

The Regional Municipality of York

Committee of the Whole
Environmental Services
October 8, 2020

Report of the Commissioner of Environmental Services

2019 Annual Waste Management Report

1. Recommendation

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

2. Summary

This report provides Council with a copy of the 2019 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 (SM4RT Living Plan). The report is part of the Region's enhanced approach to tracking, measuring and reporting on the performance of its waste management system. As a result of the work completed on the SM4RT Living Plan 5-year Review and Update, this new approach combines two previous annual reports:

- Annual Solid Waste Diversion Memo provided information on total material collected, processed and diverted
- Balanced Scorecard summarized progress toward goals set out in the SM4RT Living Plan

The new combined report will be submitted prior to the November 3rd deadline each year to the Ministry of the Environment, Conservation and Parks to satisfy the Durham York Energy Centre Environmental Assessment condition for diversion reporting.

Key Points:

- The Region and its local municipal partners achieved 94% diversion from landfill in 2019, exceeding the 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
- With the move to producer responsibility for the blue box program, reporting of waste generation rates now focuses on two key streams in curbside collection (organics and garbage)

- Organics and garbage generation rates have remained steady over the past five years
- York Region continues to prepare for full transition of the Blue Box Program to producer responsibility
- Although this is the 2019 report, COVID-19 impacts are introduced here as the pandemic has impacted the Region's waste management system and trends might look different in the 2020 report

3. Background

New reporting approach will help the Region measure progress efficiently and inform strategic decisions

As approved by Council in [April 2020](#), the updated SM4RT Living Plan establishes an aspirational vision and long-term targets to move towards a world without waste. The Plan identifies the following three objectives with relevant key actions:

- Successfully navigate legislative changes
- Use resources and infrastructure more strategically to achieve SM4RT Living
- Inspire people across the Region to embrace SM4RT Living and advance the circular economy

One outcome of the update is a streamlined approach to reporting which is achieved by combining the SM4RT Living Balanced Scorecard Report and Annual Solid Waste Diversion Memo. The 2019 Annual Waste Management Report (Attachment 1) provides an update on waste generation trends as it relates to new targets approved in the review and update, and meets reporting requirements to satisfy the Durham York Energy Centre Environmental Assessment condition for diversion reporting.

Waste generation rate is now focused on organics and garbage streams only

The waste generation rate has been the key metric used to measure progress toward the SM4RT Living waste reduction target of 289 kg/capita by 2031. This rate was previously calculated based on all of the material managed through local and Regional waste programs, including waste depots. Having a single metric that included many diverse sources of material made it challenging to interpret trends and inform decision-making. With the move to full producer responsibility, York Region will focus on two key streams (organics and garbage) that will continue to be municipally managed and which represent a significant portion of the net operating budget for waste management. These streams align with priority actions in the Plan, including food waste reduction, reuse and repair and minimizing single-use items. New targets were identified for these streams:

- Green bin generation rate: 71 kilograms per resident by 2031, a 15% reduction from the baseline of 84 kilograms in 2014

- Garbage generation rate: 66 kilograms per resident by 2031, a 20% reduction from the baseline of 82 kilograms in 2014

Blue Box generation will still be tracked at the York Region level however no target has been set due to the expected shift to full producer responsibility for that stream by the end of 2025.

4. Analysis

New and ongoing SM4RT Living Plan actions underway

Since the SM4RT Living five-year update was approved in April, work on priority ongoing and new actions continues despite challenges created by the pandemic.

- Collaborating with community partners such as York Region Food Network, Longos and York Farm Fresh to share tips on reducing food waste while cooking more at home
- Working on eligibility requirements and selection criteria for the Circular Economy Initiatives Fund with program launch anticipated in 2021
- Developing procurement documents for contracted source separated organics processing with the projected release in Q1 2021

Continue to exceed the Regional Official Plan target with 94% diversion from landfill in 2019

Together, York Region and its local municipal partners achieved 94% diversion from landfill in 2019 continuing to exceed the Official Plan goal of 90% waste diversion from landfill. The Region's diversion from landfill rate includes all tonnes collected through local municipal curbside programs, waste depot diversion programs and tonnes managed through energy-from-waste.

York Region leads large urban municipalities in the Resource Productivity and Recovery Authority (RPR) diversion ranking

This provincial diversion rate reported by the RPR differs from the York Region diversion from landfill rate (referred to above), as energy-from-waste is not provincially recognized as diversion. York Region and its local municipal partners continue to be leaders in Ontario in sustainable waste management. Since 2012, York Region has ranked first in the large urban municipal diversion category, verified through the RPR Annual Datacall. In 2018 (the latest year for which we have verified data) York Region continued this leadership with the highest verified diversion rate of 67.5% in the large urban municipal diversion category (Table 1). York Region's reported 2019 diversion rate of 66% has been submitted to the RPR for verification. As outlined later in this report, the decreasing diversion rate is a result of increasing contamination in the blue box stream.

Table 1

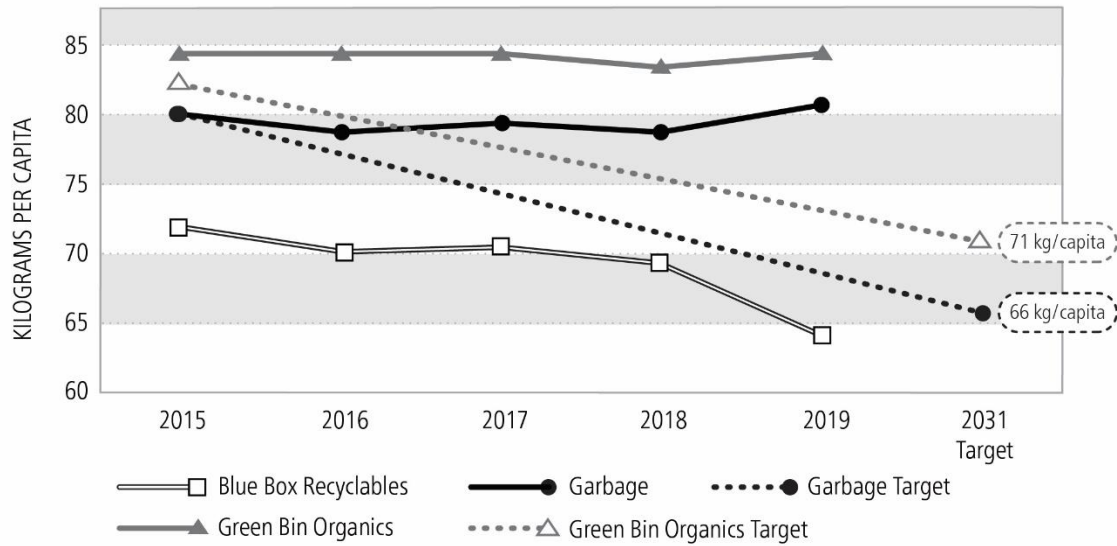
2018 Large Urban Municipal Verified Diversion Rankings

Rank	Municipality	Diversion Rate
1	<i>Regional Municipality of York</i>	67.5%
2	<i>Regional Municipality of Halton</i>	55.4%
3	<i>City of Toronto</i>	50.7%
4	<i>Regional Municipality of Peel</i>	50.3%
5	<i>City of London</i>	44.1%
6	<i>City of Hamilton</i>	35.9%

Five year trends show that green bin generation rates are steady but blue box contamination is impacting the garbage generation rate

As shown in Figure 1, green bin generation rates demonstrate a steady trend in the Region. Further analysis of green bin generation rates shown in Attachment 1 (pages 6 – 7) reveals a downward trend in some cities and towns which can be attributed to efforts to reduce avoidable food waste. Although the garbage generation rate is demonstrating a similar trend, it is showing a slight increase in 2019. This was the result of efforts to control contamination from inbound blue box loads. In April 2019, measures were put in place at the Earl Turcott Waste Management Centre in the City of Markham to address growing contamination issues in the blue box stream. Approximately 1,880 tonnes of contaminant material was removed from single family and multi-residential blue box loads received from the southern three local municipalities and placed directly into the garbage. The redirected material is equivalent to a 1.6 kg/capita increase in the Region’s overall garbage generation rate.

Figure 1
Waste Generation Rate from 2015 - 2019



Two-stream waste collection for multi-residential units is also affecting Vaughan’s garbage generation rate

In 2019, the six northern municipalities had a garbage generation rate that was lower than their 2015 rate while the southern three municipalities all recorded an increase in their garbage generation rates (consistent with the Region’s rate). The City of Vaughan had the most notable increase of all the municipalities. Between 2015 and 2018, Vaughan’s garbage generation rate was consistent, hovering between 87 kg/capita (2015) and 88 kg/capita (2018). In 2019, the generation rate increased significantly to 94 kg/capita. Some of this was due to blue box contamination reduction measures as mentioned previously, however, even if these measures were not implemented, Vaughan’s garbage rate would be 92 kg/capita, a large increase when compared to the Cities of Markham and Richmond Hill.

In 2019, eight multi-residential buildings with a total of 2,539 units were added to Vaughan’s two-stream multi-residential collection program and this may have contributed to this increase. Waste generation rates are based on total population so the population of these buildings was counted in past waste generation rates however the tonnage they produced was not being collected by Vaughan and processed by York Region. As these buildings were added to the system, they added to the tonnage managed but did not increase the population, resulting in an increase in the per capita waste generation rate. These buildings do not receive organics collection, so the impact on the garbage generation rate is amplified as it includes both organics and garbage.

York Region makes program changes to align with Ontario's move to extended producer responsibility

The evolving recycling landscape in Ontario impacted operations in some areas of the Region's waste management system in 2019. In January 2019, the Used Tire Collection Program transitioned to full producer responsibility. York Region partnered with the Regions of Peel and Halton on a co-operative agreement to jointly procure the services of Evolve Recycling for the pick-up, transportation, processing and recycling of tires collected at the Region's depots. Joint procurement helped reduce costs and leverage total tonnages of tires collected by the three Regions. This contract was initially for a 12-month term with allowances for four additional one-year extensions.

There was a 51% increase in tonnage of tires collected at the Region's depots in 2019. This increase can be attributed to changes the depots have made due to the new Regulation. Previously, the depots collected a maximum of four tires per day from residential customers only. Under the new regulation, they accept up to ten tires per day per customer from both residential and small business customers.

Single-use batteries fully transitioned to producer responsibility in June 30, 2020. Staff have been actively involved in consultations on the development of the regulation and program plans for the transitioned battery program. As the program rolls out, the Region will continue to monitor and report on program impacts.

York Region has remained flexible in its response to COVID-19 system impacts

During the COVID-19 pandemic, staff continue to demonstrate flexibility and innovation as the Region continues to serve and engage its residents. In addition to service level changes, staff leveraged relationships with community partners to share waste reduction messaging and continued to explore new ways to stay connected with residents. It is important to note, while garbage and green bin generation reported for 2019 is encouraging, impacts from COVID-19 will undoubtedly influence trends moving forward.

A significant waste impact relating to COVID-19 is higher than typical tonnages at the curb. Between January and July 2020, garbage and green bin tonnage increased by 10% and 11% respectively over the same period last year with most of the increase happening at the onset of the state of emergency between March and July. Increases, mainly due to population growth, between 2018 and 2019 were 5% for garbage and 1.5% for green bin. COVID-19 related increases are more than double and likely result from more people cooking, working and studying at home during the pandemic. This trend is also seen in the blue box stream, where tonnages increased by 1% between January and July 2020. When compared with the same period in 2019 this is significant growth compared to the 4.5% reduction in tonnage in the previous year.

The full magnitude and duration of this impact is unclear at this time and will be monitored closely by both Regional and local municipal staff. The Region has been conducting audits and is developing a survey to understand the long-term impacts of COVID-19. Results of these initiatives will be shared with Regional Council in the Annual Waste Management Report in 2021.

5. Financial

The Region's waste services provide great value to residents for less than \$1 per day

The cost for delivering all waste management services in York Region, including the SM4RT Living Plan, curbside collection, processing, depot operations and education services is approximately \$300/household per year or less than \$1 per day. This is substantially less than comparable utilities such as energy and natural gas therefore demonstrating great value to residents.

The SM4RT Living Plan also recommends capital investments to improve the efficiency and sustainability of the integrated waste management system. In 2019, a total of \$1.4 million was invested in capital upgrades at the Materials Recovery Facility to reduce contamination within the mixed paper bales, allowing more material to be recovered and marketed. The long term capital outlook includes funding to support expanded processing capacity for organics and residual waste that maximizes resources and energy recovery and reduces greenhouse gas emissions.

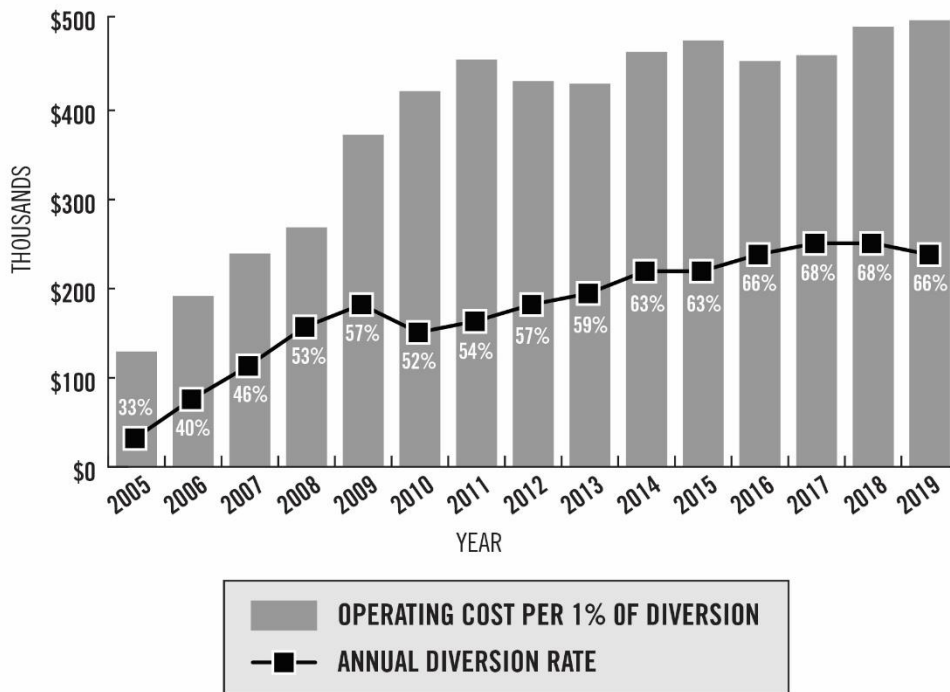
Council's environmental leadership emphasizes waste reduction and reuse as well as maximizes current diversion programs

A key reason the Region emphasizes waste reduction and reuse is the growing cost and complexity of waste diversion. Staff will continue to drive diversion programs to maximize the Region's diversion standing in the province. Due to various end market challenges and restrictions, it has become increasingly difficult to divert recyclables. While the green bin program is well established in the Region, it is also costly to manage given the magnitude of the tonnes and the cost per tonne to process. Council's environmental leadership combines cost-effective diversion with waste prevention to leverage and extend the life of waste management infrastructure and also to reduce operating costs.

Figure 2 shows that over the past 14 years with increased diversion performance we have become a leader in waste management; along the way the cost of increasing the diversion rate by one percentage point has gone from \$129,000 to \$494,000.

This underscores the need to focus on reduction and reuse in addition to maximizing current diversion programs to strive for economic sustainability over the long term. Reducing the tonnage of waste that must be processed is the best way to ensure cost-effectiveness in the Region's waste management system.

Figure 2
Cost per percent of diversion



York Region continues to invest in contamination reduction measures in the Blue Box Program

Increasing blue box contamination and stricter quality requirements of overseas end markets are driving up Blue Box Program costs and risk. As reported to Council [in June](#), the Region and its local municipalities have indicated a preference to transition to full producer responsibility in 2025. Until then, the Region and its local municipal partners will continue efforts to reduce contamination in the blue box stream. In addition to the capital investment mentioned above, more staff were hired to remove and reject contaminated recyclables.

In the 2019 Potential Service Adjustment report to Council, the Region committed to working with local municipalities, particularly the southern cities, to consistently implement curbside enforcement to help reduce contamination rates. It was estimated that such efforts could help the Region realize savings of approximately \$600,000 annually. As outlined below, efforts are underway however it is unclear whether the Region will achieve these savings as COVID-19 has led to PPE related waste in the blue box and a pause in staff screening of blue box recyclables at the Earl Turcott Waste Management Facility due to safety concerns.

Financial Impacts of COVID-19 still unknown

The increased waste tonnage during the state of emergency that was declared in York Region during the COVID-19 pandemic has impacted the waste management budget in 2020. As of the end of July, the impact of COVID-19 to blue box, garbage and green bin tonnage is approximately \$1 million on net operating costs. The COVID-19 impact by the end of 2020 is estimated to be \$2.1 million. Waste depot programs and implementation of some of the SM4RT Living programs have also been impacted. It is uncertain how tonnage and blue box contamination will change as schools and workplaces reopen and mandatory mask policies take effect. COVID-19 pressures will continue to be identified throughout the 2021 budget process with staff continuing to monitor the situation and assess the associated financial impacts.

6. Local Impact

Continued combined efforts between the Region and local municipalities is key to reducing Blue Box contamination

In 2019, York Region continued to collaborate with its local municipal partners to manage blue box contamination. A targeted effort was made to ensure clear and consistent messaging across cities and towns regarding top contaminants of the blue box stream. Local municipalities worked with the Region to share this message through their communication channels such as social media, roadside signs and Recycle Coach.

A significant focus in 2019 was to increase curbside enforcement and education. The Town of Newmarket led a campaign in which it conducted random spot checks of blue bins at the curb and provided homeowners with door hangers congratulating them on recycling correctly or providing reminders on materials that should not be placed in the blue box. Several other local municipalities are looking at similar tactics.

In 2020, COVID-19 related waste such as masks and gloves began appearing in the Blue Box. Local municipalities continue to work with their collection contracts to sticker and leave behind blue boxes with visible contamination. York Region is sharing data from contamination audits to guide messaging and track impacts. The Region is working with its local municipalities on an ongoing strategy to address contamination from COVID-19 related changes and broader ongoing contamination concerns.

Regional staff continue to engage local municipal partners requesting a boosted effort, particularly in the southern three municipalities where blue box contamination is highest; these communication efforts are focused on garnering more support and alignment of efforts in curbside enforcement. More information will be shared in the 2020 Annual Waste Management Report in Q2 2021.

Collaboration with local municipal and community partners continues to drive reduction and reuse programs

The Region remains committed to educating and motivating residents to make informed decisions about waste reduction and reuse. Through collaboration with municipal and community partners, expansion of successful programs continues. The Town of Newmarket officially launched a municipal textile program in 2019 with bins at three municipal facilities to help collect and divert textiles from the garbage stream. Textile collection bins were added at the McCleary Court and Elgin Mills Community Environmental Centres (CECs) and the Georgina Transfer Station, making textile diversion easily accessible across all of York Region. The 2019 Annual Waste Management Report (Attachment 1- pages 24 - 25) showcases program efforts across the Region, including the opening of the first Lendery in Markham Public Library, new partnerships to support food waste reduction, a highly successful backyard composter sale and a growing number of Repair Cafés hosted by libraries across the Region.

All waste events and programs requiring in-person interactions have been on hold since March 2020 due to social distancing guidelines instituted to prevent the spread of COVID-19. With restrictions being lifted, staff are working with local municipal and community partners to safely restart programs such as Curbside Giveaway days, the Lendery and Repair cafes as these programs play an important role in reducing tonnes entering the system.

7. Conclusion

York Region 2019 results show progress toward SM4RT Living targets

Performance of the Region's integrated waste management system in 2019 reveals that York Region remains a leader in the field. Based on diversion rates as well as the commitment to waste reduction and reuse efforts, the Region and its local municipal partners are well placed to move towards its visionary goal of a world with no waste. COVID-19 has had some impacts on 2020 tonnages and may impact waste generation trends in the short to medium term; results will be shared with Council in 2021.

New reporting parameters outlined in the updated SM4RT Living Plan will result in a more efficient reporting process with more meaningful and useful data for Council, the Ministry of Environment, Conservation and Parks, local municipal partners, residents and stakeholders. Shifting how the Region reports on waste generation rates will make it easier to monitor progress towards the new green bin and garbage generation targets. Generation rates have already recorded a stable or downward trend in most local municipalities and this is encouraging as the Region moves towards its 2031 targets.

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.

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Chief Administrative Officer

September 19, 2020
Attachments (1)
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