



Office of the Commissioner
Environmental Services

Memorandum

To: Committee of the Whole

From: Erin Mahoney
Commissioner, Environmental Services

Date: August 21, 2018

Re: **2017 Annual Solid Waste Diversion Report**

This memo provides Regional Council with a copy of the 2017 Annual Solid Waste Diversion Report (Attachment 1) that summarizes York Region's waste diversion and reduction initiatives. The Report must be submitted to the Ministry of the Environment, Conservation and Parks by November 3, 2018 and posted on York Region's website to satisfy the Durham York Energy Centre Environmental Assessment condition for diversion reporting.

York Region exceeds Official Plan goal of 90 per cent diversion from landfill

In 2017, York Region and its local municipal partners achieved 93 per cent diversion from landfill. This includes all tonnes from local municipal curbside collection programs, waste depot diversion programs and tonnes managed through energy-from-waste.

Additional key outcomes in the 2017 Annual Solid Waste Diversion Report include:

- 85,298 tonnes of blue box recyclables and 97,877 tonnes of organic waste collected
- York Region's reported 2017 Resource Productivity and Recovery Authority (the Authority) diversion rate, which excludes energy-from-waste, is 68 per cent (pending verification)

Region ranks first in Ontario with highest verified 2016 waste diversion rate

Since 2012, York Region and its local municipalities have ranked first in the large urban municipal diversion category. York Region continues to be a leader in sustainable waste

management with the highest verified 2016 diversion rate of 65.7 per cent in both the large urban municipal diversion category and in the province overall (Tables 1 and 2).

Table 1
2016 Large Urban Municipal Diversion Rankings

Rank	Municipality	Diversion Rate
1	<i>Regional Municipality of York</i>	65.7%
2	<i>Regional Municipality of Halton</i>	56.6%
3	<i>City of Toronto</i>	51.3%
4	<i>Regional Municipality of Peel</i>	49.6%
5	<i>City of Hamilton</i>	44.5%
6	<i>City of London</i>	44.5%

Table 2
2016 Overall Municipal Diversion Rankings

Rank	Municipality	Diversion Rate
1	<i>Regional Municipality of York</i>	65.7%
2	<i>County of Simcoe</i>	60.7%
3	<i>County of Dufferin</i>	60.1%
4	<i>City of Kingston</i>	60.1%
5	<i>City of Guelph</i>	58.7%
6	<i>City of Orillia</i>	57.5%
10	<i>Regional Municipality of Durham</i>	55.4%

York Region’s waste diversion monitoring is consistent with the annual datacall that gathers information on residential waste materials diverted and disposed by Ontario municipalities. The datacall is used to determine funding from producers to assist with costs of operating the Blue Box Program.

Market restrictions and lower commodity market prices may reduce future diversion rates and increase Blue Box Program costs

Diversion rates may be impacted by market restrictions on imported recyclables, which continue to impose increasingly stringent contamination limits. As reported in a memo to Committee of the Whole in [May 2018](#), the impact of slow moving newsprint is large, accounting for over 50 per cent of blue box material. As a result of storage constraints, York Region sent 100 tonnes of fibre to energy-from-waste facilities in September 2017 and another 815 tonnes as of July 2018. The Region is implementing technology upgrades at the Materials Recovery Facility to improve quality and marketability of newsprint in an effort to lessen impacts of the changing markets. If necessary, managing newsprint through energy-from-waste contracts allows the Region to continue to meet the Official Plan goal of 90 per cent diversion from landfill, but, this approach would not count towards the Authority diversion rate.

In 2018, the Full Cost Accounting Study was completed. York Region collaborated with all nine local cities and towns to prepare a full picture of all costs and revenues in the Region’s integrated waste management system. Table 3 illustrates whole system costs for the waste streams collected curbside, including any revenues received. Although the Blue Box Program has the lowest net cost per tonne, declining market revenues and changing producer funding will negatively impact future program costs. The Region and local municipalities will continue to monitor Blue Box Program costs that will be impacted due to future market or legislative changes.

Table 3
2016 Cost for Waste Streams Collected Curbside

Stream	Total Cost Per Tonne	Net Cost Per Tonne*
Organic Waste	\$267.11	\$265.98
Leaf and Yard Waste	\$194.93	\$192.99
Residual Waste	\$211.86	\$185.77
Blue Box	\$289.24	\$73.07

*net cost per tonne is lower than the total cost per tonne for each of these four streams as the net cost includes revenue received from material commodities, producer funding, depot fees, bag tags and bin sales.

August 21, 2018
2017 Annual Solid Waste Diversion Report

York Region and its local cities and towns continue to be leaders in sustainable waste management. In the coming year this work will continue to involve collaboration to identify solutions to address the continued changes to the waste management landscape.

Erin Mahoney, M. Eng.
Commissioner of Environmental Services

AH/ah
Attachment
#8426178

**PARTNERSHIPS DRIVING
REDUCTION REUSE RECYCLING RECOVERY**



2017 ANNUAL SOLID WASTE DIVERSION REPORT

WASTE MANAGEMENT
1-866-665-6752

york.ca/waste

**York Region**

WASTE MANAGEMENT FACILITIES IN YORK REGION

-  Public Yard Waste Drop-off
-  Regional Household Hazardous Waste Depot
-  Regional Recycling Depot
-  Transfer Station
-  Local Municipal Recycling Depot
-  Community Environmental Centre
-  Waste Management Centre (not open to public)




WASTE DEPOT HOURS



Bloomington Yard Waste Depot 

April 1 to November 30
Monday to Saturday: 7:30 a.m. to 5 p.m.
Sunday: Closed

December 1 to March 31
Monday to Friday: 8 a.m. to 4 p.m.
Saturday and Sunday: Closed

East Gwillimbury Household Hazardous Waste and Recycling Depot  


Monday: 8:30 a.m. to 4:30 p.m.
Tuesday and Wednesday: Closed
Thursday to Saturday: 8:30 a.m. to 4:30 p.m.
Sunday: 8:30 a.m. to 3:30 p.m.

Elgin Mills Community Environmental Centre and McCleary Court Community Environmental Centre  

Monday and Tuesday: Closed
Wednesday to Saturday: 8:30 a.m. to 4:30 p.m.
Sunday: 8:30 a.m. to 3:30 p.m.

Georgina Transfer Station, Household Hazardous Waste and Recycling Depot    

Monday to Saturday: 8 a.m. to 5 p.m.
Sunday: Closed
HHW Depot Open Tuesday and Saturday

Markham Household Hazardous Waste Depot 

Monday: 8:30 a.m. to 4:30 p.m.
Tuesday and Wednesday: Closed
Thursday to Saturday: 8:30 a.m. to 4:30 p.m.
Sunday: 8:30 a.m. to 3:30 p.m.

Markham Unionville Depot 

Monday: 10 a.m. to 6 p.m.
Tuesday: 12 p.m. to 8 p.m.
Wednesday: Closed
Thursday: 12 p.m. to 8 p.m.
Saturday: 8 a.m. to 4 p.m.
Sunday: Closed

Markham Village Depot 

Monday: 8 a.m. to 4 p.m.
Tuesday: Closed
Wednesday: 8 a.m. to 4 p.m.
Thursday: 12 p.m. to 8 p.m.
Friday: 8 a.m. to 4 p.m.
Saturday: 8 a.m. to 4 p.m.
Sunday: Closed

Milliken Mills Depot 

Saturday: 8 a.m. to 4 p.m.

Thornhill Depot 

Monday: Closed
Tuesday: 12 p.m. to 8 p.m.
Wednesday: 8 a.m. to 4 p.m.
Thursday: 12 p.m. to 8 p.m.
Friday: Closed
Saturday: 8 a.m. to 4 p.m.
Sunday: 8 a.m. to 4 p.m.

INTRODUCTION

The Regional Municipality of York 2017 Annual Solid Waste Diversion Report summarizes York Region’s integrated waste management system. The report is submitted annually to the Ministry of the Environment, Conservation and Parks, formerly the Ministry of the Environment and Climate Change, (the Ministry) to satisfy the Durham York Energy Centre Environmental Assessment condition for diversion reporting.

As an upper-tier municipal government, York Region provides programs and services to 1.2 million residents in nine cities and towns. Waste management services are delivered to residents through a two-tier structure where the local cities and towns manage curbside collection of waste and York Region is responsible for waste processing and disposal.

In partnership with local cities and towns, York Region continues to deliver innovative waste reduction, diversion and disposal programs to meet the needs of our growing population. There are 374,000 households within nine cities and towns: the Towns of Aurora, East Gwillimbury, Georgina, Newmarket, Richmond Hill, Whitchurch-Stouffville, the Township of King and the Cities of Markham and Vaughan.

Throughout 2017, York Region and its local cities and towns worked together to advance the municipal perspective in multiple provincial stakeholder consultations related to the *Waste-Free Ontario Act* (the Act). The Act is expected to shift all responsibility for the end-of-life management of products and packaging to producers of the goods. York Region is committed to continued delivery of high quality services to our communities during the transition of financial and operational responsibility to the producers.



York Region’s *SM4RT Living Integrated Waste Management Master Plan (SM4RT Living Plan)* sets the course for waste management in the Region for the next 25 to 40 years. The *SM4RT Living Plan* identifies 32 priority initiatives to be launched in the first five years of the program (2014 to 2018). The priority initiatives focus on piloting community-driven programs and innovative technologies that emphasize reduction, reuse and recycling before recovery. By the end of 2017, 32 initiatives were implemented of which 60 per cent will be expanded into full programs or on-going actions. The first five-year review and update of the plan is underway with the final report and recommendations expected in 2019.






















PARTNERSHIPS FOR SUCCESS

COLLABORATION DRIVES INNOVATIVE APPROACHES TO REDUCTION AND DIVERSION.

York Region and its nine local cities and towns collaborate to provide comprehensive waste reduction, reuse and recycling initiatives which include regular curbside collection programs, curbside giveaways, battery, electronic waste and textile collection. Through the semi-annual Strategic Waste Policy Committee and one-to-one meetings, the partners discuss policy and program changes, review *SM4RT Living Plan* progress, share information and develop metrics to measure performance.

Waste Reduction and Collection Programs Provided by Local Cities and Towns

		Aurora	East Gwillimbury	Georgina	King	Markham	Newmarket	Richmond Hill	Vaughan	Whitchurch-Stouffville
Curbside Collection	Residual Waste 	•	•	•	•	•	•	•	•	•
	Recycling 	•	•	•	•	•	•	•	•	•
	Organics 	•	•	•	•	•	•	•	•	•
	Leaf & Yard Waste 	•	•	•	•	•	•	•	•	•
	White Goods 	•	•	•	•	•	•	•	•	•
	Bulky Items 	•	•	•	•	•	•	•	•	•
Special Events	Textile Diversion 	•			•	•			•	•
	Education & Outreach 	•	•	•		•	•	•	•	•
Multi-Residential Collection	Residual Waste 	•		•		•	•	•	•	•
	Recycling 	•		•		•	•	•	•	•
	Organics* 					•		•		
	E-waste 	•				•				
	Batteries 	•				•				
School Collection	Recycling 	•		•		•				
	Organics 	•				•				
Municipal Facilities Collection	Recycling 	•	•	•	•	•	•	•	•	•
	Organics 	•	•	•		•	•	•	•	
	Batteries 	•			•	•	•	•	•	
Public Space	Recycling 	•	•	•	•	•	•	•	•	•





* Organics collection programs in mid and high rise multi-residential buildings

DIVERSION ACHIEVEMENTS

YORK REGION RANKS FIRST IN ONTARIO WITH A DIVERSION RATE OF 66 PER CENT.

York Region, in partnership with our local cities and towns, submits an annual datacall to the province through the Resource Productivity and Recovery Authority (the Authority) to receive funding from producers to assist with costs of operating the Blue Box Program. The datacall is the source of data used to confirm municipal diversion rates across the province. York Region continues to be a leader in sustainable waste management with the highest verified diversion in 2016 in the large urban category and in the province overall with a diversion rate of 66 per cent.

Resource Productivity and Recovery Authority Annual Waste Diversion

2013	1st for Large Urban Municipalities	 59%
2014	1st for Large Urban Municipalities	 63%
2015	1st for Large Urban Municipalities	 63%
2016	1st Overall in the Province	 66%*
2017	Pending Verification**	68%

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

*Updated to reflect finalized 2016 RPRA diversion rate.

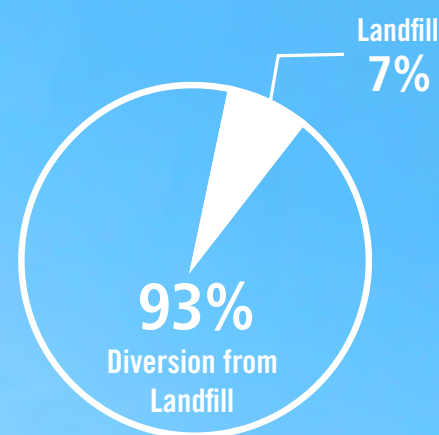
** 2017 diversion data presented is pending verification by the Authority at the time of printing. Until this method is revised, future York Region Datacall submissions and resulting diversion rates will continue to be adjusted.

Tonnes Collected

Material	2013	2014	2015	2016	2017
Residual Waste	120,260	124,011	128,148	130,400	134,249
Organics	94,591	94,700	96,593	97,044	97,877
Blue Box	87,879	87,645	85,335	84,468	85,298
Leaf & Yard Waste	40,486	52,457	44,370	37,407	39,477
Other Diversion - Depots	6,297	4,930	5,944	6,196	5,061
Household Hazardous Waste	1,126	1,203	1,305	1,268	1,256
Electronics	1,503	1,489	1,554	1,460	1,344

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

In 2017, York Region achieved 93 per cent waste diversion from landfill, which includes all tonnes collected through curbside and depot diversion programs, and tonnes managed through energy-from-waste.



COMMUNITY ENVIRONMENTAL CENTRES

CONVENIENT ONE-STOP LOCATIONS TO ACCESS DIVERSION PROGRAMS.

York Region's two Community Environmental Centres (CECs), Elgin Mills in the Town of Richmond Hill and McCleary Court in the City of Vaughan, provide convenient outlets for residents and small businesses to drop off a variety of waste materials. Examples of accepted materials for diversion include bulky recyclables, construction and demolition materials, electronics, metals and blue box recyclables. Materials that cannot be diverted are disposed as residual waste.

Last year, 31,608 tonnes of materials were collected at these two CECs:

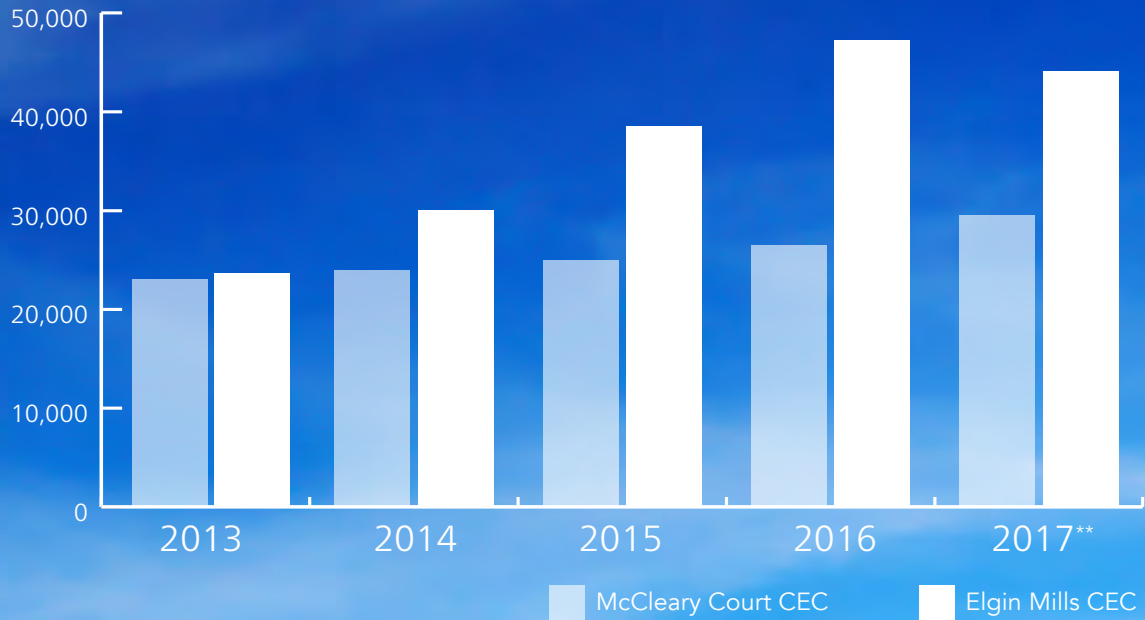
- Blue box recyclables, cooking oil, electronics, foam packaging, metal, shredded paper and tires accounted for 2,135 tonnes
- Construction and demolition materials, including concrete, drywall and untreated wood, represented 3,520 tonnes
- Residual waste totaled 25,953 tonnes

To meet the growing needs of our customers, York Region began constructing facility enhancements at the McCleary Court and Elgin Mills CECs in the fall of 2016, making the CECs a true 'one-stop shop'. Enhancements were completed in late 2017 with the introduction of weigh scales, weight-based fees and household hazardous waste (HHW) depots at the CECs. This will significantly improve cost recovery on construction and demolition materials, a high-cost divertible material.

In 2017, a slight decrease in customer visits was seen at Elgin Mills CEC due to construction causing on-site delays and increased wait times. The Vaughan HHW Depot moved into the McCleary Court CEC in 2017, while the Elgin Mills CEC HHW Depot opened at the end of July 2018. In January 2018, York Region revised waste depot hours to provide residents with more convenient access to disposal services by adding an hour of service at the CECs and having a HHW depot available to residents seven days a week.



Visits* to Elgin Mills and McCleary Court Community Environmental Centres



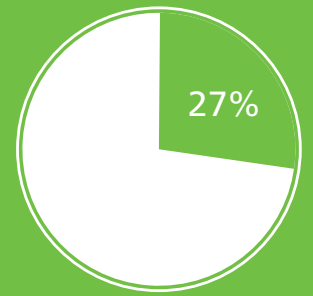
* Paid transactions only (including garbage and mixed loads)
** CECs were under construction in 2017



**DID YOU
KNOW?**

In 2017, over 16 tonnes of foam packaging was collected at the CECs.

ORGANIC WASTE



FOOD WASTE REDUCTION IS A CRITICAL COMPONENT TO MANAGE ORGANIC WASTE.

In November 2017, the Ministry released the Proposed Food and Organic Waste Framework (the Framework) as part of its commitments under the *Strategy for a Waste-Free Ontario*. The proposed Framework includes a policy statement and an action plan that identifies priorities for the Ministry and other stakeholders to address food and organic waste in a holistic and inclusive manner. In collaboration with municipal partners, York Region submitted comments to the Ministry on the Framework in January 2018, which highlighted the importance of reducing avoidable food waste, streamlining approvals process for new facilities and careful planning. The Region will continue

to prioritize food waste reduction and collaborate with local municipalities and the Ministry to advance this work.

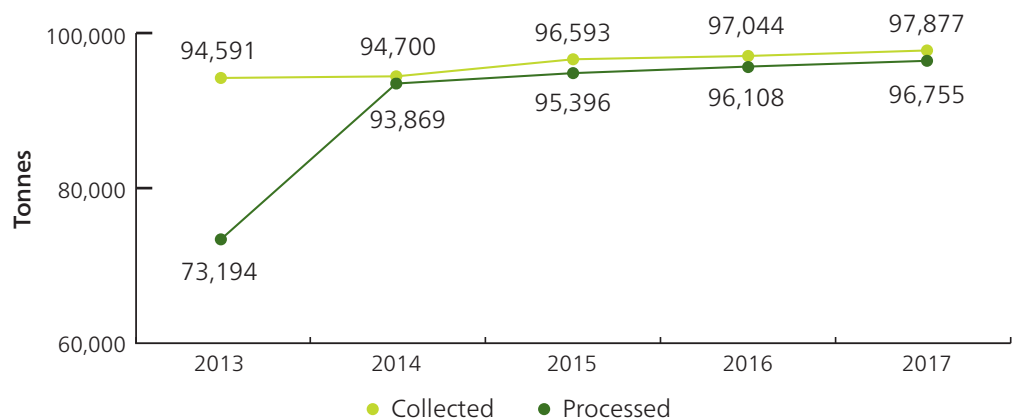
York Region is one of the first municipalities to establish a long-term target for food waste reduction. Under the *SMART Living Plan's* Good Food program, the Region aims to reduce food waste in the green bin by 15 per cent by 2031. York Region created the Ontario Food Collaborative, bringing together provincial, regional and municipal government stakeholders, including industry organizations, to take an integrated food systems approach and support residents to eat well and reduce food waste through public education.

Processing organic waste into compost currently represents one-third of the Region's overall diversion achievement. In 2017, York Region residents generated 97,877 tonnes of source separated organics. The Region shipped 55,917 tonnes of source separated organic material to GFL (formerly Lafleche) in Moose Creek, Ontario, 32,891 tonnes to Orgaworld in London, Ontario, and 6,745 tonnes to Cornerstone Renewables in Ontario for processing. The remaining tonnes represent leachate (liquid produced from the decomposition of waste) and evaporation. In 2017, 1,202 tonnes of leachate were managed through approved treatment facilities in Ontario, and 1,122 tonnes were lost to evaporation.

DID YOU KNOW?

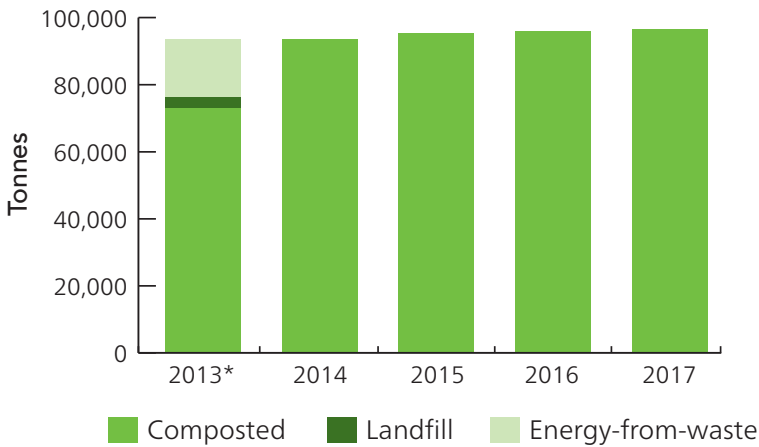
If Ontario doubled its current recovery rate of food and organic waste it would reduce an additional 1.1 megatonnes of greenhouse gas emissions, equivalent to removing 260,000 cars from Ontario roads each year.

Organic Waste Collected and Processed



York Region has secured reliable processing capacity for organics waste until 2027. Looking ahead, York Region is exploring potential technologies and partnerships to process organic waste while reducing greenhouse gas emissions. Organic waste presents an opportunity to recover energy through biogas in an effort to use renewable energy sources.

Organic Waste by Destination (Outbound)



*Operational and contractual challenges impacted organics processing options at third party facilities in 2013

Organic Waste Processing Contract Expiry Dates

Facility	Expiry Date
Cornerstone Renewables, Elmira and Leamington, Ontario	6/30/2022
GFL Environmental, Moose Creek, Ontario	6/30/2027
Orgaworld, London, Ontario	6/30/2027

Good Food
PLAN PREPARE ENJOY

Shopping List:

Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

DISCOVER TIPS FOR PLANNING HEALTHY FAMILY MEALS AT YORK.CA/GOODFOOD #PlanPrepareEnjoy

Good Food
PLAN PREPARE ENJOY

Stare your fresh fruits and vegetables properly so they last longer

- Optimal
- Minimal/Limited Time
- Not recommended

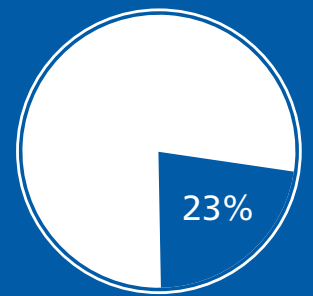
Discover more tips for storing your fruits and vegetables at YORK.CA/GOODFOOD

#PlanPrepareEnjoy York Region

Good Food
PLAN PREPARE ENJOY

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BLUE BOX

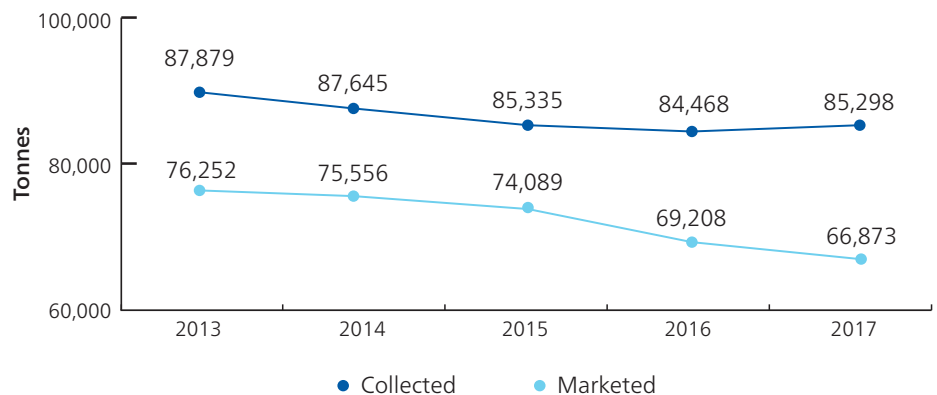


YORK REGION CONTINUES TO ADVOCATE FOR A STRONG MUNICIPAL VOICE TO SUPPORT A SUCCESSFUL TRANSITION TO FULL PRODUCER RESPONSIBILITY.

In November 2016, the *Waste Diversion Act, 2002* was repealed and replaced by the *Waste-Free Ontario Act, 2016*. The new legislation shifts the current Blue Box Program to full producer responsibility, where producers are fully responsible for the end-of-life management of their products and packaging. In 2017, the Municipal Resource Recovery and Research Collaborative (Municipal 3Rs Collaborative) was formed by municipal advocates including York Region, who began working on an accelerated transition of the Blue Box Program. Throughout 2017, York Region met with local cities and towns to capture feedback on the impacts to our integrated waste management system. In January 2018, staff submitted comments to the Ministry

reiterating the need to expand and harmonize blue box materials, as well as a transparent process that considers all stakeholders. In February 2018, the Authority notified the public that more time was needed to address comments received. York Region will continue to engage local cities and towns to seek feedback as the extended consultation process unfolds.

Blue Box Collected and Marketed



In 2017, blue box recyclables made up 23 per cent of the total material collected in York Region. High levels of precipitation contributed to an increase in collected blue box tonnage due to heavier fibre recyclables. Spring 2017 was one of the wettest years on record; annual precipitation was 47 per cent higher in 2017 than 2016.

York Region’s marketable blue box tonnes declined from 2016 to 2017 due to changes in newsprint end markets. In late 2017, China, one of the largest newsprint markets, announced strict new import limits on recyclables, limiting movement of newsprint. The impact was significant as newsprint accounts for over 50 per cent of the material recovered at York Region’s Material Recovery Facility. As a result of storage constraints, York Region sent 100 tonnes of fibre to energy-from-waste facilities in September 2017 and another 815 tonnes as of July 2018. Due to difficulty marketing fibre, 1,191 tonnes of fibre remained in inventory and unmarketed at the end of 2017. York Region is developing options for improving quality and marketability of fibre through upgrades to York Region’s Material Recovery Facility.

For years, Ontario municipalities including York Region have seen a downward trend in marketed blue box tonnes due to changes in the producer and consumer landscapes. Producers prefer lighter products and packaging to reduce transportation and production costs. Consumers in North America use less printed paper like newspaper and magazines as they access information online and use more light-weight plastics with the trend towards single-serve prepared food. With full producer responsibility, producers will be responsible for end-of-life management of all packaging, incenting better packaging design and creating more end markets.

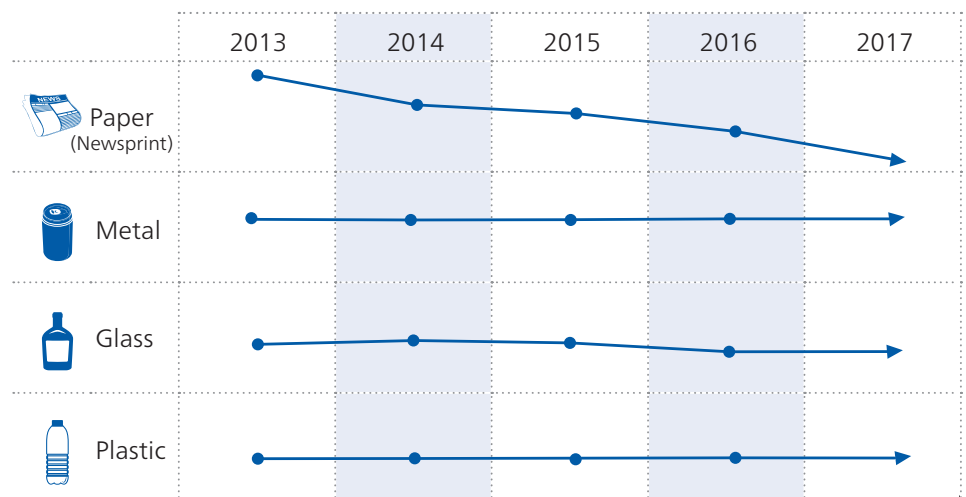
Traditional recyclables such as glass, metal, and heavier plastics are being replaced by multi-layered and new types of flexible packaging in the marketplace. This complex packaging is increasing contamination and costs to manage the Blue Box Program. York Region is working together with local cities and towns to identify solutions, minimize contamination and to provide education as necessary.



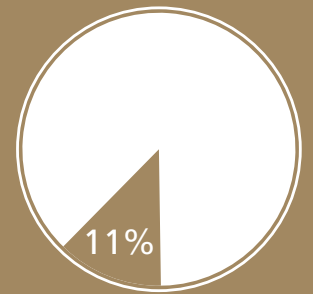
DID YOU KNOW?

In 2005, it took 35,000 plastic water bottles to recover 1 tonne of plastic; 10 years later it takes almost 70,000 bottles.

Trend of Marketed Blue Box Tonnes



LEAF AND YARD WASTE



COMPOSTING LEAF AND YARD WASTE RETURNS VALUABLE NUTRIENTS TO THE SOIL.

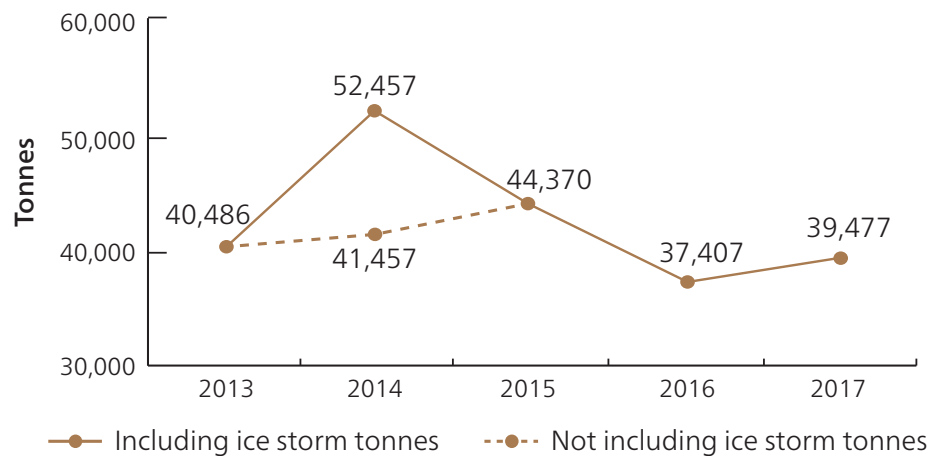
York Region's local cities and towns offer residents seasonal curbside leaf and yard waste collection programs every other week from spring to fall. Residents can also drop off leaf and yard waste at the Georgina Transfer Station in the Town of Georgina and the Bloomington Yard Waste Depot in the Town of Richmond Hill. Miller Waste composts all yard waste collected in the Region at their Bloomington Facility.

In 2017, York Region residents generated 39,477 tonnes of leaf and yard waste, representing 11 per cent of the total curbside stream. Leaf and yard waste tonnes are influenced by changing weather patterns. Yard waste tonnes typically increase during warm, wet weather, or after severe winds or ice storms. The wet weather in 2017 created growth conditions which resulted in a slight increase in tonnages compared to the dry 2016 season.

DID YOU KNOW?

In 2017, York Region sold 434 backyard composters diverting an estimated 43 tonnes of kitchen scraps, leaf and yard waste.

Leaf and Yard Waste Collected

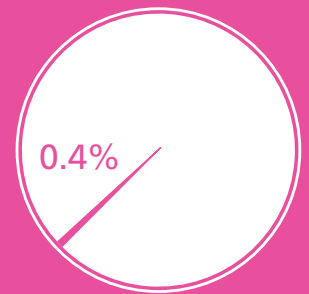


EMERALD ASH BORER

The Emerald Ash Borer was discovered in York Region in 2008. This invasive insect poses no risk to human health but kills all North American species of ash trees, posing a significant threat to our forests and street trees. This will impact yard waste tonnages as older trees die off and are replaced by younger, smaller trees that produce less yard waste. York Region Forestry has confirmed infestations in all Regional municipalities and is working with local cities and towns, conservation authorities, the Canadian Food Inspection Agency and the Ontario Ministry of Natural Resources and Forestry to coordinate efforts to monitor and manage the Emerald Ash Borer's impacts in the Region.



ELECTRONIC WASTE



REUSE AND RECYCLING OF ELECTRONIC WASTE CAPTURE VALUABLE RESOURCES.

In 2009, the Waste Electrical and Electronic Equipment (WEEE) program, managed by the Ontario Electronic Stewardship (OES), was developed and designated under the *Waste Diversion Act, 2002* and currently operates under the *Waste Diversion Transition Act*. The WEEE program includes collection, processing and disposal of the material and is funded by brand owners and first importers of these products. In February 2018, the Ministry issued a letter to OES to wind up the WEEE program and transition to full producer responsibility by June 30, 2020. Region staff will continue to participate in consultations throughout the wind up process.

York Region provides residents with a network of drop-off facilities for electronic waste, including

Georgina Transfer Station, East Gwillimbury HHW and Recycling Depot, Markham HHW Depot, Vaughan HHW Depot and McCleary Court and Elgin Mills CECs. In December 2017, the Vaughan HHW Depot moved to the McCleary Court CEC. Regional depots collected 1,344 tonnes of electronic waste in 2017. Additionally, local cities and towns organized 50 electronic waste collection events. These special recycling events, combined with York Region's drop-off depots, provide residents with convenient options for the safe recycling of electronic waste. In addition, OES provides numerous drop-off locations in York Region.

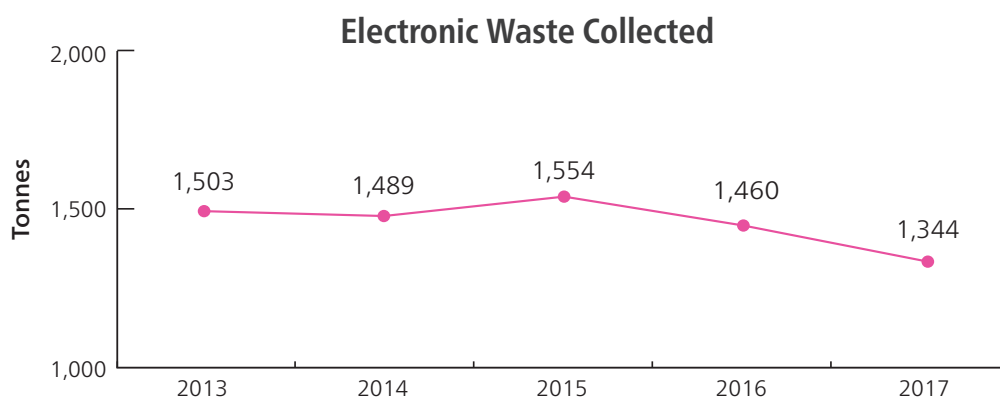
Electronic devices are getting smaller, thinner and lighter over time resulting in fewer tonnes

collected each year. The average LCD and LED televisions are 81 per cent lighter than older technologies such as cathode ray tube televisions.

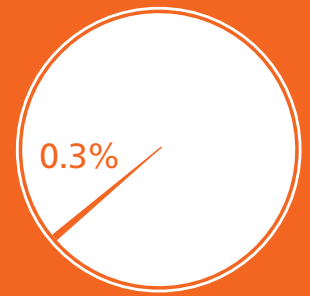
Depot collected electronic waste is sent to Global Electric and Electronic Processing (GEEP) for recycling. GEEP recovers valuable raw materials through environmentally responsible de-manufacturing of waste electronics and uses sustainable business practices and a non-export policy to achieve a near zero landfill goal.

DID YOU KNOW?

GEEP recycles 97 per cent of all materials handled including the dust produced in the recycling process of electronic waste. Dust briquetting technology allows precious metals contained in the dust to be recovered and recycled.



HOUSEHOLD HAZARDOUS WASTE



PROTECTING THE ENVIRONMENT BY SAFELY MANAGING AND DIVERTING HOUSEHOLD HAZARDOUS WASTE.

The Municipal Hazardous or Special Waste (MHSW) program was established in 2008 and designated under the previous *Waste Diversion Act, 2002*. Collection, processing and disposal of this material are funded by brand owners and first importers of these products and will continue to operate under the *Waste Diversion Transition Act* until the MHSW program is transitioned to full producer responsibility. In April 2018, the Ministry issued direction to Stewardship Ontario to wind up the MHSW program by December 31, 2020. York Region will monitor regulatory changes and continue to be engaged during transition.

York Region provides a network of facilities where residents can drop off Household Hazardous Waste (HHW). Drop-off locations

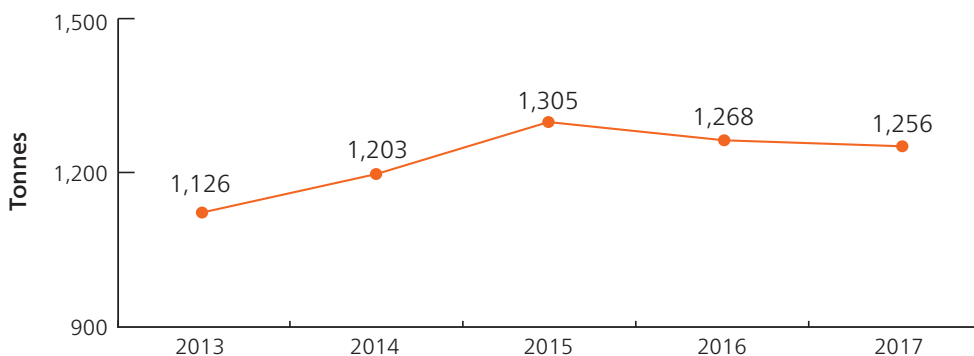
include the Georgina Transfer Station, East Gwillimbury HHW and Recycling Depot, Vaughan HHW Depot, Markham HHW Depot and McCleary Court Community Environmental Centre (CEC). Materials are recycled or treated and disposed of in an environmentally responsible manner through specialized contract services. In December 2017, the Vaughan HHW Depot moved to the McCleary Court CEC and a new HHW Depot will be introduced at the Elgin Mills CEC in 2018. In addition, York Region revised waste depot hours to better reflect customer needs. Beginning in January 2018, HHW depot hours were adjusted to ensure a HHW depot is open each day of the week.

York Region collected 1,256 tonnes of HHW materials at Regional depots. In addition, many retailers offer take-back programs for HHW materials. Municipal depots and retail take-back locations ensure materials are safely managed to end-of-life and divert harmful substances from landfill, waterways and forests. Further, many HHW items contain materials that can be recovered, refined and reused in manufacturing new products, reducing the need for virgin resources.



Waste diversion programs operating in Ontario provide an annual benefit of nearly \$1 billion in avoided environmental and health costs.

Household Hazardous Waste Collected

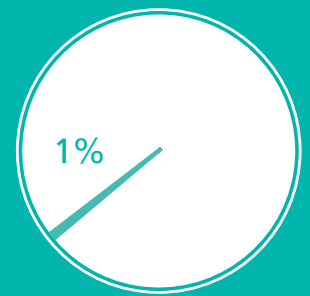




PAINT (145)
HIGHLY FLAMMABLE LIQUID + SOLID (145)
& OXIDIZING LIQUID + SOLID (145)

SPECIALTY PAINTS (040)

OTHER DIVERSION PROGRAMS



DIVERSION SUCCESS THROUGH DEPOT RECYCLING PROGRAMS.

USED COOKING OIL

Used cooking oil can be dropped off at all York Region depots including Georgina Transfer Station, East Gwillimbury HHW and Recycling Depot, Markham HHW Depot, Elgin Mills and McCleary Court Community Environmental Centres (CECs). In 2017, York Region collected 21,225 kilograms of used cooking oil that was processed and returned to the market as an ingredient in lubricants and animal feed.

York Region continues to deliver a Fats, Oils and Grease (FOG) education campaign, which began in 2015 to keep FOG out of the wastewater collection system. FOG placed down the drain or toilet cause clogs and backups resulting in costly sewage repairs. The campaign educates residents and local businesses to use the green bin to dispose of fats and grease and informs residents to bring cooking oil to York Region's five drop-off depots.

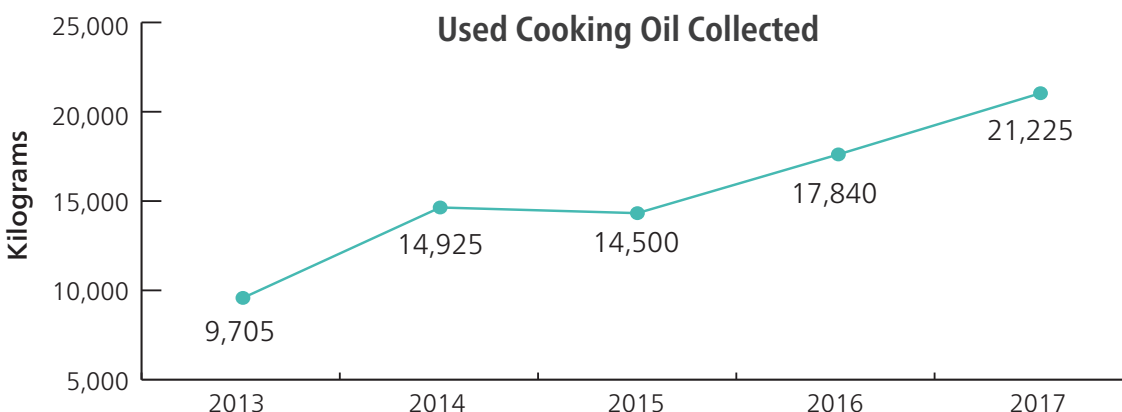
CONSTRUCTION AND DEMOLITION MATERIALS

York Region accepts construction and demolition materials including concrete, drywall and untreated wood for recycling at the Elgin Mills and McCleary Court CECs. As a result of site enhancements, the Georgina Transfer Station will begin accepting construction and demolition materials for recycling in 2018.

TIRE RECYCLING

York Region collects used tires at the Elgin Mills and McCleary Court CECs and the Georgina Transfer Station. Residents can drop off up to four tires per day, including passenger, light and medium truck and farm tractor tires. In 2017, the Region collected 171 tonnes of tires. In Ontario, municipalities represent only six per cent of registered collectors. The majority of tires are collected at tire retailers and automotive shops. Used tires are recycled into new products including rubber bricks, playground surfacing and rubber mulch.

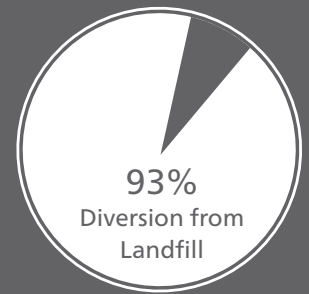
Ontario Tire Stewardship (OTS) funds tire collection through fees levied on each tire supplied in Ontario. In 2017, under the *Waste-Free Ontario Act* the Ministry directed OTS to wind up the Used Tires Program by December 31, 2018. York Region staff have actively participated in this wind-up process through consultations and submission of comments to the Ministry. The Region will remain engaged and program impacts will be monitored and reported in future Annual Solid Waste Diversion Reports.



DID YOU KNOW?

Since 2009, OTS has recycled over 100 million tires. Laid side-by-side, the tires would cross Canada 11 times.

RESIDUAL WASTE



ENERGY RECOVERY PROVIDES SUSTAINABLE RESIDUAL WASTE MANAGEMENT WHILE MINIMIZING LANDFILL DISPOSAL.

After reduction, reuse and recycling diversion efforts have been maximized, York Region manages its remaining residual waste primarily through energy-from-waste recovery. Energy-from-waste captures the energy content of residual waste, lowers greenhouse gas emissions, recovers metals and diverts waste from landfill.

In 2017, the Region shipped 125,801 tonnes of residual waste for energy recovery with 52,576 tonnes processed at Covanta Niagara in New York State and 38,453 tonnes processed at Emerald Energy in Brampton, Ontario. The remaining 34,772 tonnes were sent to the Durham York Energy Centre (DYEC) in Clarington, Ontario. In 2017, the DYEC operated in full compliance with regulatory emissions limits which are among the most stringent in the world. York Region's residual waste managed through energy recovery generates enough electricity to power 3,830 homes every year.

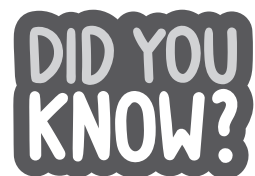
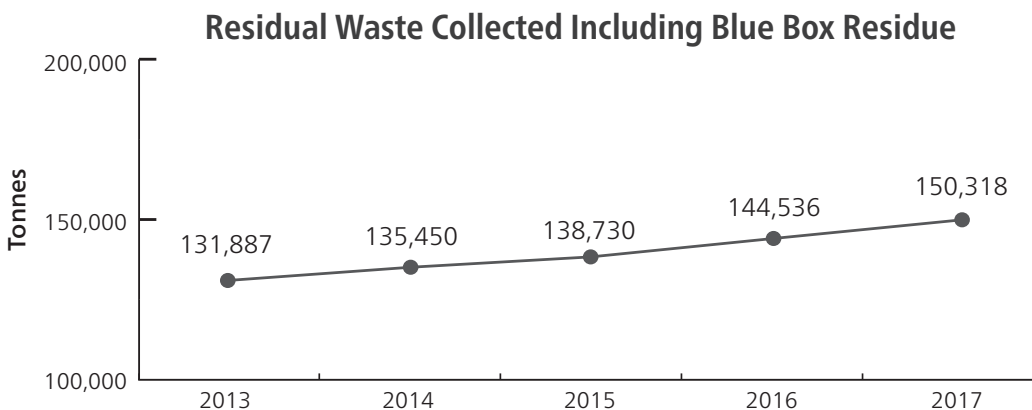
Landfill disposal remains the last option for managing Regional waste materials, once all other diversion options have been exhausted. Bulky items like mattresses and sofas can block the feed shoot and ash discharger in energy-from-waste facilities making them unsuitable for energy recovery. Instead these materials are managed through landfill contracts with Niagara Waste Landfill in Thorold, Ontario; City of Toronto's Green Lane Landfill in St. Thomas, Ontario; and with Twin Creeks Landfill in Watford, Ontario. York Region sent 25,057 tonnes of residual waste to landfills in 2017.

York Region achieved 93 per cent diversion from landfill in 2017, exceeding the 90 per cent target established in the Regional Official Plan. This was achieved through successful diversion programs and commitment to sustainable waste management through energy recovery.

Residual Waste Shipments

Destination	Tonnes
Energy-from-waste	125,801
Landfill	25,057
Year-end carry over*	-540
Total Residual Waste	150,318

*Change in transfer station inventory January 1, 2017 and December 31, 2017



Durham York Energy Centre reuses all process water in the facility. The only wastewater entering the sanitary sewer system is from the administrative offices.

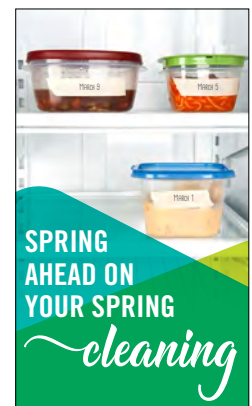
WASTE PROMOTION AND EDUCATION

PROMOTION AND EDUCATION ACTIVITIES DRIVE PARTICIPATION IN WASTE REDUCTION AND DIVERSION.

York Region actively promotes waste reduction and diversion through extensive public communication and education programs. Local cities and towns also provide education and information through their initiatives, including annual local waste collection calendars distributed to all York Region residents. York Region communicates regularly with our local cities and towns, recognizing the importance of consistent messaging to minimize public confusion and to leverage economies of scale wherever possible.

In 2017, York Region's Waste Management communication campaigns included:

- Bindicator – Cut the Clutter campaign promoting the use of an online waste directory
- Community Environmental Centres and Georgina Transfer Station upgrades – informing customers of upcoming construction projects to enhance these facilities
- Curbside Giveaway – providing promotional support to local municipalities who coordinated their Curbside Giveaway Days
- Fall Yard Waste Campaign – encouraging residents to place fall decorations (straw, corn stalks and pumpkins) in yard waste
- Garden Gold Composter Sales – renewing interest in backyard composting with several composter sales events taking place throughout the Region and in partnership with many of our local cities and towns
- Good Food Program – promoting food waste reducing behaviours which focused on simple tips and actions including proper planning and storage of foods
- Textile Collection – a pilot encouraging residents to place unwanted fabric-based materials either at the curb for collection or in the collection bins provided within the Towns of Aurora and Whitchurch-Stouffville
- Trash Blasters – promoting year two of a waste reduction education pilot program at six elementary schools in York Region
- Multi-residential – providing multi-residential specific education resources across the Region



SUMMARY

YORK REGION AND OUR NINE LOCAL CITIES AND TOWNS ARE LEADERS IN ONTARIO OFFERING COMPREHENSIVE WASTE MANAGEMENT SERVICES TO RESIDENTS.

Regional and local municipal Councils have taken a proactive and sustainable approach to manage waste. The *SMART Living Plan* has led to the successful implementation of non-traditional waste reuse, reduction, recycling and recovery programs and facilities. Since the implementation of the *SMART Living Plan*, the Region's programs and facilities have won awards from the Federation of Canadian Municipalities, Municipal Waste Association, Solid Waste Association of North America and Recycling Council of Ontario. Success of these programs is due to the dedication of Council, Regional and local cities and town staff, residents, businesses and community partners across the Region.

As seen in the *2017 Annual Solid Waste Diversion Report*, the Region's programs have demonstrated the following:

- 93 per cent diversion from landfill
- 68 per cent Resource Productivity and Recovery Authority diversion rate (verification pending)
- Convenient access to depot diversion programs with over 70,000 visits recorded through paid transactions diverting more than 5,655 tonnes of waste materials
- Ensured the safe and responsible recycling of 2,600 tonnes of household hazardous waste and electronic waste materials
- Processed 125,801 tonnes of residual waste through energy-from-waste recovery generating enough electricity to power 3,830 homes annually
- Delivered promotion and education programs focused on reuse, reduction and recycling initiatives

York Region will continue to advance the *SMART Living Plan's* reduction, reuse and recycling initiatives through continued collaboration with local cities and towns and partnerships with community organizations. The *SMART Living Plan's* principles and goals have positioned York Region to advance the municipal perspective on issues related to the *Waste-Free Ontario Act*. As the province moves forward with the transition to full producer responsibility, staff will continue to remain engaged with all stakeholders and will report back on potential program impacts.



Thank you!

Success of York Region's waste reduction and diversion programs is due to our residents and their continued commitment to building sustainable communities.

