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The Regional Municipality of Durham Report

To: Works Committee
From: Commissioner of Works
Report: #2023-WR-1
Date: January 11, 2023

Subject:

Update on the Proposed Clear Garbage Bag Pilot in the Municipality of Clarington

Recommendations:

That the Works Committee recommends to Regional Council:

- A) That the implementation of a clear garbage bag pilot program in the Municipality of Clarington be deferred to 2025 due to the significant waste management programming changes occurring in 2024;
- B) That the implementation of a clear garbage bag pilot program in the Municipality of Clarington be approved with the following implementation parameters:
 - i) That the clear garbage bag pilot be implemented for a period of six months;
 - ii) That the clear garbage bag pilot commences in the second quarter of 2025 and include a four-week transition period before participation in the program becomes mandatory;
 - iii) That the clear garbage bag pilot project be implemented in a manner that reflects how the clear garbage bag program would operate permanently, meaning that where any visible Blue Box material, food, household hazardous waste or any other material for which a diversion program is available, is detected in the garbage bag during the mandatory phase, that the bag will not be collected and will be left at the curb;

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- iv) That the clear garbage bag pilot project be conducted with the following performance measures with a comparison of the data pre and post pilot:
 - 1. Garbage generation rates;
 - 2. Quantity of Blue Box, Green Bin and/or household hazardous material found in the garbage bag;
 - 3. Collection contractor injury rate;
 - 4. Collection route impacts (collection time, etc.);
 - 5. Impacts at Waste Management Facilities; and
 - 6. Incidence of illegal dumping complaints.
 - C) That external resources to support the implementation of the clear garbage bag pilot project be retained to provide the following:
 - i) An initial communication strategy and support in the planning and operating phases of the clear garbage bag pilot, including the distribution of educational material to residents in the pilot areas of the Municipality of Clarington and discussions with retail outlets and/or clear bag suppliers related to the supply of clear garbage bags to pilot project residents; and
 - ii) Waste audits to establish the baseline for the performance measures and to measure performance in the clear garbage bag pilot area in the Municipality of Clarington as compared to non-pilot areas located in other Regional Municipality of Durham municipalities during the pilot.
 - D) That the pilot program costs, currently estimated at \$530,000 exclusive of taxes (2023 costs), be included in the proposed Business Plans and Budget for Waste Management Services in the applicable year and subject to the approval of Council; and
 - E) That additional details regarding the Regional Municipality of Durham's waste management education programs in partnership with local school boards and details regarding the City of Orillia's clear garbage bag requirement be received for information.
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Report:**1. Purpose**

- 1.1 This report provides an outline and timing of a proposed pilot project to study the impact of using clear garbage bags on waste diversion and driver safety in the Municipality of Clarington (Clarington).
- 1.2 In addition, this report also provides an update on the education program delivered by Waste Management Services staff in the Regional Municipality of Durham (Region) school boards and on the implementation of a clear garbage bag requirement in the City of Orillia (Orillia).

2. Background

- 2.1 At its meeting on January 26, 2022, Regional Council passed a motion directing staff to implement a one-year clear garbage bag pilot program in Clarington, and to report on the details of “how the clear bag program will be done, when, what the cost is, etcetera” at the April 2022 Regional Council meeting.
- 2.2 Report [#2022-WR-3](#) “Proposed Pilot of Mandatory Clear Garbage Bag Use in the Municipality of Clarington” was presented at the April 6, 2022, Works Committee meeting included the following information:
 - a. The previous clear garbage bag pilot conducted in the City of Pickering (Pickering) and Clarington in 2009 resulted in an approximately three per cent increase in diversion and a 14 per cent increase in the Green Bin participation rate. However, based on the extensive promotion and education program provided to residents participating in the pilot, the impact of clear garbage bags could not be distinguished from the impact of the additional resident education and awareness.
 - b. Results from other municipalities with clear garbage bag programs vary, with diversion rate increases that are temporary or inconclusive.
 - c. Conducting another clear garbage bag pilot will require significant effort, cost, and staff time, including consultant support to conduct the required waste audits and impact analysis.
 - d. Clear garbage bags are not an effective diversion tool in multi-residential buildings where garbage from all residents is comingled in common

collection bins and cannot be traced to a specific unit for compliance with diversion programs.

- e. The results of the pilot will be one of several considerations in the staff's recommendation to Council on whether or not to expand the program permanently throughout Durham Region. Implementing a clear bag program in one municipality alone will produce a negligible impact on the Region's overall diversion rate.

- 2.3 The Works Committee referred Report #2022-WR-3 back to staff until the September 7, 2022 Works Committee meeting.
- 2.4 At the September 7, 2022 Works Committee meeting, Report [#2022-WR-4](#) titled "Update on the Proposed Clear Garbage Bag Pilot in the Municipality of Clarington" was referred back to staff for a further report at the January 11, 2023 Works Committee meeting, the second committee meeting under the newly elected Council.
- 2.5 Modifications to the original recommendations adjust the timing of the budget request and pilot to accommodate the referral of Report #2022-WR-3 to the September 2022 Works Committee. The further referral of consideration of the clear garbage bag pilot to the January 2023 Works Committee meeting has also impacted program budget and schedule.

3. Revised Timing for Clear Garbage Bag Pilot

- 3.1 The proposed operation parameters for the clear garbage bag pilot are provided in Report #2022-WR-3. The timing of the pilot has been adjusted as outlined below to reflect the referral of consideration of the clear garbage bag pilot to the January 2023 Works Committee meeting and the 2023 Waste Management Business Plans and Budget process.
- 3.2 Preparatory work for the clear garbage bag pilot in Clarington was initially proposed to begin in fall 2022 with waste audits to establish baseline quantities of Blue Box, Green Bin and household hazardous waste in the garbage bags of the proposed pilot area and a control area of non-pilot homes. Communications with retailers regarding the upcoming pilot and the need for increased retail stock of clear garbage bags were also anticipated to take place in fall 2022. The schedule for the clear garbage bag pilot has been adjusted to commence in 2025 due to the significant changes in waste management services in 2024.

- 3.3 The budget for the clear garbage bag pilot will be refined in the future 2025 Waste Management Services Business Plans and Budgets and will include planning, communication and consultant support. The estimated total cost for the clear garbage bag pilot is \$530,000 (excluding applicable taxes, 2023 projection). Work on the clear garbage bag pilot is anticipated to proceed as follows:
- a. Late 2024/First Quarter 2025 – Planning for waste audits in coordination with the auditing program developed as part of the Long-term Waste Management Plan (baseline and operating). A Communications Plan will be developed to support the pilot. The audit results will need to identify potential changes in habits as a result of the 2024 program changes;
 - b. Second quarter of 2025 - Conduct the baseline waste audit in the pilot area(s) and in non-pilot communities that will act as the control;
 - c. Second quarter of 2025 – Commence communication with retailers and residents regarding the clear garbage bag pilot and timing;
 - d. Third quarter of 2025 - Launch clear garbage bag pilot and conduct waste audits to measure the impact of the program;
 - e. Fourth quarter of 2025 – Conduct additional waste audits to measure the impact of clear garbage bag requirements; and
 - f. First/Second quarter of 2026 - Compile pilot data and report to Regional Council on results of the clear garbage bag pilot.
- 3.4 If retailers in Clarington and the surrounding area are unable to stock an adequate supply of clear garbage bags to support the timing of the pilot, the Region may need to provide clear garbage bags to every household in the pilot area. The additional cost of supplying clear garbage bags is unknown at this time and will be included in the proposed 2025 budget request, if necessary. It is anticipated that the delay of the commencement of the pilot may allow for additional communication time, reducing the likely need to incur this expense.
- 3.5 The objectives and measurements for the clear garbage bag pilot as originally outlined in Report #2022-WR-3 remain unchanged.

Implications of Revised Timing

- 3.6 Waste management services will see significant changes to its operations in the 2024 calendar year due to new regulatory requirements and contract expirations.
- 3.7 The transition of the Region's Blue Box Program to producer responsibility is scheduled to occur on July 1, 2024. This timing is determined by regulations and is not anticipated to change.
- 3.8 Although intended to be a seamless Blue Box Program transition for residents, staff are planning extensive, Region-wide communications with residents to ensure they are aware of the shift of responsibilities and potential changes to the collection vehicles on residential routes.
- 3.9 The Region's organic processing contract also expires on June 30, 2024, meaning the Region's Green Bin Program may be changed as of July 1, 2024, to align with programming changes that may be possible under a new organic processing contract.
- 3.10 The Region's most visible and high-volume diversion programs will undergo significant changes in mid-2024 which could impact the value of a clear garbage bag pilot based on the extensive promotion being planned to accompany changes to the Blue Box and Green Bin programs. Due to the changes occurring in 2024, the clear garbage bag pilot is planned to be deferred until 2025.

4. Additional Details and Clarification of the Proposed Clear Garbage Bag Pilot

- 4.1 The baseline waste audits, and follow-up audits will be conducted on select collection routes in Clarington that are in the pilot area and on select routes in non-pilot municipalities (i.e., Pickering and Township of Scugog). The same routes will be audited before and during the pilot to establish the baseline and measure changes in residents' behaviour after the implementation of a clear garbage bag requirement.
- 4.2 There will be a phase-in period at the start of the pilot to allow residents to adjust to the new requirements as has been done with previous waste collection program changes. During this time, additional education will be provided to non-compliant households to encourage proper participation in the program.

- 4.3 Measurement of any increased use by Clarington residents of the Region's Waste Management Facilities for garbage disposal during the pilot will be necessary. The approach for obtaining this measurement is being investigated but will be designed to minimize the impact on residents use and access to the Waste Management Facility.

Zero Tolerance

- 4.4 A zero-tolerance approach is not intended to be punitive to residents but serves to reinforce the Region's waste diversion requirements. Zero-tolerance is already used when residents use non-compostable plastic bags in the Green Bin, place grass clippings in the garbage or leaf and yard waste or have more than four garbage bags out for collection without tags for additional bags. Enforcing collection requirements incentivizes residents to use diversion programs and provides collection contractors with clear procedures that reinforce Regional waste reduction initiatives.
- 4.5 The Clear Garbage Bag pilot does not introduce any new diversion opportunities for residents who already use all Region diversion programs. Instead, clear garbage bags make it easier for collectors to see divertible material in the garbage and leave non-compliant bags at the curb. Collecting garbage bags with visible diversion items negates this benefit of clear garbage bags.
- 4.6 Collection contractors work efficiently to collect materials to complete all routes within the Region's designated collection hours. With recent labour shortages, collection contractors have been more pressed to complete routes within the required collection hours. Given the time constraints on collection contractors, simple and quick (pass/fail) parameters for collection are necessary.
- 4.7 The communities listed in the [Continuous Improvement Fund Clear Garbage Bag Program Implementation Toolkit](#) (CIF Toolkit) were reviewed to confirm the approach to prohibited materials in the clear garbage bag. All the communities indicate that recyclables and household hazardous wastes are not permitted in clear garbage bags. Food waste is also prohibited in communities that have an organics diversion program. Any bags containing materials which are prohibited may not be collected.

- 4.8 None of the CIF Toolkit communities indicate a permissible level of contamination below which the clear garbage bag may be collected. Every participating community indicated that garbage in opaque bags will be left at the curb. A zero-tolerance approach is not unique to the Region's pilot and, in most communities, any leeway for contamination provided to residents is not publicized.
- 4.9 Orillia published a Frequently Asked Questions page for the recent launch of their clear bag program. It indicates that soiled recycling, such as soiled tin foil, will be accepted in the clear garbage bags if it is less than 10 per cent of the garbage and the resident has also placed recycling containers for collection.

5. Waste Management Education Program in Durham School Boards

- 5.1 For several years Regional staff has delivered school education programs to engage Durham students in a fun and interactive manner on the importance of proper waste management practices and the impact of their choices on the environment. Engaging students also serves as a means for those students to advocate for proper waste practices in their own homes and workplaces.
- 5.2 These presentations were initially geared toward elementary schools and focused on the proper sorting of paper and packaging for inclusion in the Blue Box. Over time, the focus has shifted to include older students in secondary and post-secondary schools and to cover more complex waste management topics.
- 5.3 Currently, waste management education is offered in all four English-speaking school boards in Durham Region. The development of French language education modules is a priority for the 2022-2023 school year.
- 5.4 Waste management education has evolved to focus on complementing the Ontario Ministry of Education curriculum. With limited staff resources to provide in-person programming, video and online modules were developed for teachers to access and present independently of Regional staff. This shift pre-dated the pandemic but was beneficial with the shift to online school and virtual learning during the COVID-19 pandemic.

- 5.5 At the elementary school level, teachers can request virtual presentations that can be provided as pre-recorded videos or in real-time to allow more interaction with students. These have been available for the 2020-2021 and 2021-2022 school years and cover topics such as the 5Rs (Rethink, Reduce, Reuse, Recycle and Recover) and food waste. For the 2022-2023 school year, more detailed education modules are being developed on the 5Rs, composting, household hazardous waste and careers in waste management.
- 5.6 For secondary students, a virtual education program was launched in September 2021 to provide education modules on several waste management topics. These include Landfills and Perpetual Care, Integrated Waste Management, Energy from Waste and Careers in Waste Management. Education modules include background on the topic, lesson plans to help deliver course material in the classroom, videos and resources, and interactive activities.
- 5.7 The education modules for elementary and secondary students are available on an updated [School Programs](#) webpage.
- 5.8 In addition to the classroom resources outlined above, staff are developing a video library to support the general promotion and education program and diversify the resources provided to teachers and students. Completed videos are posted on the [#DurhamWaste - YouTube](#) channel and include topics such as Durham's Integrated Waste Management System; How to properly participate in the Green Bin program – "the Basics"; Benefits of Recycling; Safe with Your Waste Topics on medical sharps, batteries and others; Careers in Waste Management Series such as Waste Disposal Clerk, Landfill Management, and Waste Management Policy Planner; and Food Waste Reduction.
- 5.9 In 2021, the Waste Management education program reached over 4,000 Kindergarten to Grade 8 students in the Region's school boards and the virtual education program for high school was launched. Private schools are also included in the Region's education program.

6. Update on Orillia Clear Garbage Bag Requirement

- 6.1 Table 1 below outlines key aspects of waste management programs in the Region, Orillia and the Town of Markham (Markham). The comparison is provided to highlight commonalities and differences between the Region and two nearby municipalities requiring clear garbage bags.

- 6.2 The 2020 diversion rates as calculated by the Resource Productivity and Recovery Authority (RPRA) for all three communities are between 60 and 65.8 per cent. York Region's diversion rate is used as a proxy for Markham to ensure a common calculation method for diversion. A key factor in York Region's higher diversion rate is that diapers and pet waste are accepted in their Green Bin program. The Region estimates up to 10 per cent increased diversion is possible if contaminated organics, such as diapers and pet waste, are accepted in the Green Bin.
- 6.3 Both the Region and Orillia impose a garbage bag limit for curbside collection. However, Orillia allows only 20 free bags annually, while the Region allows 104 free bags annually with four bags permitted each collection period. Orillia residents must purchase bag tags for each bag exceeding the 20-bag limit. Markham does not impose a garbage bag limit.
- 6.4 In addition to garbage, the Markham instructs residents to place overflow Green Bin material in plastic bags for collection. York Region staff have indicated that all bagged material received from the local area municipalities that complete curbside collection is considered waste and sent for disposal.
- 6.5 Markham does not operate a Waste Management Facility for residents to drop off items for disposal that are not collected at the curb. Residents are directed to a private waste transfer station where tonnages are not included in Markham's or York Region's waste generation numbers.

Table 1 Waste Management Programs Comparison

	Region of Durham	City of Orillia	Town of Markham
Population	696,992	31,166	338,503
Area, km²	2,537	28.61	210.9
2020 RPRA Diversion Rate	62.8%	60.0%	65.8% (York Region)

	Region of Durham	City of Orillia	Town of Markham
Curbside Garbage Collection	Four bag limit with collection every other week at no charge	20 free bags per year with collection every other week; residents purchase additional bag tags for more than 20 bags per year	No garbage bag limit with collection every other week
Curbside Blue Box	Dual stream collected weekly	Dual stream collected weekly; includes Styrofoam packaging and trays in clear bags and plastic shopping bags	Single stream collected weekly in large boxes (not totes); cardboard bundled separately; excess recycling can be placed in clear bags
Curbside Green Bin	Weekly; limited to food waste and other 'clean' organics such as hair and tissues	Weekly; limited to food waste and other 'clean' organics such as hair and tissues	Weekly; includes diapers and pet waste and allows plastic bags; Overflow organics collected in clear bags
Curbside Bulky Items	Curbside collection by appointment	No curbside collection	Curbside collection of carpet and bulky items with garbage; appliances and metal items collected by appointment; fees may apply

	Region of Durham	City of Orillia	Town of Markham
Grass Clippings	Prohibited for disposal in any Region program	Collected as yard waste but must be tagged with garbage bag tag (i.e.: collected for a fee)	Prohibited for disposal in garbage or yard waste
Garbage Disposal Method	Durham York Energy Centre	City-owned landfill	Managed by York Region at various locations including Durham York Energy Centre, private EFW, and landfill
Garbage Bag Tag availability and cost	Sold as packs of 5 for \$12.50	Sold as packs of 5 for \$10.00	Not Applicable
Waste Management Facility	Three resident drop-off locations for \$5 minimum; sliding scale up to \$125/tonne for waste; \$250/tonne for fill material	One resident drop-off location for \$20 minimum; \$185/tonne for waste; \$370/tonne for construction and demolition waste	Residents directed to privately owned transfer station for garbage disposal where fees apply
Stated Goal of Clear Garbage Bag	Proposed pilot to measure impact on diversion	To divert additional Blue Box and Green Bin material and extend the life of the City landfill	To reduce risk of injury to collection workers and generate clean waste for EFW

	Region of Durham	City of Orillia	Town of Markham
Contamination/Privacy Policy	Proposed: Opaque bags not collected; Zero visible contamination; one privacy bag	Opaque bags not collected; up to 10% visible contamination allowed if recycling containers are out; two privacy bags	Opaque bags not collected; no publicized allowable contamination amount but collector discretion allowed; four privacy bags per clear bag

- 6.6 Orillia implemented a clear garbage bag requirement on February 7, 2022. A Council Information Report comparing waste tonnage for the first five weeks of the clear bag requirement to the same time the previous year was released on April 1, 2022.
- 6.7 The 46 per cent decrease in garbage tonnage year over year is attributed primarily to an increase in organics diversion which rose by 21 per cent. The impact of additional waste generation in 2021 due to COVID-19 stay-at-home orders is not discussed.
- 6.8 Based on the experience of other municipalities as detailed in the Attachment to Report #2022-WR-3, garbage generation generally decreases, and diversion increases in the first months to one year after the implementation of a clear garbage bag requirement. However, diversion numbers generally return to pre-clear bag levels after the first year.

7. Financial Implications

- 7.1 Costs for a clear garbage bag pilot commencing in 2025 will need to be developed closer to the timing for the preparation of the new budget. Anticipated costs include consultant support for communication and auditing, a promotion and education campaign and contractor collection costs. Estimates developed previously for the program totalled approximately \$530,000 and included funding related to additional audit, communication strategy development and implementation, as well as additional fees incurred related to the collection contract.

- 7.2 Costs will be included in the applicable Business Plans and Budget for Waste Management Services and subject to Council approval.
- 7.3 Staff will endeavour to reduce waste auditing costs by coordinating with other planned curbside audits where possible.

8. Relationship to Strategic Plan

- 8.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:
 - a. Environmental Sustainability:
 - Goal 1.2: Increase waste diversion and resource recovery.

9. Conclusion

- 9.1 The proposed timing of planning activities for the clear garbage bag pilot must be revised to reflect the referral of the initial report to the September Works Committee and further referral of consideration of the clear garbage bag pilot to the January 2023 Works Committee.
- 9.2 Due to significant changes to waste management services occurring in 2024 the clear garbage bag pilot should be planned for 2025 with the program to be included in the proposed 2025 Waste Management Services Business Plans and Budget for Council approval.
- 9.3 An extensive and expanding waste education program in partnership with the four English school boards operating in Durham Region is supported. The French language programming to allow partnership with the two French language school boards is currently being developed for future implementation.
- 9.4 Clear garbage bag programs, like other waste management services, vary by municipality in the scope and purpose of the requirement. The proposed pilot for Clarington is designed to reflect the Regional Municipality of Durham's integrated waste management system, collection options and contracts and does not introduce any new diversion opportunities for residents.
- 9.5 This report has been reviewed by the Finance Department.

9.6 For additional information, contact: Gioseph Anello, Director, Waste Management Services, at 905-668-7711, extension 3445.

Respectfully submitted,

Original signed by:

John Presta, P.Eng., MPA
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

Elaine C. Baxter-Trahair
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