

The Regional Municipality of York

Committee of the Whole
Environmental Services
June 10, 2021

Report of the Commissioner of Environmental Services

2020 Annual Waste Management Report

1. Recommendation

The Regional Clerk circulate this report to the Clerks of the local municipalities and the Ministry of the Environment, Conservation and Parks.

2. Summary

This report provides Council with a copy of the 2020 Annual Waste Management Report (Attachment 1) which summarizes the Region's waste reduction and diversion initiatives and provides an update on implementation of the SM4RT Living Integrated Waste Management Master Plan (the SM4RT Living Plan). It supports the Region's enhanced approach to tracking, measuring, and reporting on the performance of its waste management system.

This Annual Report is submitted to the Ministry of the Environment, Conservation and Parks each year to satisfy the Durham York Energy Centre Environmental Assessment condition for diversion reporting.

Key Points:

- Regional and local municipal staff collaborated to manage the challenges created by the COVID-19 pandemic, adapting programs and services to ensure safe delivery for staff and residents
- Organics and garbage curbside generation rates increased in 2020 due primarily to pandemic impacts
- The Region and its local municipal partners achieved 93% diversion from landfill in 2020, again exceeding the Regional Official Plan goal of 90% waste diversion from landfill. This includes all tonnes collected through local municipal curbside programs, waste depot diversion programs and tonnes managed through energy-from-waste
- A diversion rate of 66% has been reported by the Region for 2020 and is awaiting verification by the Resource Productivity and Recovery Authority (RPRA). The province does not recognize energy-from-waste as diversion and, as such, the diversion rate reported by RPRA does not include energy-from-waste tonnages

- Although the release of the Blue Box regulation is still pending (as of drafting this report), York Region continues to prepare for transition of the Blue Box Program to full producer responsibility and has advocated to the province to finalize the Blue Box regulation (Attachment 2)
- The SM4RT Living Plan's focus on circular economy will support the Region as it recovers from the pandemic and navigates waste-related legislative changes

3. Background

The SM4RT Living Plan focus on circular economy demonstrates leadership in an evolving waste landscape

The SM4RT Living Plan outlines the long-term direction for waste policy and programming in the Region. The SM4RT Living Plan has a visionary goal of a world where nothing goes to waste and a strong focus on partnerships and innovation to drive change. Approved by Council in [April 2020](#), the SM4RT Living Plan continues to move York Region to a more sustainable circular economy that emphasizes waste reduction, repair, reuse and resource recovery to ensure materials are kept in circulation, maximizing economic value and environmental protection. Council demonstrated early leadership in this important shift which is gaining momentum with senior governments, municipalities across Canada, and the private sector.

Changes influenced by the pandemic restrictions have highlighted the value of resilient and adaptable local supply chains that can be achieved through a more circular economy. Despite the ongoing pandemic challenges, the federal government has moved forward with funding announcements for Canadian industry, academia and other sectors to support innovative circular solutions to address plastics, textiles and food waste reduction. Advancing the circular economy will keep the Region at the forefront of this important movement, helping to improve waste management outcomes, while mitigating greenhouse gas emissions and supporting innovation and resilience in the public and private sectors.

4. Analysis

The Region and local municipal partners provided flexible, high quality service to residents despite COVID-19 impacts to waste operations

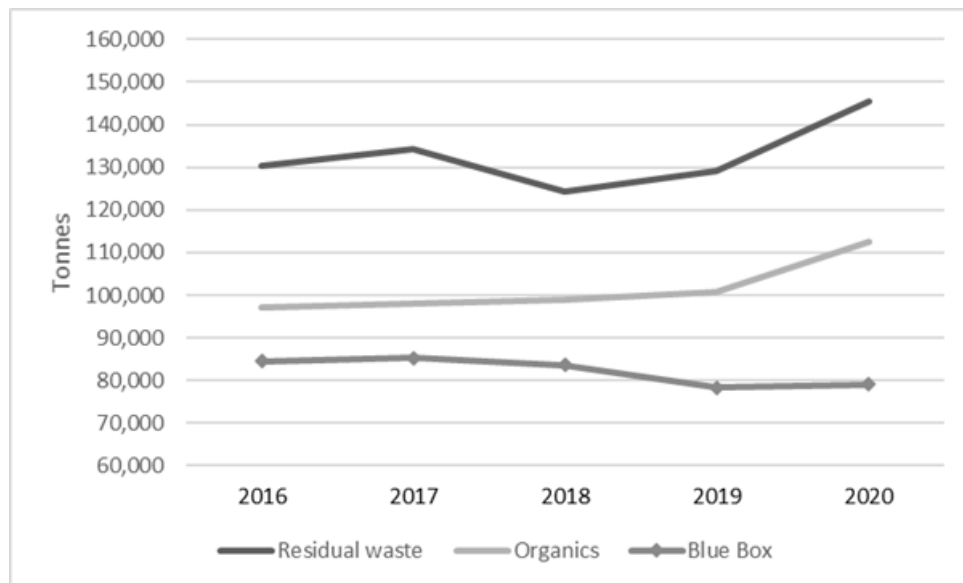
Throughout the pandemic, the Region and its local municipal partners adapted quickly and remained flexible to maintain curbside and waste depot service levels. Outlined in Attachment 1 (pages 22 – 23), waste depots implemented additional safety protocols to ensure the health and safety of workers and residents. The community environmental centres and our Georgina Transfer Station temporarily prioritized drop-off of garbage and household hazardous waste at the start of the pandemic. Textile diversion was briefly suspended at the request of Diabetes Canada. When the program resumed in July 2020 usage of this service surged. Similarly, there was a significant increase in demand for depot services during the pandemic, with a record number of tonnes collected and visits to depots.

At the local municipal level, staff collaborated with the Region on messaging about proper placement of materials at the curb and provided flexibility on garbage bag limits to support residents working or studying at home. Some municipalities adapted services such as bin and tag sales to contactless formats.

COVID-19 had a significant impact on waste generation rates as communities implemented measures to manage the pandemic

In 2020, the global pandemic impacted social and recreational activities, jobs, supply chains and economies worldwide resulting in significant changes in consumption and waste disposal behaviours at home. Municipal systems captured waste normally managed in workplaces, schools, and other places outside the home and additional waste generated from online shopping, takeout food and single use personal protective equipment. This led to increased tonnages of waste managed in the Region’s three largest streams and new blue box contamination challenges. Figure 1 shows the total tonnes collected over the last five years. Year over year changes in tonnage can be attributed to population growth, however, in 2020 additional increases were attributed to COVID-19 impacts.

Figure 1
Total Tonnes Collected per Year



Attachment 1 (pages 6 – 9), details the Region’s waste generation rates in 2020 and highlights waste behaviours that influenced these rates. The green bin generation rate increased from 84 kilograms per person in 2019 to 92 kilograms per person in 2020 and the garbage generation rate increased from 81 kilograms per person in 2019 to 91 kilograms per person in 2020.

Region and community partners engage residents through virtual programming to help support waste reduction and health and wellbeing

The pandemic inspired growing interest in activities such as cooking, gardening and bicycling, as residents took advantage of more time at home to learn new skills and manage mental health impacts of isolation. The Region partnered with community groups to offer online and socially distanced programs and shared waste messaging that aligns with the SM4RT Living Plan and engages residents exploring new pursuits. The 2020 Annual Waste Management Report (pages 30 – 31) showcases community engagement activities across the Region, including a partnership with Markham Cycles that provided online workshops, a donated bike refurbishing program and outdoor bicycle tune-ups. Regional staff developed a new contactless approach to the annual composter sale which saw increased demand from new and existing gardeners. Partnerships with York Region Food Network and York Farm Fresh allowed the Region to continue sharing tips and tools for reducing food waste while cooking at home and buying local produce.

SM4RT Living Plan priorities guide programs and policy as the Region moves towards recovery from COVID-19

It is unclear how changes brought about by the pandemic response, such as increased online shopping, working from home, and further reliance on single use packaging may impact waste generation over the longer term. The Region will continue to monitor waste generation trends over the next few years to better understand the medium and long-term impacts. While the Region has been successful at promoting environmentally friendly consumption and waste behaviours in the past, it might be challenging to address some of the new consumption and waste habits residents displayed during the pandemic. On the other hand, residents have also exhibited new skills and interests such as cooking, gardening and repair that may be leveraged to help in waste reduction engagement and education efforts. Private sector commitments such as the new [Loop Program](#) offering reusable packaging options for shopping and take-out food aligns with federal commitments on banning single use items and suggests that the movement towards a circular economy continues.

As the pandemic evolves the Region will continue to work with local municipal and community partners to deliver waste reduction and education programs supporting this transition. The Region's first Circular Economy Initiatives Fund, launched in February 2021, will support non-profit organizations to drive community-led waste reduction and reuse efforts. The Region has also applied to participate in the [Circular Cities and Regions Initiative](#), a network of municipalities engaged in transition to a circular economy. Program participants will be announced in June 2021. If successful, the Region will have the opportunity to work with national and international experts and municipal peers to develop a roadmap to circularity that builds on our SM4RT Living plan to further guide our work over the next several years.

Region continues to exceed the Regional Official Plan target with 93% diversion from landfill in 2020

Although an increase in tonnage for all streams was noted in 2020, York Region and its local municipal partners achieved 93% diversion from landfill, continuing to exceed the Regional Official Plan target of 90% waste diversion from landfill. The Region has exceeded its diversion from landfill target since the target was established in 2016; however, the rate has decreased slightly from our 2019 rate of 94%. The diversion from landfill rate includes all tonnes collected through local municipal curbside programs, waste depot diversion programs and tonnes managed through energy-from-waste. Diversion from landfill is a key performance measure under the sustainable environment priority in the Corporate Strategic Plan. The diversion rate is reported annually to the Ministry of the Environment, Conservation and Parks to satisfy the Durham York Energy Centre Environmental Assessment condition for diversion reporting.

York Region continues to lead large urban municipalities in the Resource Productivity and Recovery Authority diversion ranking

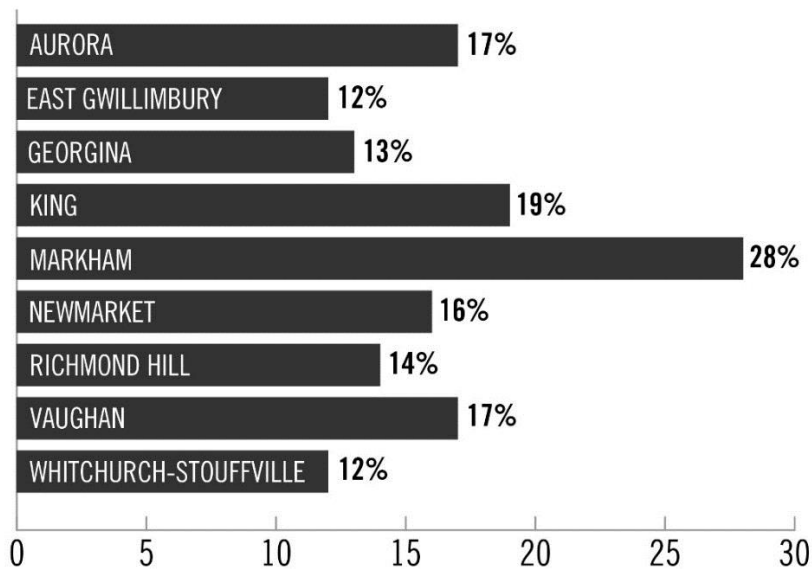
Since 2012, York Region has ranked first in the large urban municipal diversion category, verified through the Resource Productivity and Recovery Authority Annual Datacall. The province does not recognize energy-from-waste as diversion and, as such, the diversion rate reported by the Resource Productivity and Recovery Authority does not include energy-from-waste tonnages. York Region and its local municipal partners continue to be leaders in Ontario in sustainable waste management. In 2019 (the latest year for which we have verified data), York Region continued this leadership with the highest verified diversion rate of 66% in the large urban municipal diversion category. For 2020, York Region has again reported a diversion rate of 66% which has been submitted to the Resource Productivity and Recovery Authority for verification. This suggests the Region's diversion rate remained the same despite challenges and impacts of the pandemic.

The Region and local municipalities will tackle broader blue box contamination to prepare for transition

Waste audits revealed that blue box contamination persisted in 2020. Local municipal contamination rates range from 12% to 28% as seen in Figure 2. A broad range of contaminants was found in the blue box stream, with no common contamination issues among the municipalities.

Figure 2

Blue Box Contamination Rates – 2020 Audit



The Region and local municipalities along with the collection contractors recognize that education combined with curbside enforcement are best practices that must be employed to help lower blue box contamination. Region and local municipal staff continue to work together to drive improvements in the Blue Box Program by educating residents on what materials are acceptable and leveraging curbside enforcement practices. However, further progress is needed in areas where high contamination rates persist. As the pandemic recovery phase commences York Region and the local municipalities will work on expanding education efforts and focus enforcement on targeted areas to address broader contamination issues. Regional and local municipal staff have engaged in discussions to develop an approach to better understand the impacts of the pandemic on blue box participation and contamination.

Provincial government advances transition of several key programs however regulations show erosion of producer responsibility requirements

As the recycling landscape in Ontario continues to evolve, York Region has remained engaged in consultations related to implementation of full producer responsibility. Table 1 highlights the regulatory changes and consultations in 2020 and early 2021 and the Region’s feedback/position. While the Region is pleased to see significant progress on plans to transition to full producer responsibility, there is concern about the strength and effectiveness of the regulation. In some cases, materials covered by draft regulations were not included in the final versions, leading to a possible reduction in diversion and convenience for residents. Lack of clear targets in the regulations could also impact environmental outcomes.

Table 1

Regulatory advocacy work in 2020

Batteries

- Transitioned to individual producer responsibility on July 1, 2020
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Blue Box

- [June 2020](#): all nine local municipal councils and Regional Council passed resolutions indicating transition in 2025 as the preferred date; this date was included in the draft regulation
 - October 2020: Ministry released proposed Regulation
 - December [2020](#): Staff submitted comments on the draft regulation that included local municipal concerns
 - Ministry expected to finalize Blue Box regulation in 2021 (still pending)
 - April 2021: Region issues letter to Minister of Environment, Conservation and Parks, copying the Premier's office, to advocate for the release and finalization of the Blue Box regulation
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Electronic Waste

- December 31, 2020: Waste Electrical and Electronic Equipment Program ended
 - January 1, 2021: program transitioned to individual producer responsibility
 - Concerns around new Electrical and Electronic Equipment Regulation as fewer material types designated under final regulation than in earlier draft version; no established penalties for non-compliance
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Food and Organic Waste Policy Statement

- September 2020: Ministry posted proposed amendments to policy statement to encourage inclusion of compostable packaging in green bin programs
 - [November 2020](#): Region and local municipalities provided feedback, including recommendation to establish producer responsibility for compostable packaging
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Municipal Hazardous or Special Waste

- September 30, 2021: transition to individual producer responsibility
 - February 2021: proposed regulations released
 - York Region and local municipalities responded with feedback expressing extreme disappointment that the draft did not include key material types and lacked targets
 - Feedback also identified lack of alignment between ministry's permissions office and producer responsibility regulations; the "use it up" approach for fertilizer under the proposed regulation increases non-point source runoff at a time when the province is actively trying to reduce non-point sources of phosphorus to the Great Lakes and Lake Simcoe. This is in stark contrast to increasingly restrictive phosphorus requirements for wastewater facilities already subject to extremely stringent phosphorus effluent limits.
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Regional and local municipal staff will continue to advocate for improvements to ensure residents have convenient access to diversion programs as well as trust that waste is being managed consistently and responsibly under new programs.

The Blue Box regulation has yet to be finalized despite earlier commitments from the province to release the final regulation by early 2021. The Association of Municipalities of Ontario, City of Toronto, Peel Region and York Region (Attachment 2) have issued letters to the province advocating for release of the final regulation and other municipalities across Ontario are following this lead.

5. Financial

Uncertainty around Blue Box Regulation may impact future budgets

Further delays in the release of the final regulation are increasing municipal costs that would otherwise be avoided through transition to full producer responsibility. Transition as currently proposed in the draft regulation would initiate in 2023, with York Region scheduled for 2025. Delayed transition timing and/or inadequate scope of the final regulation will impact the timing and extent of future costs savings and may result in increased costs. Staff continue to collaborate with local municipal partners to adapt to the changes during this evolving process.

COVID-19 impacts reflected in 2020 actuals and 2021 budget

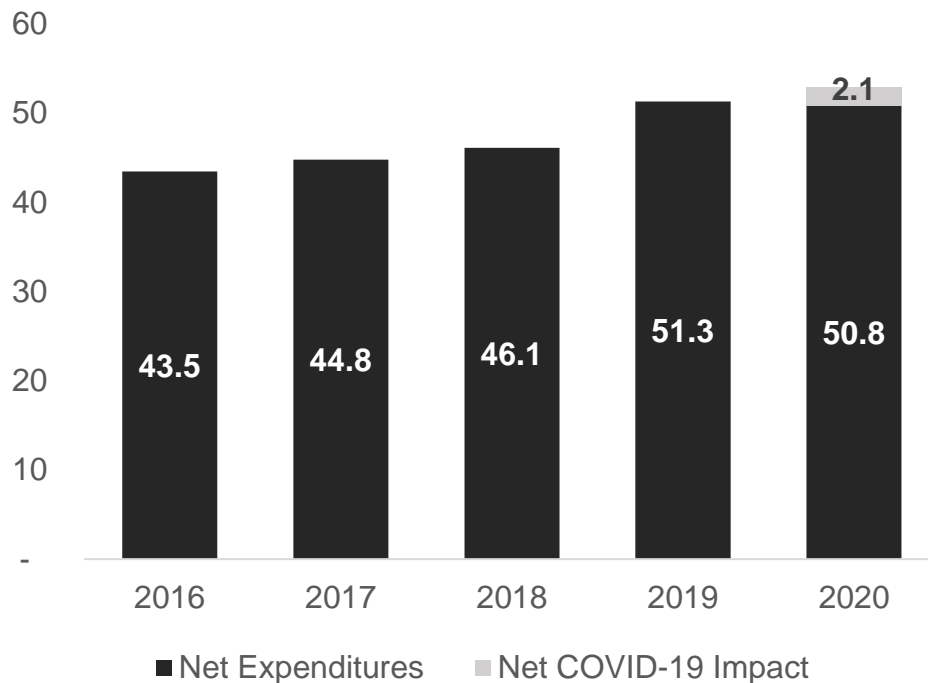
Increased blue box, garbage, and green bin tonnages observed in 2020 due to the pandemic resulted in an increase of \$2.1 million to the Region's waste management net operating costs. Table 2 summarizes the operating impact of the pandemic on the affected waste streams.

Table 2
2020 Net Operating Impact of COVID-19 by Waste Stream

Waste Stream	Additional Tonnage Due to COVID-19	Net Operating Impact (000s)
Garbage	7,900	\$630
Blue Box	3,000	\$240
Organics	8,000	\$1,230
Total	18,900	\$2,100

Over the past five years, the waste management operating spending has grown at a predictable and consistent rate typically due to cost inflation and population growth. As shown in Figure 3, 2020 operating expenditures were forecasted to be slightly lower than 2019 expenditures. However, the impact of the pandemic increased the waste expenditures by \$2.1M, an additional 4% over expected spending.

Figure 3
Waste Management Net Operating Expenditures 2016-2020
(\$ Millions)



Tonnages and contamination are difficult to forecast given the uncertainty about residents continuing to work or study from home and how behaviours will be modified based on the evolving pandemic. Based on current trends the pandemic is expected to increase 2021 waste management expenditures by an additional \$1.8 million.

6. Local Impact

Local municipal efforts critical to eliminate personal protective equipment (PPE) in the blue box

Waste directly related to the COVID-19 pandemic, specifically masks and gloves, began appearing in the blue box at the start of the pandemic in 2020, raising health and safety concerns for collection and processing staff. The Region conducted waste audits that found a higher quantity of personal protective equipment in blue box tonnages from the southern municipalities. Markham recorded the highest PPE related contamination rate, with 236 gloves/masks per tonne of blue box material audited.

Recognizing this trend, the Region worked closely with the southern municipalities to identify and address PPE waste in the blue box. Through a targeted education and enforcement campaign starting in October 2020, the southern three municipalities monitored blue boxes at the curb and worked with their collection contractors to sticker and leave behind blue boxes containing PPE. In 2020 early results showed a downward trend in observed PPE from September to December. During this period the northern six municipalities continued to educate and enforce at the curb and recorded a lower quantity of PPE in the blue box. This education and enforcement helps protect staff and operations at the Materials Recovery Facility. The Region will continue with education, enforcement work, and monitoring impacts of PPE in the blue box stream.

7. Conclusion

The Region and its local municipal partners remain resilient despite impacts of the pandemic and are well positioned to support recovery

With unexpected changes and impacts to waste management resulting from the pandemic, 2020 was a challenging year. It was also a year that revealed the resilience of Regional and local municipal diversion programs and their potential for improvement. Service levels were maintained with very few modifications and staff continued delivery of high-quality programs through new and innovative methods.

The Region's emphasis on a circular economy supports a strong recovery from the impacts of the pandemic. The Region's Circular Economy Initiatives Fund, launched in 2021, provides funding and support to the non-profit sector to deliver projects that reduce waste and promote a circular economy. Work has begun on developing a circular economy working group to facilitate knowledge sharing and collaboration so the Region's facilities and operations align with our commitment to circularity and waste reduction and efforts to support the industrial, commercial and institutional sector in adopting circular practices can be guided by data and stakeholder insights. The Region and local municipalities also remain actively engaged in advocacy around the transition to full producer responsibility, a key component of the circular economy.

For more information on this report, please contact Laura McDowell, Director, Environmental Promotion and Protection at 1-877-464-9675 ext. 75077. Accessible formats or communication supports are available upon request.

Recommended by:

Per: 
Erin Mahoney, M. Eng.
Commissioner of Environmental Services

Approved for Submission:


Bruce Macgregor
Chief Administrative Officer

May 21, 2021
Attachments (2)
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