



2021 ANNUAL **WASTE** MANAGEMENT **REPORT**

PARTNERSHIPS DRIVING
Reduction | Reuse | Recycling | Recovery



2021 AT-A-GLANCE



139,133
TONNES
RESIDUAL WASTE
SENT TO ENERGY-FROM-
WASTE FACILITIES



112,350
TONNES
ORGANIC
WASTE
PROCESSED



54,954
TONNES
BLUE BOX
RECYCLING
MARKETED



42,029
TONNES
LEAF &
YARD WASTE
COMPOSTED



1,913
TONNES
DEPOT
DIVERSION
RECYCLED



1,365
TONNES
HOUSEHOLD
HAZARDOUS
WASTE
PROPERLY DISPOSED



1,085
TONNES
ELECTRONIC
WASTE
RECYCLED



92% DIVERSION FROM LANDFILL

Residents of the Regional Municipality of York are part of an extensive integrated waste management system delivered together with our local cities and towns. In collaboration with community partners, new and innovative waste programs that emphasize the circular economy are being implemented through the updated Integrated Waste Management Master Plan (SM4RT Living Plan), showcasing York Region's leadership in sustainable waste management. Regional and local municipal Councils have made waste reduction and diversion a priority and continue to advocate to provincial and federal governments on waste management issues. The Region offers residents access to many opportunities to dispose and divert a wide variety of materials; as a result, in 2021 York Region diverted 92% of waste from landfill.

In collaboration with community partners, new and innovative waste programs that emphasize the circular economy are being implemented through the updated Integrated Waste Management Master Plan (SM4RT Living Plan), showcasing York Region's leadership in sustainable waste management.



INTRODUCTION

The Regional Municipality of York's 2021 Annual Waste Management Report summarizes the integrated waste management system and the amount of material collected and processed. It also highlights the progress being made on the objectives set out in the SM4RT Living Plan. This report will be submitted to the Ministry of Environment, Conservation and Parks to satisfy the Durham York Energy Centre Environmental Assessment condition for diversion reporting.

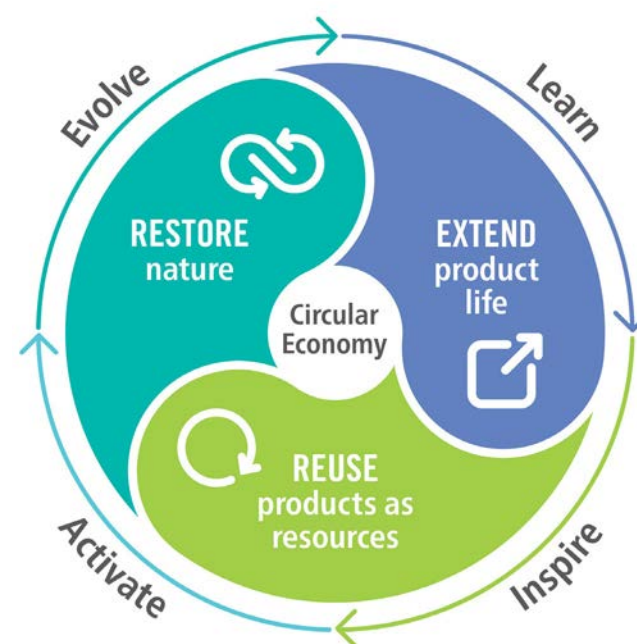
The Region delivers programs and services to more than 1.2 million residents, across 394,000 households in nine cities and towns: the Towns of Aurora, East Gwillimbury, Georgina, Newmarket, Whitchurch-Stouffville, the Township of King and the Cities of Markham, Richmond Hill and Vaughan.

COVID-19 posed challenges and impacted the lives of Canadians for a second year in 2021. York Region residents and staff faced a state of emergency declaration with periods of varying levels of restrictions throughout the year. York Region, in partnership with its local municipalities, continued to demonstrate adaptation and resiliency, by providing consistent service to residents.

In 2021, York Region experienced a plateau in tonnages for most materials collected at the curb. Overall, the Region's waste depots saw an increase in visitors compared to 2020. The Region also successfully launched the Circular Economy Initiatives Fund (CEIF) and awarded funding to six recipients with innovative, community driven projects, focused on reducing residential waste and advancing the circular economy. By the end of 2021, the Region was progressing towards a new normal; many programs were reinstated while observing COVID-19 safety protocols and public engagement continued virtually.

Circular Economy Initiatives Fund Recipients

Circular Innovation Council
Free Geek Toronto
Furniture Bank
Impact Zero
Whitchurch-Stouffville Strawberry Festival
Willowgrove



Learn more at york.ca/circulareconomy

The SM4RT Living Plan: Objectives and Actions



OBJECTIVE 1: Successfully navigate legislative changes

Responding flexibly and using legislative changes to continually improve SM4RT Living.	●	Region and local municipalities leverage existing framework for collaborative decision-making to navigate legislative changes.
	●	Region and local municipalities ensure compliance with changing legislation (e.g., Food and Organics Waste Policy Statement and Resource Recovery and Circular Economy Act), including reviewing Official Plan and bylaws.
	●	Local municipalities and Region explore legal mechanisms to ensure producers manage their waste as required in the Region.
	●	During the transition to full producer responsibility, Region and local municipal partners continue to monitor and address blue box contamination and Region ensures the Materials Recovery Facility performs as needed.

OBJECTIVE 2: Use resources and infrastructure more strategically to achieve SM4RT Living

Focusing efforts, innovating and improving coordination to create a more seamless, cost-effective system and do more with available resources.	●	Region and local municipalities leverage technology to improve data collection, analysis and information sharing from facilities and operations, in support of greater efficiency and more strategic decisions.
	●	Region and local municipalities maintain leadership in waste diversion by researching and sharing best practices, approaches and technologies, particularly for multi-residential buildings. Local municipalities take the lead in testing and applying new approaches and sharing lessons learned.
	●	Local municipalities include standards for waste diversion and material storage and collection in the approval process for new multi-residential developments.
	●	Region contracts for anaerobic processing capacity to diversify its portfolio and inform future investment decisions.
	●	Region and local municipalities work towards consistent messaging and education to reduce food waste, including promoting backyard composting to help manage SSO pressures and costs.
	●	Local municipalities and Region apply best practices and tools to work towards consistency in waste collection services, messaging, enforcement and performance monitoring.
	●	Region works with other Ontario municipalities to standardize record-keeping and data reporting across the province to provide consistent evidence for advocacy positions.
	●	Region secures long-term contracts to recover energy from residual materials.

OBJECTIVE 3: Inspire people across the Region to embrace SM4RT Living and advance the circular economy

The value of partners and pioneers in igniting the uptake of SM4RT Living and the circular economy across our communities.	●	Region and local municipalities encourage grassroots community initiatives that align with SM4RT Living philosophy.
	●	Region improves support for partnerships, including establishing a \$100,000 Circular Economy grant program that would help community partners, new social enterprises and businesses advance SM4RT Living Plan goals.
	●	Region identifies and promotes how SM4RT Living connects to broader Regional initiatives around healthy communities and social well-being and builds linkages where appropriate.
	●	Through strategic partnerships, the Region and local municipalities support opportunities for residents to repair, share, reuse and repurpose items.
	●	Region and local municipalities work to implement an "Ask First" voluntary program across the Region to reduce single-use items, and show leadership by reducing consumption at their own facilities. Region and local municipalities assess results of "Ask First" program, review federal and provincial policies if available, and determine if a mandatory approach is needed.
	●	Region and local municipalities advocate for provincial and/or federal policies and legislation that advance the circular economy.
	●	Region researches, consults and shares findings to build understanding of the circular economy in York Region and how it connects to SM4RT Living. Region encourages residents, not-for-profit groups, businesses and others in York Region to move to the circular economy.

● ONGOING ● INITIATED ● DELAYED

DIVERSION ACHIEVEMENTS






Five Year Trend: York Region Remains a Leader in Ontario with Verified Diversion Rate of 66% in 2020

York Region, in partnership with its local cities and towns, submits an annual Datacall to the province through the Resource Productivity and Recovery Authority (RPRA). The information is used to determine blue box costs and to allocate funding from producers to assist with the cost of operating the Blue Box Program. Each year RPRA releases a ranking of municipal diversion rates for Ontario based on the Datacall results.

York Region leads once again in the large urban category with 66%.

Resource Productivity and Recovery Authority Annual Waste Diversion Rate

2017	1st for Large Urban Municipalities		68%
2018	1st for Large Urban Municipalities		68%
2019	1st for Large Urban Municipalities		66%
2020	1st for Large Urban Municipalities		66%
2021	Pending Verification		65%*

All values are rounded. RPRA does not recognize energy-from-waste as diversion.

*The 2021 diversion data presented is pending verification by the RPRA at time of printing.

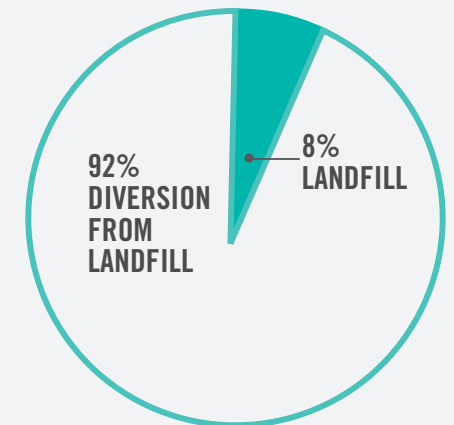
Table 1: Total Tonnes Collected

Material	Tonnes Collected				
	2017	2018	2019	2020	2021
Residual Waste (Garbage)	134,249	124,319	129,144	145,464	145,435
Organics	97,877	99,065	100,874	112,403	114,075
Blue Box	85,298	83,526	78,243	79,087	78,417
Leaf and Yard Waste	39,477	42,287	42,814	44,216	42,029
Other Diversion - Depots	5,061	2,580	2,659	1,612	1,913
Household Hazardous Waste	1,256	1,219	1,297	1,459	1,365
Electronics	1,344	1,124	1,117	1,205	1,085

*Note: total blue box and organics tonnes collected at curbside and depots include contamination

York Region continues to exceed the Regional Official Plan goal of 90% waste diversion from landfill.

In 2021, York Region achieved 92% waste diversion from landfill, which includes all tonnes collected through curbside and depot diversion programs and tonnes managed through energy-from-waste.



WASTE GENERATION



TARGETS



GREEN BIN

71 kilograms per capita by 2031



GARBAGE

66 kilograms per capita by 2031

Waste Reduction Targets are Tracked by the Waste Generation Rate

The SM4RT Living Plan's waste reduction targets are tracked by the waste generation rate, allowing the Region to evaluate its progress. The waste generation rate measures the tonnage of waste per person (kg/capita) collected curbside. During the second year of the pandemic, there continued to be a significant amount of waste produced at home compared to pre-pandemic levels as over 50% of residents continued to work remotely. At this time the long term impacts of the pandemic on waste generation rates is unknown, however these elevated levels could continue as 44% of residents surveyed expected to be working from home into early 2022¹. As seen in Graph 1, the overall regional waste generation rate has leveled out after the sharp increase seen at the start of the pandemic in 2020. There was only a small increase in curbside green bin and slight decrease in curbside garbage generation rates in 2021. The blue box generation rate also showed a slight decrease in keeping with the downward trend prior to the pandemic.

¹ 2021 Annual Community Opinion Report conducted by Forum Research, York Region, Feb 2021.

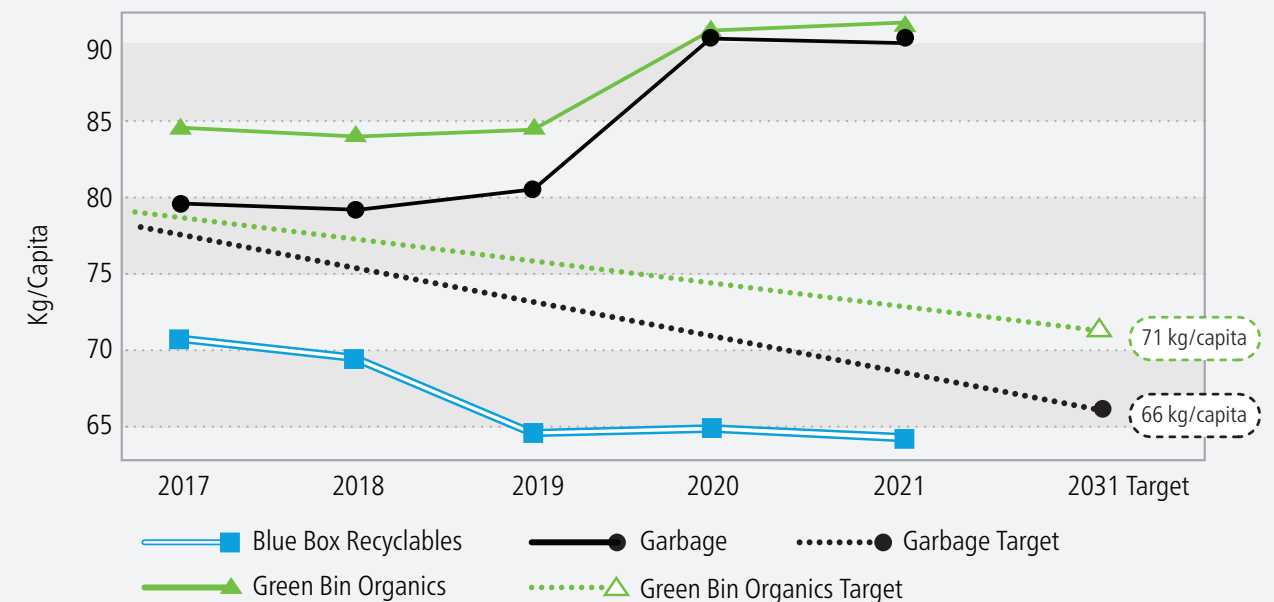
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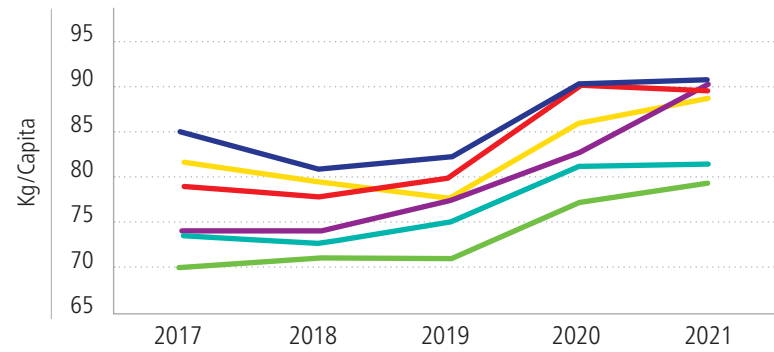
In 2021, garbage and green bin waste generation rates in the southern cities remained similar to 2020 generation rates. In the northern towns, for the most part, residual waste and green bin waste generation rates increased. In the southern three cities, continued public health restrictions and residents continuing to work from home may have resulted in waste generation rates remaining steady. In the northern towns, residual waste generation rates may have been influenced by changes in bag limits with most of the towns increasing garbage bag limits. The Town of Aurora had a notable decrease in its garbage generation rate compared to 2020. In the fall of 2021, Aurora began promoting a garbage bag tag program that would require residents to purchase a bag tag if they wished to place more than three bags curbside on waste

Graph 1: York Region Residential Curbside Waste Generation Rate (kg/capita)



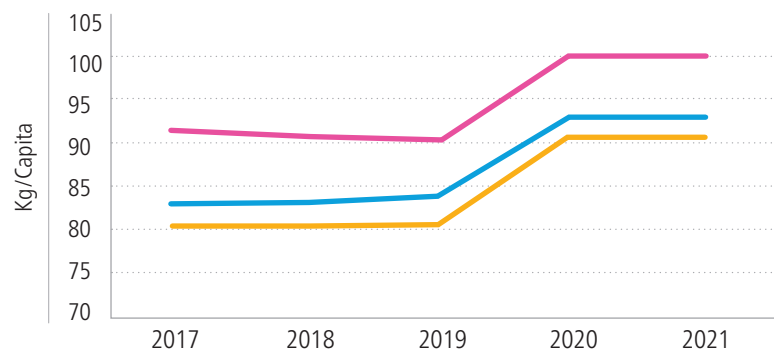


Graph 2: Northern Towns' Green Bin Waste Generation Rate (kg/capita)



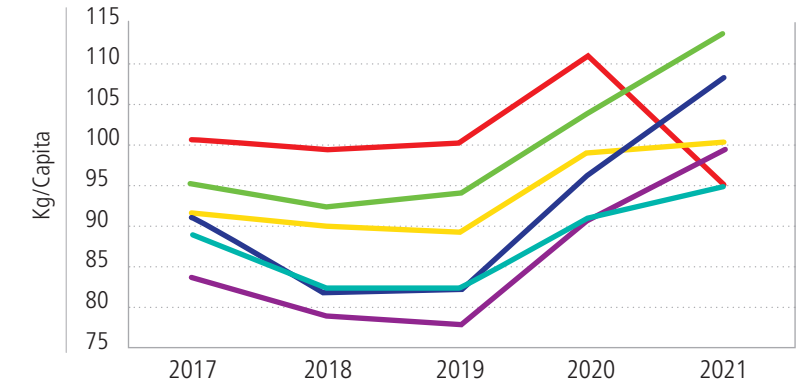
Local Town	2017	2018	2019	2020	2021
Aurora	78	77	80	90	88
East Gwillimbury	74	74	77	83	91
Georgina	70	71	71	76	77
King	85	81	83	90	92
Newmarket	74	73	75	81	83
Whitchurch-Stouffville	82	79	77	86	87

Graph 3: Southern Cities' Green Bin Waste Generation Rate (kg/capita)



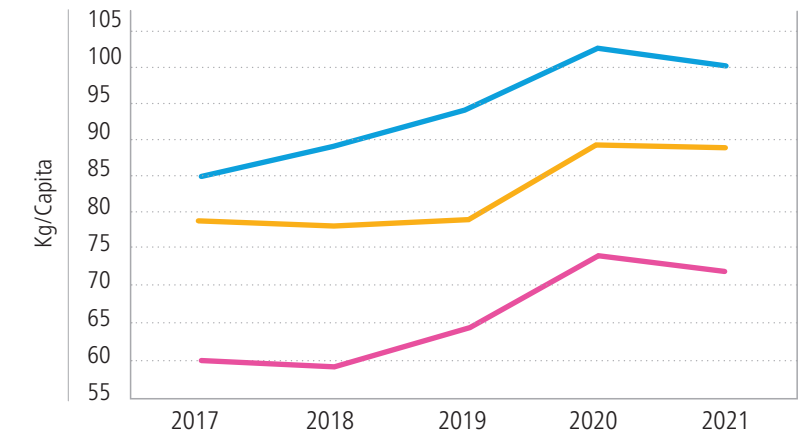
Local City	2017	2018	2019	2020	2021
Markham	92	91	91	100	100
Richmond Hill	80	80	81	91	91
Vaughan	83	84	85	93	93

Graph 4: Northern Towns' Residual Waste (Garbage) Generation Rate (kg/capita)



Local Town	2017	2018	2019	2020	2021
Aurora	101	99	100	111	95
East Gwillimbury	84	78	77	91	99
Georgina	95	93	94	104	114
King	91	82	83	96	108
Newmarket	88	83	83	91	95
Whitchurch-Stouffville	92	90	89	98	101

Graph 5: Southern Cities' Residual Waste (Garbage) Generation Rate (kg/capita)



Local City	2017	2018	2019	2020	2021
Markham	60	59	64	74	72
Richmond Hill	78	77	78	89	88
Vaughan	85	88	94	103	100

PARTNERSHIPS



Local Municipalities and Community Partners Help the Region Deliver Innovative Programs

York Region and its nine local cities and towns continue to collaborate to provide integrated waste management services and programs focusing on reduction, reuse and recycling initiatives. The Region recently strengthened community partnerships by providing funding to six community projects through the Circular Economy Initiatives Fund; demonstrating the Region's commitment to building community capacity in the circular economy.

In 2021, several cities expanded their organics programs. Most notably, the City of Vaughan launched a new organics collection service to multi-residential buildings (apartments/condominiums), with the goal of reducing its organic waste by 50% by 2025, in compliance with Ontario's Food and Organic Waste Policy Statement. Many local municipalities also offer drop off sites for special waste streams such as batteries, textiles and electronic waste at municipal facilities, increasing diversion opportunities and convenience for residents.

Community partnerships drive innovative programs that promote waste prevention and community building in the Region.

Waste Reduction and Collection Programs Provided by Local Cities and Towns

Collection Type	Waste Type	Aurora	East Gwillimbury	Georgina	King	Markham	Newmarket	Richmond Hill	Vaughan	Whitchurch-Stouffville
Curbside Collection	Garbage, Recycling, Green Bin, Leaf and Yard Yard	•	•	•	•	•	•	•	•	•
	White Goods	•	•	•	•	•	•	•	•	•
	Bulky Items	•	•	•	•	•	•	•	•	•
Special Programs	Textile Diversion	•	•	•	•	•	•	•	•	•
	Education and Outreach	•	•	•	•	•	•	•	•	•
Multi-Residential Collection	Garbage	•		•		•	•	•	•	•
	Recycling	•		•		•	•	•	•	•
	Green Bin			•		•		•	•	
	Electronic Waste	•				•				•
	Batteries	•				•				
Public Spaces	Recycling	•	•			•	•	•	•	•
	Garbage	•	•	•	•	•	•	•	•	•
Municipal Facilities	Recycling	•			•	•	•		•	
	Green Bin	•				•	•	•		
	Batteries	•			•	•	•	•	•	



TEXTILES

200

MUNICIPAL COLLECTION BINS

678

TONNES OF TEXTILES COLLECTED



COMPOSTING

879

COMPOSTERS SOLD

88

TONNES OF ORGANICS DIVERTED



BLUE BOX



DID YOU KNOW?

Most people want to do the right thing but on average an estimated 20% of what gets put in the blue box doesn't belong there. This contamination is an ongoing issue and poses challenges to our recycling system. For details on what can go in the blue box visit york.ca/bluebox

What Happens After Recyclables Leave The Curb?

As a two-tier municipality, the Region's local cities and towns collect the blue box materials at the curb; this includes materials from residential homes, multi-residential buildings, some businesses and school boards. The Region receives and sorts these materials at a Material Recovery Facility (MRF) located in the Town of East Gwillimbury. In 2021, 78,417 tonnes of blue box recyclables were collected and processed at the MRF, then baled and sold to end markets to be recycled and made into new products.

As shown in Graphs 6 and 7 on page 15, there have been fluctuations in the amount of blue box recyclables collected and marketed over the past five years. Since the pandemic, end markets have been impacted by lockdowns and global supply chain disruptions. The Region has markets for all materials to help ensure it can maximize material recovery. In 2021, 71% of blue box recyclables were sent to North American markets to be made into new products and packaging such as food and beverage containers, cardboard, newsprint, plastic lumber, carpets and pallets.

Contamination

In 2021, the Region's blue box contamination rate was 19.6%, slightly increased compared to 2020. Throughout the pandemic, the Region continued to reduce contamination by working collaboratively with local municipal partners on education and enforcement efforts. Addressing contamination now will help municipalities prepare for the transition. To minimize confusion for residents, contamination reduction efforts will give thought to the future blue box program under the producer responsibility framework.

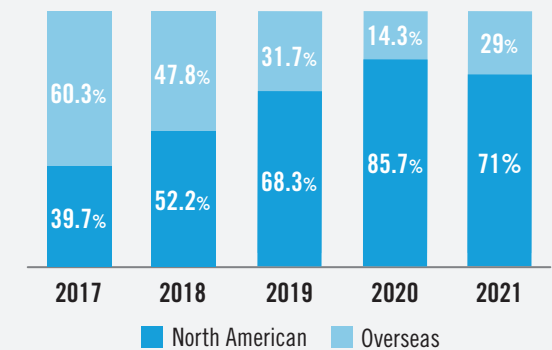
Transition Towards A New Blue Box Program

The Ontario Ministry of the Environment, Conservation and Parks finalized the Blue Box Regulation on June 3, 2021 and will transition to the new regulatory framework for resource recovery starting on July 1, 2023, through to December 31, 2025. York Region and its nine local cities and towns are working together to navigate through the transition process and to prepare for a smooth transition to the full producer responsibility framework and are scheduled to transition on December 31, 2025.

Transition Dates for Municipalities

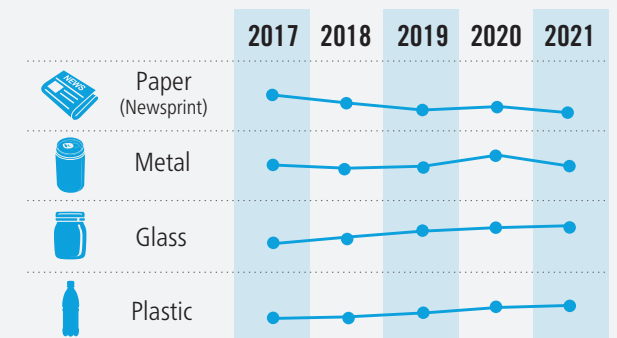


Graph 6: End Market of York Region Blue Box Material



Note: 2021 Blue Box Residue Rate - 28% of collected blue box material was rejected during processing.

Graph 7: Trend of Marketed Blue Box Tonnes





ORGANIC WASTE

DID YOU KNOW?

Food waste has increased substantially since 2019 due to more people preparing and eating meals at home or ordering takeout as a result of the pandemic. Food waste generates greenhouse gases and impacts climate change. For food saving tips and tools visit york.ca/goodfood

What Happens to Organics From Curbside to Compost

Processing organic waste into compost represents one-third of the Region’s overall diversion achievement. In 2021, York Region residents generated 114,075 tonnes of source separated organics. Of that amount, 111,154 tonnes were shipped to contracted composting facilities in Ontario and processed into biogas (for electricity and heat), fertilizers and compost using anaerobic digestion (composting with no oxygen). The remaining 2,921 tonnes represent leachate (liquid produced from the decomposition of waste) and evaporation. The 1,195 tonnes of leachate were managed through approved treatment facilities in Ontario and 1,725 tonnes were lost to evaporation.

Processing organic waste into biogas, fertilizer and compost represents one-third of the Region’s overall diversion achievement.



RESIDUAL WASTE

Energy Recovery Helps Achieve Landfill Diversion Target

Processing of waste remaining after reducing, reusing, recycling and composting efforts waste at energy-from-waste facilities captures the energy content of residual waste, lowers greenhouse gas emissions, recovers metals and reduces the volume of waste going to landfill. In 2021, York Region achieved 92% diversion from landfill, exceeding the Region’s goal of diverting 90% of waste from landfill.

In 2021, 168,179 tonnes of residual waste (garbage) was received in York Region. Materials that were placed in the blue box but could not be recycled were also managed as part of the residual waste stream. The Region shipped 139,133 tonnes of residual waste for energy recovery: 59,012 tonnes (42%) were processed at Covanta Niagara in New York State, 49,870 tonnes (36%) processed at Emerald Energy from Waste in Brampton, Ontario and the remaining 30,251 tonnes (22%) processed at the Durham York Energy Centre (DYEC) in Clarington, Ontario. The DYEC continues to operate in full compliance with stringent regulatory emissions limits.

York Region achieved 92% diversion from landfill, exceeding the Region’s goal of diverting 90% of waste from landfill.

Table 2: Residual Waste Shipments

Destination	Tonnes
Energy-From-Waste	139,133
Landfill	29,311
Year-End Carry Over*	-265
Total Residual Waste	168,179

*Change in transfer station inventory January 1, 2021 and December 31, 2021.





DEPOT COLLECTION



DID YOU KNOW?

★★★★★

You can find more information about York Region Waste Depots by visiting york.ca/wastedepots

Do you have an item you no longer need? Learn how to properly recycle or dispose of items at york.ca/bindicator

4,364 TONNES

of divertible material was collected by York Region through special programs.

91%

of respondents surveyed said that they were very satisfied/satisfied with the quality of service at the depots.

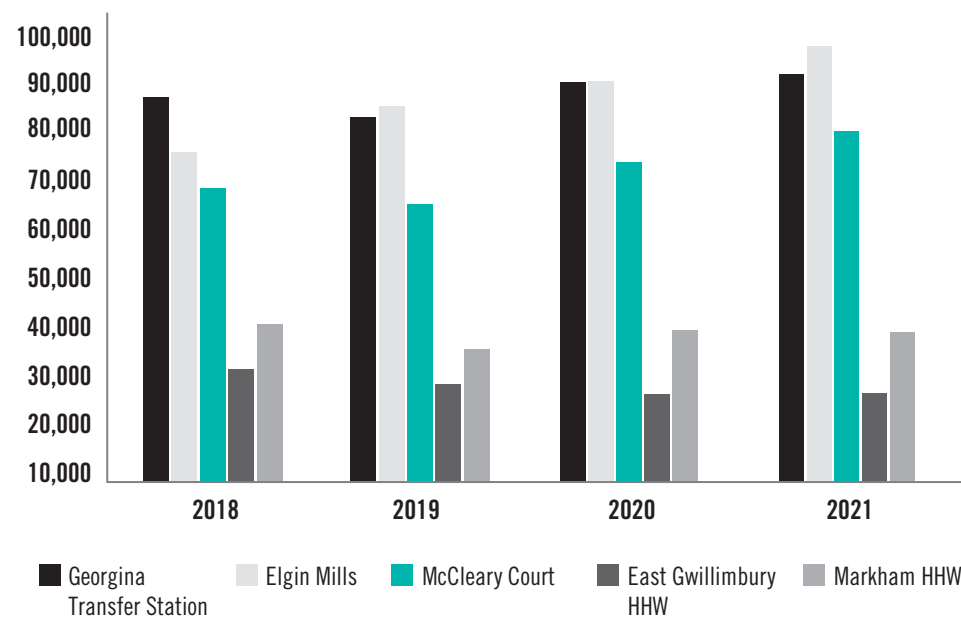
Increased Use of Depots With Most Diversion Programs Reinstated

York Region's waste depots collected 4,364 tonnes of divertible materials through special programs not offered at the curb such as cooking oil, concrete, electronic waste, refrigerated appliances, scrap metal, shredded paper, textiles, tires and wood.

Throughout the pandemic, the Region's waste depots and facilities continued to offer valuable services for all residents and small businesses

to drop off a variety of waste material while remaining in compliance with all COVID-19 safety protocols. Use of the depots continues to grow and customer satisfaction is high. Added new programs such as yard waste at McCleary Court Community Environmental Centre (CEC), launched in 2021, enhanced the value of these sites to the community.

Graph 8: Total Visits to York Regions Waste Depots



DEPOT VISITORS



Georgina Transfer Station
88,114



Elgin Mills CEC
94,209



McCleary Court CEC
75,868



East Gwillimbury HHW
19,055



Markham HHW
32,174

Total Site Visits:

309,420

ALL FIVE WASTE DEPOTS

collected household hazardous waste in 2021.

HHW COLLECTED



Paint (latex and alkyd)
545,090 kg



Motor Oil (bulked)
142,151 kg



Batteries (single-use/rechargeable)
65,209 kg



Propane Tanks and Cylinders
64,579 kg



Aerosol Containers
34,176 kg

Total HHW kg Collected:

1,365,490 kg

COMMUNITY ENGAGEMENT

The feedback received from these engagements provided vital input to some of the Region's waste programs.

Partnerships and Innovation Help Region Reach Residents in 2021

The feedback received from these engagements provided vital input to some of the Region's waste programs and services and will help guide staff as they implement future waste-related programming.

Based on interactions with the Region's social media, surveys and workshops, knowledge is increasing and interest in waste issues is growing. Several social media campaigns generated significant dialogue online, with residents sharing helpful tips and support on composting, reducing waste and proper disposal and recycling behaviours. An increase in visits to the Region's waste-related webpages also suggests that residents are interested in doing more to reduce waste and are regularly seeking information on how to dispose of items responsibly.

7 COMMUNITY ENGAGEMENTS IN 2021

THREE SURVEYS

THREE WORKSHOPS

1 Session with the York Region Accessibility Advisory Committee


2,725 PARTICIPANTS

33 REPRESENTATIVES from organizations and businesses across York Region

SINGLE-USE SURVEY RESULTS

87% would like businesses to ask first before giving them a single-use item

85% feel confident they know how to properly sort household waste

 The waste quiz revealed many items still cause confusion - coffee cups, foam containers, paper towels and tissues

80% support reducing plastic and foam containers and disposable cutlery

WASTE WEDNESDAY SOCIAL

FACEBOOK AND TWITTER POSTS

 **114 POSTS** | **551,840 PEOPLE REACHED**

FACEBOOK AND INSTAGRAM STORIES

124,000+ PEOPLE REACHED | **400,000+ ENGAGEMENTS**
(Number of people who saw our content) | (Total number of actions taken on our content, i.e. Likes, shares, messages, comments)

ACROSS ALL PLATFORMS (FACEBOOK, TWITTER AND INSTAGRAM)

247 SHARES | **186 COMMENTS /REPLIES** | **576 LINK CLICKS** | **624 VOTES**

74.04% VOTED RIGHT  | **25.96%** VOTED WRONG 



Thank You to Our Partners



york.ca/waste

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