid Waste Management Strategy was prepared in 2015. That strategy identified a number of initiatives to improve the overall performance of the City’s solid waste management system, increase the proportion of waste diverted from disposal, reduce the total amount of waste being disposed at the landfill site, and – in doing so - maximize the current landfill site’s useful lifespan. Since then, the Municipality has implemented most of the strategy’s recommendations. A summary of these and their status are presented in Table 1.

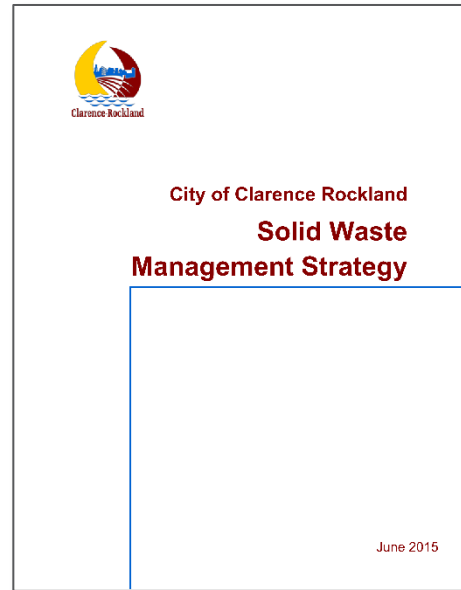


Table 1: Status of 2015 Solid Waste Management Strategy Recommendations

2015 Recommendation	Current Status
<p>Automated Waste Collection Conduct a business case analysis, maintain on-going dialogue with neighbouring municipalities regarding multi-municipal waste management services</p>	<p>Included in the last tendering process as an option, but was not selected</p>
<p>Ban Designated Materials from Landfill Add Blue Box materials, screen loads at landfill</p>	<p>Waste Management by-law include list of banned materials, including prohibited from collection as garbage or from disposal at landfill</p>
<p>Establish a Scale House at the Landfill Site and Update Landfill Tipping Fees</p>	<p>Scale house constructed and is in use</p>
<p>Design and Implement a Solid Waste Management Promotion and Education Strategy</p>	<p>City’s Solid Waste Management Promotion and Education program continues to evolve and integrate new methods as they become available</p>
<p>Updating the Bag Limits / Bag Tag Policy</p>	<p>Bag limit has not been decreased from three items</p>
<p>User Pay/Bag Limits for Business Sector Clients</p>	<p>Bag limit remains 10 bags/week.</p>

2015 Recommendation	Current Status
<p>Multi-Municipal Partnerships for Collection and Processing of Materials</p> <p>Ongoing collaboration with neighbouring municipalities about opportunities for multi-municipal partnerships for solid waste management services</p>	<p>Opportunities continue to be explored</p>
<p>On-site Management of Organics</p> <p>Develop a Backyard Composting Program</p>	<p>Backyard Composting Program has not been included</p> <p>Exploring opportunities with FoodCycler appliances for in-home organics management</p>
<p>Source Separated Organics (SSO) and Leaf and Yard waste</p> <p>Conduct a feasibility assessment for an SSO program</p>	<p>SSO program assessment not completed</p> <p>Leaf and yard waste curbside collection in place since fall of 2023 (April to November)</p>

3 Existing Solid Waste Management System

3.1 Curbside Garbage (Residential)

The City's waste collection contractor collects curbside garbage from households once per week. There is a maximum 3-container set out limit, but additional containers can be set out for collection with a purchased bag tag. Monthly bulky waste collection is available for items greater than 50 pounds, with the purchase of a \$20 bulky item tag.

The City collected 7,122 tonnes of waste in 2024, which included:

- 6,063 tonnes of curbside residential (including small ICI with 10 bags) garbage;
- 1,058 tonnes of IC&I garbage (including multi-residential with bins); and
- 1.65 tonnes of curbside bulky waste (note: this weight reflects only metal items, as all other items were in the curbside residential truck).

3.2 Curbside Recycling

Management of the City's Curbside Blue Box Recycling program was transitioned to Circular Materials Ontario (CMO) in July 2023. As such, data for 2024 is not available. The City reports that 1,782 tonnes of residential Blue Box material were collected for recycling in 2023. This included 985 tonnes of mixed fibres (i.e., printed paper and paper packaging) and 798 tonnes of glass, metal and plastics (GMP).

3.3 Deposit-Refund

Ontario's Deposit-Refund program allows Ontarians to return their deposit-refund beverage containers to Beer Store locations for a refund. While data is not available specifically for Clarence-Rockland, the amount of metal, glass and plastic beverage containers returned for recycling in the City is 602 tonnes (based on average per household returns).

3.4 Yard Waste and Chipped Wood

The City started providing seasonal curbside leaf and yard waste collection in September 2023. The service is provided annually from April to November. Residents are also able to drop off their yard waste at the landfill site. The City managed 1,306 tonnes of yard waste in 2024, including 1,210 tonnes collected curbside and 96 tonnes collected at the landfill site.

In addition, the City chipped about 875 tonnes of wood, including branches, which 275 tonnes were then sent for agricultural reuse.

3.5 On-site Waste Diversion

Backyard composting and grasscycling are valuable on-site activities that help divert organics from disposal in landfills. While measured data is not available, estimates have been prepared based on average per household diversion for Group 7 municipalities in the 2022 RPRM Municipal Datacall. An estimated 592 tonnes of organics were diverted from disposal in 2024 in Clarence-Rockland. For the purposes of this study, about half of this (296 tonnes) is assumed to be food waste and the other half yard waste.

3.6 Commercial Waste Collection (Bins)

The City provides solid waste collection services to a variety of commercial and institutional customers². In 2024, the City collected about 1,058 tonnes of waste from these customers, with the greatest amount

² 119 sites in 2023.

of waste coming from health care-related sites (227 tonnes), restaurants (191 tonnes), apartments and condominiums (181 tonnes) and retail/office customers (146 tonnes)³.

Table 2: Commercial Waste Tonnage (2023)

Commercial Category	Garbage Collected in 2024 (tonnes)	Percent of Commercial Waste Collected
Health Care Related	227	21.4%
Restaurant	191	18.1%
Apartment / Condominium	176	16.7%
Retail	146	13.8%
School	120	11.4%
Municipal	70	6.7%
Sports / Recreation	60	5.7%
Light Manufacturing	37	3.5%
Grocery	30	2.8%
Total	1,057	

3.7 Landfill Drop-off Programs

The landfill site is available with scheduled operating hours to residents who wish to drop waste off waste items. Each Clarence-Rockland residence is allowed to dispose, at no cost, a cumulative weight of 140 kg annually. Once the limit is reached, disposal fees will apply. The following table lists the materials accepted at the landfill site, indicates whether fees apply after the 140 kg threshold is reached, and reported tonnage received at the landfill in 2024. Figures 1 through to 3 depict the location of the landfill site in Clarence-Rockland, the scale house and waste diversion drop-off area, and the tip face area.

³ This includes garbage collected in bins and excludes garbage collected using curbside bags.

Table 3: Materials Available for Landfill Drop Off, Fee Applicability, and Annual Tonnage (2024)

Material	Fees Applicable?	2024 Tonnage
Non-hazardous Solid Waste	Yes	5,339
Construction and Demolition Waste	Yes	1,143
Items with refrigerant	Yes	261 units with refrigerant removed
Sand and concrete	Yes	no data
Lumber	Yes	no data
Garden waste & Branches up to 12 inches in diameter	No	96
Household hazardous waste (100 kg limit)	No	52
Blue Box Recyclables	No	no data
Refrigerant free scrap metal	No	159
Propane tanks	No	2.4
Tires	No	42
Textiles	No	6
Electronics	No	20
Mattresses	No	77 ⁴

With respect to mattresses, the City advised that the initial estimated annual demand for mattress recycling would be approximately 300 mattresses per year. Based on the amount of material received in 2023 and 2024, the annual estimated demand for recycling is currently estimated at 1,200 mattresses per year.

⁴ Based on data provided from Recycl-matelas.

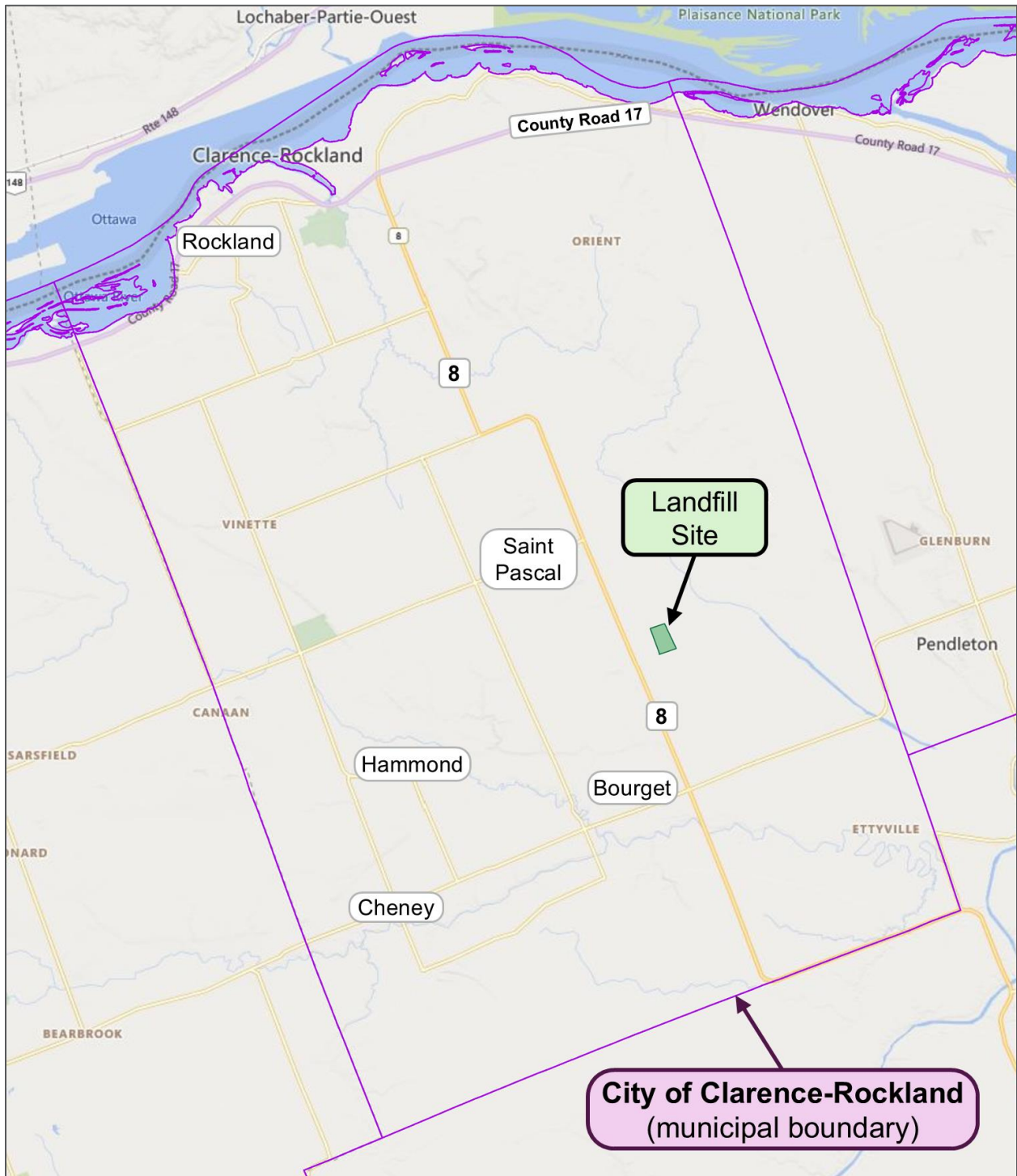


Figure 1: Location of Municipal Landfill



Figure 2: Scale House and Waste Diversion Drop-off Area

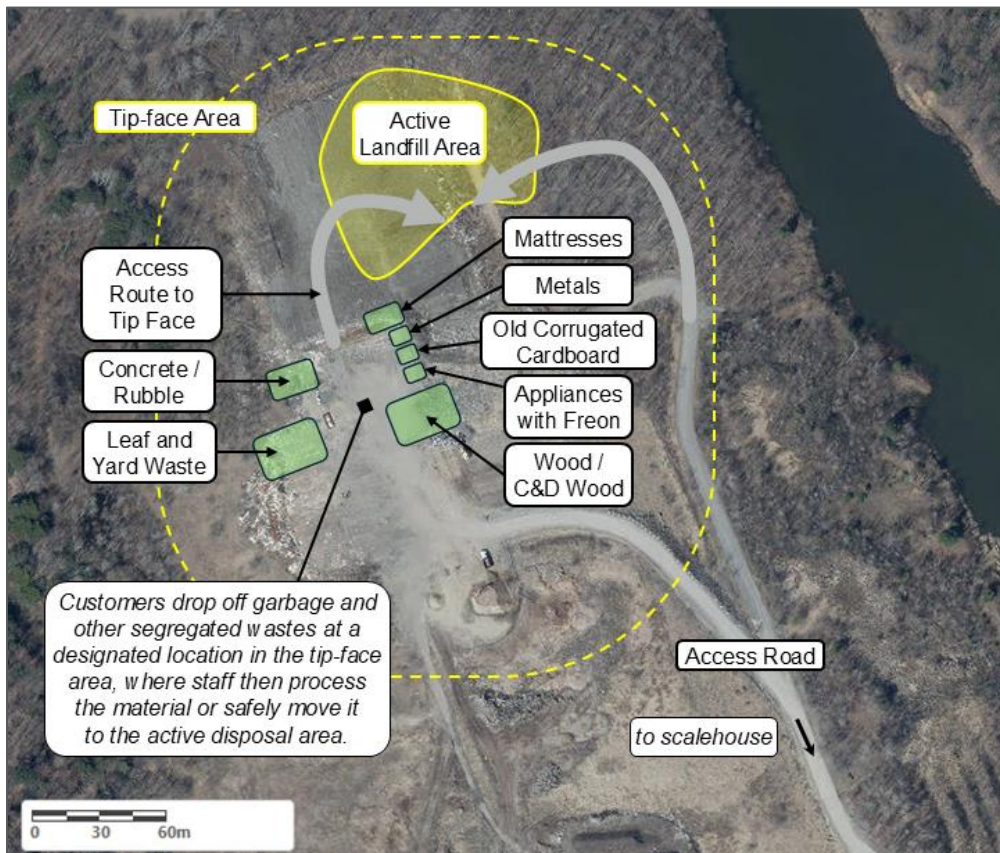


Figure 3: Landfill Tip-Face Area

4 Relevant Municipal Planning and Policies

There are a number of municipal and provincial policies and planning documents that provide relevant guidance for the Municipality’s SWMS. These are reviewed below.

4.1 Clarence Rockland

4.1.1 Official Plans

There are two Official Plans (OP) that are used in governing the City of Clarence-Rockland. These include:

- Official Plan of the United Counties of Prescott and Russell - The County's OP directs the development of all areas of Clarence-Rockland and is the only Official Plan in effect for the rural and agricultural areas of the City, as well as the villages of Clarence Creek, Hammond, Cheney, Bourget, Clarence Point and St-Pascal. The current Official Plan of the United Counties of Prescott and Russell came into effect in July 2023.
- Official Plan of the Urban Area of the City of Clarence-Rockland – This OP directs the future development of Rockland and was adopted in February 2021.

Table 4 identifies the key policies within these OP’s relating to solid waste management in the City of Clarence-Rockland⁵.

Table 4: Key Solid Waste Management Official Plan References

Official Plan of the United Counties of Prescott and Russell (2023)
<ul style="list-style-type: none"> • Section 3.5 Waste Management Policy Area <ul style="list-style-type: none"> – States that the objectives of providing waste management infrastructure services are to ensure waste management uses are environmentally sustainable and to provide appropriate waste management infrastructure that supports ongoing development. – Permits the following uses in Waste Management Policy Areas: 1) Existing municipal or private solid waste disposal sites; 2) Public or private wastewater disposal facilities; 3) Recycling and composting facilities; and 4) Waste transfer stations. – Notes that development within 500 metres (or less, where approved) of existing solid waste management sites will be discouraged unless supported by studies that confirm either the waste site will not have negative impacts on the proposed development nor will the proposed development impact future expansion of the waste disposal site. • Section 7.7.6 Waste Reduction / Adaptive Re-use <ul style="list-style-type: none"> – Section 7.7.6 is a Cultural Heritage policy whereby Council will support the reduction of waste from construction debris as a result of the demolition of buildings by promoting and encouraging the adaptive reuse of older and existing building stock. • Section 8.4.6 Special Policies—City of Clarence-Rockland Transfer Station <ul style="list-style-type: none"> – Notes that the permitted land uses lands for the property described as Part of Lot 17 of Concession 5 in the former Township of Clarence (now in the City of Clarence-Rockland) also

⁵ Note: this is a high-level summary and is not meant to be exhaustive of all policies that may direct or influence the management of solid waste in Clarence-Rockland.

include a waste transfer station for the inter-vehicle transfer of sanitary sewage and the parking of those vehicles.

Official Plan of the Urban Area of the City of Clarence-Rockland (2021)

• Section 4.24 Waste Management and Conservation

- Notes that the City of Clarence-Rockland has a recycling program, and that Council will continue to encourage good waste management practices and initiatives to make better use of resources.

4.1.2 Collection of Waste Management By-law

By-law 2023-36 is the Municipality's Waste Management By-law. Key aspects of the by-law include:

- Definitions of the different types of waste allowed for collection or management within the Municipality's waste management system and acceptable collection containers.
- Container limits for curbside garbage collection (three plastic bags or two 90 litre containers) and a requirement for those that exceed the limit to use a bag tag.
- Description of materials not allowed for curbside collection (including construction/renovation/demolition waste, boulders and concrete, fence and fencing material, electronics, and household hazardous waste, among other things).
- Requirement for all allowable recyclable waste placed for curbside collection to be segregated from garbage (either in a blue box or other acceptable form)⁶.
- Acknowledgment that, as of July 1, 2023, the Blue Box Regulation made under the Resource Recovery and Circular Economy Act, 2016, mandates producers to operate and pay for the collection and reuse, refurbishment and recycling of blue box materials, and that Recyclable Material is not allowed to be set out in any of the waste stream collections provided by the City.
- Waste collection requirements for apartment buildings (i.e., buildings containing 4 or more rental units) and IC&I properties.
- Enforcement provisions.

4.1.3 Waste Disposal Site Management By-law

By-law 2018-48 is the by-law used by the City to regulate the management of the City's Waste Disposal Site. Key aspects of the by-law include:

- Definitions of the different types of waste regulated at the waste disposal site.
- The site's hours of operation.
- Allocation of fee setting to the User Fees and Charges By-law.
- A list of materials prohibited from being deposited at the site, including (but not limited to):
 - Sludge from septic tanks or septic and hauled sewage;
 - Animal carcasses (other than what might typically be in kitchen waste);
 - Pharmaceuticals or dangerous chemical waste;
 - Sharps (i.e., needles);

⁶ The by-law notes that garbage set out for collection will not be collected if more than 10 percent of it is recyclable material .

- Material originating from a material recovery facility (i.e., a MRF), unless authorized by the Director of Operations;
 - Any material under a landfill ban from any level of government to which the jurisdiction of the City of Clarence-Rockland is subject; and
 - Waste generated from outside the boundaries of Clarence-Rockland.
- Enforcement and penalties (including initial fines of up to \$10,000 for a first offense and up to \$25,000 for subsequent offenses for individuals, and up to \$50,000 and \$100,000 for first and subsequent offenses for businesses).

4.2 Provincial Legislation and Policies

Solid waste management in Ontario has, until recently, been regulated primarily through the Province’s Environmental Protection Act (EPA) and Waste Diversion Act (WDA). This focus has shifted in recent years in response to the Province setting aspirational goals of achieving zero waste and zero GHG emission from the waste sector and moving towards a circular economy. These actions have resulted in significant change in the provincial regulatory framework including the introduction and repeal of several pieces of legislation that will have a direct impact on the Municipality’s waste management system.

This section summarizes important new legislation, provincial policy and guidelines that were considered in the development of the Municipality’s new WMMP. The impacts of related Extended Producer Responsibility (EPR) programs and initiatives are also discussed. This action is intended to ensure the SWMS can effectively adapt and respond to future EPR programs and legislative changes.

4.2.1 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 found within those two statutes. The WFOA provides further details on the responsibility of corporations 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.

4.2.2 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 the 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.

4.2.3 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 and is expected to be completed in 2026.

4.2.4 Blue Box Transition

Arguably, the most significant legislative change in recent years 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 triggered the transition of Ontario's Blue Box Program to an Individual Producer Responsibility (IPR) scheme for the management of printed paper and 'packaging-like' products. Under the new system, municipalities will no longer be responsible for the provision of Blue Box recycling services and the current funding system will end when municipalities transition to the new program. Instead, producers became obligated to develop and operate a 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.

In Clarence-Rockland, management of the City's Curbside Blue Box Recycling program transitioned to Circular Materials Ontario (CMO) in July 2023.

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). After the transition of the province's Blue Box program, it will be up to the producers to determine what Blue Box materials are diverted and how.

4.2.5 Food and Organic Waste Framework

Ontario's Food and Organic Waste Framework (the 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 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 4.2 requires the following:

4.2 Municipalities in Southern Ontario that, as of the effective date, do not provide curbside collection of source separated food and organic waste shall provide:

i. Curbside collection of food and organic waste to single-family dwellings in an urban settlement area within a local municipality if 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 square kilometre.

ii. Collection of food and organic waste to single-family dwellings in an urban settlement area within a local municipality if:

a. The population of the local municipality is greater than 50,000 and the population density of the local municipality is less than 300 persons per square kilometre; or

b. The population of the local municipality is greater than 20,000 but equal to or less than 50,000 and the population density of the local municipality is greater than or equal to 100 persons per square kilometre.

As of the 2021 census, the City's population is 26,505, which is less than the population threshold noted Policy 4.2.i or in Policy 4.2.ii.a, but greater than the population threshold noted in Policy 4.2.ii.b. However, the population density of the City is 89 people per square kilometre. While this is slightly lower than the threshold of 100 people per square kilometre, the City will reach this density once it has a population of 29,747. According to the City's 2024 Development Charges Background Study, the estimated population of the City in 2023 was 27,153, with a projected population of 30,435 by 2033. As such, **Policy 4.2 will likely be applicable to the City within the next five years.**

Furthermore, Section 2.1 requires that Municipalities in Southern Ontario that are subject to policy 4.2ii achieve a:

50% waste reduction and resource recovery of food and organic waste generated by single-family dwelling in urban settlement areas by 2025.

The Policy Statement also addresses food and organic waste from multi-unit residential buildings. Specifically, 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.

4.2.6 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.

At the time of this study, no direct action is required of the Municipality beyond the program and service changes already under consideration in the development of the SWMS.

5 Waste Composition

This section provides an overview of what type of solid waste materials are being generated, disposed and diverted in Clarence-Rockland. Section 5.1 focuses on residential garbage and recycling, followed by a profile of the City’s entire solid waste management system in Section 5.2. This is followed by Section 5.3, which summarizes the list of materials that have the greatest potential for increasing the amount of solid waste diverted in Clarence-Rockland.

5.1 Residential Garbage and Blue Box Composition

Garbage

As noted previously, the City collected about 6,063 tonnes of curbside garbage in 2024, which includes both residential garbage as well as from bagged commercial garbage (i.e., the small IC&I generators that set out 10 bags or less of garbage for municipal collection). The amount of garbage generated by the small IC&I customers is about 1,500 tonnes annually, with the remaining 4,563 tonnes of garbage coming from the residential sector. This waste is disposed at the City’s landfill. The composition of this waste was estimated based on a proxy waste composition profile based on waste audit data collected through the CIF/SO Waste Composition Study program. The profile was built using waste audit data from Rural Collection-South municipalities that participated in years 4, 5 and 6 of the program. Data from other municipalities were also used to prepare estimates of household organics and textiles in the City’s waste stream. As the following chart shows, nearly half (52%) of the remaining waste in the garbage stream is estimated to be household organics⁷, such as kitchen waste and tissue and toweling. About 14% is comprised of Blue Box recyclable materials, including printed paper, paper packaging, plastics, metals, and glass.

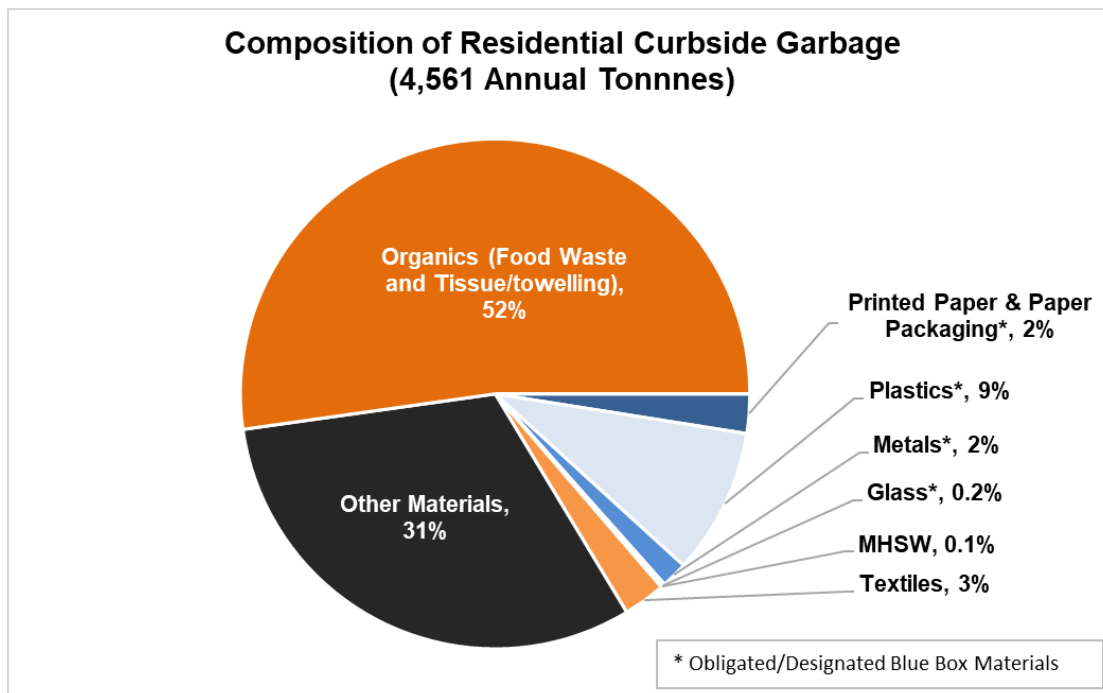


Figure 4: Typical Composition of Curbside Residential Garbage

* Refers to Blue Box materials

⁷ Does not include yard waste.

Curbside Blue Box Recycling

As noted previously, about 1,782 tonnes of residential Blue Box material was collected for recycling in 2023. Based on the available data, this includes:

- 331 tonnes of printed paper;
- 654 tonnes of paper packaging, such as corrugated cardboard, boxboard and polycoat materials;
- 353 tonnes of plastics (including PET, HDPE, plastic film, tubs and lids, polystyrene and mixed plastic);
- 150 tonnes of metal (including steel and aluminum); and
- 294 tonnes of glass (including flint and coloured glass).

5.2 Clarence-Rockland Solid Waste Profile

Based on the City’s available waste management data and waste audit data from the CIF/SO Waste Composition Study program, a profile that describes the amount of solid waste generated in Clarence Rockland (2023) was prepared. This profile is presented in the following table and estimates how much of each material is generated as municipal solid waste in the City. The table also indicates how much of this material is diverted, what the resulting capture rate is (i.e., what percentage of the material is captured for diversion), and how much is therefore available for additional diversion.

Table 5: Municipal Solid Waste Composition Profile for the Municipality of Clarence-Rockland (2023)

Waste Material	Composition (%)	Waste Material Generated (tonnes)	Current Diversion (tonnes)	Capture Rate (%)	Available for Additional Diversion (tonnes)
Blue Box Paper and Paper Packaging	5.7%	1,098	985	90%	114
Blue Box Metals	1.3%	252	176	70%	76
Blue Box Plastics	4.1%	781	359	46%	422
Blue Box Glass	4.6%	874	865	99%	9
WEEE	0.1%	20	20	100%	0
Household Special Waste	0.3%	55	52	94%	3
Household Organics (Food Waste and Tissue/Toweling)	14.0%	2,678	296	11%	2,382
Yard Waste	13.0%	2,477	2,477	100%	0
Textiles	0.7%	128	6	5%	122
Scrap and Other Metal	1.0%	196	154	78%	42
Bulky Item Collection	0.01%	2	-	-	-
Residue in Curbside Garbage (This includes the remaining material in residential curbside garbage)	7.3%	1,396	-	-	-
Tires	0.2%	42	42	100%	0
Propane Tanks	0.0%	2	2	100%	0
Mattresses	0.4%	77	77	100%	0
C&D Waste	6.0%	1,143	-	-	-
Garbage (bagged commercial)	8.9%	1,500	-	-	-
Garbage (binned commercial)	7.4%	1,058	-	-	-
Garbage (landfill drop-off)	27.9%	5,339	-	-	-
Total	100.0%	19,118	5,515	28.8%	3,166

5.3 Diversion Opportunity Summary

In 2024, an estimated 19,118 tonnes of residential and other solid waste was generated in Clarence-Rockland and managed by the City. Of this, about 28.2% was diverted from landfill disposal through City and stewardship programs and on-site residential practices. Key opportunities for increased waste diversion include:

- **Source-separated organics (SSO)** - approximately 2,382 tonnes of residential household organics is available for diversion, as well as any other organics that are generated by (but not quantified here) commercial properties (such as restaurants). Capturing 50% of this residential material would divert about 1,191 tonnes of additional material from disposal annually. Mature municipal SSO programs in Ontario capture between 40% to 65% of residential household organics from households, based on available data from the CIF/SO waste composition program.
- **Blue Box materials** – Approximately 621 tonnes of obligated Blue Box materials are available for diversion from the residential garbage, and likely more from the commercial waste.
- **Textiles** – Clarence-Rockland’s residential garbage includes approximately 122 tonnes of textiles annually.
- **Scrap metal** – Approximately 42 tonnes of scrap metal may be available for diversion annually from residential solid waste.

Other opportunities for diversion likely exist within the City’s commercial waste and garbage dropped off at the landfill, the composition of which has not been assessed.

Options for diverting these and other wastes - as well as options for waste reduction and reuse - are discussed in the following section.

6 Review and Evaluation of Solid Waste Management Options

There were a wide range of options available to Clarence-Rockland for reducing and diverting waste from disposal. The first stage of narrowing these options down were to undertake an initial screening to develop an options short-list. The options were screened based on the following criteria:

- **Diversion Potential / Critical for Supporting Diversion** – this considers what potential the options have for diverting waste from the City’s landfill⁸, if they improve the management of toxic or hazardous wastes, or if they are a policy or other element critical or otherwise very beneficial in supporting waste diversion.
- **Cost Efficiencies/ Savings Potential** – if the option has the potential to improve program efficiencies or otherwise contribute to program cost savings.
- **Implementation Cost** – the relative magnitude of the cost of implementing the option.
- **Approach Innovation and/or Reliability** – whether the approach is innovative or has otherwise been shown to be a reliable or well-established solid waste management option.

Table 6 presents a summary of the screening (see full results in Appendix B). Once the short list was developed, they were reviewed in more detail and recommendations were prepared on if or how they should be implemented in Clarence-Rockland. These recommendations are presented in Section 7.

Table 6: Review of Solid Waste Management Options and Recommendations for Short List Evaluation

No.	Option	Included for Short List Evaluation	Excluded for Short List Evaluation
<i>WASTE REDUCTION AND REUSE</i>			
1.	Promote on-site management of organics	Included	
2.	Supporting Waste Minimization and Diversion at Special Events	Included	
3.	Support Community Reduce and Reuse Programs	Included	
4.	Establish a Lendery Program		Excluded
5.	Curbside Give Away Weekends	Included	
6.	Subsidies, Rebates, Grants for Actions that Avoid, Reduce, or Reuse Waste		Excluded
<i>RECYCLING</i>			
7.	Increase the number of waste diversion special events.	Included	
8.	Add additional materials to the municipal recycling program	Included	
9.	Textile recycling	Included	
10.	Agricultural waste diversion		Excluded
11.	Curbside battery recycling	Included	
<i>ORGANICS MANAGEMENT</i>			
12.	Introduce household (food and kitchen waste) organics collection and composting	Included	
13.	Conduct further pilot testing of foodcycler-style home composting appliances.	Included	

⁸ This includes redirecting waste from the City’s landfill to a private facility for disposal or other management there.

No.	Option	Included for Short List Evaluation	Excluded for Short List Evaluation
14.	Implement a Food Waste Reduction Strategy	Included	
	<i>WASTE COLLECTION/RECEIVING</i>		
15.	Assess garbage collection frequency (every other week collection)	Included	
16.	Assess collection using carts	Included	
17.	RFID Technology on Waste Collection Containers	Included	
18.	Pilot-test Alternative Collection Containers in Public Spaces		Excluded
19.	Zero or Low Emissions Solid Waste Fleet	Included	
	<i>PROMOTION AND EDUCATION</i>		
20.	Conduct targeted/expanded promotion and education	Included	
21.	Develop branding for the Solid Waste Management Section / Program	Included	
22.	Enhance Social Media Presence and use of Apps	Included	
23.	Promote “Green” purchasing and Green Procurement	Included	
24.	Encourage Extended Producer Responsibility	Included	
25.	Toolkit for Waste Diversion in Multi-Residential Buildings		Excluded
26.	Conduct periodic multi-season waste audits	Included	
	<i>MUNICIPAL POLICY</i>		
27.	Introduce / reduce maximum bag limit	Included	
28.	Increase the cost per bag tag	Included	
29.	Shift to full user pay	Included	
30.	Enforcement of Waste Collection By-Law	Included	
31.	Differential tipping fees	Included	
32.	Clear Garbage Bags	Included	
33.	Reduction Strategies and Bans for Single-use Items	Included	
34.	Preparation of Multi-Residential development standards		Excluded
35.	Update Waste Performance Metrics	Included	
36.	Mandatory Waste Diversion in all City Facilities	Included	
	<i>IC&I</i>		
37.	Promotion of waste minimization/diversion in the IC&I sector		Excluded
38.	Further or complete reduction in provision of waste collection services to IC&I sector (or portions of it)	Included	
39.	Establish a system for Construction and Demolition (C&D) recycling	Included	
40.	Divert C&D Materials from Landfill Site either through landfill fees or bans	Included	
41.	Partnership with COIL Zero Waste Economic Transformation Lab		Excluded

No.	Option	Included for Short List Evaluation	Excluded for Short List Evaluation
<i>OTHER OPPORTUNITIES</i>			
42.	Explore multi-municipal partnerships for waste management services	Included	
43.	Assisted Waste Collection Services		Excluded
<i>DISPOSAL/PROCESSING</i>			
44.	Future Expansion of Landfill Site	Included	
45.	Develop a new landfill site		Excluded
46.	Develop an Energy from Waste facility		Excluded
47.	Develop a Mechanical Biological Treatment facility		Excluded
48.	Export garbage to a different landfill	Included	

7 Review of Recommended Solid Waste Management System Updates

The previous section identified a suite of options to be included in the short list of options considered for the City’s Solid Waste Management Strategy. This section includes a discussion on the various options and recommendations on whether or how they should be implemented and suggested steps for implementation. Table 7 provides a summary of the recommendations. A full discussion of the options is provided in Appendix C.

Table 7: Summary of Solid Waste Management Strategy Recommendations

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
WASTE REDUCTION AND REUSE				
Promote on-site management of organics	<ol style="list-style-type: none"> 1. Reintroduce the sale of subsidized backyard composters and associated products, including compost aerators and digesters. 2. Include promotion and education of backyard composting within the City’s Waste Diversion Promotion and Education Strategy. 	✓		
Supporting Waste Minimization and Diversion at Special Events	<ol style="list-style-type: none"> 3. Work with the City’s facility managers to develop and implement a protocol to be used in helping event organizers at City facilities incorporate waste minimization into their planning. This would include: <ol style="list-style-type: none"> a. Identify an existing Zero Waste Event (or similar) planning guide suitable for use in Clarence-Rockland to include in the protocol. b. Develop (or identify) a directory of providers that provide goods and services suitable for Zero Waste Events at City facilities. This effort could potentially be undertaken by a non-governmental organization in the Ottawa or eastern-Ontario area. 4. Incorporate these items into a Waste Management Promotion and Education Strategy. 	✓		
Support Community Reduce and Reuse Programs	<ol style="list-style-type: none"> 5. Promote Community Reduce and Reuse Programs through the City’s solid waste communications. This could include a searchable directory of programs and drop-off locations. 	✓		
Curbside Give Away Weekends	<ol style="list-style-type: none"> 6. Continue and expand the Curbside Give-away event. 	✓		
RECYCLING				
Increase the number of waste diversion special events	<ol style="list-style-type: none"> 7. In lieu of holding waste diversion special events, promote the use of existing retail and depot drop-off locations. 	✓		

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
Add additional materials to the municipal recycling program	<p>8. Continue to be open to opportunities for diverting additional materials from disposal. Assess the opportunities based on their logistical and economical sustainability and diversion potential.</p> <p>9. Once sufficient time has passed with management of the Blue Box program under management by Circular Materials and an organics diversion program is in place, actively pursue new opportunities and innovations for waste diversion.</p>		✓	
Textile recycling	<p>10. Actively promote community textile reuse and recycling programs through the City's solid waste communications. This could include a searchable directory of programs and drop-off locations.</p>	✓		
	<p>11. Undertake a pilot program for the curbside collection of textiles, based on the experiences of the pilot in the Kawartha Lakes.</p>		✓	
Curbside battery recycling	<p>12. Include curbside battery collection as an option within the next solid waste collection tender.</p>	✓		
ORGANICS MANAGEMENT				
Introduce household (food and kitchen waste) organics collection and composting	<p>13. Initiate the planning process for curbside SSO collection in the first 5-year timeframe.</p>	✓		
	<p>14. Implementation of the program in the subsequent 5-year timeframe</p>		✓	
Conduct further pilot testing of foodcycler-style home composting appliances.	<p>15. Run a focused pilot using Foodcycler-style appliances within a measurable area, with support from a provider of the appliance or other funding source.</p>	✓		
Develop and Implement a Food Waste Reduction Strategy	<p>16. Continue to follow the food-waste reduction programs underway in Ontario.</p> <p>17. As necessary, incorporate messaging into the on-going promotion and education.</p> <p>18. Develop a strategy in the mid-term to coincide with organics roll-out.</p>		✓	
WASTE COLLECTION/RECEIVING				
Assess garbage collection frequency (also includes assessment of collection using carts, Radio-frequency Identification (RFID) Technology on Waste Collection Containers, and Zero or low emissions solid waste fleet)	<p>19. Assess every-other-week (EOW) garbage collection as well as use of carts and fleet considerations in greater detail as part of the implementation of the SSO program development.</p> <p>20. Either implement in concert with an SSO program or incorporate as required into a future solid waste collection contract.</p>		✓	

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
PROMOTION AND EDUCATION				
Solid Waste Management Promotion and Education Strategy (includes branding for the Solid Waste Management Section / Program, Enhance Social Media Presence and use of Apps, and Promote “Green” purchasing and Green Procurement)	21. Develop and implement a comprehensive Solid Waste Management Promotion and Education Strategy.	✓		
Encourage extended producer responsibility	22. Continue to monitor and participate in product stewardship and EPR activities. 23. Monitor for potential gaps in how stewardship waste diversion programs are promoted in Clarence-Rockland and address through the City’s communications initiatives.	✓		
Conduct periodic multi-season waste audits	24. Undertake sorted waste audits every two to four years. 25. Undertake visual waste audits as required for issue areas.	✓		
MUNICIPAL POLICY				
Introduce maximum bag limits	26. Introduce a maximum bag limit for how many bags or containers of waste can be set out for collection.	✓		
Increase Cost of Bag Tags	27. Monitor need for bag tag cost increases annually with operational and capital budget reviews. 28. Obtain curbside set-out data assessing the number of households that set out 1, 2, 3, and 4 or more bags/containers of garbage. 29. Decrease the limit of garbage bags allowed for set out without a bag tag, from three bags to two. 30. Annually review the suitability of the garbage tag fee in conjunction with a review of the number households setting out 1, 2, 3 and 4 or more garbage bags out for collection per week.	✓		
Transition to full user pay	31. Undertake feasibility assessment for full user pay for garbage collection. Assessment should consider: <ul style="list-style-type: none"> • Implementation timing with garbage collection contract and curbside organics collection. • Fee structures for cost recovery. • Recommendations for implementation. 32. Depending on results from feasibility assessment, prepare implementation plan for transition to full user pay.		✓	

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
Enforcement of Waste Collection By-Law	33. Monitor waste collection bylaw semi-annually to ensure bylaw clauses align with desired waste management practices and provincial legislation. 34. Update the Waste Collection By-Law to ensure it accurately describes how solid waste should be segregated and set out for collection. The update should ensure there are adequate provisions and penalties to allow for the bylaw's enforcement. 35. Supply bylaw enforcement staff with guidelines to encourage diversion. Provide municipal staff with the legal means to enforce desired behaviours (e.g., source separation) and curtail undesired behaviours (e.g., scavenging). 36. Review and coordinate solid waste related-fee schedules.	✓		
Clear garbage bags	37. Initiate the transition of the City's garbage collection program to require use of clear garbage bags. Prepare an implementation plan that considers: <ul style="list-style-type: none"> • Preferred timing of the transition to clear bags, in consideration of other changes to the City's solid waste management system (e.g., implementation of weekly organics collection and EOW garbage collection). • Use of a transition period that allows for promotion and education about the change and allows residents to use up stockpiled black garbage bags. • Engagement of retailers and bag suppliers. 	✓		
Reduction Strategies and Bans for Single-use Items	38. Develop a strategy to eliminate or reduce single-use plastics. 39. Ensure the Solid Waste Management Promotion and Education Strategy supports activities and initiatives related to reduction strategies and bans for single-use items.	✓		
Update waste performance metrics	40. Identify a suite of key performance indicators (KPIs) for evaluating the City's solid waste management program. 41. Incorporate the KPI into the City's waste management evaluation and reporting.	✓		
IC&I				
Reduction in Provision of Waste Collection Services to IC&I sector	42. Extract the City from providing solid waste collection services to IC&I sector clients. As feasible, assist the clients with transitioning to alternative private sector service providers.	✓		

Option	Recommendations Arising from Option	Short Term 1-5 Year	Mid Term 5-10 Year	Revisit Next SWMS
Establish a system for Construction and Demolition (C&D) recycling	43. Develop a strategy for C&D recycling. Elements of the strategy could include: <ul style="list-style-type: none"> • Partnering with or promoting of private sector facilities. • Establishment of a specialized depot to receive, sort and process C&D waste for diversion. • Policy instruments to encourage C&D recycling. • Implementation of C&D waste diversion best practices. • Disposal bans for C&D waste at the City’s landfill, or discouragement of their disposal at the City’s landfill through increased tip fees. 		✓	
OTHER OPPORTUNITIES				
Explore multi-municipal partnerships for waste management services	44. Continue exploring multi-municipal partnerships for the collection and processing of waste, as well as other aspects of managing solid waste in Clarence-Rockland.	✓		
DISPOSAL				
Future Expansion of Landfill Site	45. Review options for purchasing land adjacent to the landfill boundaries.	✓		
	46. Review the need for and suitability of landfill expansion in subsequent SWMS updates.			✓
Export garbage to a different landfill	47. Review the need for and suitability of waste export for disposal in subsequent SWMS updates.			✓

7.1 Waste Reduction and Reuse

7.1.1 Promote on-site management of organics

Recommendations	Planning Horizon
<ol style="list-style-type: none"> 1. Reintroduce the sale of subsidized backyard composters and associated products, including compost aerators and digesters. 2. Include promotion and education of backyard composting within the City’s Waste Diversion Promotion and Education Strategy. 	Short-term 1-5 YR

Centralized organics programs such as the composting of household source separated organics (SSO) and leaf and yard waste yard waste organics can divert significant amounts of solid waste from disposal and provide environmental benefits. Another staple approach in Ontario for diverting organics is backyard composting (BYC) and grasscycling. These programs have the benefit of diverting organics from landfill without incurring any collection or processing costs.

Backyard composting is, essentially, the composting of home and kitchen organics (such as fruit and vegetable peelings, coffee grinds and eggshells) in a backyard composter (BYC). This is a voluntary activity, and many municipalities try to encourage it through promotion and education, and by offering subsidized or free backyard composters. Various municipalities find that residents still utilize their green bins, as meat and dairy products should not be placed in a BYC for composting due to the potential for odour and pests. While the City has offered backyard composters in the past, it has not in recent years.

Grasscycling is the practice of leaving grass clippings on the lawn so they can decompose and return to the soil. Many municipalities do not accept grass clippings in their yard waste program because they can cause odour issues during the yard waste composting process. Instead, they encourage the practice of grasscycling through promotion and education.

7.1.2 Supporting Waste Minimization and Diversion at Special Events

Recommendations	Planning Horizon
<p>3. Work with the City’s facility managers to develop and implement a protocol to be used in helping event organizers at City facilities incorporate waste minimization into their planning. This would include:</p> <ul style="list-style-type: none"> • Identify an existing Zero Waste Event (or similar) planning guide suitable for use in Clarence-Rockland to include in the protocol. • Develop (or identify) a directory of providers that provide goods and services suitable for Zero Waste Events at City facilities. This effort could potentially be undertaken by a non-governmental organization in the Ottawa or eastern-Ontario area. <p>4. Incorporate these items into a Waste Management Promotion and Education Strategy.</p>	<p>Short-term 1-5 YR</p>

Special events or public events can generate large quantities of various waste. The City can provide tools and resources to help ensure event organizers send as little waste for disposal as possible. Other mechanisms such as permit / facility requirements and graduated waste disposal fees can also be used.

There are a number of “Zero Waste” event guides available that could be used as a resource “off the shelf” with supportive materials from the City. Preparation of a directory of service and product providers could also help event organizers (and the general public) achieve their waste minimization and zero waste goals. A vendor list of pre-approved products could be generated through a request-for-information process by the City.

Promotion and/or development of materials to encourage events shift toward zero waste could be included within the City’s waste diversion promotion and education strategy and budget. The cost of the promotion would depend on its extent.

7.1.3 Support Community Reduce and Reuse Programs

Recommendations	Planning Horizon
<p>5. Promote Community Reduce and Reuse Programs through the City’s solid waste communications. This could include a searchable directory of programs and drop-off locations.</p>	<p>Short-term 1-5 YR</p>

There are a variety of initiatives in various communities that promote waste reduction through the reuse or repair of items. Providing promotional or other support for such programs could help the City prevent the premature disposal of items that may still have use. This type of initiative would also provide other community benefits such as local skill development, goods affordability, and economic development.

Thrift stores and pawn shops are two common types of organizations that facilitate local reuse. Other community groups and non-profit organizations may host events like repair cafes, which bring together owners of broken items and those who can either fix the item and/or teach the owner how to repair it.

7.1.4 Curbside Give Away Weekends

Recommendations	Planning Horizon
<p>6. Continue and expand the Curbside Give-away event.</p>	<p>Short-term 1-5 YR</p>

Curbside Giveaway events are a method municipalities use to encourage the reuse of unwanted goods that still have useful life. Clarence-Rockland could continue and expand the use of this program and incorporate its promotion within a Waste Management Promotion and Education Strategy.

7.2 Recycling

7.2.1 Promotion of Existing Retail and Depot Drop-off Locations the Number of Waste Diversion Special Events

Recommendations	Planning Horizon
7. In lieu of holding waste diversion special events, promote the use of existing retail and depot drop-off locations.	Short-term 1-5 YR

Holding irregular events for the collection of special wastes have been mainstays of municipalities for decades. However, given the abundance of drop-off locations now available for consumers, special collection events are not specially recommended in this strategy. Rather, it is recommended that the City promote and encourage the use of existing drop-off locations. For example, RPRAs Where to Recycle Map (<https://rpra.ca/where-to-recycle/>) allows users to search for depot, retail and date-specific event-based locations where materials can be dropped off. Figure 9 depicts locations for various materials based on a search for depot and retail locations within 25 km of Clarence-Rockland’s geographic centre (approximately).

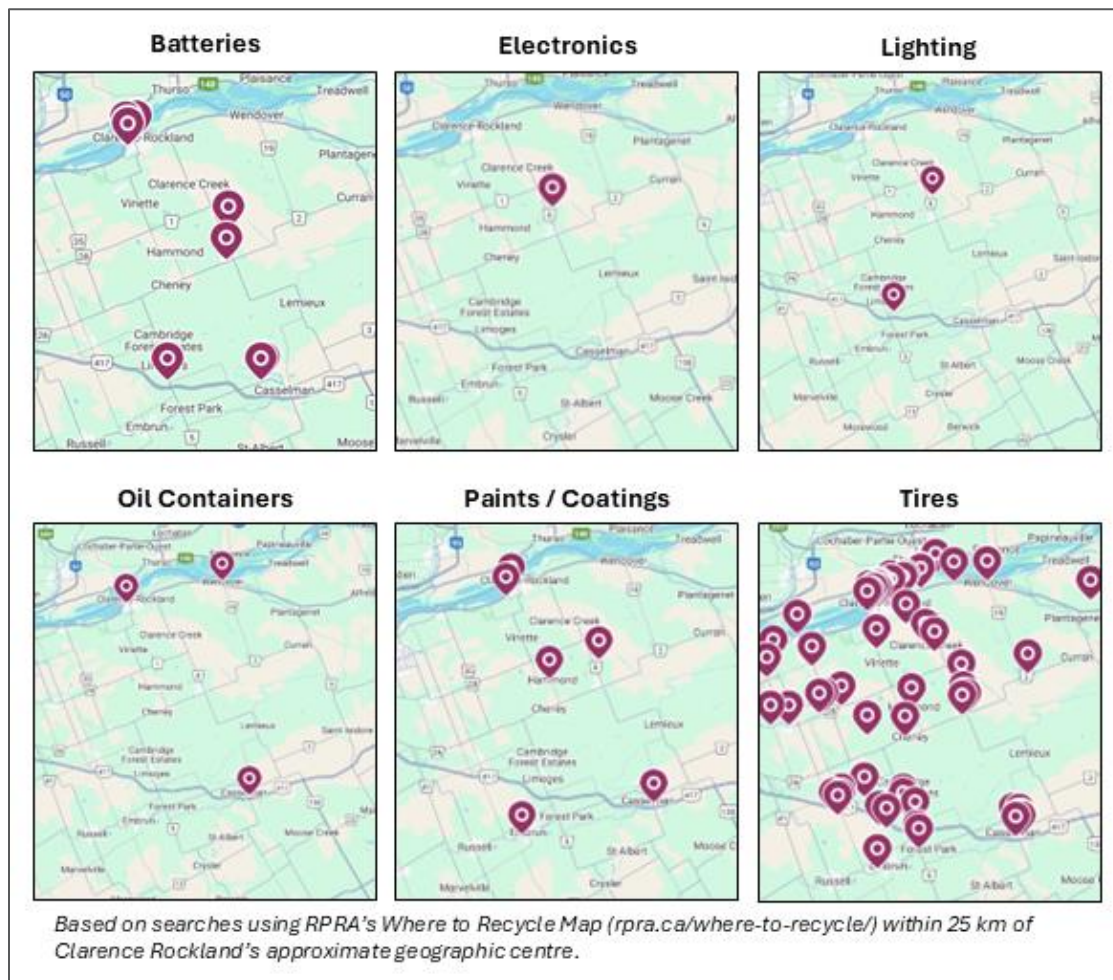


Figure 5: Drop-off locations for various special wastes in Clarence-Rockland

7.2.2 Add additional materials to the municipal recycling program

Recommendations	Planning Horizon
<p>8. Continue to be open to opportunities for diverting additional materials from disposal. Assess the opportunities based on their logistical and economical sustainability and diversion potential.</p> <p>9. Once sufficient time has passed with management of the Blue Box program under management by Circular Materials and an organics diversion program is in place, actively pursue new opportunities and innovations for waste diversion.</p>	<p>Mid-term 5 to 10 year</p>

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

As the City explores these opportunities, considerations should include:

- Available markets or processors for the material under consideration;
- Collection and handling logistics for the material and associated capital and operational costs; and
- Longevity / sustainability of the program.

7.2.3 Textile Recycling

Recommendations	Planning Horizon
<p>10. Actively promote community textile reuse and recycling programs through the City’s solid waste communications. This could include a searchable directory of programs and drop-off locations.</p>	<p>Short-term 1 to 5 year</p>
<p>11. Undertake a pilot program for the curbside collection of textiles, based on the experiences of the pilot in the Kawartha Lakes.</p>	<p>Mid-term 5 to 10 year</p>

The waste composition analysis prepared for this strategy estimates that approximately 120 tonnes of textiles are disposed by City residents each year. In Ontario, diversion of textiles from disposal is commonly conducted through non-profit and thrift organizations, such as the Salvation Army or Value Village, or through textile diversion programs run in partnerships with such organizations, for instance by providing drop-off locations in municipal areas.

Use of curbside collection of textiles is less common, although it has been piloted the use of curbside collection of textiles, while others have incorporated it as a special collection event.

7.2.4 Curbside Battery Recycling

Recommendations	Planning Horizon
<p>12. Include curbside battery collection as an option within the next solid waste collection tender.</p>	<p>Short-term 1 to 5 year</p>

In years past, curbside battery collection events were operated in conjunction with Blue Box recycling programs, in that residents were able to place batteries in a bag on top of their blue box materials, and the collection contractor would collect and handle the batteries separately. Transitioning Blue Box collection to stewards had generated some uncertainty of how curbside battery collection might now proceed, but a number of municipalities continue to operate curbside battery collections. Offering curbside collection opportunities could potentially increase the diversion of batteries by making it more convenient to do so.

7.3 Organics Management

7.3.1 Introduce Household (food and kitchen waste) Organics Collection and Composting

Recommendations	Planning Horizon
13. Initiate the planning process for curbside SSO collection in the first 5-year timeframe.	Short-term 1 to 5 year
14. Implementation of the program in the subsequent 5-year timeframe.	Mid-term 5 to 10 year

As noted in Section 5, household organics provides the major opportunity for the City to increase diversion of waste from its landfill. Based on the requirements of Ontario’s Food and Organic Waste Framework, the City will be required to implement a program for the collection of food and organic waste to single-family dwellings in urban settlement areas within the next five years. Providing this service to the residents and diverting organics from disposal will benefit the City by preserving landfill space, reducing the generation and toxicity of landfill leachate, and reducing the amount of greenhouse gas emissions that may emanate from the landfill.

Implementing a household (food and kitchen waste) organics collection and composting program generally requires a multi-pronged approach. This approach would include the following:

- Prepare an implementation plan for a household organics collection and composting program. The implementation plan should consider the following:
 - Update on the regulatory environment concerning household organics, in particular updates to timelines, thresholds and targets in the Province’s Food and Organic Waste Policy Statement.
 - The status of the City’s existing and future collection contracts.
 - Estimated annual generation of food and organic wastes and anticipated capture.
 - Collection service levels for organics, garbage and other applicable waste streams.
 - Review and evaluation of processing options, including consideration of municipally owned and/or operated as well as contractor facilities.
 - Feasibility assessment of anticipated capital and operational costs.
 - Identification of a critical path for the development of the program and its delivery.
- Preparation and implementation of a promotion and education strategy for the household organics collection and composting program. This should include:
 - Research on barriers and incentives for correct participation in household organics collection and composting programs.
 - Identification of methods for addressing the identified barriers and capitalizing on incentives.
 - Development of the strategy, including actions and steps for implementation.

7.3.2 Further Pilot Testing of Foodcycler-Style Home Composting Appliances

Recommendations	Planning Horizon
<p>15. Run a focused pilot using Foodcycler-style appliances within a measurable area, with support from a provider of the appliance or other funding source.</p>	<p>Short-term 1 to 5 year</p>

Like backyard composting, Foodcycler-style home composting appliances have the potential for managing a portion of the City’s household organics, or they may complement a curbside organics collection program. However, it is unclear at this time whether such a product could provide a consistent level of diversion of organics from disposal, or to what price point the City would need to subsidize the product to provide comprehensive coverage.

A focused foodcycler pilot project could help to provide additional data that may help assess the suitability of Foodcycler-style appliances for broader, reliable diversion of household organics. A pilot project conducted at the street, neighbourhood or community level (or perhaps or census area) would allow the City to assess what percentage of the population may be willing to purchase and use the units and at what price-point. The pilot should include a methodology for:

- Quantifying/measuring participation of households within the pilot area;
- Quantifying/measuring the amount of organics diverted (either through waste audits and/or comparison of garbage tonnage collected per household against a control group);
- Surveying participants on their attitudes toward use of the appliance; and
- Comparison of measured results against baseline or control data.

7.3.3 Implement a Food Waste Reduction Strategy

Recommendations	Planning Horizon
<p>16. Continue to follow the food-waste reduction programs underway in Ontario.</p> <p>17. As necessary, incorporate messaging into the on-going promotion and education.</p> <p>18. Develop a strategy in the mid-term to coincide with organics roll-out.</p>	<p>Mid-term 5 to 10 year</p>

Avoidable food waste is considered food waste that could have otherwise been consumed (i.e., edible food-loss waste). For example, this may include food that has spoiled or that has been cooked but not eaten. Unavoidable food waste would include items such as carrot top trimmings, peelings from food preparation, or the inedible parts of food (e.g., apple cores).

A food waste reduction strategy would work to reduce avoidable food waste in Clarence Rockland. The City could develop and implement its own custom a food waste reduction strategy or work with an established program (such as Love Food Hate Waste Canada) to implement their available programming locally. This could include food waste reduction initiatives to educate residents and build awareness of food waste and its impact. Examples of possible initiatives could include:

- Virtual or in-person waste-free cooking classes or events;
- Messaging about food waste and Green Bin use at events such as Farmers’ Markets;
- Expanding existing P&E campaigns and materials;
- Creating educational material regarding meal planning, how to tailor grocery shopping to avoid impulse buys, and how to properly transport and store perishable food;
- Collaboration with the food industry, Public Health and non-profit agencies to direct food to charities and food banks, as well as with the initiatives noted above.

7.4 Waste Collection/Receiving

7.4.1 Every-Other-Week Garbage Collection Frequency

Recommendations	Planning Horizon
<p>19. Include EOW garbage collection as part of the implementation of the SSO program development.</p> <p>20. Either implement in concert with an SSO program or incorporate as required into a future solid waste collection contract.</p>	<p>Mid-term 5 to 10 year</p>

Typically, municipalities in Ontario with SSO programs have transitioned from weekly residential garbage collection to Every-Other-Week (EOW) garbage collection. This is considered a best practice in Ontario:

- 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 also encourages residents to make greater use of available diversion programs.

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)⁹. 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 the alternating week from garbage collection. Participants are required to register and renew annually¹⁰.

In developing the implementation plan for SSO and EOW garbage collection, other opportunities for streamlining collection activities, enhancing data collection, and managing costs should be considered. These would include:

- Collection of garbage using carts: This assessment would examine the feasibility of adopting a cart-based collection system for garbage and (as applicable) source-separated organics. The assessment could consider the feasibility of introducing automated or semi-automated curbside cart collection

⁹ Peter Gorrie. Making The Move To Alternate Week Trash Collection. BioCycle August 2012, Vol. 53, No. 8, p. 25.

¹⁰ 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.

and providing the waste collection containers with radio-frequency identification (RFID) capabilities. The RFID capabilities would allow for the measuring data about collection services and their performance. They would also ensure systems are in place to capture information on vehicles or programs.

- Incorporation of zero or low emission vehicles into the solid waste fleet: The assessment could also examine the feasibility of incorporating requirements for a zero or low emission solid waste fleet in a future collection contract, including the anticipated impact on costs, availability of service providers offering this feature, and whether infrastructure upgrades to service the vehicles would be required or beneficial in the community. It would also help the City reduce its greenhouse gas emissions.

7.5 Promotion and Education

7.5.1 Solid Waste Management Promotion and Education Strategy

Recommendations	Planning Horizon
21. Develop and implement a comprehensive Solid Waste Management Promotion and Education Strategy.	Short-term 1 to 5 year

An effective promotion and education strategy is key to ensuring waste diversion programs are used to their maximum potential through successful participation by residents. They work to identify and overcome both actual and perceived barriers that can discourage residents from fully participating. The overall goal of these promotion and education efforts is to influence sustainable behaviour change within the community.

The City will build upon the successes and lessons learned from its previous communications activities and develop a comprehensive Waste Diversion Promotion and Education Strategy. Elements of the strategy may include:

- Waste Minimization, Reduction and Reuse Practices;
 - Promotion of opportunities for reuse and repair, such as community-based online exchanges;
 - A backyard composting promotion program; and
 - Targeted educational materials and initiatives that focus on specific materials, diversion programs, specific behaviour or attitude changes, or geographic areas. An emphasis could be placed on topics such as waste minimization (i.e., waste reduction and reuse), among others.
- Issue or topic-based campaigns;
- Improving diversion of specific items through targeted campaigns
 - Focusing on issues related to participation, including level of participation as well as how people participate (e.g., reducing contamination, segregating drop-off waste, etc)
 - Promote green purchasing and procurement practices among the general public, local businesses and municipal departments. This could include: promotion of precycling; promotion of the link between purchasing decisions and waste/the environment; educating businesses on green purchasing practices for their sector, etc.
- Audience-specific;
 - An emphasis or targeted campaign on diversion in multi-residential buildings;
 - Delivering presentations and education initiatives to schools and other organizations;
 - The establishment of a Community Liaison Committee to help provide input on and to deliver community-based education; and
 - Enlistment of community champions to help foster waste diversion behaviours in the community.
- Emphasis on Communications Tools and Approaches;

- Developing a brand that provides a consistent program look and messaging throughout municipal waste reduction initiatives.
- Enhancing the City’s use of its Social Media Presence and use of Apps to deliver public communications and education;
- Capitalize on the City’s website and public participation platform to provide more information related to the City’s waste reduction and waste management services and facilitate interactive engagement with the public.
- Expanding waste management promotions at public events;
- Implementing incentive/recognition programs for exceptional recycling by households, businesses or organizations (e.g., Hamilton’s “Gold Box” program);
- Fine-tuning (as required) of communication tools and materials, such as brochures, etc.

7.5.2 Encourage Extended Producer Responsibility

Recommendations	Planning Horizon
<p>22. Continue to monitor and participate in product stewardship and EPR activities.</p> <p>23. Monitor for potential gaps in how stewardship waste diversion programs are promoted in Clarence-Rockland and address through the City’s communications initiatives.</p>	<p>Short-term 1 to 5 year</p>

Ontario has a number of Extended Producer Responsibility (EPR) or other industry-funded product stewardship initiatives in place. These are generally in the form of retail take-back or other drop-off programs. As the landscape of EPR in Ontario continues to evolve, how it is implemented in Ontario affects the ability of Clarence-Rockland’s residents to utilize these waste diversion services. The City will maximize the effectiveness of EPR locally by:

- Providing the municipality’s perspective on EPR and product stewardship during consultations or at other opportunities;
- Supporting municipal waste associations in their efforts to lobby for product stewardship; and
- Promoting local recycling opportunities already provided through existing provincial product stewardship programs (<https://rpra.ca/where-to-recycle/>).

7.5.3 Periodic Multi-season Waste Audits

Recommendations	Planning Horizon
24. Undertake sorted waste audits every two to four years.	Short-term 1 to 5 year
25. Undertake visual waste audits as required for issue areas.	

When beneficial, the City will undertake periodic multi-season waste audits (e.g., every 2 to 4 years). The audits will provide the City with quantifiable data that will help assess the performance of the City’s waste diversion programs. They will also identify categories of solid waste and related information that require additional effort to maximize diversion. This in turn will help to guide the further adjustment the City’s solid waste management system.

The waste audit would include a comprehensive review of the City’s waste stream, including specific waste materials of interest, such as:

- Food waste, including avoidable food waste;
- Textiles;
- Blue box recyclables; and
- Any other materials that may be of interest to the City.

The waste audits may also consider multiple sectors or locations, such as:

- Single-family households;
- Multi-residential households;
- IC&I sector; and
- Bulky waste collections.

In some cases, visual audits may also be completed if quantifiable data is not required. Visual audits require less rigour than full sort audits and could potentially be undertaken using municipal or summer staff.

The Continuous Improvement Fund (CIF) developed a guidance document to provide communities across Ontario with direction for planning and executing composition audits of waste, organics and litter streams. The guide identifies audit sources including waste from single-family homes, multi residential units, depots, and business improvement areas (BIAs)/ non-eligible sources. The purpose of the guide was to allow communities to easily compare or consolidate audit data across the province. The guideline is available to download at this address: <https://thecif.ca/project/municipal-waste-composition-audit-guideline/>.

7.6 Municipal Policy

7.6.1 Introduce maximum bag limits

Recommendations	Planning Horizon
<p>26. Introduce a maximum bag limit for how many bags or containers of waste can be set out for collection.</p>	<p>Short-term 1 to 5 year</p>

The City does not currently have a limit on the number of garbage bags or containers that can be set out for collection. Residents can set out three garbage bags each collection without a bag tag, with subsequent bags requiring bag tags.

The City will introduce a maximum bag limit on the maximum number of bags that can be set out at the curb, as well as reduce the number of bags that can be set out without a bag tag. This will provide additional incentive to residents to increase waste diversion by:

- Being more cognizant of properly segregating Blue Box recyclables from their garbage; and
- Separating other potentially recyclable waste materials from the garbage for diversion through other means.

For bulkier loads, residents will be encouraged to take segregated loads to the City’s landfill site, where it can be sorted for proper disposal, reuse or recycling.

7.6.2 Increase Cost of Bag Tags

Recommendations	Planning Horizon
<p>27. Monitor need for bag tag cost increases annually with operational and capital budget reviews.</p> <p>28. Obtain curbside set-out data assessing the number of households that set out 1, 2, 3, and 4 or more bags/containers of garbage.</p> <p>29. Decrease the limit of garbage bags allowed for set out without a bag tag, from three bags to two.</p> <p>30. Annually review the suitability of the garbage tag fee in conjunction with a review of the number households setting out 1, 2, 3 and 4 or more garbage bags out for collection per week.</p>	<p>Short-term 1 to 5 year</p>

User pay programs, also known as Pay-As-You-Throw (PAYT), unit-based pricing, variable rate and user fee, are becoming an accepted method for financing residential waste management services. The City’s current system operates as a partial user pay system, as residents only pay to set out garbage bags above the three-bag threshold. The cost per garbage tag is \$2.50.

The City will examine the need for bag tag cost increases annually with operational and capital budget reviews. As part of these reviews, the City will monitor (as needed) setout data to help gauge the potential results of increasing the cost per bag tag and adjusting set out limits.

7.6.3 Assessment of Full User Pay

Recommendations	Planning Horizon
<p>31. Undertake feasibility assessment for full user pay for garbage collection. Assessment should consider:</p> <ul style="list-style-type: none"> • Implementation timing with garbage collection contract and curbside organics collection. • Fee structures for cost recovery. • Recommendations for implementation. <p>32. Depending on results from feasibility assessment, prepare implementation plan for transition to full user pay.</p>	<p>Mid-term 5 to 10 year</p>

Transitioning from a partial user-pay system to one that is full user pay could encourage residents to divert more of their waste to diversion programs and potentially reduce overall waste generation. However, shifting to full user pay from a partial user pay can be controversial, as residents may feel that waste collection is a service already paid for through property taxes. The City will explore transitioning to a full user-pay system at a later date.

7.6.4 Update to and Enforcement of Waste Collection By-Law

Recommendations	Planning Horizon
<p>33. Monitor waste collection bylaw semi-annually to ensure bylaw clauses align with desired waste management practices and provincial legislation.</p> <p>34. Update the Waste Collection By-Law to ensure it accurately describes how solid waste should be segregated and set out for collection. The update should ensure there are adequate provisions and penalties to allow for the bylaw’s enforcement.</p> <p>35. Supply bylaw enforcement staff with guidelines to encourage diversion. Provide municipal staff with the legal means to enforce desired behaviours (e.g., source separation) and curtail undesired behaviours (e.g., scavenging).</p> <p>36. Review and coordinate solid waste related-fee schedules.</p>	<p>Short-term 1 to 5 year</p>

Waste management bylaws provide municipalities with a tool to define and enforce how solid waste is to be managed in their community. The bylaw also provides a mechanism for setting fees for providing solid waste management services.

The current solid waste management bylaw does not contain the provisions for fees. Rather, this is contained within a separate bylaw. The City will review coordinating the by-laws so that fees related to garbage tags, stickers for bulky items and differential tipping fees at the landfill are consistent and accessible.

7.6.5 Clear Garbage Bags

Recommendations	Planning Horizon
<p>37. Initiate the transition of the City’s garbage collection program to require use of clear garbage bags. Prepare an implementation plan that considers:</p> <ul style="list-style-type: none"> • Preferred timing of the transition to clear bags, in consideration of other changes to the City’s solid waste management system (e.g., implementation of weekly organics collection and EOW garbage collection). • Use of a transition period that allows for promotion and education about the change and allows residents to use up stockpiled black garbage bags. • Engagement of retailers and bag suppliers. 	<p>Short-term 1 to 5 year</p>

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, and that number has increased since then.

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.

7.6.6 Reduction Strategies and Bans for Single-use Items

Recommendations	Planning Horizon
<p>38. Develop a strategy to eliminate or reduce single-use plastics.</p> <p>39. Ensure the Solid Waste Management Promotion and Education Strategy supports activities and initiatives related to reduction strategies and bans for single-use items.</p>	<p>Short-term 1 to 5 year</p>

On June 22, 2022, the Government of Canada published the Single-use Plastics Prohibition Regulations (SOR/2022-138), issued under the Canadian Environmental Protection Act, 1999. The regulation prohibits the manufacture, import, and sale of six categories of single-use plastics to prevent plastic pollution. The six categories include checkout bags, cutlery, foodservice ware, ring carriers, stir sticks, and straws. The Single-use Plastics Prohibition Regulations (SUPPR) are part of the Government of Canada’s plan to address pollution, meet its target of zero plastic waste by 2030, and help reduce greenhouse gas emissions¹¹.

In support of this, the City will develop a strategy that will eliminate or reduce single-use plastics. This will be supported through the Solid Waste Management Promotion and Education Strategy with activities and initiatives related to reduction strategies and bans for single-use items.

¹¹ Environment and Climate Change Canada (ECCC). Single-use Plastics Prohibition Regulations – Overview. <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/reduce-plastic-waste/single-use-plastic-overview.html>. April 18, 2023.

7.6.7 Update Waste Performance Metrics

Recommendations	Planning Horizon
<p>40. Identify a suite of key performance indicators (KPIs) for evaluating the City’s solid waste management program.</p> <p>41. Incorporate the KPI into the City’s waste management evaluation and reporting.</p>	<p>Short-term 1 to 5 year</p>

Changes to the material composition and the regulatory environment around waste management are shifting how municipalities report on the success of their waste management programs. The City will review, identify and integrate other quantifiable metrics into its performance reporting. Possible metrics include:

- Tonnes of garbage collected per household or per capita;
- Tonnes of solid waste disposed per household or per capita;
- Tonnes of organic waste diverted per household or per capita;
- Estimated capture rates of organics waste through curbside programs from program participants;
- Curbside diversion program household participation rates;
- Calculated landfill life;
- Landfill volume used annually.
- Tonnes of CO₂ emissions avoided through diversion programs;
- Number of calls of complaint and enquiry.

7.7 IC&I Sector

7.7.1 Reduction in Provision of Waste Collection Services to IC&I sector

Recommendations	Planning Horizon
<p>42. Extract the City from providing solid waste collection services to IC&I sector clients. As feasible, assist the clients with transitioning to alternative private sector service providers.</p>	<p>Short-term 1 to 5 year</p>

The City has reduced the number of IC&I service stops and customers to which it provides solid waste collection services. Generally speaking, delivery of solid waste management services is not a core function of the municipality. Given the continued shifting of the regulatory landscape for solid waste management, withdrawing the City from administering solid waste management services to IC&I sector customers may generate administrative efficiencies for the City and provide economic opportunities for local waste collection service providers. The administrative efficiencies would arise from not having to navigate recent or future changes to the Blue Box Program by the Province or product stewards, managing issues related to improper waste separation, and coordinating access to private properties by waste collection vehicles, among other things.

7.7.2 Establish a System for Construction and Demolition (C&D) Recycling

Recommendations	Planning Horizon
<p>43. Develop a strategy for C&D recycling. Elements of the strategy could include:</p> <ul style="list-style-type: none"> • Partnering with or promoting of private sector facilities. • Establishment of a specialized depot to receive, sort and process C&D waste for diversion. • Policy instruments to encourage C&D recycling. • Implementation of C&D waste diversion best practices. • Disposal bans for C&D waste at the City’s landfill, or discouragement of their disposal at the City’s landfill through increased tip fees. 	<p>Mid-term 5 to 10 year</p>

Over 1,000 tonnes of C&D waste were disposed at the City’s landfill in 2023. This material could potentially be segregated for reuse or diverted to other C&D-focused disposal facilities. The City will develop a strategy for C&D waste to help ensure C&D waste is delivered segregated to the landfill. The City will also explore working with C&D-focused disposal facilities to provide and promote disposal alternatives to residents.

7.8 Other Opportunities

7.8.1 Multi-municipal Partnerships for Waste Management Services

Recommendations	Planning Horizon
44. Continue exploring multi-municipal partnerships for the collection and processing of waste, as well as other aspects of managing solid waste in Clarence-Rockland.	Short-term 1 to 5 year

Multi-municipal partnerships for the collection and processing of waste is viewed as a municipal best practice by the RPRA. These types of partnerships allow municipalities to take advantage of economies of scale through co-operation with neighbouring municipalities. The City will continue to explore and be open to these opportunities.

7.9 Disposal/Processing

7.9.1 Preparation for Potential Future Expansion of Landfill Site

Recommendations	Planning Horizon
45. Review options for purchasing land adjacent to the landfill boundaries.	Short-term 1 to 5 year
46. Review the need for and suitability of landfill expansion in subsequent SWMS updates.	Revisit Next SWMS

The City’s landfill site has an approved capacity of 974,000 m³. The City’s 2023 annual monitoring report estimates that it has about 478,000 m³ of disposal capacity remaining, or about 42 years of estimated site life.

While there is no present requirement for seeking additional disposal capacity, it is in the City’s long-term interest to continue exploring options for the extended and cost-effective use of the landfill, and for the waste management site as a whole. This would include:

- Consideration of purchasing properties adjacent to its boundaries, which would allow the site to be expanded in a manner that would protect its ability to continue operation as a natural attenuation facility.
- Continued strategic placement of landfilled waste such that it maintains conditions favourable to a future landfill expansion. use of the Future expansion of the landfill would extend its lifespan, which may either require or be benefited by acquisition of the landfill site’s adjacent properties.

The potential need for and suitability of landfill expansion will continue to be reviewed in subsequent SWMS updates.

7.9.2 Future Consideration of Garbage Export to a Different Landfill

Recommendations	Planning Horizon
<p>47. Review the need for and suitability of waste export for disposal in subsequent SWMS updates.</p>	<p>Revisit Next SWMS</p>

The City’s landfill site has sufficient useful life remaining and expansion potential such that it does not have a current need to explore alternative disposal options. Exporting garbage to a different landfill would be a less favourable option compared to expansion of the landfill, as expansion would likely be more cost effective and would enable the City to continue to maintain control over their disposal costs and logistics. However, it is prudent for the City to continue reviewing the potential need for and suitability of waste export in subsequent SWMS updates.

8 Implementation Plan

A proposed implementation plan for the initiatives identified in the SWMS is provided on the following pages. The implementation plan includes Years 1 to 11 of the SWMS and covers the short and medium term. Activities identified as part of the longer term plan will be revisited in updates to the SWMS, which are scheduled to occur every five years.

The implementation plan identifies the anticipated planning and implementation periods for the initiatives, as well as any evaluation periods that may be required.

At the end of 2025, the Waste Services Division was staffed by 3 FTE (full-time equivalent) staff¹², with additional communications and engagement support provided by Corporate Services. It will be important for City to ensure the Waste Services Division has appropriate capacity for the successful implementation of the recommended updates. This may include using the first six months of the SWMS's planning period to create the capacity required to begin implementing the recommendations of the SWMS Update. This capacity could be achieved through staff recruitment, utilizing external contractors, or a combination thereof. This will be a crucial component; delays in allocating adequate resources may negatively impact the scheduling of recommended initiatives that have sensitive timing windows, such as source-separated organics management or seasonal activities, among others.

The timeframes are approximate and may be adjusted accordingly in response to funding and operational availability, updates to the regulatory landscape, or other unforeseen factors.

¹² This included a manager (0.5 FTE), a supervisor (0.5 FTE), a team lead (0.5 FTE), an administrative staff (0.5 FTE), and 1 FTE operator.

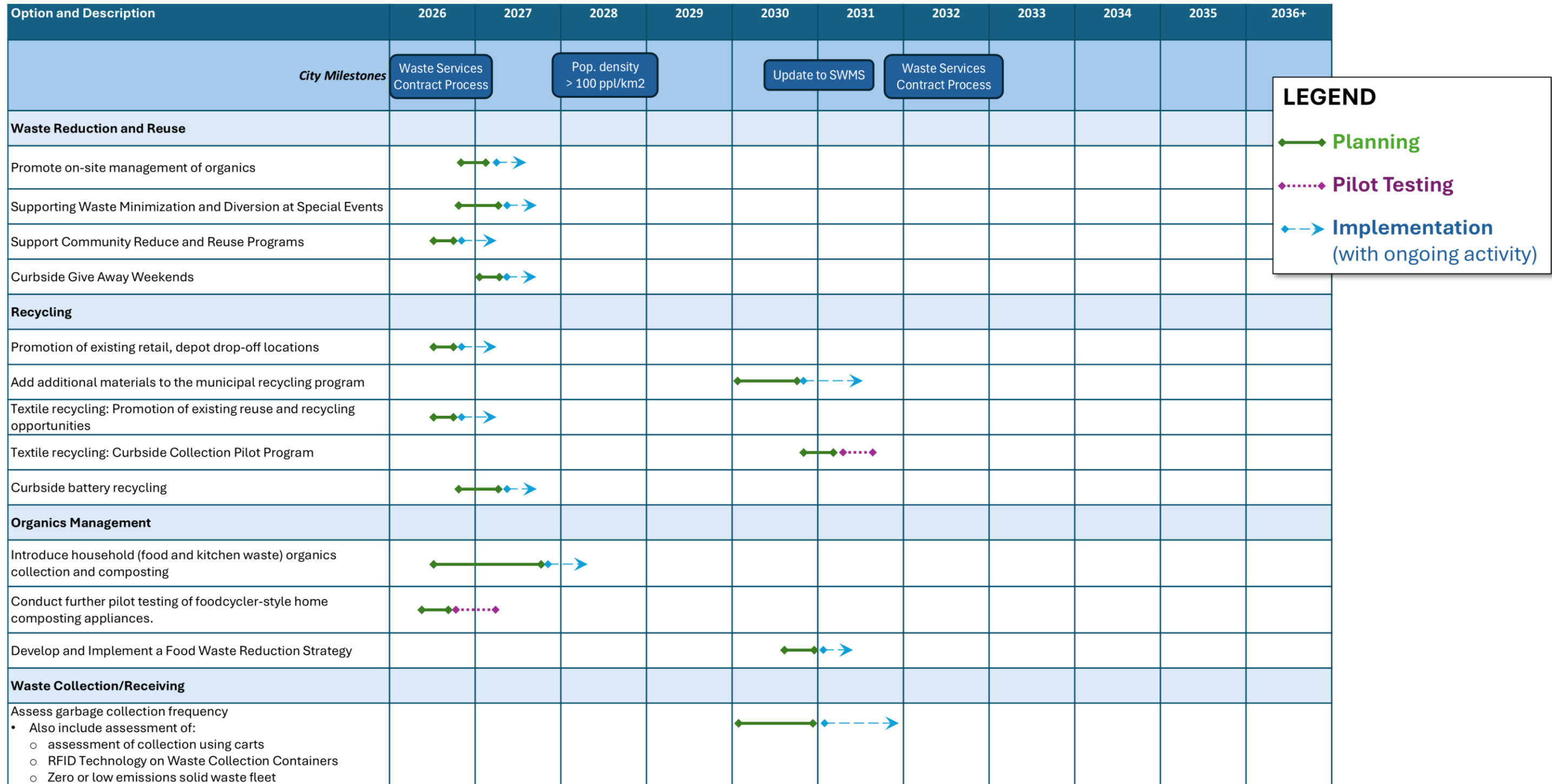


Figure 6: Implementation Plan (Part 1)

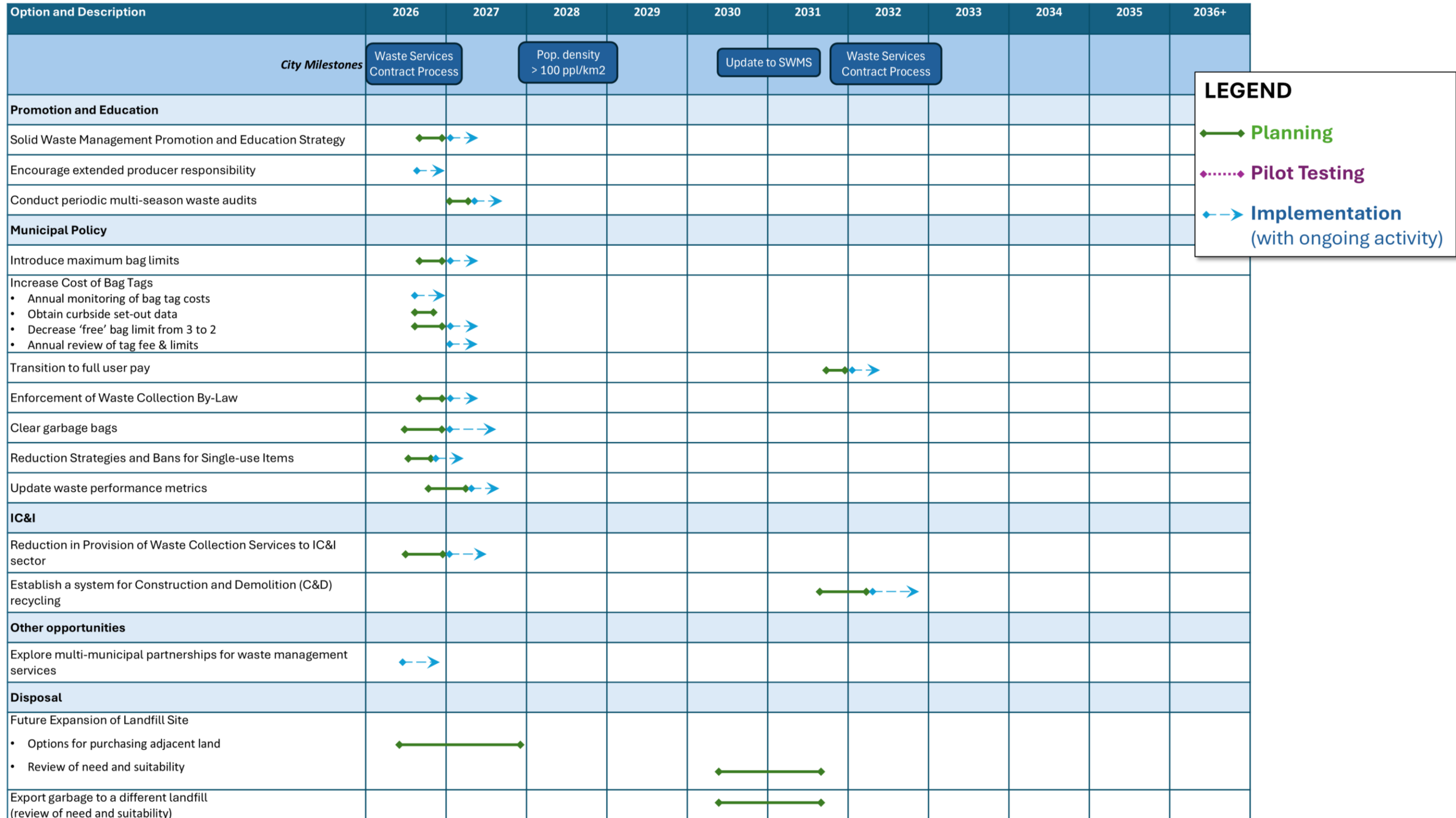


Figure 7: Implementation Plan (Part 2)

9 Community Engagement

9.1 Overview

Information about the solid waste management strategy update was shared with the public using a webpage on the City’s community engagement platform (see Figure 8). The page included a recorded presentation that described the process, reviewed the performance of the City’s solid waste management system, and the options being considered to update it. A Frequently Asked Questions (FAQ) list was also provided on the webpage to answer questions received from stakeholders during the process. A copy of the presentation slides and the FAQ list are provided in Appendix D.

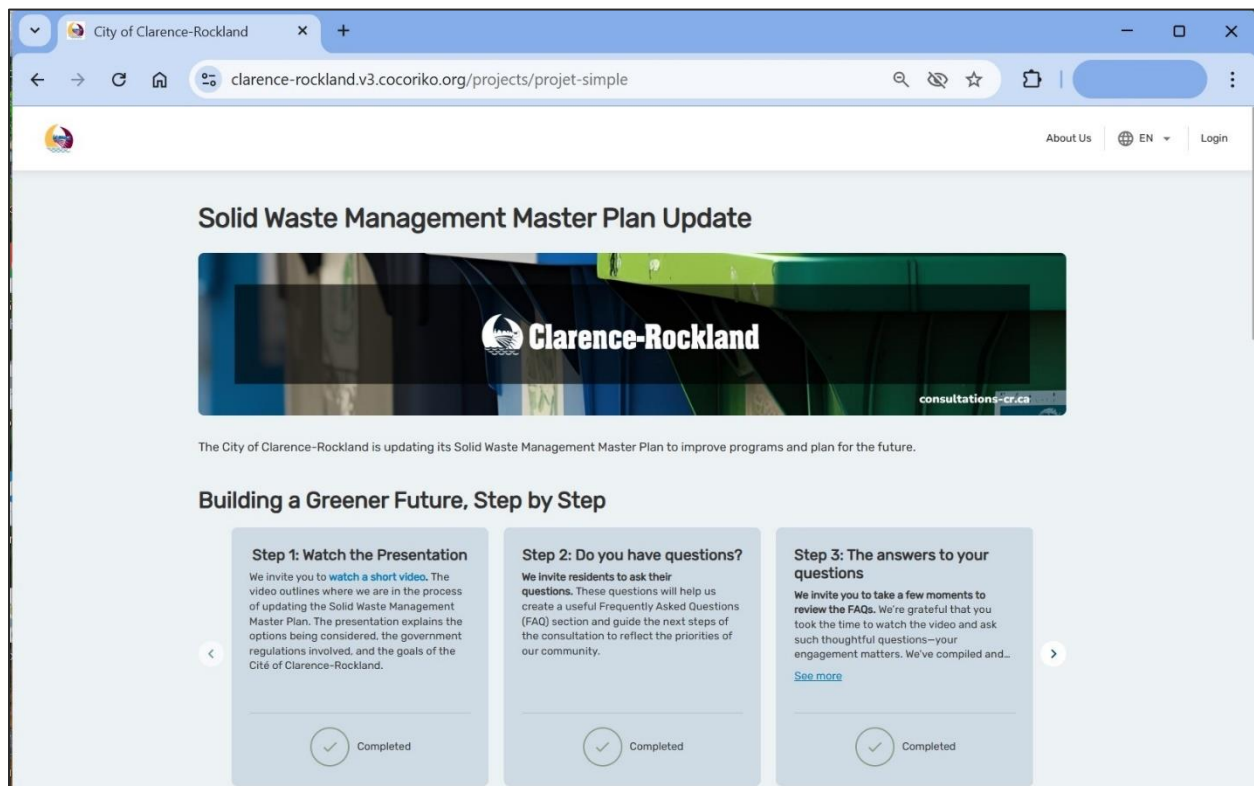


Figure 8: Project Webpage on Engagement Platform

9.2 Online Survey

An online survey was run from July 23 to August 9, 2025 to obtain input from stakeholders. There were 563 respondents.

The results of the survey is provide in Appendix D. Based on the survey results:

- Curbside Garbage and Household Organics Collection
 - A common concern about a potential curbside household organics collection program is the potential for odours and animal pests, as more than half (54%) or respondents identified that as a potential barrier to participation. The next most common barrier was already composting at home (14% of respondents).

- Nearly three-quarters of respondents felt that standardized bins for garbage and organics instead of bags would be suitable for their property. About 30% indicated yes, while another 44% indicated the bins would need to be appropriately sized.
- The most common response for what would help households transition to a new curbside garbage and organics collection program was a free starter kit or bin (76% of respondents). This was followed by clear information and instructions (50% of respondents).
- Privacy was the most common concern raised about a potential clear garbage bag program (65% of respondents), while 19% said they had no concerns.
- Recycling
 - The most common improvement noted for recycling was more curbside collection options (44% of respondents), such as for batteries or textiles. This was followed by 38% of respondents suggesting that none were needed and that the current system worked well.
 - The notion of a curbside battery recycling program was viewed favourably, with 71% of respondents indicating that they would be very likely (42%) or somewhat likely (29%) to use it. About 7% noted they already used private or retailer programs.
- Waste Reduction
 - While nearly half (47%) of respondents indicated that they would be unlikely to participate in waste reduction initiatives, another 45% said they would participate in donation weekends.
- Landfill Site
 - The most common improvements preferred for the landfill were free drop-off for more items (48% of respondents) and extended opening hours (38% of respondents).
- Communications and Participation
 - The most common preferred methods for respondents to receive information about changes to the City's solid waste programs were the City's official social media accounts (47% of respondents), the City's website (42%), and the bCiti+ Citizens Portal (26%).
 - Potential cost of new programs to households were a concern, as 70% of respondents said that costs (such as for bag tags or new bins) might prevent them from participating in new or expanded waste management programs, followed by lack of information or awareness (28% of respondents).
 - Nearly three-quarters of respondents (72%) felt that a mobile app or digital tool that provides sorting tips and collection reminders would be helpful, with 42% saying it would be very helpful and 30% somewhat helpful.

Appendix A – Recommendations from the 2015 Solid Waste Management Strategy

The items listed below are the recommendations presented in the City's **2015 Solid Waste Management Strategy**.

Automated Waste Collection

- Approximately 3 years prior to the end of the upcoming collection contract cycle, conduct a business case analysis for the conversion of Clarence-Rockland's existing residential solid waste collection system to an automated cart-based system.
- Maintain on-going dialogue with neighbouring municipalities regarding multi-municipal waste management services, as sharing implementation of an automated cart-based waste collection system with municipal neighbours may improve the business case.

Ban Designated Materials from Landfill

- Add blue box recyclable materials to the list of materials banned from disposal at landfill.
- Screen incoming loads to the landfill for banned materials.
- Develop a protocol for when banned materials are identified in a load.
- Conduct an education campaign about the updated material ban prior to the ban's full implementation. This could include providing information about the ban and newly banned items, promoting when the ban will come into effect, promoting alternatives to disposing of the banned materials, and communicating what is required when dropping off loads of waste at the landfill site.

Establish a Scale House at the Landfill Site and Update Landfill Tipping Fees

- Issue a tender for the design and installation of a weigh scale house at the landfill site.
- Develop a tipping fee schedule that considers the tip fees of other nearby landfill sites and the City's waste diversion objectives.

Design and Implement a Waste Management Promotion and Education Strategy

- Increase spending of the City's solid waste management promotion and education by approximately \$5,000, which will be consistent with best practice levels.
- Develop a Waste Management Promotion and Education Strategy in order to maximize participation in the City's waste diversion programs and achieve the City's waste diversion goals.

Updating the Bag Limits / Bag Tag Policy

- Reduce the number of bags eligible for collection without bag tags from three to two.
- Develop a communications plan to advise residents of the reduction, when it would come into effect, and its benefits.

User Pay/Bag Limits for Business Sector Clients

- Introduce a full user pay program for the curbside collection businesses in Clarence Rockland.
- The program should consider:
 - The maximum number of bags businesses would be eligible to set out (above which they would be required to make arrangements directly with a contractor for waste collection)
 - Mandatory participation in the City's waste diversion programs to be eligible for municipal collection;
 - A pricing schedule and payment protocol that is not a burden administratively and provides an economic incentive for the business to reduce or divert waste; and

Construction and demolition recycling and reuse

- Engage the local C&D contractors to help identify opportunities, barriers and potential solutions to increasing C&D recycling in Clarence-Rockland. This could include the use of surveys, a workshop, or one-on-one meetings.

- Investigate and promote private sector opportunities for C&D recycling in and around Clarence-Rockland.
- Prepare a business case for including C&D recycling opportunities at the landfill site.

Multi-Municipal Partnerships for Collection and Processing of Materials

- Continue discussions with neighbouring municipalities about opportunities for multi-municipal partnerships for solid waste management services.
- Work with interested neighbouring municipalities to develop a 5-to-10-year contract timeline for entering into multi-municipal contracts for solid waste management services. The timeline should identify applicable contract start/end dates and identify opportunities for alignment of multi-municipal contracts.

On-site Management of Organics

- Develop a Backyard Composting Program, including a plan for distribution of backyard composters and for the promotion and education of backyard composting.

Source Separated Organics (SSO) and Leaf and Yard waste

- Conduct a feasibility assessment for an SSO program midway through the upcoming waste collection contract. The assessment should consider:
 - Opportunities for neighbouring jurisdictions to collaborate on a multi-municipal SSO program. The collaborations might include:
 - Promotion and education;
 - Collection, including purchase/distribution of green carts and roadside collection; or
 - Centralized processing (e.g., establishment of a regional composting facility).
 - The advantages and disadvantages of building a municipally-owned composting facility or sending the collected organics to another facility; and
 - A business case for an SSO program, including:
 - Estimated costs for implementation, collection and processing;
 - Estimated savings from reduced collection and processing of garbage for disposal, including reducing weekly garbage collection to every-other-week;
 - Estimated savings and other benefits from diversion of organics from landfill, including increased lifespan of landfill, delayed costs of landfill expansion or new site selection, and environmental benefits; and
 - Opportunities for and implications of co-composting the wastewater treatment plant's biosolids.
- Include seasonal leaf and yard waste collection as an option in the upcoming waste collection contract.

Appendix B – Long List Screening

Screening of Solid Waste Management Options Long List

There are a number of options available to Clarence-Rockland to reduce and divert waste from disposal. The options have been preliminarily screened for the development of an options short-list. The options were screened based on the following criteria:

- **Diversion Potential / Critical for Supporting Diversion** – this considers what potential the options have for diverting waste from the City’s landfill⁴⁶, if they improve the management of toxic or hazardous wastes, or if they are a policy or other element critical or otherwise very beneficial in supporting waste diversion.
- **Cost Efficiencies/ Savings Potential** – if the option has the potential to improve program efficiencies or otherwise contribute to program cost savings.
- **Implementation Cost** – the relative magnitude of the cost of implementing the option.
- **Approach Innovation and/or Reliability** – whether the approach is innovative or has otherwise been shown to be a reliable or well-established solid waste management option.

The results of the screening are provided after the table below, which describes the options being considered and indicates their recommendation for inclusion on the short-list.

Review of Solid Waste Management Options and Recommendations for Short List Evaluation

No.	Option and Description	Recommended for Short List Evaluation?
<i>WASTE REDUCTION AND REUSE</i>		
1.	Promote on-site management of organics Foster greater uptake of backyard composting and grasscycling through the increased promotion of backyard composting and grasscycling.	Y
2.	Supporting Waste Minimization and Diversion at Special Events Develop resources and opportunities for events hosted by the City or at City facilities that encourage waste minimization and diversion. This may include toolkit, partnership/vendor opportunities that result in waste minimization, and other promotion/education initiatives.	Y
3.	Support Community Reduce and Reuse Programs Develop and implement a policy that will provide greater support for programs led by community groups and non-profit organizations that drive reuse and waste reduction. This may include repair cafes, which are free events that bring together those with broken items and those who can fix them.	Y
4.	Establish a Lendery Program A Lendery is like a library where you sign out items rather than books. These items are things needed at the moment but are not required to be owned. Lendery membership entitles one to borrow a wide range of items, such as camping equipment, party supplies, small kitchen appliances, sports equipment, tools, toys and games, and yard/garden tools.	N

⁴⁶ This includes redirecting waste from the City’s landfill to a private facility for disposal or other management there.

No.	Option and Description	Recommended for Short List Evaluation?
5.	<p>Curbside Give Away Weekends</p> <p>Expand use of the existing Curbside Give Away Weekends, where residents are invited to place unwanted items, labelled FREE, at the curb for other residents and community members to browse and take for their own use, free of charge. Tools, such as posters and other promotional material, could be developed to help residents promote the material.</p>	Y
6.	<p>Subsidies, Rebates, Grants for Actions that Avoid, Reduce, or Reuse Waste</p> <p>A subsidy, rebate or grant to local residents, resident groups or non-profit organizations could be provided for actions, ideas or programs that avoid, reduce or reuse waste.</p>	N
RECYCLING		
7.	<p>Increase the number of waste diversion special events.</p> <p>Increase the number of special events (held either by the Municipality or by Producer Responsibility Organizations) to increase the capture of steward materials (e.g., electronics, household hazardous waste, used oil, etc)</p>	Y
8.	<p>Add additional materials to the municipal recycling program</p> <p>Consider the feasibility of adding additional items to materials accepted for recycling by the Municipality (outside of the Blue Box program). The assessment should consider whether the material(s) would be collected at curbside, landfill site, or via depots.</p>	Y
9.	<p>Textile recycling</p> <p>Consider opportunities for 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.</p>	Y
10.	<p>Agricultural waste diversion</p> <p>While not a waste stream currently managed by the Municipality, it could work with the local agricultural community to help identify and act on opportunities for the recycling of agricultural wrap and diversion of other materials.</p>	N
11.	<p>Curbside battery recycling</p> <p>Work with stewardship organizations to undertake curbside battery collections⁴⁷.</p>	Y

⁴⁷ As of July 1, 2020, following the wind up of Stewardship Ontario’s battery recycling program on June 30, 2020, battery producers are individually accountable and financially responsible for collecting and reusing, refurbishing or recycling their batteries when consumers discard them. Some municipalities have partnered with stewardship organizations (such as Environmental 360 Solutions or Call2Recycle) for curbside battery collection programs.

No.	Option and Description	Recommended for Short List Evaluation?
ORGANICS MANAGEMENT		
12.	<p>Introduce household (food and kitchen waste) organics collection and composting</p> <p>Implement a household (food and kitchen waste) organics collection and composting program. This would include development of a multi-pronged curbside organics diversion strategy to maximize the capture of household organics through a source-separated organics program. The strategy could include:</p> <ul style="list-style-type: none"> • Research on behaviour and barrier identification (waste audits, behaviour and attitude research, etc.); • Identification of methods for removing or addressing the identified barriers (e.g., promotion and education, tools etc.); and • Implementation. 	Y
13.	<p>Conduct further pilot testing of foodcycler-style home composting appliances.</p> <p>A broader foodcycler test pilot could be conducted on a street, neighbourhood or community level (or census area). The pilot should include a methodology for:</p> <ul style="list-style-type: none"> • Quantifying/measuring participation of households; • Quantifying/measuring the amount of organics diverted; • Surveying participants on their attitudes toward use of the appliance; and • Comparison of measured results against baseline or control data. 	Y
14.	<p>Implement a Food Waste Reduction Strategy</p> <p>Develop and implement a food waste reduction strategy, either by licensing a program such as WRAP UK's <i>Love Food, Hate Waste</i>⁴⁸ or creating a unique program to educate residents about food waste reduction. WRAP UK's Love Food Hate Waste campaign has expanded internationally to places like Australia and has been licensed for use in Canada⁴⁹ by Metro Vancouver, the City of Toronto and other project partners. Sustain Ontario has also developed a municipal toolkit for reducing household food waste⁵⁰.</p> <p>Collaborate with the food industry, Public Health and non-profit agencies to direct food to charities and food banks and to provide educational programs geared towards supporting residents in changing food waste behaviour. As an example, Foodsharing Ottawa was founded in 2015 to reduce the amount of food that gets thrown away by providing and promoting alternative local uses. This includes providing surplus food rescue services to local grocery stores and restaurants and donating the food back to the community where it is needed⁵¹.</p> <p>This could also include food waste reduction initiatives to educate residents and build awareness of food waste and its impact. Examples of initiatives include virtual or in-person waste-free cooking classes or events, rapid messaging about food waste and Green Bin use at events such as Farmers' Markets, expanding existing P&E campaigns and materials, creating educational material regarding meal planning, how to tailor grocery shopping to avoid impulse buys, and how to properly transport and store perishable food.</p>	Y

⁴⁸ <https://www.wrap.ngo/take-action/love-food-hate-waste>

⁴⁹ <https://lovefoodhatewaste.ca/>

⁵⁰ <https://sustainontario.com/greenhouse/resource/reducing-household-food-waste-a-municipal-regional-toolkit/>

⁵¹ <https://foodsharingottawa.com/>

No.	Option and Description	Recommended for Short List Evaluation?
WASTE COLLECTION/RECEIVING		
15.	Assess garbage collection frequency (every other week collection) Collect garbage every other week (EOW) rather than every week.	Y
16.	Assess collection using carts Assess the feasibility of converting to a cart-based collection system for garbage and (when applicable) source-separated organics recyclables. The assessment could consider the feasibility of introducing automated or semi-automated curbside cart collection (for inclusion in future collection contract).	Y
17.	RFID Technology on Waste Collection Containers Equip waste collection containers with radio-frequency identification (RFID) capabilities to gain information about collection services and performance and ensure systems are in place to capture information on vehicles or programs (for inclusion in future collection contract).	Y
18.	Pilot-test Alternative Collection Containers in Public Spaces Review the use of alternative waste collection containers in parks and public spaces across the City. This could include containers such as in-ground collection, plastic front-end load containers, multi-stream containers, and waste bins with solar compactors to improve collections efficiency and/or aesthetics and is applicable to City parks, including for dog waste, other public spaces. In-ground collection containers could also be installed at multi-residential properties; however, this would be at the discretion of property owners/developers.	N
19.	Zero or Low Emissions Solid Waste Fleet Identify opportunities for incorporating requirements for a zero or low emissions solid waste fleet in future collection contract.	Y
PROMOTION AND EDUCATION		
20.	Conduct targeted/expanded promotion and education Develop/implement targeted promotion and educational campaigns, and expand the municipality'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"; • Enhancing the existing municipal website with online waste management information tools such as an environmental impact calculator; • 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. 	Y
21.	Develop branding for the Solid Waste Management Section / Program Develop a brand that provides a consistent program look and messaging throughout municipal waste reduction initiatives.	Y

No.	Option and Description	Recommended for Short List Evaluation?
22.	<p>Enhance Social Media Presence and use of Apps</p> <p>Provide greater use of solid waste messaging in the City’s social media.</p> <p>Investigate SmartPhone apps that can help to remind residents of waste management services and diversion opportunities.</p> <p>Enhance The City’s website to provide more information related to the City’s waste reduction and waste management services, and incorporating more interactive features.</p>	Y
23.	<p>Promote “Green” purchasing and Green Procurement</p> <p>Promote green purchasing / procurement practices among municipal departments, local businesses and the general public. This may include: promotion of precycling; promotion of the link between purchasing decisions and waste/the environment; educating businesses on green purchasing practices for their sector, etc.</p>	Y
24.	<p>Encourage Extended Producer Responsibility</p> <p>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., Orange Drop, WEEE, MHSW, etc.)</p>	Y
25.	<p>Toolkit for Waste Diversion in Multi-Residential Buildings</p> <p>Develop a toolkit to help residents and building managers implement or improve waste diversion programs for apartment buildings and condominiums.</p>	N
26.	<p>Conduct periodic multi-season waste audits</p> <p>Multi-season waste audits conducted periodically (e.g., every 2 to 4 years) would provide the Municipality with quantifiable data that would help it better understand what wastes are going to landfill that could otherwise be diverted. This information would allow the Municipality to assess the diversion performance of the Blue Box stewards and to adjust other aspects of its solid waste management program.</p>	Y
MUNICIPAL POLICY		
27.	<p>Introduce / reduce maximum bag limit</p> <p>Limit or reduce the total number of garbage bags that households can set out at the curb for collection, including the number of bags with garbage tags.</p>	Y
28.	<p>Increase the cost per bag tag</p> <p>Increase the cost per bag tag.</p>	Y
29.	<p>Shift to full user pay</p> <p>Reduce the number of garbage bags or bins that can be set out at the curb without a garbage tag.</p>	Y
30.	<p>Enforcement of Waste Collection By-Law</p> <p>Update and enforce the applicable elements of the existing Waste Collection By-Law. Add guidelines 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).</p>	Y
31.	<p>Differential tipping fees</p> <p>Increase financial incentives for increasing segregation and diverting recyclable and compostable materials through a system of differential tipping fees at the landfill site.</p>	Y

No.	Option and Description	Recommended for Short List Evaluation?
32.	<p>Clear Garbage Bags</p> <p>Switch from opaque to clear garbage bags, which has been shown to increase the amount of waste diverted through recycling and composting programs.</p> <p>Clear bag garbage programs are increasingly common in Ontario and other Canadian municipalities.</p>	Y
33.	<p>Reduction Strategies and Bans for Single-use Items</p> <p>Develop a strategy to eliminate or reduce single-use plastics (SUPs), which may include banning items such as plastic shopping bags and polystyrene foam cups and takeout containers.</p>	Y
34.	<p>Preparation of Multi-Residential development standards</p> <p>Consider updating existing multi-residential development standards or other related guidelines to ensure multi-residential developments or retrofits include consideration of waste diversion.</p>	N
35.	<p>Update Waste Performance Metrics</p> <p>Consider new metrics for measuring the success of the waste management programs, such as carbon footprints of different waste streams.</p>	Y
36.	<p>Mandatory Waste Diversion in all City Facilities</p> <p>Implement mandatory waste diversion in all City facilities, including diversion of recyclables, organics, electronics, hazardous waste (e.g. batteries, hazardous waste from City operations), and other materials such as textiles and C&D materials. This could be implemented through a by-law or administrative policy.</p>	Y
<i>IC&I</i>		
37.	<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>	N
38.	<p>Further or complete reduction in provision of waste collection services to IC&I sector (or portions of it)</p> <p>Require all businesses to obtain private waste collection services.</p>	Y
39.	<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 municipal program, and implementation of C&D waste diversion best practices.</p>	Y
40.	<p>Divert C&D Materials from Landfill Site either through landfill fees or bans</p> <p>Encourage diversion of C&D materials from the landfill site to private facilities through banning their disposal at the landfill by contractors or by increasing their relevant tip fees.</p>	Y

No.	Option and Description	Recommended for Short List Evaluation?
41.	<p>Partnership with COIL Zero Waste Economic Transformation Lab</p> <p>The City of Guelph, Wellington County and the Guelph Smart Cities Office launched the Zero Waste Economic Transformation Lab, a new initiative under the Circular Opportunity Innovation Launchpad (COIL). It will apply place-based circular economy strategies to develop and test new opportunities to reduce or redirect waste from sectors across the economy, starting with construction, renovation and demolition (CRD) materials. COIL is looking to develop and test system changes that will create a more circular CRD industry</p>	N
<i>OTHER OPPORTUNITIES</i>		
42.	<p>Explore multi-municipal partnerships for waste management services</p> <p>Explore opportunities for partnerships with other municipalities/regionalization of services that will make waste management activities more effective and efficient. This may include shared collection and processing contracts or facilities.</p>	Y
43.	<p>Assisted Waste Collection Services</p> <p>Assisted waste collection services are municipal support services provided to residents who have temporary or physical disabilities and are unable to set waste at the curb for collection. These programs help to promote independent living and reduce the risk of injury to those who need such physical assistance.</p>	N
<i>DISPOSAL/PROCESSING</i>		
44.	<p>Future Expansion of Landfill Site</p> <p>The City's landfill site has an approved capacity of 974,000 m³. The City's 2024 annual monitoring report estimates that it has about 478,000 m³ of disposal capacity remaining, or about 41 years of estimated site life. Future expansion of the landfill would extend its lifespan, which may either require or be benefited by acquisition of the landfill site's adjacent properties.</p> <p>The approximate cost of obtaining the necessary approvals for this expansion (excluding construction) would be in the order of \$100,000 to \$150,000.</p>	Y
45.	<p>Develop a new landfill site</p> <p>Site and build a new landfill to secure long-term disposal capacity for the municipality. The new landfill could be exclusively for the Municipality's own use, or it could be designed for use as a regional landfill that accepts waste from other municipalities in the region.</p> <p>Establishing a new landfill would require an Environmental Assessment (EA) to be completed, which would consider a variety of technical, social, environmental and economic factors. The EA and subsequent design and approvals process would likely be about a decade to complete before construction could begin. This planning process could be extended if the new landfill project is contentious.</p> <p>The cost to identify, design, approve, and construct a new landfill site may be in the order of \$15 million to \$25 million, depending on the facility's size, use, and complexity.</p>	N

No.	Option and Description	Recommended for Short List Evaluation?
46.	<p>Develop an Energy from Waste facility</p> <p>While Energy-from-Waste (EfW) facilities are not very common in Canada, they are regularly used in waste management systems in the United States and other countries. While EfW does not replace the need for a landfill, it significantly reduces the volume of waste requiring disposal, thereby minimizing landfill space. Examples of EfW facilities in the GTA include the Durham York Energy Centre in Clarington and the Emerald Energy from Waste facility in Brampton.</p> <p>There are two broad categories of existing thermal treatment: conventional combustion technologies and advanced thermal treatment technologies. Conventional combustion technologies include mass burn incineration, controlled air systems, and others, with mass burn being the most common. Advanced thermal treatment technologies, which are generally less proven and more technologically complex, include gasification, pyrolysis and plasma arc gasification.</p> <p>Clarence-Rockland would have insufficient annual tonnages to achieve any economy of scale for an EfW facility. Therefore, the Municipality's participation in EfW would need to be done so in partnership with other municipalities.</p>	<p>N</p>
47.	<p>Develop a Mechanical Biological Treatment facility</p> <p>Develop a Mechanical Biological Treatment facility within the Municipality to process and stabilize its solid waste. Recyclable materials are sorted out of the garbage stream, which then goes through a stabilization process where the organics are rendered essentially inert. This reduces the volume of the waste requiring disposal and removes most if not all of its water content. This in turn reduces the quantity of leachate generated by the waste once disposed.</p> <p>Clarence-Rockland would have insufficient annual tonnages to achieve any economy of scale for such a facility.</p>	<p>N</p>
48.	<p>Export garbage to a different landfill</p> <p>When the municipal landfill is nearing capacity, the Municipality could investigate disposal of its waste at a private disposal facility or at the disposal facility of another municipality.</p>	<p>Y</p>

Long List Screening Criteria / Legend

Diversion Potential / Critical for Supporting Diversion

- ~ = Minimal diversion potential
- ✓ = Some diversion potential (nil to 2% of total residential waste generated)
- ✓✓ = Good diversion potential (2% to 10% of total residential waste generated), or improved management of toxic / hazardous materials
- ✓✓✓ = Very good diversion potential (More than 10% of total residential waste generated)
- CSD = Policy or other option critical or otherwise very beneficial to support waste diversion



Cost Efficiencies/ Savings Potential

- ~ = Minimal to no cost savings
- \$ = some potential for cost savings (or additional revenue)
- \$\$ = good to very good potential for cost savings (or additional revenue)

Implementation Cost









- \$ = Low cost
- \$\$ = Moderate cost
- \$\$\$ = Significant cost










Approach Innovation and/or Reliability









-  = Approach is innovative, or is shown to be a reliable solid waste option
-  = Approach has not been shown to be particularly innovative, or has not been shown to be a particularly reliable solid waste option











Carry Forward for Short List Evaluation








- **Y** = Yes, carry forward as a short-listed option
- **N** = No, option is screened out

No.	Option and Description	Screening Criteria				Carry forward to Short List Evaluation?
		Diversion Potential / Critical for Supporting Diversion	Cost Efficiencies/ Savings Potential	Implementation Cost	Approach Innovation and/or Reliability	
WASTE REDUCTION AND REUSE						
1.	Promote on-site management of organics (backyard composting and grasscycling)	✓✓	\$	\$		Y
2.	Supporting Waste Minimization and Diversion at Special Events	✓	~	\$\$		Y
3.	Support Community Reduce and Reuse Programs	✓	~	\$		Y
4.	Establish a Lendery Program	~	~	\$\$		N
5.	Curbside Give Away Weekends	✓	~	\$		Y
6.	Subsidies, Rebates, Grants for Actions that Avoid, Reduce, or Reuse Waste	~	~	\$		N
RECYCLING						
7.	Increase the number of waste diversion special events.	✓✓	\$\$	\$		Y
8.	Add additional materials to the municipal recycling program	✓✓	\$	\$\$		Y



No.	Option and Description	Screening Criteria				Carry forward to Short List Evaluation?
		Diversion Potential / Critical for Supporting Diversion	Cost Efficiencies/ Savings Potential	Implementation Cost	Approach Innovation and/or Reliability	
9.	Textile recycling	✓✓	~	\$\$		Y
10.	Agricultural waste diversion	✓	~	\$\$		N
11.	Curbside battery recycling	✓✓	\$	\$		Y
ORGANICS MANAGEMENT						
12.	Introduce household (food and kitchen waste) organics collection and composting	✓✓✓	~	\$\$\$		Y
13.	Conduct further pilot testing of foodcycler-style home composting appliances.	✓	~	\$\$		Y
14.	Develop and Implement a Food Waste Reduction Strategy	✓	\$	\$		Y
WASTE COLLECTION/RECEIVING						
15.	Assess garbage collection frequency (every other week collection)	CSD	\$\$	\$		Y
16.	Assess collection using carts (automated or semi-automated curbside cart collection of garbage)	~	\$	\$\$		Y
17.	RFID Technology on Waste Collection Containers	~	\$	\$		Y

No.	Option and Description	Screening Criteria				Carry forward to Short List Evaluation?
		Diversion Potential / Critical for Supporting Diversion	Cost Efficiencies/ Savings Potential	Implementation Cost	Approach Innovation and/or Reliability	
18.	Pilot-test Alternative Collection Containers in Public Spaces	~	\$	\$		N
19.	Zero Emissions Solid Waste Fleet	~	\$	\$\$		Y
PROMOTION AND EDUCATION <i>{note – the various Promotion and Education options listed below could be integrated and implemented as part of the targeted/expanded promotion and education campaign option, or undertaken separately}</i>						
20.	Conduct targeted/expanded promotion and education campaigns	CSD	\$	\$\$		Y
21.	Develop branding for the Solid Waste Management Section / Program	n/a	~	\$		Y
22.	Enhance Social Media Presence and use of Apps	CSD	\$	\$		Y
23.	Promote “Green” purchasing and Green Procurement	✓	~	\$		Y
24.	Encourage Extended Producer Responsibility	CSD	\$\$	\$		Y
25.	Provide Toolkit for Waste Diversion in Multi-Residential Buildings	✓	~	\$		N

No.	Option and Description	Screening Criteria				Carry forward to Short List Evaluation?
		Diversion Potential / Critical for Supporting Diversion	Cost Efficiencies/ Savings Potential	Implementation Cost	Approach Innovation and/or Reliability	
26.	Conduct periodic multi-season waste audits	CSD	~	\$\$		Y
MUNICIPAL POLICY						
27.	Introduce / reduce maximum bag limit	CSD	\$	\$		Y
28.	Increase the cost per bag tag	~	\$	\$		Y
29.	Shift to full user pay	~	\$	\$		Y
30.	Enforcement of Waste Collection By-Law	CSD	~	\$		Y
31.	Differential tipping fees	✓✓	\$	\$		Y
32.	Clear Garbage Bags	✓✓	~	\$		Y
33.	Reduction Strategies and Bans for Single-use Items	✓	~	\$		Y
34.	Preparation of Multi-Residential development standards	~	~	\$\$		N
35.	Update waste performance metrics	~	~	\$		Y

No.	Option and Description	Screening Criteria				Carry forward to Short List Evaluation?
		Diversion Potential / Critical for Supporting Diversion	Cost Efficiencies/ Savings Potential	Implementation Cost	Approach Innovation and/or Reliability	
36.	Mandatory Waste Diversion in all Municipal Facilities	✓	~	\$\$		Y
<i>IC&I</i>						
37.	Promotion of waste minimization/diversion in the IC&I sector	✓	~	\$		N
38.	Further or complete reduction in provision of waste collection services to IC&I sector (or portions of it)	✓✓ ⁵²	~	\$		Y
39.	Establish a system for Construction and Demolition (C&D) recycling	✓✓	\$	\$\$		Y
40.	Divert C&D Materials from Landfill Site either through landfill fees or bans	✓✓ ¹²	\$	\$		Y
41.	Partnership with COIL Zero Waste Economic Transformation Lab	~	~	\$		N
<i>OTHER OPPORTUNITIES</i>						
42.	Explore multi-municipal partnerships for waste management services	✓✓	\$\$	\$		Y

⁵² While waste may continue to be disposed at a private facility, the Municipality would be able to retain that disposal capacity for its residential waste and therefore extend the useful life of the landfill site.

No.	Option and Description	Screening Criteria				Carry forward to Short List Evaluation?
		Diversion Potential / Critical for Supporting Diversion	Cost Efficiencies/ Savings Potential	Implementation Cost	Approach Innovation and/or Reliability	
43.	Assisted Waste Collection Services	~	~	\$		N
DISPOSAL						
44.	Future Expansion of Landfill Site	~	\$	\$\$		Y
45.	Develop a new landfill site	~	~	\$\$\$		N
46.	Develop an Energy-from-Waste facility	~	~	\$\$\$		N
47.	Develop a Mechanical Biological Treatment facility	~	~	\$\$\$		N
48.	Export garbage to a different landfill	~	~	\$\$		Y

Appendix C – Review of Short-Listed Options

A. WASTE REDUCTION AND REUSE

a. Promote On-site Management of Organics

Centralized organics programs such as the composting of household source separated organics (SSO) and leaf and yard waste yard waste organics can divert significant amounts of solid waste from disposal and provide environmental benefits. Another staple approach in Ontario for diverting organics is backyard composting (BYC) and grasscycling. These programs have the benefit of diverting organics from landfill without incurring any collection or processing costs.

Backyard Composting

Backyard composting is, essentially, the composting of home and kitchen organics (such as fruit and vegetable peelings, coffee grinds and eggshells) in a backyard composter (BYC). This is a voluntary activity, and many municipalities try to encourage it through promotion and education, and by offering subsidized or free backyard composters. Various municipalities find that residents still utilize their green bins, as meat and dairy products should not be placed in a BYC for composting due to the potential for odour and pests.

While the City did offer backyard composters in the past, it no longer does so.

An example of a comprehensive backyard composting promotion and education program can be found with the Township of Langley in British Columbia (<https://www.tol.ca/en/services/backyard-composting.aspx>). The Township conducted a Community-Based Social Marketing backyard composting study in 2010 and identified the following as potential barriers to participation:

- The convenience of other disposal methods, such as the garbage or a garburator;
- Lack of a perceived benefit;
- Lack of understanding on how to backyard compost;
- Inconvenience of going out and purchasing a backyard composter;
- Concern over odours and pests;
- Belief that backyard is too small; and
- Perception that composting is messy, among others¹.

To counter these barriers, the Township developed a webpage hosting composting videos and other information about backyard composting, sold subsidized backyard composters and aerators, and offered vermicomposting (i.e., composting with worms) workshops and garden parties. The Township continues to include information about backyard composting on their website and offer subsidized composters and aerators for sale (see the screengrab in the figure below).

At the time of the 2010 study, the Township did not have a household organics Green Bin program. However, in 2013, the Township launched their “Green Can” program, where residents were able to place food scraps with yard waste in a curbside collection can. In 2016, this program was modified through the introduction of wheeled carts to collect organic waste.

¹ Lura Consulting. *Township of Langley Backyard Composting Community-Based Social Marketing Study*. November 1, 2010.



The screenshot shows the Township of Langley website header with the logo and navigation menu. The main content area is titled "Purchase a backyard composter" and contains text describing the FreeGarden composter, a kitchen catcher, and a Wing Digger aerator. Below the text are three images: a black FreeGarden composter, a tan kitchen catcher, and a green Wing Digger aerator.

Township of Langley
EST. 1873

Services Parks & Recreation Arts & Culture Building & Development

Purchase a backyard composter

The Township sells the FreeGarden, an 80-gallon, durable and lightweight composter. The subsidized cost to Township residents is \$25. To contain your kitchen scraps you can purchase a kitchen catcher for \$5 and to mix your compost you can purchase a Wing Digger aerator for \$15. The wings of the tool fold in as it is pushed into the compost and fold out when it is pulled up. This brings older material from the bottom of the composter to the top, and mixes it with new additions, it also loosens the compost to introduce oxygen.

These products are available for purchase in person at the Township's **Civic Facility** Customer Service (20338 - 65 Avenue) or over the phone by calling Township customer service (604-534-3211). Free home delivery is available upon request.



Screengrab from Township of Langley Backyard Composting Webpage

In another example, the City of Red Deer, Alberta, had implemented a program called “Composting at Home.” The purpose of the initial four-year backyard composting program was to provide the residents of Red Deer with the knowledge and tools they require to backyard compost. The program used Community Based Social Marketing to change behaviour by identifying the barriers to backyard composting, designing a strategy to address them, and then running a pilot program. The program began in March 2012, ran for seven years and trained more than 1,800 people².

Additionally, some municipalities also include the sale of digesters, such as the Green Cone Digester. For example, the Township of Selwyn³ and the Essex Windsor Solid Waste Authority⁴ sell and offer information on the Green Cone Digester. The Green Cone Digester turns food scraps into a nutrient-rich liquid and can digest material not suitable for backyard composting, such as raw and cooked meat or fish and dairy products. While the digester does produce a small amount of digested food waste, it takes about five years before the digester bucket needs to be emptied.

² City of Red Deer. Composting. <https://www.reddeer.ca/city-services/environment-and-conservation/your-yard/composting/>.

³ https://www.selwyntownship.ca/en/township-hall/resources/Public_Works/Composter-vs-Digester-FULL.pdf

⁴ <https://www.ewswa.org/composting-food-waste/composting-and-digesting/>

Township of  **Composters vs. Digesters**

Using a composter and a digester in your backyard can help you sustainably divert all food waste and generate nourishment for your garden!



\$30

Where should I put my Composter?

- Exposed to the sun
- Convenient and accessible spot
- Well-drained area
- Close to a water source for maintenance

How do I manage it through the seasons?

- Spring: empty the composter, use the finished compost in your garden and start a new pile with the material that is still breaking down.
- Summer: keep your composter in top condition by layering and stirring.

- Fall: if compost is available, harvest the finished compost and use as mulch in your garden. Continue to layer and stir.
- Winter: continue to add kitchen scraps regularly.

How do I start composting?

- Churn the soil where the composter will be placed
- After installation, place a layer of small branches at the bottom for air and drainage purposes
- Place kitchen scraps and dried yard waste in layers
- Put in a layer of finished compost or garden soil to introduce microorganisms
- Mix the pile and add organics as often as possible

Where should I put my Digester?

- Exposed to the sun
- Convenient and accessible spot
- Well-drained area
- Area where you can dig a 3 foot hole
- Away from your well, septic system and any underground wire/cable

How do I start my Digester?

- Dig down 3 feet to install the digester, then start adding kitchen waste. Limit meat/bone/fish input for the first 4-6 weeks until the digester is established.

How do I manage it through the seasons?

- Digesters do not need any maintenance. Simply add your kitchen waste and secure the lid tightly.
- If the material in the digester isn't breaking down fast enough, use an enzyme revitalizer (used for septic systems) to speed up the breakdown of materials, or move the digester to a new location.
- Do not allow it to fill above ground level or else it becomes very tricky to move.



\$60

Extract from Township of Selwyn Composters vs. Digesters Brochure

Grasscycling

Grasscycling is the practice of leaving grass clippings on the lawn so they can decompose and return to the soil. Many municipalities do not accept grass clippings in their yard waste program because they can cause odour issues during the yard waste composting process. Instead, they encourage the practice of grasscycling through promotion and education. Examples of municipalities with grasscycling webpages include:

- City of Winnipeg (www.winnipeg.ca/waterandwaste/recycle/grasscycling.stm);
- City of Hamilton (<https://www.hamilton.ca/home-neighbourhood/garbage-recycling/yard-waste>);
- City of Vaughan (<https://www.vaughan.ca/residential/garbage-and-recycling/leaf-and-yard-waste/grasscycling>); and
- Halifax Regional Municipality (www.halifax.ca/home-property/garbage-recycling-green-cart/green-carts-leaf-yard-material/grasscycling).



Frame for HRM's "Grasscycling: Keep it on the Lawn" Instruction Video

To encourage grasscycling, some municipalities have also offered rebates for mulching lawnmower blades or mulching mowers. Typically, residents would submit a form with the receipt for the mulching blade or mulching mower to obtain the rebate. Examples of such programs⁵ are provided in the following table.

⁵ Note – Some programs may not be currently offered.

Examples of Past Grasscycling Incentive Programs

Municipality	Type of Incentive
Winnipeg, MB	<ul style="list-style-type: none"> • Issued EOI in August 2014 for point-of-sale rebates at participating retailers. • EOI proposes point-of-sale rebates of \$30 on lawnmowers and reel mowers and \$5 for replacement blades. • Would also include rebates for tune-ups and blade sharpening on mulching lawnmowers and manual reel lawnmower blades.
Folsom, CA	<ul style="list-style-type: none"> • Residents could sign up for a workshop teaching how to recycle yard waste through composting and recycling through their Minimizing Organic Waste with Education and Recycling (MOWER) Program. • At end of workshop, participants had a choice of a subsidized composted bin (\$30) or a mulching lawnmower rebate of \$25.
Glendale, CA	<ul style="list-style-type: none"> • Brush chipper/shredder - \$100 rebate (maximum of 15 chipper/shredder rebates are issued each year). • Mulching mower retrofit blade - \$5 rebate.
City of Northglenn, CO	<ul style="list-style-type: none"> • \$5 rebate on utility bill on purchase of mulching lawnmower blade or new mulching lawnmower.
Hastings Utilities, Hastings, NE	<ul style="list-style-type: none"> • New mulching blades were eligible for a \$10/blade rebate, limit three blades. • New mulching mowers were eligible for a \$50 rebate.
Hutchinson, MN	<ul style="list-style-type: none"> • During backyard composting program rollout, residents provided with five-dollar rebate coupon and a free backyard composter for attending workshop on backyard composting and grasscycling.
La Verne, CA	<ul style="list-style-type: none"> • \$10 rebate for mulching mower blades and compost bins • \$25 rebate for chipper shredders. • Residents who purchase these items brought receipt or proof of purchase to City Hall for rebate. • Program first come/first served with a ceiling of \$2,000.
Woodland, CA	<ul style="list-style-type: none"> • Rebate to residents who purchase a mulching mower and/or chipper and/or compost bin. • Funding for the program limited. Receipt of a rebate depends on availability of funds when applications are received. • Rebate is for \$100 per item, or if the item costs less than \$100, then rebate is for the purchase price of the item. Maximum amount for rebate is \$300.
King County, WA	<ul style="list-style-type: none"> • King County (Washington) Natural Lawn Care program in the late '90s featured a limited (19 households in a single neighbourhood) distribution of free mulching mowers as part of campaign.

b. Supporting Waste Minimization and Diversion at Special Events

Special events or public events can generate large quantities of various waste. The City can provide tools and resources to help ensure event organizers send as little waste for disposal as possible. Other mechanisms such as permit / facility requirements and graduated waste disposal fees can also be used.

There are a number of “Zero Waste” event guides available that could be used as a resource “off the shelf” with supportive materials from the City. Examples include:

- City of Toronto Special Events Waste Diversion Handbook (<https://www.toronto.ca/wp-content/uploads/2018/01/9510-9980-Special-Events-Hand-Book-AODA.pdf>)
- RRFB Nova Scotia Event Greening Guide (https://divertns.ca/sites/default/files/2021-09/rrfb-event_greening_guide.pdf)
http://divertns.ca/assets/files/Guides/rrfb-event_greening_guide.pdf)
- Town of Squamish, BC Zero Waste Events Guide For Event Organizers (<https://squamish.ca/assets/solid-waste/Organics-Guides/Zero-Waste-Events-Guide.pdf>)
- Zero Waste DC Guide To Waste Reduction at Events (https://zerowaste.dc.gov/sites/default/files/dc/sites/zerowaste/page_content/attachments/zerowaste-guide_101421.pdf)
- Sonoma County, California Zero Waste Event Guide (https://www.recology.com/wp-content/uploads/2023/04/Zero-Waste-Event-Guide_ZWS.pdf)

Numerous other guides can be found online using the search terms “zero waste event guide”.

Another aspect of this would be to develop a directory of service and product providers that may help event organizers (and the general public) help event organizers achieve their waste minimization and zero waste goals. A vendor list of pre-approved products could be generated through a request-for-information process by the City. Two examples of online directories include:

- Burlington Green’s ‘Shop Local Buy Green’ directory (<https://www.burlingtongreen.org/shop-local-buy-green/directory/>); and
- Toronto’s ‘Reducing Single-Use’ Directory of Service Providers (<https://www.toronto.ca/services-payments/recycling-organics-garbage/waste-management/reducing-single-use-takeaway-items/reducing-single-use-directory-of-service-providers/>)

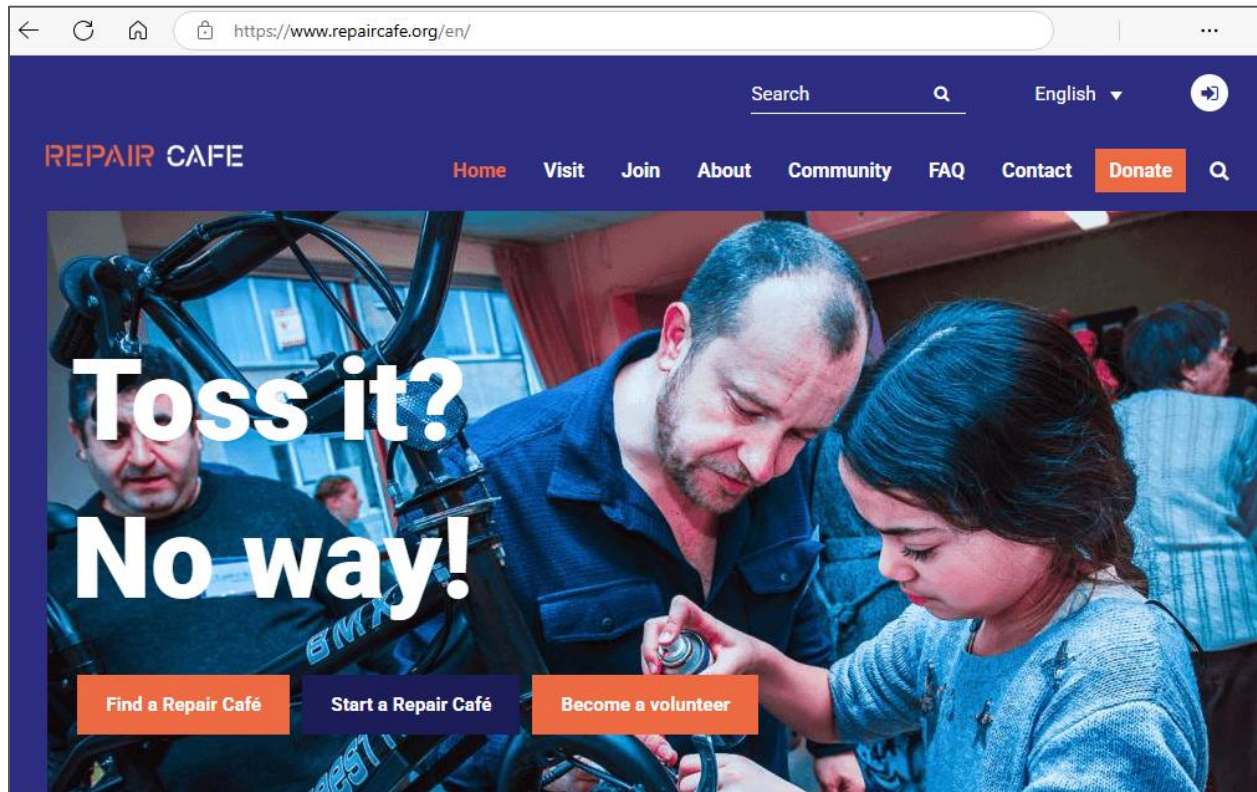
Promotion and/or development of materials to encourage events shift toward zero waste could be included within the City’s waste diversion promotion and education strategy and budget. The cost of the promotion would depend on its extent.

c. Support Community Reduce and Reuse Programs

There are a variety of initiatives in various communities that promote waste reduction through the reuse or repair of items. Providing promotional or other support for such programs could help the City prevent the premature disposal of items that may still have use. This type of initiative would also provide other community benefits such as local skill development, goods affordability, and economic development.

Thrift stores and pawn shops are two common types of organizations that facilitate local reuse. Other community groups and non-profit organizations may host events like repair cafes, which bring together owners of broken items and those who can either fix the item and/or teach the owner how to repair it.

For example, the Ottawa Tool Library is a non-profit tool lending library located in the City of Ottawa's Laurentian neighbourhood and includes repair cafes among its offered events⁶. The Repair Café concept was reportedly initiated in 2007 in Amsterdam and can be found in countries around the world. RepairCafe.org provides promotional and educational material about Repair Cafés, including information on where repair cafes are available, how to start one, and information on how to repair various goods⁷. A search on their webpage shows that there are about 27 such cafes operating in Ontario, including the one mentioned above in Ottawa.



Screengrab from RepairCafe.org homepage

d. Curbside Give Away Weekends

Curbside Giveaway events are a method municipalities use to encourage the reuse of unwanted goods that still have useful life. Clarence-Rockland could continue and expand the use of this program and incorporate its promotion within a Waste Management Promotion and Education Strategy.

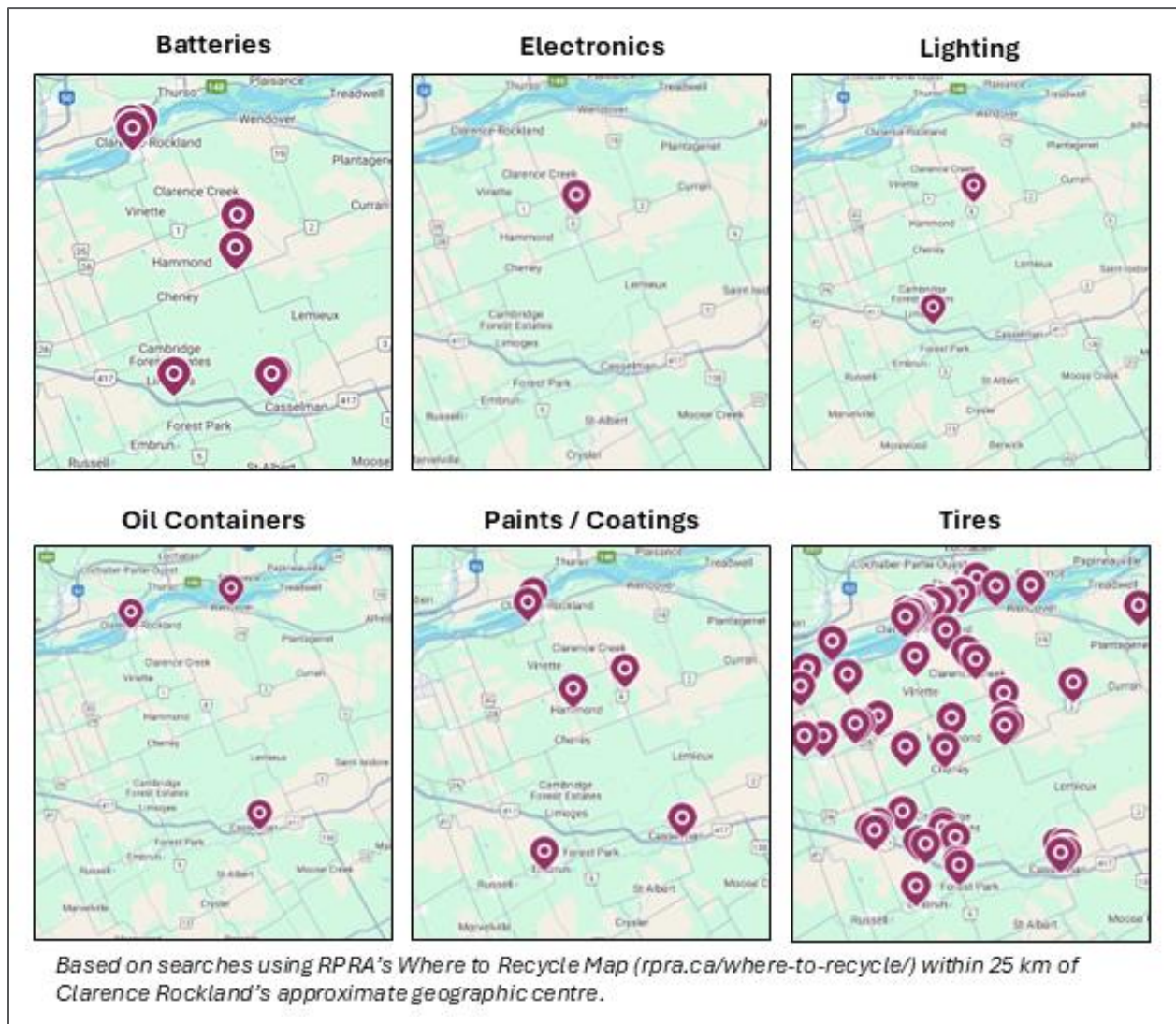
⁶ <https://ottawatoolibrary.com/repair-cafes/>

⁷ <https://www.repaircafe.org/en/>

B. Recycling

a. Increase the Number of Waste Diversion Special Events

Holding irregular events for the collection of special wastes have been mainstays of municipalities for decades. However, given the abundance of drop-off locations now available for consumers, special collection events are not specially recommended in this strategy. Rather, it is recommended that the City promote and encourage the use of existing drop-off locations. For example, RPR's Where to Recycle Map (<https://rpra.ca/where-to-recycle/>) allows users to search for depot, retail and date-specific event-based locations where materials can be dropped off. The figure below depicts locations for various materials based on a search for depot and retail locations within 25 km of Clarence-Rockland's geographic centre (approximately).



Drop-off locations for various special wastes in Clarence-Rockland

b. Add additional materials to the municipal recycling program

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

One example of a material of some interest in Ontario is Carpet, although it is a material with limited available recycling opportunities. 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.

As the City explores these opportunities, considerations should include:

- Available markets or processors for the material under consideration;
- Collection and handling logistics for the material and associated capital and operational costs; and
- Longevity / sustainability of the program.

c. Textile Recycling

The waste composition analysis prepared for this strategy estimates that approximately 120 tonnes of textiles are disposed by City residents each year. In Ontario, diversion of textiles from disposal is commonly conducted through non-profit and thrift organizations, such as the Salvation Army or Value Village, or through textile diversion programs run in partnerships with such organizations, for instance by providing drop-off locations in municipal areas. Examples of municipal programs include:

- Region of Peel residents can take waste clothing and footwear to their Community Recycling Centre (CRC) reuse drop-off areas. Some CRC's have Salvation Army Thrift Store Donor Welcome Centres or Diabetes Canada Textile Sheds (<https://peelregion.ca/waste/sorter/crc/clothing-footwear>).
- The City of Markham has a clear bag program and since 2017 has banned textiles from being placed in the garbage. It has placed Markham-branded textile donation bins in 160 public access locations and 63 multi-residential properties. Its textile program includes partnerships with licensed, registered charities such as The Salvation Army, Diabetes Canada, Cornerstone to Recovery, Ontario Federation of Cerebral Palsy, and B'nai Brith Canada. The partners sort donated textiles based on whether they can be re-worn, reused, or recycled. Textiles unable to be re-worn are turned into industrial rags, furniture padding, insulations, car seats, and recycle fabrics, among other things⁸. See the following figure for an example of the program's communication material.
- York Region provides textile collection bins at select York Region waste depots. The program is run in partnership with Diabetes Canada and B'nai Brith. The Region also lists other locations where used textiles can be donated.

Use of curbside collection of textiles is limited. Municipalities such as the Town of Aurora, Town of Whitchurch-Stouffville, and the Township of Muskoka Lakes have piloted curbside collection of textiles but currently operate bin or depot-based programs. The City of Kawartha Lakes, however, piloted a textile curbside collection in 2021 in collaboration with Talize/Recycling Rewards and as of the fall of

⁸ City of Markham. Textiles. <https://www.markham.ca/neighbourhood-services/recycling-garbage/textiles>. 2025.

2024 continues to offer it as a special collection for which residents must register.⁹ Residents place unwanted textiles in a clear bag at curbside for collection. Reusable clothing was provided to a charity while the remaining fabrics were recycled. A June 2023 staff report describes how in 2021 Talize/Recycling Rewards was awarded a contract with the City through a Request for Proposal procurement to provide textile collection and reuse/recycling services for a one-year pilot project, which had been extended. Collections were held typically in October and June. The program collected 25 tonnes at curbside in 2021 11 tonnes in 2022¹⁰.

What are textiles?
 Markham's unique textile recycling program accepts all adult and children's clothing and footwear, including undergarments, socks, shoes, bedding, towels, pillows, and curtains. All unwanted textiles are acceptable for donation including items that are worn, torn or stained. Even single socks and shoes are welcome!

What happens to my textile donations?

Donate → Sort → Recycle

- Rewear: Supporting the Community
- Recycle: Pillow Stuffing, Car Seat Stuffing, Home Insulation

What's accepted?

All Clothing	Household Textiles	Accessories	Footwear
Active wear	Bedding	Backpacks	Athletic shoes
Bathing suits	Bibs	Belts	Boots
Bathrobes	Blankets	Gloves	Cleats
Coats	Comforters	Hats	Dress shoes
Dresses	Curtains	Jewellery	High heels
Jeans	Cushions	Mittens	Running shoes
Pants	Mats	Purses	Slip-ons
Parkas	Oven mitts	Scarves	Slippers
Shirts	Pillows	Ties	Loafers
Skirts	Rags	Toques	Sneakers
Socks (singles or pairs)	Sewing fabric		
Sweaters	Sheets		
T-shirts	Sleeping bags		
Undergarments	Stuffed toys		
Uniforms	Towels		
	Wash cloths		

What's not accepted?
 ALL donated textiles must be dry and free of any medical or hazardous liquids such as grease/oil blood and vomit. Due to sanitary, health and safety concerns some items are not accepted, such as infant car seats.

Partnerships
 Markham has partnered with registered charities, The Salvation Army and Diabetes Canada, who service and maintain all Markham branded textile donation bins. All donated textiles are sorted to determine suitability for re-wear, reuse or recycling. Gently used items will be resold through the Salvation Army's Thrift Store and Value Village locations, where proceeds help support local food banks, shelters, children's camps, addiction treatment facilities and medical research. Textiles that are not suitable for resale are recycled and repurposed into industrial bags, furniture padding, insulation, car seats, recycled fabrics and more.

What's not accepted?
 ALL donated textiles must be dry and free of any medical or hazardous liquids such as grease/oil blood and vomit. Due to sanitary, health and safety concerns some items are not accepted, such as infant car seats.

For more items, visit What Goes Where at markham.ca

THRIFT STORE
DIABETES CANADA

Bag & tie your donations to keep them dry & clean!

Page from the City of Markham Textile Recycling Brochure

⁹ City of Kawartha Lakes. [Register by October 3 for Fall 2024 curbside textile \(clothing, footwear, and linen\) pick-up - City of Kawartha Lakes](#). September 27, 2024.

¹⁰ Jones, Leanna. Textile Recycling Pilot Program Update: Committee of the Whole Report. Report Number: WM2023-008. June 6, 2023.

d. Curbside Battery Recycling

In years past, curbside battery collection events were operated in conjunction with Blue Box recycling programs, in that residents were able to place batteries in a bag on top of their blue box materials, and the collection contractor would collect and handle the batteries separately. With Blue Box collection now transitioning to management by product stewards, there is some uncertainty how curbside battery collection would now proceed. However, a number of municipalities continue to operate curbside battery collections. For example:

- The City of Orillia provided curbside collection for its residents in November 2024. Residents were asked to set out spent household batteries in a sealed clear plastic bag (e.g., a Ziploc bag) and place it on the ground with the rest of their curbside waste items (see figure below). This had changed from previous years when batteries were placed in a bag on top of a household's recycling bin.¹¹ A request for pricing for curbside battery collection was included on the price proposal form in the City's 2019 solid waste collection RFP¹².
- Quinte Waste Solutions held curbside battery collection events in its participating municipalities in March 2025. Residents were asked to place batteries in a resealable bag and place the bag on top of their Papers Blue Box for pickup¹³. At the time of the collection, responsibility for Blue Box collection had not yet transitioned from Quinte Waste Solutions to Circular Materials Ontario, which is scheduled for July 17, 2025¹⁴.
- The County of Simcoe partnered with Call2Recycle to undertake curbside battery collection from November 4 to 7, 2024, which the County referred to as its Battery Collection Week. The County reported that it collected over 50,000 kg during the collection¹⁵.

¹¹ City of Orillia. Orillia's special curbside battery collection runs Nov. 4-8, 2024.

<https://www.orillia.ca/en/news/orillias-special-curbside-battery-collection-runs-nov-4-8-2024.aspx>.

¹² City of Orillia. Request for Proposal for Solid Waste Collection Programs & Recycling Processing & Marketing. October 8, 2019.

¹³ Quinte Waste Solutions. Battery Recycling Program. <https://quinterecycling.org/battery-recycling-program/>

¹⁴ Quinte News. Recycling changes coming in 2025. <https://www.quintenews.com/2025/01/02/recycling-changes-coming-in-2025/>. January 2, 2025.

¹⁵ County of Simcoe. County of Simcoe and Call2Recycle Canada achieve unprecedented curbside battery recycling success in 2024. <https://simcoe.ca/news-releases/county-of-simcoe-and-call2recycle-canada-achieve-unprecedented-curbside-battery-recycling-success-in-2024/>. December 11, 2024.



Image source: City of Orillia. <https://www.orillia.ca/en/news/orillias-special-curb-side-battery-collection-runs-nov-4-8-2024.aspx>

Placement of Batteries for Curbside Collection (City of Orillia)

While there are many opportunities for residents across Ontario to take their used batteries to drop-off locations, data from the RPR indicates that recovery rates for single-use batteries ranged between 22% and 35% from 2020 to 2023, and recovery rates for rechargeable batteries ranging between 37% to 63% for the same period (see table below). This suggests that there is still a considerable proportion of such batteries making their way into Ontario landfills. Offering curbside collection could potentially increase the diversion of batteries by making it more convenient to do so.

Reported Supply and Recovery of Single-Use and Rechargeable Batteries in Ontario

Supply year (battery type)	Recovery year	Tonnes supplied to Ontario	Tonnes recovered	Recovery rate
Single-use				
2021	2023	5,882	1,444	22%
2020	2022	6,925	807	12%
2019	2020-2021	6,977	3,686	35%
Rechargeable				
2020	2023	1,554	913	63%
2019	2022	1,475	761	52%
2018	2020-2021	1,762	874	37%

Source: RPR. https://rpra.ca/wp-content/uploads/Supply-and-recovery-of-batteries-in-Ontario_published-3-25.xlsx. March 20, 2025.

C. ORGANICS MANAGEMENT

a. Introduce Household (food and kitchen waste) Organics Collection and Composting

This study identified that household organics provides a major opportunity for the City to increase diversion of waste from its landfill. Based on the requirements of Ontario's Food and Organic Waste Framework, the City will be required to implement a program for the collection of food and organic waste to single-family dwellings in urban settlement areas within the next five years. Providing this service to the residents and diverting organics from disposal will benefit the City by preserving landfill space, reducing the generation and toxicity of landfill leachate, and reducing the amount of greenhouse gas emissions that may emanate from the landfill.

Implementing a household (food and kitchen waste) organics collection and composting program generally requires a multi-pronged approach. This approach would include the following:

- Prepare an implementation plan for a household organics collection and composting program. The implementation plan should consider the following:
 - Update on the regulatory environment concerning household organics, in particular updates to timelines, thresholds and targets in the Province's Food and Organic Waste Policy Statement.
 - The status of the City's existing and future collection contracts.
 - Estimated annual generation of food and organic wastes and anticipated capture.
 - Collection service levels for organics, garbage and other applicable waste streams.
 - Review and evaluation of processing options, including consideration of municipally owned and/or operated as well as contractor facilities.
 - Feasibility assessment of anticipated capital and operational costs.
 - Identification of a critical path for the development of the program and its delivery.
- Preparation and implementation of a promotion and education strategy for the household organics collection and composting program. This should include:
 - Research on barriers and incentives for correct participation in household organics collection and composting programs.
 - Identification of methods for addressing the identified barriers and capitalizing on incentives.
 - Development of the strategy, including actions and steps for implementation.

The table below presents the net 20-year costs for two household organics collection scenarios. Scenario 1 includes collection of SSO focused on urban areas, while Scenario 2 represents a City-wide program. With an assumed capture rate of about 65%, the estimated annual cost for Scenario 1 is \$160,438 and \$331,024 for Scenario 2. The estimated annual cost includes capital replacements (e.g., carts), collection, processing, and an offset for avoided garbage collection. In both scenarios, the overall anticipated 20-year cost per tonne is 12 to 13 dollars.

20-Year Net Cost Per Tonne - Curbside SSO Scenarios

	Year 1	Each Subsequent Year	20-Year Net Totals
Scenario 1			
Capital	\$552,335	\$55,234	\$1,601,773
Collection	\$117,116	\$117,116	\$2,342,318
Transfer/Processing	\$118,218	\$118,218	\$2,364,355
Garbage Collection Cost Offset	(\$130,129)	(\$130,129)	(\$2,602,576)
Net Cost	\$657,540	\$160,438	\$3,705,870
Tonnes Processed	739	739	14,777
20-Year Net Cost per Tonne			\$13
Scenario 2			
Capital	\$1,024,870	\$102,487	\$2,972,123
Collection	\$268,334	\$268,334	\$5,366,688
Transfer/Processing	\$228,537	\$228,537	\$4,570,744
Garbage Collection Cost Offset	(\$268,334)	(\$268,334)	(\$5,366,688)
Net Cost	\$1,253,407	\$331,024	\$7,542,867
Tonnes Processed	1,524	1,524	30,472
20-Year Net Cost per Tonne			\$12

b. Further Pilot Testing of Foodcycler-Style Home Composting Appliances

Like backyard composting, Foodcycler-style home composting appliances have the potential for managing a portion of the City’s household organics, or they may complement a curbside organics collection program. However, it is unclear at this time whether such a product could provide a consistent level of diversion of organics from disposal, or to what price point the City would need to subsidize the product to provide comprehensive coverage.

The following table provides a summary of estimated costs and diversion in three scenarios using the Foodcycler appliance for household organics diversion. These scenarios include:

- Scenario 1: The City provides a \$100 subsidy for FoodCycler appliances, with 25% of the City’s households (including both single-family and multi-residential) purchasing and using the appliances.
- Scenario 2: The City provides a larger subsidy of \$300 for FoodCycler appliances, with 40% of households purchasing and using the appliances.
- Scenario 3: The City provides a full subsidy (\$469) for the FoodCycler appliances, with 75% of households purchasing and using the appliances.

While Scenario 1’s net cost per tonne appears to operate on a neutral revenue basis (when garbage collection offset costs are considered), the estimated cost to achieve more comprehensive diversion in Scenario 3 surpasses the estimated cost of curbside collection. However, it should be noted that the project team is not aware of any wide-scale implementation data to indicate either what proportion of a population would be willing to purchase a FoodCycler at this level of subsidy, not whether participants would continue using the appliance for the long term and with repeat-purchases.

20-Year Net Cost Per Tonne - FoodCycler-style Appliance Scenarios

	Year 1	Each Subsequent Year	20-Year Net Totals
Scenario 1			
Capital	\$176,385	\$25,198	\$655,144
Collection / Transfer/ Processing	\$0	\$0	\$0
Garbage Collection Cost Offset	(\$53,545)	(\$53,545)	(\$1,070,901)
Net Cost	\$122,840	(\$28,347)	(\$415,757)
Tonnes Processed	304	304	6,080
20-Year Net Cost per Tonne			(\$3)
Scenario 2			
Capital	\$1,411,080	\$201,583	\$6,551,443
Collection / Transfer/ Processing	\$0	\$0	\$0
Garbage Collection Cost Offset	(\$142,787)	(\$142,787)	(\$3,569,671)
Net Cost	\$1,268,293	\$58,796	\$2,385,418
Tonnes Processed	811	811	16,215
20-Year Net Cost per Tonne			\$7
Scenario 3			
Capital	\$4,136,228	\$590,890	\$15,363,134
Collection / Transfer/ Processing	\$0	\$0	\$0
Garbage Collection Cost Offset	(\$267,725)	(\$267,725)	(\$5,354,506)
Net Cost	\$3,868,503	\$323,164	\$10,008,627
Tonnes Processed	1,520	1,520	30,402
20-Year Net Cost per Tonne			\$16

A focused foodcycler pilot project could help to provide additional data that may help assess the suitability of Foodcycler-style appliances for broader, reliable diversion of household organics. A pilot project conducted at the street, neighbourhood or community level (or perhaps or census area) would allow the City to assess what percentage of the population may be willing to purchase and use the units and at what price-point. The pilot should include a methodology for:

- Quantifying/measuring participation of households within the pilot area;
- Quantifying/measuring the amount of organics diverted (either through waste audits and/or comparison of garbage tonnage collected per household against a control group);
- Surveying participants on their attitudes toward use of the appliance; and
- Comparison of measured results against baseline or control data.

The estimated cost for such a pilot would be in the order of \$40,000 to \$60,000. A major factor in the cost of the pilot would be the average cost per appliance and the number of appliances. The feasibility of the pilot may depend on the participation of an appliance provider and the degree to which the appliances are discounted.

c. Implement a Food Waste Reduction Strategy

Avoidable food waste is considered food waste that could have otherwise been consumed (i.e., edible food-loss waste). For example, this may include food that has spoiled or that has been cooked but not eaten. Unavoidable food waste would include items such as carrot top trimmings, peelings from food preparation, or the inedible parts of food (e.g., apple cores). Awareness surrounding avoidable food waste has increased in recent years. For example:

- From a global perspective, the Food and Agriculture Organization (FAO) of the United Nations reports that approximately 14 percent of the world's food (\$400 billion value) is lost on an annual basis between harvest and the retail market, and 17 percent of food is wasted at retail and consumer levels¹⁶.
- In Canada, the National Zero Waste Council has developed a National Food Waste Reduction Strategy¹⁷.
- A study in Quebec estimates that the annual amount of edible food-loss waste in the home is about 40 kg per person per year¹⁸.
- The National Zero Waste Council and Love Food Hate Waste Canada undertook a survey in 2020 to better understand the impact of COVID-19 on consumer behaviours and attitudes related to food and food waste. It reported the top three reasons given by survey respondents for wasting food were:
 - Food left too long so it is unappetizing or may not be safe to eat;
 - Not used by the “best before” or “expiry” date; and
 - Household members don’t finish their meals (most common in families)¹⁹.

Other jurisdictions have begun acting to promote local actions to address this issue. For example:

- WRAP UK has developed a successful food waste reduction campaign titled “Love Food Hate Waste” (www.lovefoodhatewaste.com). The UK campaign includes information on its website about how to avoid wasting food, such as using leftovers for lunches, food purchasing suggestions, and other information. The campaign has also developed an app for iPhones and Android devices to help users reduce food waste. The app includes leftover recipes, a portion planner, a meal planner, and other features²⁰.
- The campaign has expanded internationally to places like Australia and has been licenced in Canada by Metro Vancouver, the City of Toronto and other project partners. An example of a Waste-Free Summer Produce Guide from a past Metro Vancouver campaign is provided in the figure further below. The Love Food Hate Waste Canada program has reportedly reached over 20 million Canadians since 2018 with education on how to prevent food waste. In January 2025, FoodMesh assumed responsibility for management of the campaign²¹.

¹⁶ Food and Agriculture Organization of the United Nations. Nutrition. <https://www.fao.org/nutrition/capacity-development/food-loss-and-waste/en/>. 2025.

¹⁷ National Zero Waste Council Food Waste Webpage: <https://nzwc.ca/focus-areas/food/Pages/default.aspx>.

¹⁸ RECYC-QUÉBEC. Quantification Study of Food Loss and Waste in Quebec. June 2022.

¹⁹ Mustel Group. Food Waste in Canadian Homes: A Snapshot of Current Consumer Behaviours and Attitudes. Prepared for the National Zero Waste Council and Love Food Hate Waste Canada. September 2020.

²⁰ <https://www.lovefoodhatewaste.com/article/get-your-free-love-food-hate-waste-app>

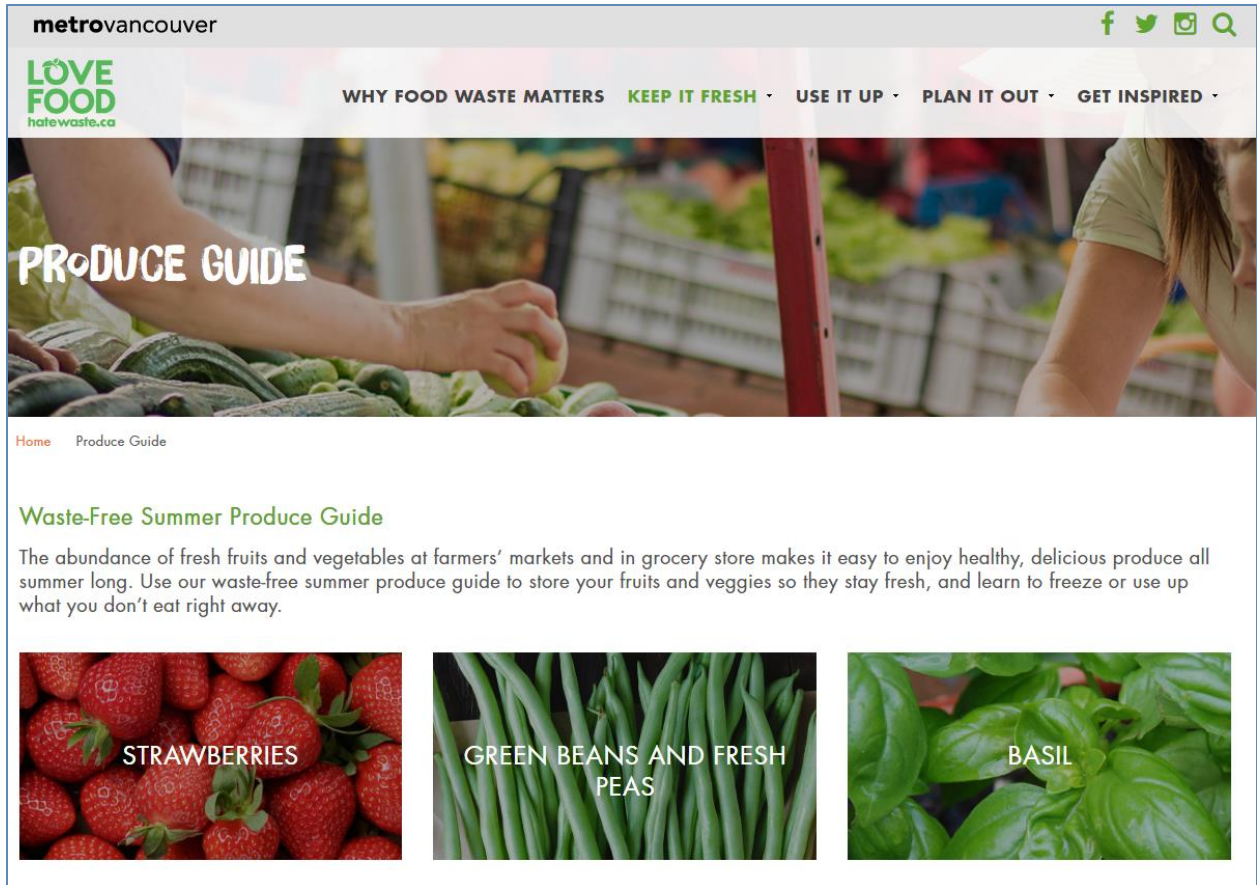
²¹ LFHW Canada. About LFHW Canada. <https://lovefoodhatewaste.ca/about/lfhw-canada/>. 2025.

- Sustain Ontario is a province-wide, cross-sectoral alliance that promotes healthy food and farming (sustainontario.com). In August 2016, it launched a municipal toolkit for reducing household food waste. The toolkit is intended to help municipal and regional government, food policy councils, community groups and other not-for-profit organizations strengthen food waste campaigns or policy initiatives in their region. The toolkit provides background information on food waste, guidance on how to address the issue of food waste, and examples of food waste reduction initiatives²².
- The Region of Peel invites its residents to “Take the Peel challenge and reduce your food waste by the equivalent of a watermelon this year”. The website notes that 40% of the food waste disposed is still good to eat and includes tips and suggestions for reducing avoidable food waste (<https://peelregion.ca/waste/organics/food-waste>).

A food waste reduction strategy would work to reduce avoidable food waste in Clarence Rockland. The City could develop and implement its own custom a food waste reduction strategy or work with an established program (such as Love Food Hate Waste Canada) to implement their available programming locally. This could include food waste reduction initiatives to educate residents and build awareness of food waste and its impact. Examples of initiatives include virtual or in-person waste-free cooking classes or events, rapid messaging about food waste and Green Bin use at events such as Farmers’ Markets, expanding existing P&E campaigns and materials, creating educational material regarding meal planning, how to tailor grocery shopping to avoid impulse buys, and how to properly transport and store perishable food.

The City could also collaborate with the food industry, Public Health and non-profit agencies to direct food to charities and food banks and to provide educational programs geared towards supporting residents in changing food waste behaviour.

²² Sustain Ontario. *Reducing Household Food Waste: A Municipal-Regional Toolkit*. August 2016.



Metro Vancouver's Waste-Free Summer Produce Guide (screen capture)

D. WASTE COLLECTION/RECEIVING

a. Assess Every-Other-Week Garbage Collection Frequency

Typically, 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 also encourages 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 (i.e., 2020) 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 cent²³. The Region also reported that EOW garbage collection provides opportunities for cost avoidance, as EOW collection on average was found to cost about \$1.1M less than weekly collection²⁴.

Similarly, the Region of Waterloo achieved annual contract savings of \$1.5M when implementing EOW garbage collection in 2017²⁵.

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%²⁶.

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 services²⁷.

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-

²³ Alison Powell, Niagara Region. Every Other Week (EOW) Garbage Collection Diversion Impact Analysis. PWC-C 19-2021. May 11, 2021.

²⁴ Alison Powell, Niagara Region. Considerations of City of Niagara Falls Withdrawing from Regional Waste Management Services. PW 14-2020. March 10, 2020.

²⁵ Brad Whitelaw, Niagara Region. 2019.

²⁶ Tetra Tech. Review of Solid Waste Collection Programs. Prepared for the Township of Langley. July 2015.

²⁷ SAIC and SERA. 2012 Five Year Program Audit. Prepared for the Alameda County Source Reduction and Recycling Board. July 2013.

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)²⁸. 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 the alternating week from garbage collection. Participants are required to register and renew annually²⁹.

As EOW garbage collection is being reviewed, the assessment should also include other options for streamlining collection activities, enhancing data collection, and managing costs, among other things. These would include the collection items included in the shortlist:

- **Collection of garbage using carts:** This assessment would examine the feasibility of adopting a cart-based collection system for garbage and (as applicable) source-separated organics. The assessment could consider the feasibility of introducing automated or semi-automated curbside cart collection and providing the waste collection containers with radio-frequency identification (RFID) capabilities. The RFID capabilities would allow for the measuring data about collection services and their performance. They would also ensure systems are in place to capture information on vehicles or programs.
- **Incorporation of zero or low emission vehicles into the solid waste fleet:** The assessment could also examine the feasibility of incorporating requirements for a zero or low emission solid waste fleet in a future collection contract, including the anticipated impact on costs, availability of service providers offering this feature, and whether infrastructure upgrades to service the vehicles would be required or beneficial in the community. It would also help the City reduce its greenhouse gas emissions.

²⁸ Peter Gorrie. Making The Move To Alternate Week Trash Collection. BioCycle August 2012, Vol. 53, No. 8, p. 25.

²⁹ 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.

E. PROMOTION AND EDUCATION

a. Solid Waste Management Promotion and Education Strategy

An effective promotion and education strategy is key to ensuring waste diversion programs are used to their maximum potential through successful participation by residents. They work to identify and overcome both actual and perceived barriers that can discourage residents from fully participating. The overall goal of these promotion and education efforts is to influence sustainable behaviour change within the community.

The City could build upon the successes and lessons learned from the previous communications activities to develop a comprehensive Waste Diversion Promotion and Education Strategy. Elements the strategy may include are:

- Waste Minimization, Reduction and Reuse Practices;
 - Promotion of opportunities for reuse and repair, such as community-based online exchanges;
 - A backyard composting promotion program; and
 - Targeted educational materials and initiatives that focus on specific materials, diversion programs, specific behaviour or attitude changes, or geographic areas. An emphasis could be placed on topics such as waste minimization (i.e., waste reduction and reuse), among others.
- Issue or topic-based campaigns;
- Improving diversion of specific items through targeted campaigns
 - Focusing on issues related to participation, including level of participation as well as how people participate (e.g., reducing contamination, segregating drop-off waste, etc)
 - Promote green purchasing and procurement practices among the general public, local businesses and municipal departments. This could include: promotion of precycling; promotion of the link between purchasing decisions and waste/the environment; educating businesses on green purchasing practices for their sector, etc.
- Audience-specific;
 - An emphasis or targeted campaign on diversion in multi-residential buildings;
 - Delivering presentations and education initiatives to schools and other organizations;
 - The establishment of a Community Liaison Committee to help provide input on and to deliver community-based education; and
 - Enlistment of community champions to help foster waste diversion behaviours in the community.
- Emphasis on Communications Tools and Approaches;
 - Developing a brand that provides a consistent program look and messaging throughout municipal waste reduction initiatives.
 - Enhancing the City's use of its Social Media Presence and use of Apps to deliver public communications and education;

- Capitalize on the City’s website and public participation platform to provide more information related to the City’s waste reduction and waste management services and facilitate interactive engagement with the public.
- Expanding waste management promotions at public events;
- Implementing incentive/recognition programs for exceptional recycling by households, businesses or organizations (e.g., Hamilton’s “Gold Box” program);
- Fine-tuning (as required) of communication tools and materials, such as brochures, etc.

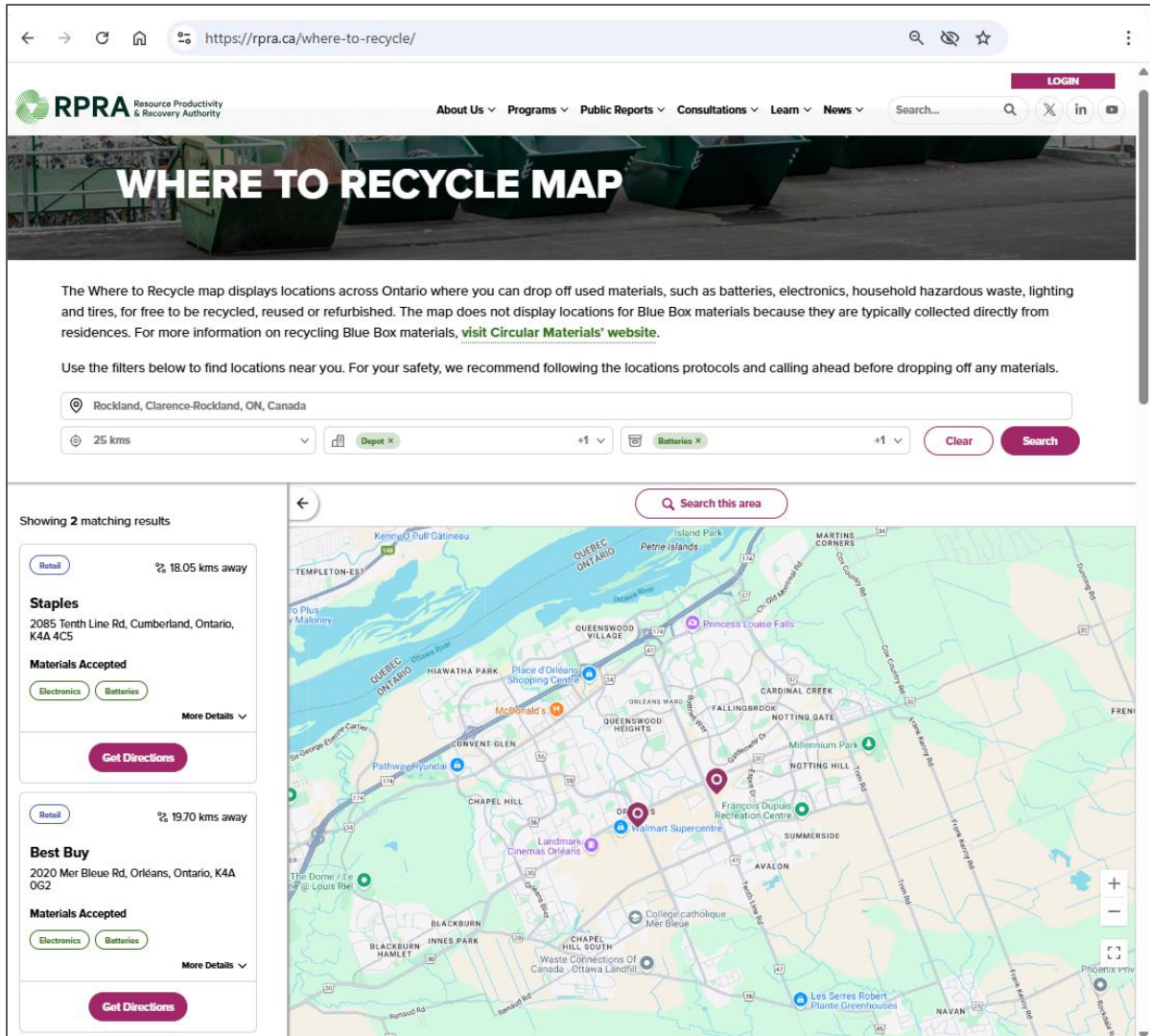
b. Encourage Extended Producer Responsibility

Ontario has a number of Extended Producer Responsibility (EPR) or other industry-funded product stewardship initiatives in place. These are generally in the form of retail take-back or other drop-off programs. As the landscape of EPR in Ontario continues to evolve, how it is implemented in Ontario affects the ability of Clarence-Rockland’s residents to utilize these waste diversion services. Actions the City can do to influence how EPR is implemented and to help its residents use the services provided include:

- Provide the municipality’s perspective on EPR and product stewardship during consultations or at other opportunities;
- Support municipal waste associations in their efforts to lobby for product stewardship; and
- Promote local recycling opportunities through existing provincial product stewardship programs, including a link to the RPRA’s “where to recycle” searchable map³⁰ (<https://rpra.ca/where-to-recycle/>). The following figure presents the results of a search for depot and retail drop-off opportunities for batteries and electronics within 25 km of Rockland.

The level of additional diversion and long-term cost implications from this option are undetermined at this time, as they will depend heavily on the policy decisions made at the Provincial level. However, the operational cost of undertaking this option should not require any additional cost resources and should be covered under the waste management systems existing administrative and promotion/education costs.

³⁰ RPRA’s “Where to Recycle” map displays locations across Ontario where you can drop off used materials, such as batteries, electronics, household hazardous waste, lighting and tires, for free to be recycled, reused or refurbished.



Screengrab from RPRa's Where to Recycle Map

c. Periodic Multi-season Waste Audits

Multi-season waste audits conducted periodically (e.g., every 2 to 4 years) would provide the City with quantifiable data that would help it better understand what wastes are going to landfill that could otherwise be diverted. This information would help the City to confirm which waste materials are avoiding diversion and therefore should be targeted, and which sectors require greater support or motivation to divert waste. It would also allow the City to assess the diversion performance of the Blue Box stewards and to adjust other aspects of its solid waste management program.

The waste audit should include a comprehensive review of the City's waste stream, including specific waste materials of interest, such as:

- Food waste, including avoidable food waste;
- Textiles;
- Blue box recyclables; and
- Any other materials that may be of interest to the City.

The waste audits should consider multiple sectors or locations, which could be completed in phases. Sectors and locations may include:

- Single-family households;
- Multi-residential households;
- IC&I sector; and
- Bulky waste collections.

In some cases, visual audits may also be completed if quantifiable data is not required. Visual audits require less rigour than full sort audits and could potentially be undertaken using municipal or summer staff.

The Continuous Improvement Fund (CIF) developed a guidance document to provide communities across Ontario with direction for planning and executing composition audits of waste, organics and litter streams. The guide identifies audit sources including waste from single-family homes, multi residential units, depots, and business improvement areas (BIAs)/ non-eligible sources. The purpose of the guide was to allow communities to easily compare or consolidate audit data across the province. The guideline is available to download at this address: <https://thecif.ca/project/municipal-waste-composition-audit-guideline/>.

F. MUNICIPAL POLICY

a. Introduce maximum bag limits

The City does not currently have a limit on the number of garbage bags or containers that can be set out for collection. Residents can set out three garbage bags each collection without a bag tag, with subsequent bags requiring bag tags.

Placing a limit on the maximum number of bags that can be set out at the curb and reducing the number of bags that can be set out without a bag tag may provide additional incentive to residents increase waste diversion by:

- Being more cognizant of properly segregating Blue Box recyclables from their garbage; and
- Separating other potentially recyclable waste materials from the garbage for diversion through other means.

For bulkier loads, it may also encourage residents to take segregated loads to the City's landfill site where it can be sorted for proper disposal, reuse or recycling.

b. Increase Cost of Bag Tags

User pay programs, also known as Pay-As-You-Throw (PAYT), unit-based pricing, variable rate and user fee, are becoming an accepted method for financing residential waste management services. By directly charging residents for their waste generation, residents are more directly aware of their waste generation and disposal habits. User pay programs can be full or partial. In a full user pay program, residents pay for each unit (i.e. bag or container) of garbage set out for collection. In partial systems, residents only pay over a set limit (e.g., they can set out one bag without a tag, while subsequent bags must be tagged).

The City's current system operates as a partial user pay system, as residents only pay to set out garbage bags above the three-bag threshold. The cost per garbage tag is \$2.50. The reported revenues from 2023 and 2024 from garbage tags was \$2,594 and \$2,712, respectively. This represents about 1,050 garbage tags sold each year, or roughly 19 used on average each week across the City. Increasing the cost per garbage tag would not have a significant effect on the City's revenues or diversion rate if they are continued to be applied for bags above the three-bag limit. For either to be affected, the cost per garbage tag would need to undergo a significant increase and/or be required after a lower threshold (for example, one or two garbage bags).

To help assess the potential reach of this option, setout data describing how many households set out 1, 2, 3 and 4 or more bags of garbage each week would be valuable. The benefit of this option would increase as the number of households setting out three or bags of garbage also increases. This information could be collected as part of a waste audit or on its own.

With respect to stickers for bulky items, their cost was increased in 2025 from \$10 per item to \$20.

c. Transition to Full User Pay

Transitioning from a partial user-pay system to one that is full user pay could encourage residents to divert more of their waste to diversion programs and potentially reduce overall waste generation. However, shifting to full user pay from a partial user pay can be controversial, as residents may feel that waste collection is a service already paid for through property taxes.

Past studies have shown that municipalities introducing user pay programs generally see increased diversion and reduced disposal rates. A 2001 EnviroRIS Ltd. study noted that, at that time, all user pay/PAYT programs in Canada and the United States were “volume based” systems. Most of the user pay/PAYT communities included in the study used one of two systems: either a tag system or a variable standardized container system. In general, most Canadian user pay programs were found to use the tag system, whereby residents are required to purchase tags that they attach to some or all of the bags/cans of garbage set out for collection. Municipalities included in the research were found to decrease the amount of waste disposed by up to 30% after implementation of their user pay system. However, they would have been shifting from a program that had no user pay, whereas the City currently operates a partial user pay system.

The Association of Municipal Recycling Coordinators (AMRC) conducted an analysis of User Pay system costs in Ontario in a project funded by Stewardship Ontario’s Effectiveness and Efficiency Fund (E&E Project 191). The analysis studied six municipalities in Ontario with user pay systems (four of which were not included in the 2001 EnviroRIS study) and found increases in recycling tonnage ranged from 22% to 86% and that decreases in waste tonnage ranged from 6% to 61% after implementation of user pay.

Other, more recent studies continue to provide support for the applicability of user fees for facilitating waste diversion:

- A study from Wilfrid Laurier University in 2014 examined combined survey and panel data from a 10-year period to examine the efficacy and public perception of user pay schemes in Ontario. The study found that while the implementation of user pay schemes do increase municipal recycling rates, their effectiveness can be negatively impacted by inconsistent enforcement and inadequate recycling bin space. They also found that the public perception of user pay policy is largely negative³¹.
- A 2018 research paper by Christina Chiasson found that user-pay schemes are among the most effective of policies to increase waste separation, although it did not find that such schemes had a significant effect on reducing the total tonnage of waste on a per capita basis³².
- A 2020 study in the City of Toronto examined the type of impact that city’s user pay system had on household food waste disposal. It was concluded that Toronto’s user pay waste program has been effective at diverting food waste into the city’s green cart program, but not at reducing the generation of food waste. The study’s authors suggested that reduction of avoidable food waste could be achieved by increasing garbage cart fees, using a weight-based user pay system, or providing messaging to households on the monetary value of avoidable food waste, and working with food retailers to improve how households shop for their food³³.

This option would generate additional fees for the City, which could in turn be used to offset the City’s operational and capital waste management costs. The table that follows estimates annual revenues based on three scenarios:

³¹ Calvin Lakhan, Evaluating the effects of unit-based waste disposal schemes on the collection of household recyclables in Ontario, Canada. Resources, Conservation and Recycling. Volume 95, 2015.

³² Chiasson, Christina. The price of garbage: an analysis of the effect of user-pay programs on waste diversion in Ontario municipalities. A research paper submitted in partial fulfillment of the requirements for the degree of Master of Science in Environmental Sustainability Institute of the Environment University of Ottawa. April 2018.

³³ van der Werf, Paul; Larsen, Kristian; Seabrook, Jamie A.; and Gilliland, Jason. How neighbourhood food environments and a pay-as-you-throw (PAYT) waste program impact household foodwaste disposal in the city of Toronto. 2020. Paediatrics Publications. 1389. <https://ir.lib.uwo.ca/paedpub/1389>

- Scenario 1: Scenario 1 assumes use of the City’s existing garbage tag fee applied to an average of 1.5 garbage bags set out per week by the City’s 9,525 single-family households.
- Scenario 2: This scenario is based on the City of Toronto’s pricing scheme³⁴, which includes \$306.36 per year for a small bin (75 litres) and \$371.91 per year for a large bin. The scenario assumes 50% of single-family households use the small bin and 50% use the medium bin. The City also provides large (240 litres) and extra large (360 litres) bins, which this scenario has not included. The City of Toronto also allows the use of bagged excess garbage, which must have a garbage tag (\$6.56 each).
- Scenario 3: This scenario is based on the Municipality of Central Elgin’s garbage cart collection program³⁵. Its annual fees include \$75 for 80 litre cart collection service and \$89.40 for 120 litre collection service. The scenario assumes 50% of single-family households use the 80-litre cart service and 50% use the 120-litre cart service. The municipality also provides collection services for 240 litre and 360 litre carts, which this scenario has not included. The municipality also allows the use of bagged excess garbage, which must have a garbage tag (\$5.25 each for tags that never expire).

Estimated Full User Pay System Revenues (Three Scenarios)

Scenario	Estimated Annual Revenue
1. Clarence-Rockland Existing Garbage Tag Pricing (\$2.50 per bag, assuming 1.5 bags per weekly set-out)	\$1,857,375
2. Scenario using City of Toronto Cart Pricing in Clarence-Rockland (50% of households using 75L cart fee and 50% using the 120L cart fee)	\$3,230,261
3. Scenario using Central Elgin Garbage Cart Collection Pricing in Clarence-Rockland (50% of households using the 80L cart fee and 50% using the 120L cart fee)	\$782,955

d. Update to and Enforcement of Waste Collection By-Law

Waste management bylaws provide municipalities with a tool to define and enforce how solid waste is to be managed in their community. The bylaw also provides a mechanism for setting fees for providing solid waste management services.

The current solid waste management bylaw does not contain the provisions for fees. Rather, this is contained within a separate bylaw. The bylaws should be coordinated so that fees related to garbage tags, stickers for bulky items and differential tipping fees at the landfill are consistent and accessible.

³⁴ City of Toronto. Garbage Bin Sizes and Fees. <https://www.toronto.ca/services-payments/recycling-organics-garbage/houses/garbage-bin-sizes-fees/>.

³⁵ Municipality of Central Elgin. Cart Collection. <https://www.centralelgin.org/en/living-in-central-elgin/cart-collection.aspx>.

e. Clear Garbage 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 County³⁶. 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).

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 bags³⁷.
- 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 years³⁸.
- The Township of McMurrich-Monteith introduced a clear bag program in 2012. Recycling tonnage increased by 62% from 2011 to 2013³⁹.

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

³⁶ CIF. Clear Bag Garbage Program Implementation Toolkit: A municipal step-by-step guide. CIF Project 748. 2015.

³⁷ 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.

³⁸ Brad Anguish. Cart Based Garbage and Recycling Collection. Halifax Regional Council Information Report. March 11, 2020.

³⁹ CIF 2015.

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.

f. Reduction Strategies and Bans for Single-use Items

On June 22, 2022, the Government of Canada published the Single-use Plastics Prohibition Regulations (SOR/2022-138), issued under the Canadian Environmental Protection Act, 1999. The regulation prohibits the manufacture, import, and sale of six categories of single-use plastics to prevent plastic pollution. The six categories include checkout bags, cutlery, foodservice ware, ring carriers, stir sticks, and straws. The Single-use Plastics Prohibition Regulations (SUPPR) are part of the Government of Canada's plan to address pollution, meet its target of zero plastic waste by 2030, and help reduce greenhouse gas emissions⁴⁰.

Many municipalities have incorporated actions to address single-use plastics in their outreach or in their waste management plans. For example:

- The City of Burlington's Zero Waste Guide notes the following for corporate food services, internal staff organized meetings and events, and third party organized/catered events on City property:
 - Condiments such as sugar, milk, cream, mustard, ketchup, and jam in single serve non-recyclable packets are prohibited.
 - Spoons or wooden stir sticks (compostable) for hot drinks will be used.
 - Expanded polystyrene foam products (Styrofoam) for food or beverages are prohibited.
 - Zero waste, recycling and composting instructions will be visible in the food preparation and service areas. Recycling and composting containers will be placed in visible locations with appropriate signage and bags (clear bags for recycling and certified compostable bags for composting)⁴¹.
- The City of Toronto adopted its Single-Use and Takeaway Items Reduction Strategy in June 2021. Stage 1 of the strategy focused on encouraging voluntary measures, such as encouraging food establishments to adopt "ask first/by request" processes for items such as bags, straws, and utensils. The Voluntary Measures Program also encouraged businesses to allow the use of reusable cups and takeaway containers in their operations instead of single-use takeaway items. In December 2023, the City adopted the Single-Use and Takeaway Items Bylaw, which requires establishments to adopt "ask first/by request" processes for items such as bags, straws, and utensils. The city also provides resources on its Reducing Single-Use & Takeaway Items webpage. These resources include signs and posters (see following figure), guidance on reducing single-use and takeaway items, a guide for product alternatives for single-use food and beverage containers and accessory items, and a Reducing Single-Use – Directory of Businesses. The purpose of the directory is to let residents know of the practices being taken by participating businesses reducing single-use and takeaway items within their operations and where they can shop to reduce their own use of these items. Businesses that would like to be listed in the directory must complete a Reducing Single-Use program application to be considered⁴².

⁴⁰ Environment and Climate Change Canada (ECCC). Single-use Plastics Prohibition Regulations – Overview. <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/reduce-plastic-waste/single-use-plastic-overview.html>. April 18, 2023.

⁴¹ City of Burlington. Zero waste Guide. Appendix B to EICS-09-24. March 19, 2024.

⁴² City of Toronto. Reducing Single-Use & Takeaway Items. <https://www.toronto.ca/services-payments/recycling-organics-garbage/waste-management/reducing-single-use-takeaway-items/>.

We are reducing waste from single-use items

The City of Toronto Single-Use and Takeaway Items Bylaw is in effect as of **March 1, 2024.**

Plan ahead. Bring your own.

We accept clean reusable shopping bags and cups.



Only take items you really need.

Before receiving single-use items such as utensils, napkins, condiment packages, stir sticks and straws, you will be asked if you need them or they will be available by self-serve or by request.



Questions?

Contact 311 or email reducewaste@toronto.ca.



toronto.ca/single-use



Image Source: City of Toronto. <https://www.toronto.ca/wp-content/uploads/2024/02/93bc-CS-24-0019Single-Use-Takeaway-BylawPoster-A.pdf>

Reducing Single-Use Items Promotional Poster (City of Toronto)

g. Update Waste Performance Metrics

Changes to the material composition and the regulatory environment around waste management have encouraged some municipalities to update how they report on the performance of their solid waste management programs. For example:

- In its 2020 solid waste master plan update, the City of Hamilton noted the legislation to transition the responsibility of the Blue Box Program to producers would require the City to establish new measurements to track the status and performance of the waste management program. One of the action items from the update is for staff to determine a new waste diversion target as well as new key performance indicators (KPIs) to measure the success of the waste management system⁴³. Since the adoption of the update, City staff had considered 29 possible waste management performance metrics used by other municipalities, identified by staff or suggested by residents through surveys. They then short-listed 17 for further evaluation. Examples of select short-listed metrics include:
 - Post Blue Box Transition Diversion Rate;
 - Capture Rate of Organics from Single-Family Homes;
 - Capture Rate of Organics from Multi-Residential Buildings;
 - Landfill life; and
 - Landfill volume used annually⁴⁴.
- A report prepared for Niagara Region explored solid waste management key performance indicators (KPIs) for its typical comparator municipalities. The report noted that the shift toward Individual Producer Responsibility (IPR) models for waste diversion programs may result in difficulty obtaining accurate data on the performance of local IPR diversion programs. Many municipalities are therefore looking to other metrics using data within their control. This could include targets and KPI's that address corporate climate change and sustainability goals. Examples of such metrics include:
 - Tonnes of waste disposed per household.
 - Tonnes of organic waste diverted per household.
 - Tonnes of CO2 emissions.
 - Number of enquiries and program compliance levels.
 - Number of complaint and enquiries calls⁴⁵.

⁴³ Kent, Ryan. Report to the Public Works Committee. Solid Waste Management Master Plan Five-Year Review (PW20072). November 16, 2020.

⁴⁴ City of Hamilton Public works Department Waste Management Division. Waste Management Sub Committee. Agenda Item 7.7. Waste Management Performance Metrics. June 23, 2023.

⁴⁵ Birett & Associates. Technical Memo 4 Comparative Scan of Peer Municipalities. Prepared for Niagara Region. December 2023.

G. IC&I Sector

a. Reduction in Provision of Waste Collection Services to IC&I sector

The City has reduced the number of service stops and customers it provides for solid waste collection services. Generally speaking, delivery of solid waste management services is not a core function of the municipality. Completing a full or partial withdrawal by the City from providing solid waste management services to IC&I sector customers may reduce the City's administrative burden and provide economic opportunities for waste collection service providers.

b. Establish a System for Construction and Demolition (C&D) Recycling

Over 1,000 tonnes of C&D waste were disposed at the City's landfill in 2023. This material could potentially be segregated for reuse or diverted to other C&D-focused disposal facilities. A strategy for C&D waste could help the City ensure C&D waste is delivered segregated to the landfill, and/or the City could work with C&D-focused disposal facilities to provide and promote disposal alternatives to residents. While diverting this material to another facility may reduce the City's annual tipping fee revenue, it would have the benefit of extending the useful life of the landfill.

H. OTHER OPPORTUNITIES

a. Multi-municipal Partnerships for Waste Management Services

Multi-municipal partnerships for the collection and processing of waste is viewed as a municipal best practice by the RPRA. These types of partnerships allow municipalities to take advantage of economies of scale through co-operation with neighbouring municipalities. This could include joint contracts for collection tenders or shared processing facilities for divertible materials.

I. DISPOSAL/PROCESSING

a. Future Expansion of Landfill Site

The City's landfill site has an approved capacity of 974,000 m³. The City's 2023 annual monitoring report estimates that it has about 478,000 m³ of disposal capacity remaining, or about 42 years of estimated site life.

While there is no present requirement for seeking additional disposal capacity, it is in the City's long-term interest to continue exploring options for the extended and cost-effective use of the landfill, and for the waste management site as a whole. This would include:

- Based on the groundwater characteristics, the City should look at purchasing property adjacent to its boundaries, which would allow the site to be expanded in a manner that would protect its ability to continue operation as a natural attenuation facility.
- Continued strategic placement of landfilled waste such that it maintains conditions favourable to a future landfill expansion. use of the Future expansion of the landfill would extend its lifespan, which may either require or be benefited by acquisition of the landfill site's adjacent properties.

The potential need for and suitability of landfill expansion should continue to be reviewed in subsequent SWMS updates.

b. Export Garbage to a Different Landfill

The City's landfill site has sufficient useful life remaining and expansion potential such that it does not have a current need to explore alternative disposal options. Exporting garbage to a different landfill would be a less favourable option compared to expansion of the landfill, as expansion would likely be more cost effective and would enable the City to continue to maintain control over their disposal costs and logistics. However, the potential need for and suitability of waste export should continue to be reviewed in subsequent SWMS updates.

Appendix D – Stakeholder Engagement

CITÉ DE / CITY OF CLARENCE-ROCKLAND

Solid Waste Management Master Plan Update

Public Consultation Presentation



1

CITÉ DE / CITY OF CLARENCE-ROCKLAND

Project purpose

- Review the City's current existing waste management programs.
- Explore options and recommend updates for the Solid Waste Management Master Plan:
 - Meet the City's future waste management needs.
 - Promote sustainable waste management practices.
 - Increase waste diversion.
 - Reduce the amount of waste disposed.
 - Maximize the lifespan of the landfill.

Purpose of this presentation

- Share with you:
 - How much solid waste the City manages, including what is diverted and what is disposed
 - Opportunities for increasing waste diversion
 - Recommended updates to the City's Solid Waste Management Master Plan
- Invite you to provide your feedback on the proposed updates

2

2

Provincial regulations



Waste-Free Ontario Act (WFOA) June 2016

- Enacted the Resource Recovery and Circular Economy Act, 2016
- Enacted the Waste Diversion Transition Act, 2016

Resource Recovery and Circular Economy Act (RRCEA), 2016

- Province to prepare the Strategy for a Waste-Free Ontario: Building the Circular Economy.
- Province to issue resource recovery and waste reduction policy statements.
- Replace Waste Diversion Ontario with Resource Productivity and Recovery Authority (RPRA).
- Establish 'individual producer responsibility' (IPR) framework for their products and packaging once disposed.

Waste Diversion Transition Act, 2016

- Outlines the legislative framework for shifting the then-existing stewardship programs for tires, electronics, household hazardous waste and Blue Box recyclables to the RRCEA's new IPR framework.

3

Provincial regulations



Resource Recovery and Circular Economy Act (RRCEA), 2016

- **Strategy for a Waste-Free Ontario: Building the Circular Economy (February 2017)**
 - Sets vision, goals and strategy for achieving a circular economy.
 - Sets provincial waste diversion targets (30% diversion rate by 2020; 50% diversion rate by 2030; 80% diversion rate by 2050).
 - Identifies actions to achieve Vision

4

Provincial regulations



Resource Recovery and Circular Economy Act (RRCEA), 2016

- **Food and Organic Waste Policy Statement (April 2018)**
 - Included in the *Food and Organic Waste Framework* (Framework).
 - Framework Part A : Action Plan - Province's proposed actions to: Reduce Food Waste; Recover Resources from Food and Organic Waste; Support Resource Recovery Infrastructure; and Promote Beneficial Uses.
 - Framework Part B: Policy Statement - Provides policy directions to support Action Plan.
 - For Clarence-Rockland:
 - Provide collection of food and organic waste to single-family dwellings in urban settlements and in multi-residential buildings.
 - Achieve 50% waste reduction and resource recovery of food and organic waste.

5

Provincial regulations



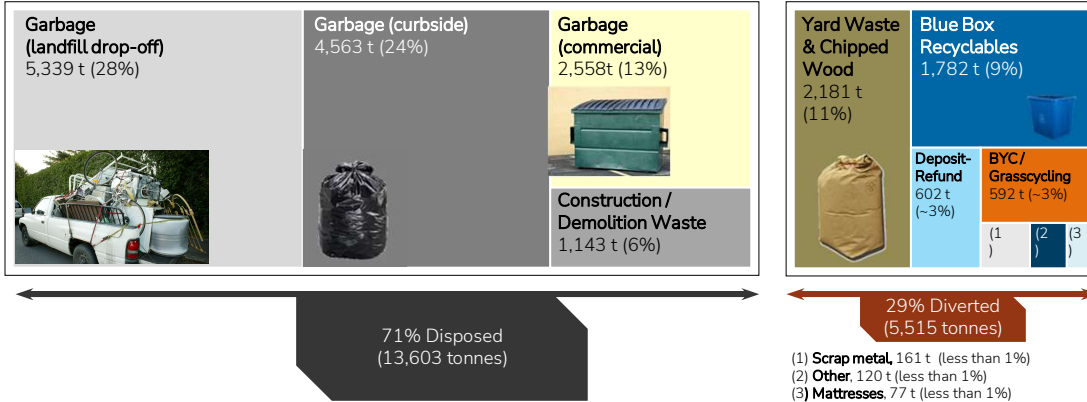
Resource Recovery and Circular Economy Act (RRCEA), 2016

- **O. Reg. 391/21: BLUE BOX (June 2021)**
 - Triggered transition of Blue Box Program to an Individual Producer Responsibility (IPR) system.
 - Producers obligated to develop and operate new system to manage Blue Box recyclables.
 - Similar regulations also in place for Hazardous and Special Products (O.Reg. 449/21), Electrical and Electronic Equipment (O.Reg. 522/20), Batteries (O.Reg. 30/20) and Tires (O.Reg. 225/18)

6

Waste Managed in Clarence-Rockland

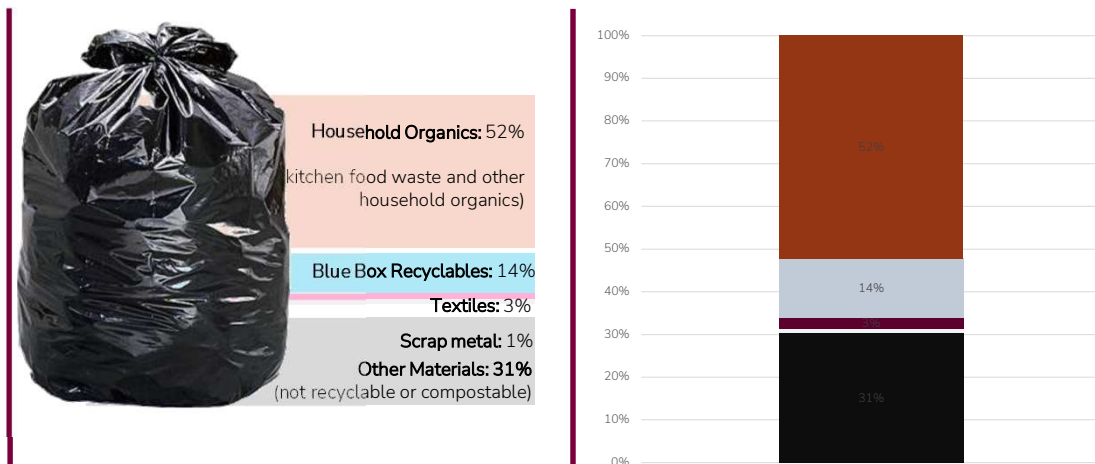
- Waste managed by City: 19,118 tonnes 2024
- Waste disposed: 13,603 (71%)
- Waste diverted: 5,515 (29%)



7

What's in our garbage?

- About 69% of the waste in our residential garbage could potentially be diverted (about 3,100 tonnes per year)



8

8

Options for Updating the Solid Waste Plan

Process for identifying recommended solid waste options

Screening of Options "Long-List"

48 options, 9 categories

Screening criteria included:

- Diversion Potential / Critical for Supporting Diversion
- Cost Efficiencies/ Savings Potential
- Implementation Cost
- Approach Innovation and/or Reliability

Options Categories



9

9

Options for Updating the Solid Waste Plan

Process for identifying recommended solid waste options

- Review of Options-short list
- Possible recommendations include:
 - Implement in **short-term** (1 to 5 years)
 - Implement in **medium-term** (5 to 10 years)
 - Implement in **long-term** (10 to 25 years)
 - Not recommended at this time / revisit during the next solid waste management plan update

10

10

CITÉ DE / CITY OF CLARENCE-ROCKLAND

Recommended Updates to Solid Waste Plan Waste Reduction and Reuse

- Promote on-site management of organics
- Supporting Waste Minimization and Diversion at Special Events
- Support Community Reduce and Reuse Programs
- Continue the Curbside Give-Away Weekends

Implement in the short-term



11

11

CITÉ DE / CITY OF CLARENCE-ROCKLAND

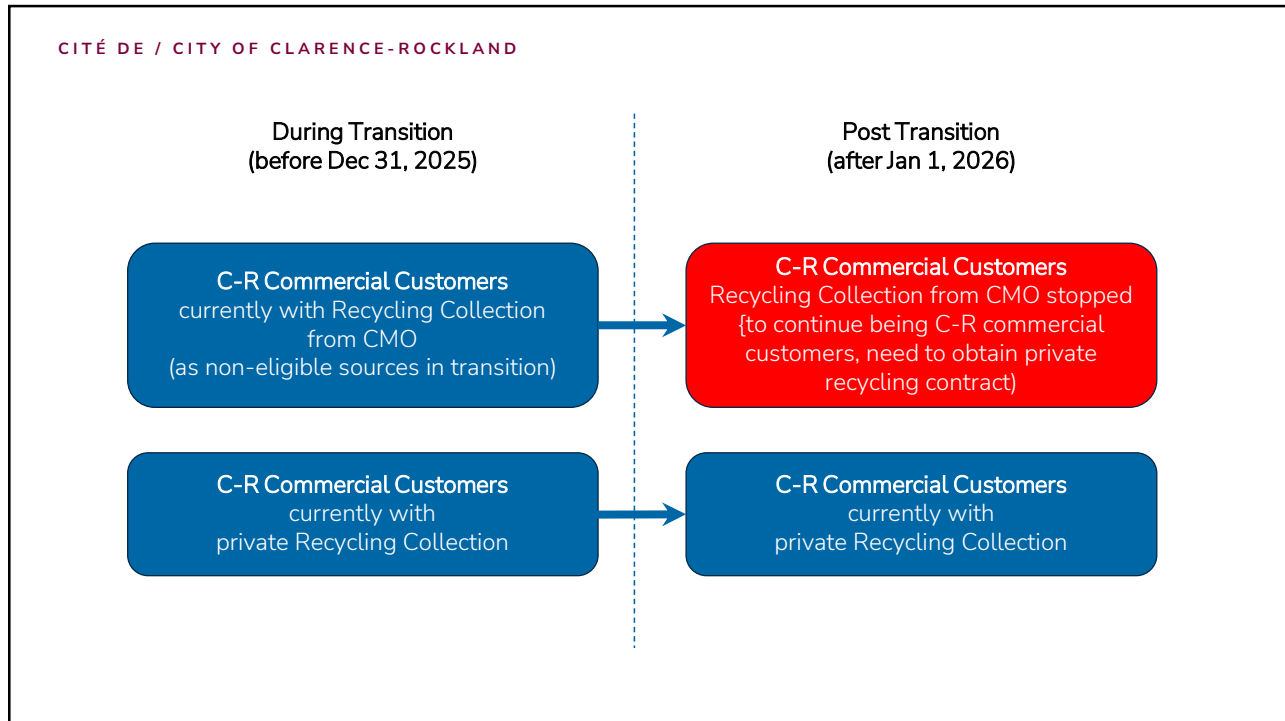
Recommended Updates to Solid Waste Plan Recycling

- Promote the use of existing retail and depot drop-off locations (*short term*)
- Pursue diversion opportunities for new materials *after* curbside organics program is in place (*medium term*)
- Textile recycling:
 - Promote community programs (*short term*)
 - Pilot a curbside program (*medium term*)
- Include curbside battery collection as an option in next solid waste collection tender (*short term*)

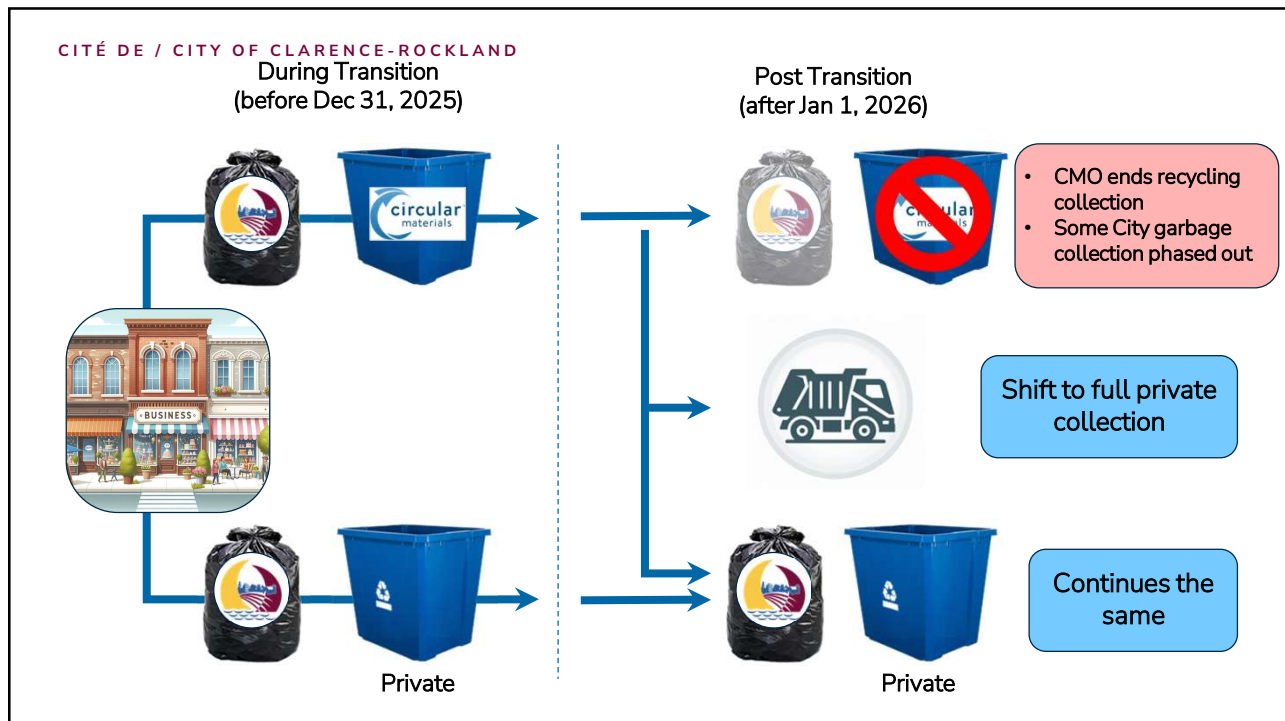


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13



14

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Recommended Updates to Solid Waste Plan Organics Management

- Curbside household organics program
 - Start planning for curbside organics program (**short term**)
 - Implement curbside organics program (**medium term**)
- Design and run a Foodcycler (or similar) pilot, focusing on targeted and quantifiable data (**short term**)
- Develop and implement a Food Waste Reduction Strategy, to coincide with implementation of the curbside organics program (**medium term**)



15

15

CITÉ DE / CITY OF CLARENCE-ROCKLAND

Recommended Updates to Solid Waste Plan Waste Collection

- Assess every-other-week garbage collection when developing the curbside organics program.
- Consider:
 - Using carts for garbage collection
 - Using Radio-frequency ID tags on collection carts (could replace bag-tags)
 - Fleet considerations, such as zero or low emission vehicles
- Implement with curbside organics program or include in future solid waste collection contract.

medium term

16

16

CITÉ DE / CITY OF CLARENCE-ROCKLAND

Recommended Updates to Solid Waste Plan Promotion and Education

- Prepare a comprehensive Solid Waste Management Promotion and Education Strategy.
- Promote waste diversion opportunities through available stewardship programs.
- Complete multi-season waste audits every 2 to 4 years, and visual audits in issue areas as required.

Short term



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CITÉ DE / CITY OF CLARENCE-ROCKLAND

Recommended Updates to Solid Waste Plan Municipal Policies

- Introduce a maximum limit for how many bags or containers of waste can be set out for collection.
- Reduce the number of “free” garbage bags from three to two.
- Monitor and assess the number of garbage bags households are setting out for collection.
- Complete regular reviews on garbage tag fees and bag limits.

Short term



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Recommended Updates to Solid Waste Plan Municipal Policies

- Undertake feasibility assessment for moving to full user pay (medium term)
- Update and enforce solid waste by-law (short term)
- Adopt a Clear Garbage Bag Program:
 - Prepare implementation plan. (short term)
 - Consider aligning timing with weekly organics collection and every-other-week garbage collection. (medium term)
 - Include transition period.



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Recommended Updates to Solid Waste Plan Municipal Policies

- Develop strategy to eliminate or reduce single-use plastics (short term)
- Identify a suite of key performance indicators (KPIs) for evaluating City's solid waste management program. (short term)



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Recommended Updates to Solid Waste Plan IC&I Waste, Other Opportunities

- Limit the Waste Collection Services the City provides to the IC&I sector (**short term**)
- Develop a strategy for managing and recycling C&D waste (**medium term**)
- Continue exploring multi-municipal partnerships for the collection and processing of waste (**short term**)



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Recommended Updates to Solid Waste Plan IC&I Waste, Other Opportunities



Limit the Waste Collection Services the City provides to the IC&I sector (short term)



Develop a strategy for managing and recycling C&D waste (medium term)



Continue exploring multi-municipal partnerships for the collection and processing of waste (short term)

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Recommended Updates to Solid Waste Plan Municipal Policies

- Future Expansion of Landfill Site
 - Review options for purchasing lands adjacent to the landfill (short term)
 - Continue reviewing the need for landfill expansion in subsequent solid waste plan update
- Develop a strategy for managing and recycling C&D waste (medium term)



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Next Steps

Review the Strategy recommendations with the public at a consultation event.

Based on the feedback received, update the Strategy recommendations.

Finalize the Strategy with an implementation schedule and costing



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Frequently Asked Questions (FAQ)

What does the “user pay” model mentioned in the presentation look like? What is that all about? ^

A **partial user pay system** for waste management is a pricing strategy where residents are allowed to dispose of a limited number of garbage bags or containers for free, and must pay a fee for any additional waste beyond that limit. This is the current system in Clarence-Rockland.

Free Allowance:

- Households are allowed to dispose of 3 garbage bags per collection period without charge.

Paid Disposal Beyond Limit:

- Additional bags require a tag or sticker, which must be purchased

A **full user pay system** for waste management –often referred to as “Pay-As-You-Throw” (PAYT)—is a pricing model where residents are charged entirely based on the amount of waste they generate, with no free allowance for garbage disposal.

The model or approach that would be used in a full-user pay system has not yet been defined. There are different approaches that could potentially be used (for example, use of bag tags, cart-based fees, by weight), but these would be reviewed and evaluated as part of a user-pay feasibility assessment. The assessment would consider things like:

- Implementation timing with garbage collection contract and curbside organics collection.
- Fee structures for cost recovery.
- Recommendations for implementation.

Assuming the assessment confirms full user-pay and identifies a preferred mechanism, an implementation plan to transition to full user pay would be prepared and implemented.

What are the timelines for implementation? ^

Assessment and implementation of full-user pay is intended for the medium term (i.e., the 5 to 10 year planning period).

Why not simply implement a program like Gatineau’s? What are the differences between that program and the one proposed here? ^

Many of the program components found in Gatineau are being considered for use here, in particular, curbside household organics collection and fully or semi-automated collection of garbage.

Fully automated collection (as used in Gatineau) uses a truck equipped with a mechanical arm that extends, picks up and empties a waste collection cart. Only one person is required to drive the truck and operate the mechanical arm.

Semi-automated waste collection uses a truck equipped with one or two mechanical flippers located on the back or side. Two people are required – one to drive the truck, and another to load the cart onto the flipper and to empty it.

Both approaches, however, eliminate the need and risk of manual lifting of garbage bags or containers.

Will there be more in-depth consultations at each stage of implementation? ^

A master plan is a high-level, strategic framework that outlines a long-term vision, objectives, and a comprehensive set of recommendations to guide decision-making and implementation. In the context of Clarence-Rockland’s Solid Waste Management Strategy, the master plan includes both fixed mandates—such as regulatory compliance requirements and essential service changes—and flexible recommendations that are subject to further refinement.

Each recommendation, whether mandatory or advisory, is accompanied by a planning horizon (short-, mid-, or long-term) and is expected to undergo appropriate discussion and review during or prior to implementation. This ensures that decisions are responsive to evolving community needs, operational realities, and stakeholder input, while maintaining alignment with the overarching goals of waste reduction, diversion, and environmental stewardship.

It is our intention to consult with stakeholder and the public as we implement key components of the SWMS, particularly for those items we know will be of specific interest to the public.

Will you introduce food waste collection like in Ottawa? Will brown bins be offered for free?

The SWMS provides direction for implementing a food waste collection program for Clarence Rockland. The details of how the program will look or be implemented have not yet been determined. The next step toward a food waste collection program will be to prepare the implementation plan. The implementation plan will review and evaluate how household organics should be collected and processed, complete a feasibility assessment of anticipated capital and operational costs, and describe the critical path for development of the program and its delivery.

Would it be possible to have a place to drop off FoodCycler waste, grass, etc., that can then be turned into compost for residents to use on their properties or for the city to use in parks?

The City has previously explored composting at the landfill site for materials available for the residents. In order to comply with ministry standards and criteria, the costs are not justifiable for the volume produced.

Can we have a standard list of recyclable materials?

The Blue Box program is now managed by CMO. Information on what materials are accepted by CMO in the Blue Box program can be found by visiting www.circularmaterials.ca/clarence-rockland or by calling 1-888-852-2374 or 1 877-667-2626.

Is there a central location where we can deposit used batteries locally? Do such battery drop-off locations already exist? If so, could you let us know?

You can drop off used batteries at the City's Household Hazardous Waste Depot (2335 Lalonde Rd, Clarence ON).

You can also use the Resource Productivity and Recovery Authority's (RPRA) "Where to Recycle" online map to find where batteries and other materials can be dropped off for recycling near you. Simply visit <https://rpra.ca/where-to-recycle/>, add in the first three digits of your postal code, and search for locations to drop off batteries, old paint, electronics, and other materials.

Can we explore the use of farm animals to help reduce food scraps and encourage a circular system?

There is no one, single exclusive way that food waste must be diverted from the landfill. For example, backyard composting is another important method, and kitchen appliances like the FoodCycler could also play a role. However, curbside organics collection programs provide the greatest opportunity to maximize organics diversion for the community as a whole. As such, use of farm animals to reduce food scraps is not an option we are actively pursuing.

That said, the City is certainly open to exploring innovative opportunities as they arise. If such an opportunity did present itself and was found to be able to help supplement Clarence-Rockland's food waste diversion programs, then the City would be willing to explore how it could promote or encourage its use.

How will the bulky item collection system be affected, if at all? Will residents still be able to pay a flat fee per item (i.e., the yellow tag) to have their bulky items picked up at the curb?

The bulky item collection will remain as an option for collection of selective materials as is currently offered.

CONSULTATION REPORT

TOWARD BETTER WASTE
MANAGEMENT – HAVE YOUR
SAY!

TABLE OF CONTENTS

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SUMMARY

Participants had access to an introductory video and a list of frequently asked questions that they could consult before completing the questionnaire. The survey aimed to better understand the community's habits, needs, and concerns in order to tailor waste and organic waste management services. The questionnaire covered a variety of topics such as curbside collection, recycling, source reduction, access to the landfill site, and communication preferences.

The questionnaire was available online from July 23 to August 9, 2025, and 563 people had the opportunity to respond to 17 questions. A total of 7,994 votes were recorded. This report presents the results.

PARTICIPANTS PROFILE

OVERVIEW

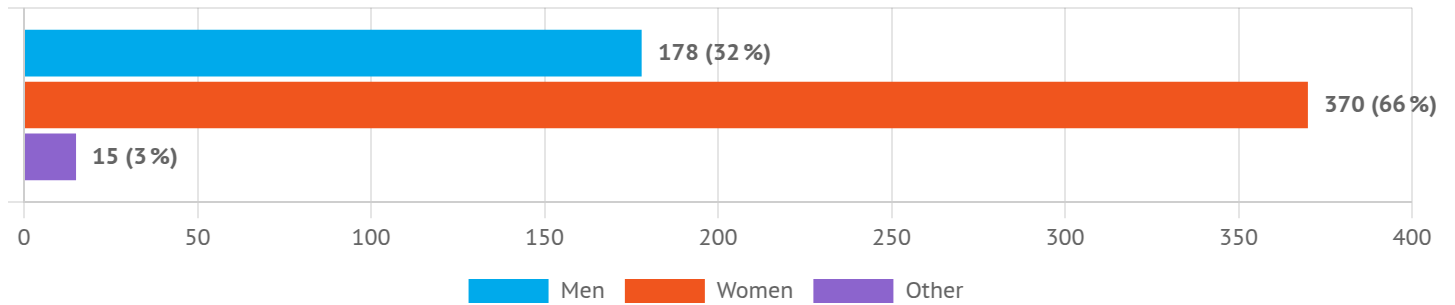
6 Sections

17 Questions

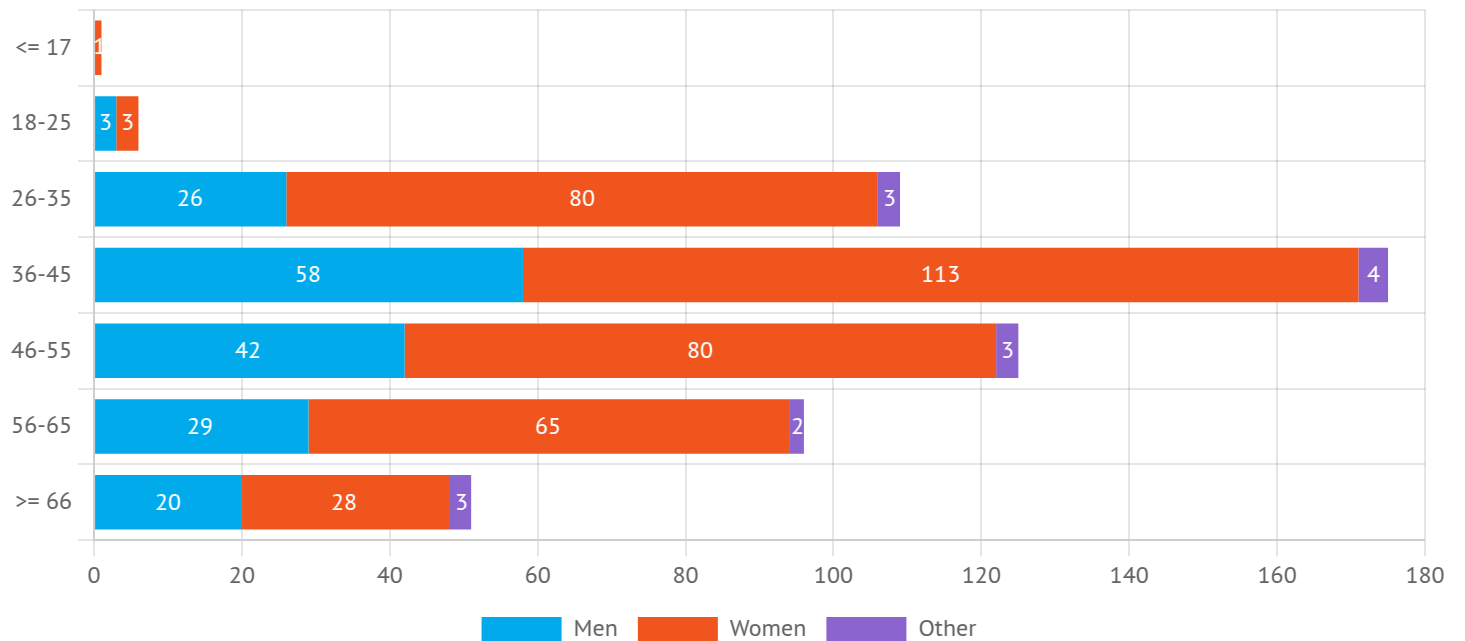
563 Participants

7994 Votes

Distribution by gender



Distribution by age



DETAILED RESULTS

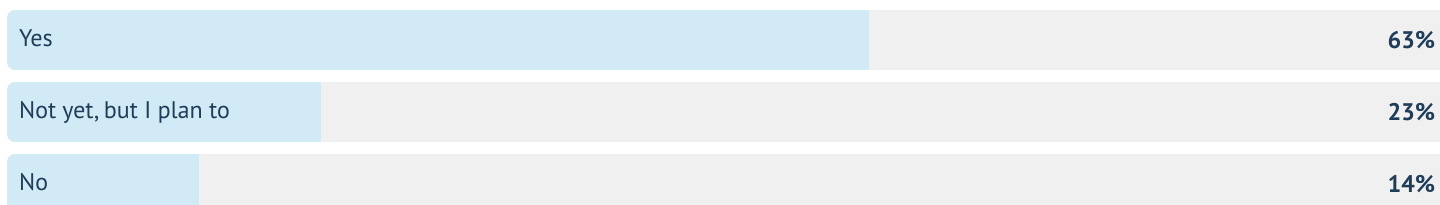
Section 1

WARM UP QUESTIONS

Warm up questions

Did you watch the public consultation video?

Only one answer



Number of respondents to the question, by gender

	Total
Men	100
Women	204
Other	10
Total	314

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	5
26 to 35 years	72
36 to 45 years	92
46 to 55 years	75
56 to 65 years	47
>= 66 years	23
Total	314

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Yes	63%	55%	65%	90%
Not yet, but I plan to	23%	28%	22%	10%
No	14%	17%	13%	0%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Yes	63%	0%	60%	61%	62%	67%	62%	61%
Not yet, but I plan to	23%	0%	0%	26%	27%	16%	26%	22%
No	14%	0%	40%	13%	11%	17%	13%	17%

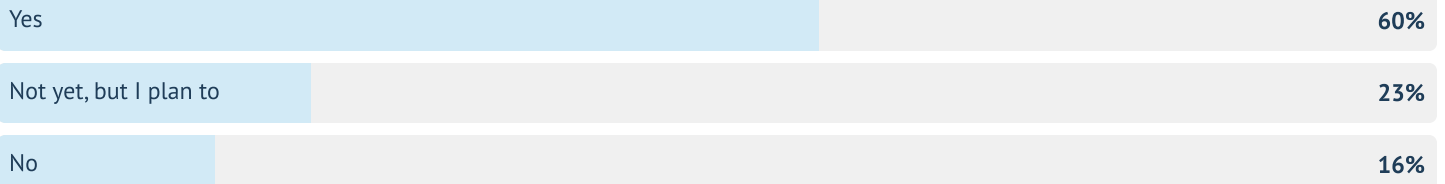
Comments summary

- **Waste management**
 - The addition of the green bin is seen as a positive step for waste management.
 - The frequency of household waste collection must not be reduced.
- **About the video**
 - The video is too long.
 - Watching the video was an unpleasant experience.
- **Information format preferences**
 - I prefer to read the information rather than watch it on video.

Warm up questions

Did you take the time to read through the FAQs?

Only one answer



Number of respondents to the question, by gender

	Total
Men	114
Women	217
Other	10
Total	341

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	4
26 to 35 years	77
36 to 45 years	96
46 to 55 years	82
56 to 65 years	57
>= 66 years	25
Total	341

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Yes	60%	57%	61%	80%
Not yet, but I plan to	23%	21%	24%	10%
No	16%	21%	14%	10%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Yes	60%	0%	25%	58%	66%	59%	63%	56%
Not yet, but I plan to	23%	0%	25%	31%	18%	22%	27%	12%
No	16%	0%	50%	10%	17%	20%	11%	32%

Comments summary

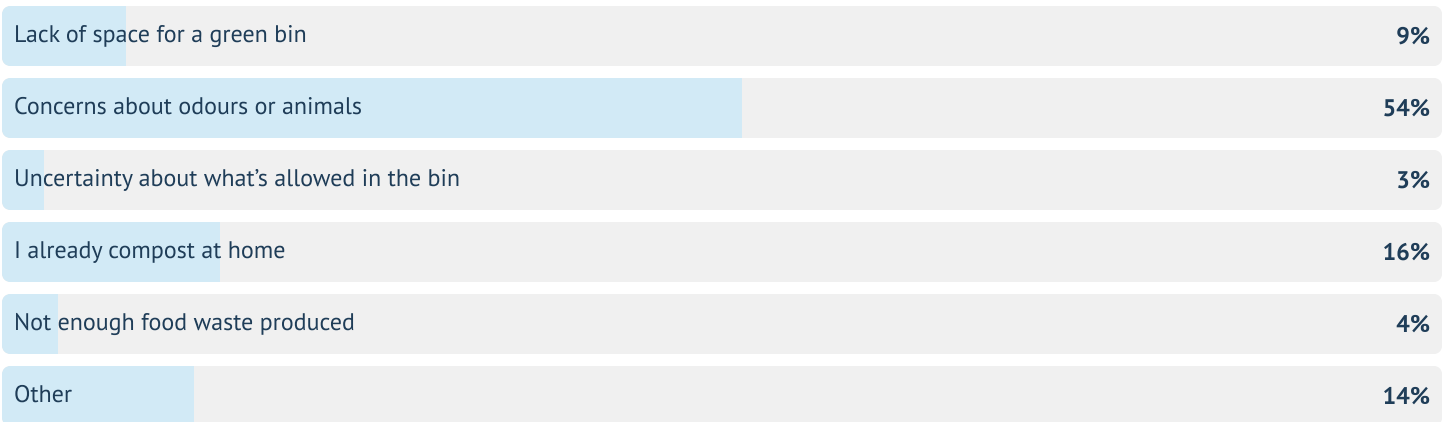
- **Adapting the system to local realities**
 - The proposed system does not sufficiently take into account the diversity of household needs, which could cause hygiene problems and illegal dumping.
 - The current system is better suited to the specific characteristics of rural areas than the new proposal.
 - The multitude of proposals has caused confusion among users.
- **Transparency and fairness in waste management**
 - Greater transparency regarding costs, savings, and environmental impacts is necessary to enable informed assessment and facilitate acceptance of changes in waste management. (2x)
 - Consultation on waste management must ensure transparency and fairness, allowing citizens to express a nuanced opinion. (2x)
 - Residents should not be penalized for things they have no control over, such as packaging.
 - Improvements in waste management should not result in an increased financial burden on families.
 - Alternatives such as larger bins or composting should be considered in the event of changes to the waste management system.
 - There is a feeling that the city is manipulating information regarding waste management.
- **Financial impact of waste management**
 - The pay-as-you-throw model and additional waste disposal fees are perceived as a disguised tax increase and an increased financial burden on families, particularly those already affected by the cost of living. (2x)
 - The transfer of waste management costs to taxpayers following a tax increase is considered unfair.
 - The reduction in the bag limit particularly penalizes large families, who produce more waste.
 - The city should introduce a program for collecting organic waste without imposing additional fees.
 - It would be preferable to consider reductions in other less essential services if the cost of waste management is a problem.
- **Frequency of waste collection**
 - Reducing the frequency of waste collection poses problems for hygiene, public health, and families' disposal capacity. (2x)

Section 2

ORGANICS AND WASTE COLLECTION

What barriers might prevent your household from fully participating in a curbside organics (kitchen waste) collection program?

Only one answer



Number of respondents to the question, by gender

	Total
Men	155
Women	317
Other	15
Total	487

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	5
26 to 35 years	95
36 to 45 years	145
46 to 55 years	111
56 to 65 years	86
>= 66 years	45
Total	487

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Lack of space for a green bin	9%	10%	9%	7%
Concerns about odours or animals	54%	49%	56%	53%
Uncertainty about what's allowed in the bin	3%	2%	4%	7%
I already compost at home	16%	15%	16%	7%
Not enough food waste produced	4%	6%	3%	7%
Other	14%	18%	11%	13%

Organics and Waste Collection

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Lack of space for a green bin	9%	0%	40%	13%	8%	10%	8%	2%
Concerns about odours or animals	54%	0%	40%	57%	56%	58%	47%	48%
Uncertainty about what's allowed in the...	3%	0%	0%	2%	4%	2%	3%	7%
I already compost at home	16%	0%	20%	16%	18%	13%	13%	20%
Not enough food waste produced	4%	0%	0%	2%	1%	4%	8%	11%
Other	14%	0%	0%	10%	13%	14%	21%	11%

Other Choice Summary

- No barriers (39X)
- The cost of the program (6X)
- Creates maggots and attracts animals (5X)
- Lack of space (2X)
- Large family home with special needs. (2X)
- Consider rural areas and the presence of animals messing with the bin (1X)
- High contamination rates make the program ineffective (1X)
- If the city will not pick up the bin and we would have to hire an outside company for our condo, then it's a barrier (1X)
- It creates maggots and attracts animals (1X)
- Lack of time (1X)
- Learn from the program in Ottawa (1X)
- Looking at the Halifax model with a large bin for organics and yard waste would be better (1X)
- Not enough food waste produced (1X)
- Pickup routinely causes damage to bins leading to a leaky/broken bin inviting pests, odors and mess (1X)
- Smaller green bins and weekly pick up will help eliminate odours and rodent (1X)
- The bin would be one more attraction for the major amount of stray cats in our neighborhood (1X)
- The timeline seems far out (1X)

Organics and Waste Collection

If garbage collection changed to every other week, while organics collection was done weekly, how would this affect your household?

Only one answer

We would adapt easily	27%
We would need to change our waste management habits	23%
We might need more tags or containers	27%
Other	22%

Number of respondents to the question, by gender

	Total
Men	155
Women	326
Other	15
Total	496

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	5
26 to 35 years	98
36 to 45 years	152
46 to 55 years	114
56 to 65 years	83
>= 66 years	44
Total	496

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
We would adapt easily	27%	22%	30%	13%
We would need to change our waste management habits	23%	21%	25%	13%
We might need more tags or containers	27%	31%	25%	27%
Other	22%	26%	19%	40%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
We would adapt easily	27%	0%	25%	19%	23%	29%	34%	41%
We would need to change our waste...	23%	0%	75%	25%	21%	18%	27%	32%
We might need more tags or containers	27%	0%	0%	36%	26%	34%	20%	9%
Other	22%	0%	0%	19%	29%	19%	20%	18%

Other Choice Summary

- Storing garbage outside the home would attract pests and create smells (e.g.: cat litter, dog waste, non compostable perishable garbage) (29X)
- Families with babies, seniors, or people with medical needs generate large amounts of non-organic, odor-causing waste (e.g., diapers, incontinence products). (18X)
- Not paying more taxes for garbage collection (15X)
- Not possible (14X)
- Lack of space to store bags for two weeks (11X)
- People will dump garbage in other places (7X)
- Biggest concern is managing diapers (6X)
- A terrible ideal for rural properties Already dealing with wildlife, critters and animals (3X)
- Concern about animal waste (3X)
- Would expect a decrease in our property taxes if services were reduced (3X)
- Compost at home (2X)
- I would start burning my garbage (2X)
- It's a concern for big families (e.g. diapers) (2X)
- The amount of organics is not enough to replace weekly garbage pickup with green bin (2X)
- We don't create enough organic waste to justify weekly collections (2X)
- Would not affect my household (2X)
- Already put our garbage out every two weeks (1X)
- An unacceptable change (1X)
- Concern about managing pet waste (1X)
- Cutting more than half our garbage disposal allowance as I feel this is the only service I get from the city (1X)
- Evaluate with a phase where both collections are done weekly to get people used to it (1X)
- Fall and winter would be feasible (1X)
- I'm a single mom in a budget and already pay high taxes (1X)
- Its more trouble then anything since we are already trying the best we can not to throw away food (1X)
- Keep the frequency at once a week, but reduce the maximum number of bags (1X)
- People in apartments or townhomes would be especially impacted (1X)
- We already have very little waste and recycle well (1X)
- Weekly organics pickup is a good idea, but reducing garbage collection to every other week creates more problems than it solves (1X)
- Would adapt easily provided a green bin program is put in place at the same time (1X)
- Would be a major and unnecessary inconvenience (1X)

If the number of “free” garbage bags allowed at the curb was reduced, how would your household manage the extra waste?

Only one answer



Number of respondents to the question, by gender

	Total
Men	153
Women	322
Other	15
Total	490

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	5
26 to 35 years	98
36 to 45 years	148
46 to 55 years	113
56 to 65 years	85
>= 66 years	41
Total	490

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Purchase additional tags	23%	27%	22%	7%
Reduce waste production	22%	16%	25%	13%
Use private services or bring waste to the landfill	23%	20%	24%	40%
Other	32%	37%	30%	33%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Purchase additional tags	23%	0%	40%	22%	25%	24%	25%	7%
Reduce waste production	22%	0%	40%	18%	22%	22%	23%	27%
Use private services or bring waste to...	23%	0%	20%	28%	24%	27%	13%	20%
Other	32%	0%	0%	32%	30%	27%	39%	46%

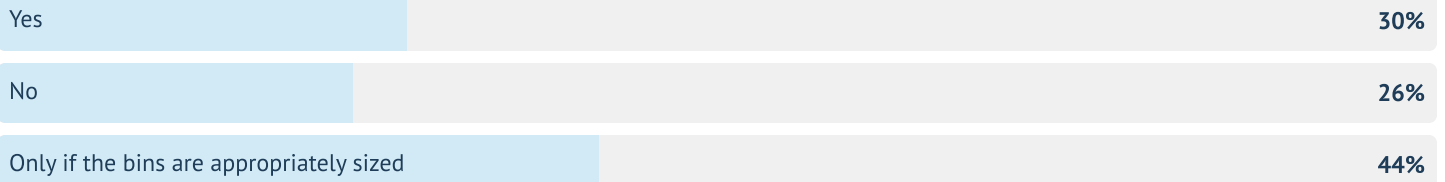
Other Choice Summary

- Already have less garbage than that (29X)
- People will dump garbage in other inappropriate places (25X)
- Not paying more for garbage collection (24X)
- It's going to be an issue (12X)
- The current three-bag limit already places strain on larger families (10X)
- Easier to reduce the number of bags if the green bin is introduced at the same time (7X)
- Do not agree (6X)
- We can manage it (6X)
- Charging for additional garbage bags on top of that only adds to the financial burden of families (5X)
- I dont know, money is already tight (4X)
- Garbage will get mixed up with compost and recycling (3X)
- Impact on the environment and odors, and increase the risk of animals around homes (3X)
- The current system works (3X)
- I live in an apartment so I often have many smaller kitchen garbage bags rather than large ones that a house would have (2X)
- Garbage would be burned (2X)
- People could manage it with their neighbors (2X)
- Purchasing tags is just another way to get money when we have already seen taxes increase and services decrease (2X)
- Encourage and spend money on getting people to recycle instead of putting it in the garbage (1X)
- I do not think I should have to pay more because I need to use small bags (1X)
- If there is a means of collection for organics, there would be no issue in meeting the limits put in place (1X)
- Need exception for families with special needs (special needs, large families, low income, etc.) (1X)
- Reduce to two bags but pick it every week (1X)
- We are also composting (1X)

Organics and Waste Collection

Would the use of standardized bins for garbage and organics (instead of bags) be suitable for your property?

Only one answer



Number of respondents to the question, by gender

	Total
Men	150
Women	324
Other	14
Total	488

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	5
26 to 35 years	101
36 to 45 years	147
46 to 55 years	109
56 to 65 years	84
>= 66 years	42
Total	488

Percentage of selected responses, by gender (among those who answered this question)

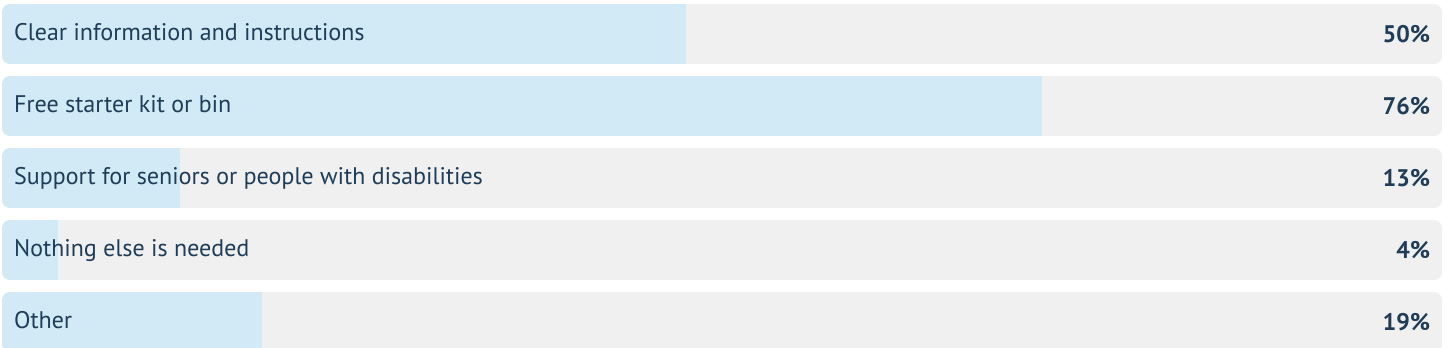
	Total	Men	Women	Other
Yes	30%	35%	29%	7%
No	26%	22%	26%	57%
Only if the bins are appropriately sized	44%	43%	45%	36%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Yes	30%	0%	20%	28%	32%	30%	25%	40%
No	26%	0%	40%	23%	20%	30%	33%	21%
Only if the bins are appropriately...	44%	0%	40%	50%	48%	39%	42%	38%

What conditions would help your household transition to a new curbside garbage and organics collection system? (Check all that apply)

Multiples answers question



Number of respondents to the question, by gender

	Total
Men	150
Women	327
Other	15
Total	492

Number of respondents to the question, by age group

	Total
<= 17 years	1
18 to 25 years	5
26 to 35 years	97
36 to 45 years	148
46 to 55 years	112
56 to 65 years	85
>= 66 years	44
Total	492

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Clear information and instructions	50%	50%	51%	20%
Free starter kit or bin	76%	69%	81%	40%
Support for seniors or people with disabilities	13%	11%	13%	20%
Nothing else is needed	4%	5%	3%	7%
Other	19%	20%	18%	27%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Clear information and instructions	50%	0%	29%	29%	31%	30%	32%	30%
Free starter kit or bin	76%	100%	57%	52%	50%	48%	41%	39%
Support for seniors or people with...	13%	0%	0%	5%	4%	8%	12%	21%
Nothing else is needed	4%	0%	0%	3%	1%	2%	4%	1%
Other	19%	0%	14%	10%	14%	12%	10%	9%

Other Choice Summary

- Don't change anything (27X)
- Lower the municipal taxes (10X)
- Large garbage bins with locking lids provided for free by the city (7X)
- Add composting if necessary without taking away our weekly garbage collection (5X)
- Considerations for large families (more labels) (5X)
- More difficult to implement in rural areas (5X)
- Put in place organic collection every week (4X)
- A plan to support maintenance of the bins (and replacement) (3X)
- Already composting at home (3X)
- Develop / Support home composting (purchase a home food composter at a reduced cost) (2X)
- Pest control (2X)
- A slower transition (1X)
- An area of collective bins on city property for each neighborhood (1X)
- Confirm that taxes won't go up as a result (1X)
- Considerations for medical waste (1X)
- Considerations for people with low income (1X)
- Develop a diaper service collection (1X)
- Develop a service to clean the bins from maggots and criters (1X)
- Ensure apartments or duplex's get their own bins, especially their own smaller composting bins (1X)
- Give a transition period (1X)
- Hard to navigate the bin down the driveway (1X)
- Having access to the compost created from our organic waste free of charge (1X)
- If regulations are enforced (1X)
- If the bins are on wheels and automated trucks are used (1X)
- Lack of space for bins (1X)
- No additional cost to the residents (1X)
- Provide brown bags for the green bin (1X)
- Reduce excess packaging in stores (1X)
- The city offering to collect the garbage/recycling from my condo buildings, rather than having to hire an outside company (1X)
- The most important is that the city is collecting everything (1X)
- Their is no need in the rural areas (1X)
- Unlimited pet waste pick up (1X)

Section 3

**RECYCLING AND DIVERSION PROGRAMS
(EXCLUDING BLUE BOX)**

Recycling and Diversion Programs (excluding Blue Box)

What improvements to recycling would be most helpful for your household?

Only one answer

More curbside collection options (e.g., batteries, textiles)	44%
More local drop-off locations	18%
None – the current system works well	38%

Number of respondents to the question, by gender

	Total
Men	152
Women	312
Other	14
Total	478

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	4
26 to 35 years	95
36 to 45 years	144
46 to 55 years	114
56 to 65 years	83
>= 66 years	38
Total	478

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
More curbside collection options (e.g., batteries, textiles)	44%	39%	48%	29%
More local drop-off locations	18%	16%	18%	21%
None – the current system works well	38%	45%	34%	50%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
More curbside collection options (e.g.,...	44%	0%	50%	45%	48%	45%	41%	35%
More local drop-off locations	18%	0%	0%	15%	19%	16%	22%	16%
None – the current system works well	38%	0%	50%	40%	33%	39%	37%	49%

Recycling and Diversion Programs (excluding Blue Box)

How likely are you to use a curbside battery or textile recycling program if it were implemented?

Only one answer



Number of respondents to the question, by gender

	Total
Men	154
Women	318
Other	14
Total	486

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	4
26 to 35 years	97
36 to 45 years	145
46 to 55 years	114
56 to 65 years	84
>= 66 years	42
Total	486

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Very likely	42%	36%	45%	21%
Somewhat likely	29%	29%	30%	14%
Unlikely	22%	24%	19%	50%
I already use private or retailer programs	7%	10%	5%	14%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Very likely	42%	0%	25%	42%	40%	41%	44%	45%
Somewhat likely	29%	0%	25%	33%	32%	27%	25%	26%
Unlikely	22%	0%	50%	21%	21%	23%	24%	14%
I already use private or retailer...	7%	0%	0%	4%	6%	9%	7%	14%

Comments summary

- **Battery and textile recycling**
 - Many people dispose of their used batteries or textiles at existing collection points such as stores or their workplace. (4x)
 - A monthly curbside collection for batteries or textiles would be appreciated.
- **Recycling and waste management**
 - It is necessary to improve and expand recycling services and facilities in Rockland, while strengthening communication and incentives to encourage recycling and organic waste collection. (3x)
- **Costs and adaptation**
 - Implementing the program would generate additional costs and could lead to higher taxes.
 - Using the program requires a period of adjustment.
- **Recycling efficiency**
 - Reducing the frequency of collections is not effective for recycling.

Section 4

WASTE REDUCTION AND CIRCULAR ECONOMY

What barriers prevent your household from reducing food waste?

Only one answer

Lack of time to meal plan	4%
Unsure how to properly store leftovers	1%
Buy in bulk but don't consume everything	4%
We're already doing our best	85%
Other	6%

Number of respondents to the question, by gender

	Total
Men	155
Women	323
Other	14
Total	492

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	4
26 to 35 years	96
36 to 45 years	150
46 to 55 years	112
56 to 65 years	87
>= 66 years	43
Total	492

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Lack of time to meal plan	4%	3%	5%	0%
Unsure how to properly store leftovers	1%	1%	1%	0%
Buy in bulk but don't consume everything	4%	5%	5%	0%
We're already doing our best	85%	87%	84%	93%
Other	6%	4%	7%	7%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Lack of time to meal plan	4%	0%	0%	5%	5%	5%	1%	0%
Unsure how to properly store leftovers	1%	0%	25%	0%	1%	1%	0%	2%
Buy in bulk but don't consume everything	4%	0%	0%	4%	3%	5%	8%	0%
We're already doing our best	85%	0%	75%	88%	84%	84%	83%	93%
Other	6%	0%	0%	3%	7%	4%	8%	5%

Comments summary

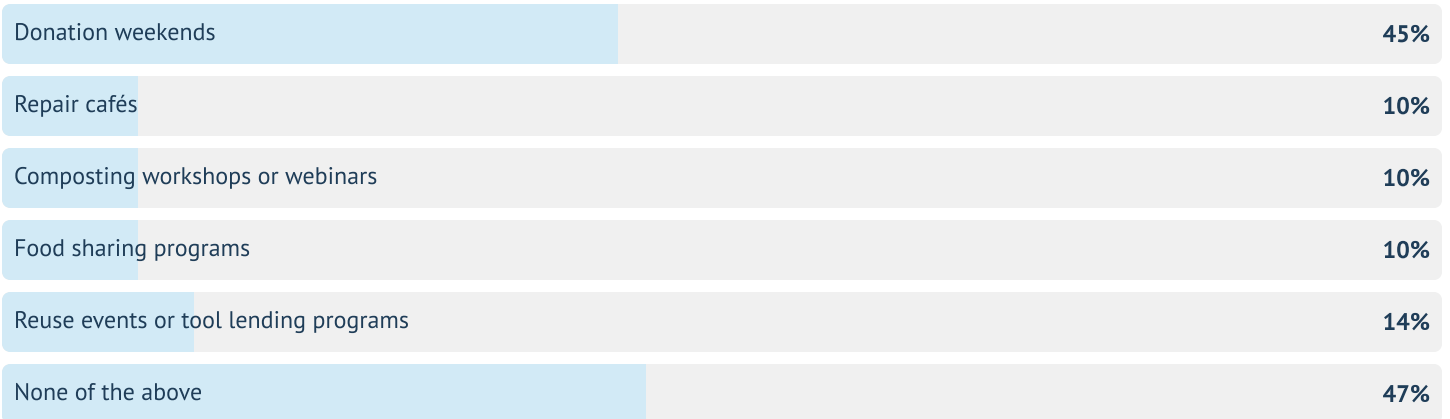
- **Personal constraints to reduce waste**
 - Personal constraints such as the number of occupants in the household, lack of time, or physical limitations make it difficult to reduce waste. (2x)
- **Reducing food waste**
 - Organize workshops to teach people how to use food scraps to reduce waste.
 - Composting kitchen waste reduces food waste while protecting the environment.
 - Using devices such as the Foodcycler helps households reduce food waste.
 - Feeding food scraps to pets helps prevent waste.
- **Reducing waste and packaging**
 - Children often waste food.
 - Products are often over-packaged.
- **Household waste management**
 - The high cost of taxes and garbage collection may discourage participation in organic waste collection.
 - The lack of clear guidelines on the disposal of cat litter complicates waste management in households with multiple cats.

Other Choice Summary

- We don't waste much (7X)
- No barriers (3X)
- A proper bin container (2X)
- Doing the best we can with a larger family (2X)
- A collection program (1X)
- Already composting at home and green bins would be problematic (1X)
- Animal getting into waste, attracting rodents (1X)
- Everything is brought to the farm animals in the neighborhood (1X)
- I don't have enough money to waste food. (1X)
- Lack of an organic waste system (1X)
- Lack of time (kids, work, etc.) (1X)
- No monetary benefit to participating in a curbside organics collection program (1X)
- Nothing needed (1X)
- Raising awareness and educating (1X)
- Think about cat litter and other animal waste (1X)
- Using a lot of fresh ingredients causes to have a lot of non edible food waste (peels, stems, leaves, etc.) (1X)
- Would like an electric composter at home (1X)

Which of the following waste reduction initiatives would you or your household participate in?

Multiples answers question



Number of respondents to the question, by gender

	Total
Men	153
Women	323
Other	15
Total	491

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	4
26 to 35 years	96
36 to 45 years	150
46 to 55 years	112
56 to 65 years	87
>= 66 years	42
Total	491

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Donation weekends	45%	34%	52%	20%
Repair cafés	10%	6%	12%	13%
Composting workshops or webinars	10%	7%	12%	0%
Food sharing programs	10%	3%	13%	13%
Reuse events or tool lending programs	14%	9%	16%	20%
None of the above	47%	59%	40%	67%

Waste Reduction and Circular Economy

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Donation weekends	45%	0%	0%	31%	36%	35%	30%	34%
Repair cafés	10%	0%	0%	7%	10%	5%	8%	8%
Composting workshops or webinars	10%	0%	0%	8%	9%	5%	6%	8%
Food sharing programs	10%	0%	25%	9%	6%	9%	6%	2%
Reuse events or tool lending programs	14%	0%	25%	9%	12%	7%	13%	8%
None of the above	47%	0%	50%	35%	27%	39%	37%	42%

Comments summary

- **Repair Value**
 - The repair of objects should be encouraged rather than their disposal.
 - Repairing something can be a learning experience.
- **Donating and reusing items**
 - Facebook Buy Nothing groups allow you to give away items and reduce waste on a daily basis. (3x)
 - The local thrift store encourages reuse by regularly accepting donations.
 - I participate in zero waste initiatives.
- **Accessibility of donation drop off points**
 - Increasing the number of drop-off points and extending their hours makes it easier to donate. (2x)
 - The Rockland Food Bank accepts donations every week.
- **Waste management and collection**
 - Weekly garbage collection must be maintained, even with the addition of a green bin.
 - The high cost of taxes and weekly collection discourages participation in organic waste collection.

What concerns, if any, do you have about a clear garbage bag program (where all contents must be visible to collectors)?

Only one answer

Privacy concerns	65%
Discomfort with visible waste sorting	10%
No concerns	19%
Need support (information, materials)	6%

Number of respondents to the question, by gender

	Total
Men	142
Women	317
Other	15
Total	474

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	4
26 to 35 years	94
36 to 45 years	147
46 to 55 years	107
56 to 65 years	80
>= 66 years	42
Total	474

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Privacy concerns	65%	63%	66%	60%
Discomfort with visible waste sorting	10%	15%	7%	20%
No concerns	19%	19%	20%	13%
Need support (information, materials)	6%	4%	7%	7%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Privacy concerns	65%	0%	75%	68%	63%	70%	61%	55%
Discomfort with visible waste sorting	10%	0%	0%	12%	10%	7%	10%	10%
No concerns	19%	0%	25%	17%	20%	19%	19%	26%
Need support (information, materials)	6%	0%	0%	3%	7%	4%	10%	10%

Comments summary

- **Use of transparent bags**
 - Transparent bags make it easier to check sorting and comply with waste regulations.
 - Transparent bags are acceptable if they are placed in rolling bins to prevent damage caused by animals.
 - The visibility of waste in transparent bags detracts from the aesthetics of the neighborhood.
- **Free transparent bags**
 - Transparent bags should be provided free of charge if their use is mandatory.
 - Transparent bags should be free or cost the same as green bags.
 - Transparent bags must be provided without resulting in an increase in taxes.
 - The municipality must provide transparent bags.
- **Issues related to transparent bags**
 - The availability, cost, and durability of transparent bags are causing concern among citizens. (3x)
 - The transparency of the bags may increase the risk of theft by making their contents visible.
- **Privacy and waste security**
 - The use of transparent bags is perceived as an invasion of citizens' privacy. (3x)
 - Transparent bags can be torn open by crows, posing a waste safety issue.
- **Financial concerns**
 - The additional costs of the program for taxpayers are causing concern.
- **The complexity of waste sorting**
 - The addition of a new type of bag complicates waste management.

Section 5

ICI SECTOR, LANDFILL, AND DROP-OFF SITES

If more items (e.g., mattresses, electronics, construction and demolition waste) were banned from the landfill or subject to higher fees, how would your household manage them?

Only one answer

Bring to the local landfill	58%
Pay for a private service	7%
Store them at home longer	14%
Other	21%

Number of respondents to the question, by gender

	Total
Men	145
Women	307
Other	13
Total	465

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	2
26 to 35 years	95
36 to 45 years	146
46 to 55 years	105
56 to 65 years	78
>= 66 years	39
Total	465

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Bring to the local landfill	58%	59%	58%	54%
Pay for a private service	7%	11%	6%	0%
Store them at home longer	14%	8%	16%	23%
Other	21%	22%	21%	23%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Bring to the local landfill	58%	0%	50%	61%	52%	61%	58%	68%
Pay for a private service	7%	0%	0%	7%	9%	8%	5%	3%
Store them at home longer	14%	0%	50%	13%	16%	12%	13%	10%
Other	21%	0%	0%	19%	23%	19%	24%	20%

Comments summary

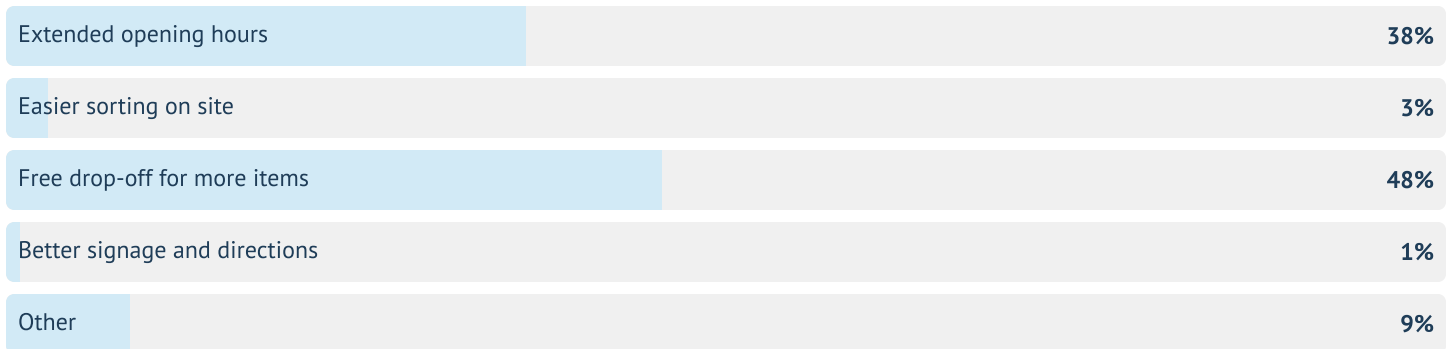
- **Bulky waste and waste management**
 - Seasonal or more frequent collections would facilitate the legal and appropriate disposal of bulky waste. (2x)
 - It is important to allow for occasional drop-offs of items at the landfill site.
 - Prioritize incentives for proper disposal of items.
 - Sell or give away these items.
 - I sort items for recycling as much as possible.
 - Adding the green bin is a good idea, but weekly garbage collection must be maintained.
- **Management of bulky waste in rural areas**
 - The lack of local solutions or transportation for bulky items complicates their proper disposal in rural areas. (2x)
 - Rural properties are at risk of becoming cluttered with large waste items.
- **Municipal finance management**
 - The management of municipal funds in Rockland needs to be improved.
- **Cost of municipal services**
 - Local taxes are considered too high to justify fees or a reduction in collection services. (3x)
 - Citizens want the savings made on municipal services to be passed on to them.
 - Rising costs and declining public services are causing discontent.
- **Responsible consumption**
 - I buy second-hand items and use them for a long time.
- **Risk of illegal dumping**
 - Restrictions or increased fees could encourage illegal or uncontrolled waste dumping. (3x)
 - Higher fees could prompt some people to resort to alternatives that are less environmentally friendly than landfill.

Other Choice Summary

- It would create more illegal dumping. (28X)
- It should be free as we pay enough taxes already. (8X)
- I will burn them. (6X)
- We don't have money to dispose of them. (5X)
- Best to allow drop off with one event to collect on the side of the road either spring or fall. (4X)
- I wouldn't have the means to take these items to a landfill. (4X)
- People will keep these items on their backyard. (4X)
- Bring them to landfill site (3X)
- Find a way to reuse or donate. (3X)
- A fee system is better and gives residents the ability to dispose of these things responsibly. (2X)
- Find a place to recycle these items. (2X)
- It should be picked up at the curb. (2X)
- Support online donations (Facebook groups) (2X)
- We already pay an environmental fee when we buy electronics and we should not have to pay again. (2X)
- As a small construction based business I would be quite upset about the construction material ban (1X)
- Find another landfill. (1X)
- Give to friends and family (1X)
- Households should have a limit per year of items instead of having a fee. (1X)
- I expect the City to provide resources to recycle or throw these items out. (1X)
- It should remain the same. (1X)
- Move to a different city where more services are offered. (1X)
- People should not be penalized for disposing of items that have lived their life span. (1X)
- People would break the items down to camouflage them in the bi-weekly garbage pickup. (1X)
- Reduce the taxes and I will use a private service when needed. (1X)
- Separate the cost: construction cost vs garbage cost could be different at the landfill. (1X)
- Support electronic recycling services (1X)
- The city should support initiatives from not for profit organizations. (1X)
- The cost has already jumped significantly at the dump. (1X)
- The stores that sell/deliver these items should take the discarded items. (1X)

What improvements would make the landfill or drop-off sites more accessible or useful to you?

Only one answer



Number of respondents to the question, by gender

	Total
Men	151
Women	309
Other	14
Total	474

Number of respondents to the question, by age group

	Total
<= 17 years	0
18 to 25 years	3
26 to 35 years	93
36 to 45 years	150
46 to 55 years	106
56 to 65 years	81
>= 66 years	41
Total	474

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Extended opening hours	38%	41%	38%	14%
Easier sorting on site	3%	2%	3%	7%
Free drop-off for more items	48%	45%	49%	64%
Better signage and directions	1%	1%	1%	0%
Other	9%	11%	8%	14%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Extended opening hours	38%	0%	33%	37%	37%	46%	36%	32%
Easier sorting on site	3%	0%	0%	3%	2%	2%	5%	2%
Free drop-off for more items	48%	0%	33%	55%	49%	42%	46%	56%
Better signage and directions	1%	0%	0%	2%	0%	3%	0%	2%
Other	9%	0%	33%	3%	12%	8%	14%	7%

Comments summary

- **Hazardous waste management**
 - It is difficult to dispose of paint cans after renovations.
- **Innovative and affordable waste management**
 - The use of advanced technologies such as gasification should be considered to improve waste treatment at landfill sites.
 - Waste management must remain affordable for taxpayers.
- **Free admission and extended opening hours**
 - The site should offer free access periods each year.
 - The site should be open for more days.
- **Cost of collection services**
 - Taxes are considered too high in relation to the frequency or perceived benefit of collection services. (2x)
- **Easy access to the storage facility**
 - Allowing more items to be dropped off free of charge and offering extended hours, particularly in the evenings, would improve the accessibility of the service. (2x)
- **Quality of service at waste collection centers**
 - The staff and service at the waste disposal facility are considered pleasant and satisfactory. (2x)
 - It is requested that garden waste be deposited at the entrance to the site.
- **Deposit cost and incivility**
 - Excessively high disposal costs can encourage illegal dumping and promote the presence of pests.
- **Queue management**
 - The current system is considered inefficient due to queues at the entrance and exit.

Other Choice Summary

- Nothing to change (9X)
- Extended opening hours (6X)
- No means of transportation to go to the landfill (6X)
- Never been to the landfill (5X)
- Free drop-off for more items (4X)
- Friendly staff (3X)
- Most efficient service (3X)
- Spring and fall pick up in the city (3X)
- Easy and friendly to use (2X)
- Facilitate access to recycling and diversion facilities without having to wait in long lines at the landfill site (2X)
- Reduce wait times (2X)
- Add services to reuse products (1X)
- Easier too sort out items on site (1X)
- Free drop off (1X)
- Open a site in Rockland and transfer items to Bourget (1X)
- Respecting the posted hours (1X)
- Upgrade landfill policies to reduce illegal dumping (1X)

Section 6

COMMUNICATION AND PARTICIPATION

Communication and Participation

How do you prefer to receive information about changes to municipal waste management services?

Multiples answers question

City website clarence-rockland.com	42%
The City's Official Social Media Accounts (Facebook and Instagram)	47%
Local events or info sessions	5%
The bCiti+ Citizens Portal	26%
Other	16%

Number of respondents to the question, by gender

	Total
Men	158
Women	329
Other	14
Total	501

Number of respondents to the question, by age group

	Total
<= 17 years	1
18 to 25 years	5
26 to 35 years	96
36 to 45 years	158
46 to 55 years	114
56 to 65 years	84
>= 66 years	43
Total	501

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
City website clarence-rockland.com	42%	44%	42%	29%
The City's Official Social Media Accounts (Facebook and Instagram)	47%	39%	51%	21%
Local events or info sessions	5%	6%	5%	0%
The bCiti+ Citizens Portal	26%	26%	27%	7%
Other	16%	16%	15%	50%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
City website clarence-rockland.com	42%	0%	0%	27%	28%	32%	34%	47%
The City's Official Social Media Account...	47%	0%	40%	44%	39%	34%	21%	20%
Local events or info sessions	5%	0%	0%	3%	5%	3%	5%	4%
The bCiti+ Citizens Portal	26%	100%	20%	19%	18%	17%	25%	22%
Other	16%	0%	40%	8%	11%	15%	16%	7%

Comments summary

- Receiving a notice on personal email there has been an update would be helpful as a reminder to check 'NEW' information. (1X) (2 Likes)

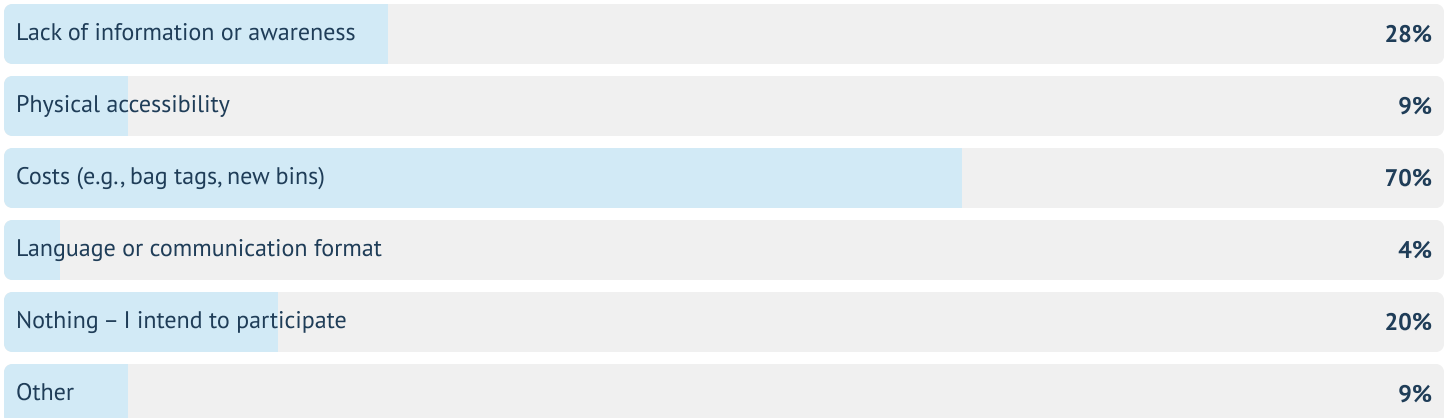
Other Choice Summary

- By email (38X)
- By mail (24X)
- By text messages (5X)
- Local newspaper (3X)
- Facebook Groups (2X)
- Newsletter by email (2X)
- As sequence: website, bciti and email (1X)
- By email through bciti (1X)
- Don't change anything (1X)
- Information at local home shows (1X)
- More user friendly app (1X)
- Posters on message boards and business windows (1X)
- Social media (1X)
- Take the time to answer questions (1X)
- What is bciti? (1X)

Communication and Participation

What might prevent you from participating in new or expanded municipal waste management programs? (Check all that apply)

Multiples answers question



Number of respondents to the question, by gender

	Total
Men	158
Women	333
Other	14
Total	505

Number of respondents to the question, by age group

	Total
<= 17 years	1
18 to 25 years	5
26 to 35 years	98
36 to 45 years	159
46 to 55 years	113
56 to 65 years	86
>= 66 years	43
Total	505

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Lack of information or awareness	28%	28%	27%	36%
Physical accessibility	9%	9%	9%	7%
Costs (e.g., bag tags, new bins)	70%	75%	68%	71%
Language or communication format	4%	2%	5%	0%
Nothing – I intend to participate	20%	18%	22%	14%
Other	9%	10%	9%	0%

Communication and Participation

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Lack of information or awareness	28%	25%	17%	20%	19%	19%	21%	25%
Physical accessibility	9%	25%	0%	4%	5%	8%	8%	6%
Costs (e.g., bag tags, new bins)	70%	25%	83%	56%	54%	48%	42%	40%
Language or communication format	4%	25%	0%	2%	3%	3%	3%	2%
Nothing – I intend to participate	20%	0%	0%	11%	14%	15%	16%	22%
Other	9%	0%	0%	8%	5%	6%	10%	5%

Comments summary

- **Consumer awareness**
 - Support is provided for initiatives that promote reflection on consumption.
- **Cost and fairness of services**
 - Citizens are concerned that tax increases will not be accompanied by improved services. (2x)
 - The cost of programs or services is a potential barrier to participation.
 - The lack of public transportation and the cost of water are sources of concern for some residents.
 - Equal tax rates do not reflect the unequal distribution of services between rural and urban areas.
- **Waste management and accessibility**
 - Reducing the number of weekly bags complicates waste management for large families, shelters, or those who produce a lot of waste, and does not take into account specific needs such as pets. (4x)
 - Taxes are considered too high in relation to the reduction or quality of waste management services. (3x)
 - Participation in new waste management programs should not result in additional costs or financial barriers for citizens. (3x)
 - The addition of the green bin is positive, but weekly garbage collection must be maintained.
 - Curbside collection of organic waste promotes more conscious waste management.
 - The city must help cover the cost of the bins prescribed for users.
 - Appropriate containers for garbage, recycling, and compost are necessary.
 - The use of transparent bags for waste is perceived as intrusive and excessive.
 - The green bin must be provided at the same time as the brown bags.
 - The inability to drive makes it difficult to access Bourget without transportation.
 - There are no barriers preventing participation in new waste management programs.
- **Concerns about property taxes**
 - Participation depends on property taxes remaining at the same level, without any increase. (2x)
 - High property taxes should guarantee robust services without cuts.
 - The cost represents a slight barrier to participation.

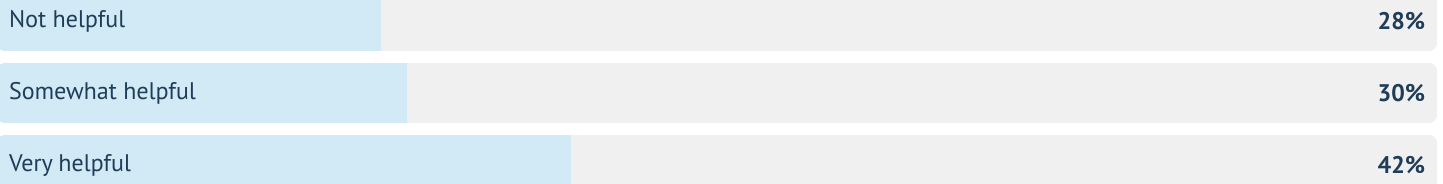
Other Choice Summary

- Less services for higher costs /taxes (8X)
- Not interesting / It's working as it is (5X)
- Having to deal with pests/messes (maggots, odors, animals, rodents, etc.) (4X)
- Option to participate or not / not imposing (4X)
- The cost of it is too high (3X)
- I would willingly participate as long as there are no additional costs / increase taxes (2X)
- Complex medical needs (1X)
- Garbage collection every 2 week (1X)
- I don't have the means to physically take large items to drop off locations (1X)
- I intend to participate to changes at my home (1X)
- I would willingly participate as long as there are no additional costs to the residents (1X)
- No services to pickup our garbage at condominiums (1X)
- Not interesting / It's working as it is (1X)
- Options aren't taking into consideration residents needs (1X)
- The city must provide the bins (1X)
- This will impact low income households (1X)
- Time and motivation (1X)
- Transportation to bring things to landfill (1X)

Communication and Participation

How helpful would it be to have a mobile app or digital tool that provides sorting tips and collection reminders?

Only one answer



Number of respondents to the question, by gender

	Total
Men	167
Women	339
Other	14
Total	520

Number of respondents to the question, by age group

	Total
<= 17 years	1
18 to 25 years	5
26 to 35 years	98
36 to 45 years	166
46 to 55 years	114
56 to 65 years	88
>= 66 years	48
Total	520

Percentage of selected responses, by gender (among those who answered this question)

	Total	Men	Women	Other
Not helpful	28%	32%	25%	57%
Somewhat helpful	30%	35%	28%	29%
Very helpful	42%	34%	47%	14%

Percentage of selected responses, by age (among those who answered this question)

	Total	<= 17 years	18 to 25 years	26 to 35 years	36 to 45 years	46 to 55 years	56 to 65 years	>= 66 years
Not helpful	28%	0%	40%	26%	29%	27%	34%	23%
Somewhat helpful	30%	100%	0%	32%	33%	31%	22%	33%
Very helpful	42%	0%	60%	43%	39%	42%	44%	44%