

PARTNERSHIPS DRIVING

reduction
reuse
recycling
recovery



The Regional Municipality of York
2015 Annual Diversion Report

reduction

York Region's SM4RT Living Integrated Waste Management Master Plan (SM4RT Living Plan) identifies food waste as having the largest waste reduction potential over the long term. York Region initiated the Ontario Food Collaborative with leaders from municipalities, provincial government and food organizations to collaborate on decreasing wasted food at the residential level through public education and shared messaging. The unique focus of the Ontario Food Collaborative is the link between post-consumer food waste reduction and healthy eating attitudes and behaviours. Over the next two years, the Ontario Food Collaborative will work on developing common metrics, messaging and partnerships to support healthy eating and food waste reduction. In 2015, York Region also partnered with the University of Guelph on a study to investigate the link between food waste behaviours and waste generation at the household level. This work will inform continued implementation of the SM4RT Living Plan.

reuse

A variety of opportunities exist to increase reuse in the community through partnership-based initiatives with non-profit organizations and York Region's local municipal partners. Reuse provides a cost-efficient, environmentally preferred alternative to recycling and recovery by limiting the need for new natural resources. In 2015, York Region collaborated with three local municipal partners to expand reuse opportunities for residents through curbside swap events. On designated curbside swap event days, residents place reusable items at the curb for other residents to pick up, free of charge. This innovative reuse partnership will be expanded in 2016 to include more local municipal partners. York Region also connects residents with reuse options for common household items through the Bindicator, an online waste search tool.

The background of the entire page is a photograph of a pond. In the foreground, there are several fallen autumn leaves in shades of orange, red, and brown, scattered across the water's surface. In the background, tall, thin reeds or grasses stand vertically, their reflections visible in the calm water. The overall scene is peaceful and seasonal.

recycling

Materials collected through local municipal Blue Box programs are processed at the Waste Management Centre, located in the Town of East Gwillimbury. The Waste Management Centre is owned by York Region and operated under contract by Miller Waste Systems. At the facility, blue box materials are separated into their individual commodities and sent to end markets where they are recycled into new products. In 2015, a glass clean-up system was installed to decrease contamination in the final glass stream. This upgrade has increased the separation of glass, optimizing recovery, recycling and marketability. The system also captures misdirected metals, containers and fibre, previously blended with the glass stream, re-directing them back to the appropriate recycling stream.

recovery

York Region continues to be a leader in sustainable waste management. The Durham York Energy Centre, located in the municipality of Clarington, is the first energy-from-waste facility to be constructed in Ontario in almost 25 years. It was designed, built and is now operated by Covanta Durham York Renewable Energy Limited Partnership and was in the commissioning stage throughout 2015. The facility is co-owned by the Regional Municipalities of Durham and York can process up to 140,000 tonnes of non-hazardous, municipal solid waste per year, of which York Region will provide up to 30,000 tonnes. At full scale operations, the facility is expected to generate 14 net megawatts of electricity and recover approximately 3,500 tonnes of recyclable metals per year. Energy-from-waste captures energy content of residual waste, lowers greenhouse gas emissions, recovers metals and reduces volume of waste going to landfill.

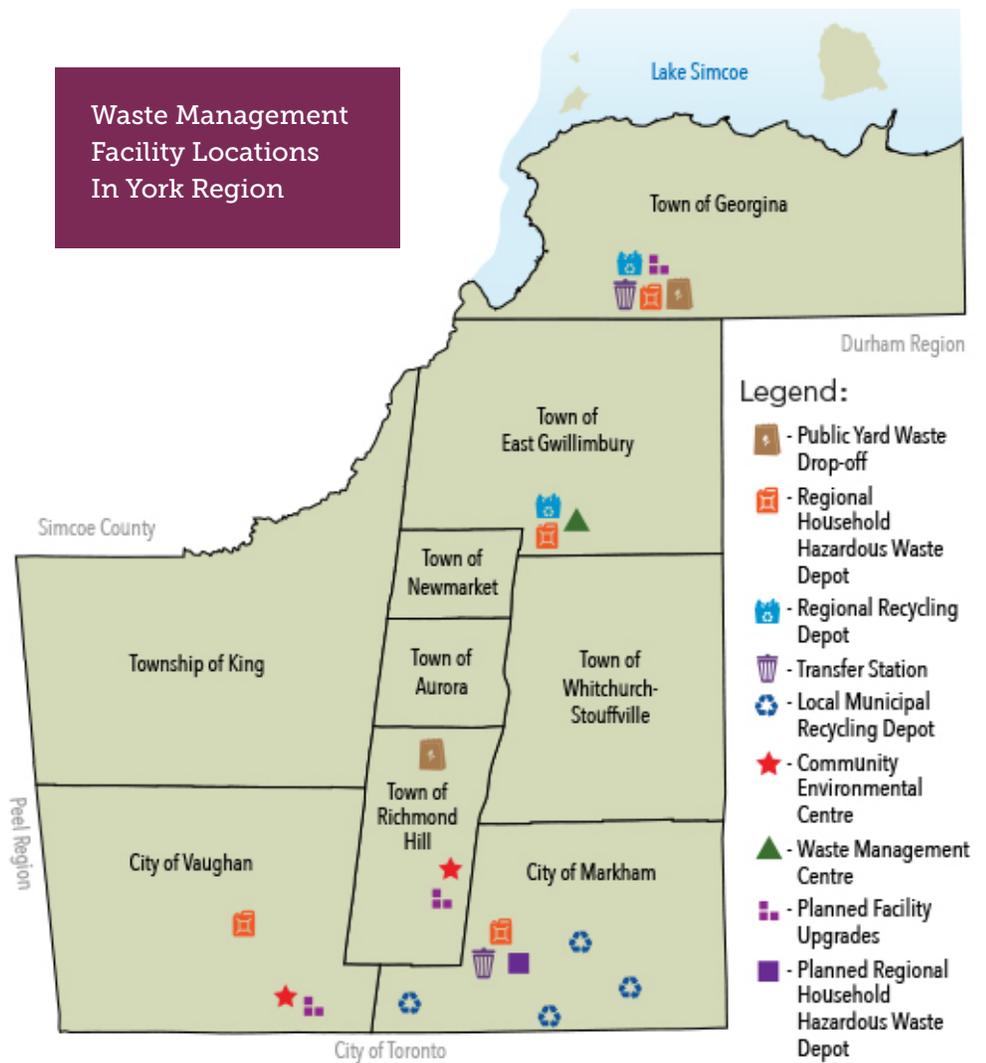


At-a-Glance

Working together to deliver efficient waste management services

York Region covers 1,776 square kilometres, from Lake Simcoe in the north, to the City of Toronto in the south; it borders Simcoe County and Peel Region in the west and Durham Region in the east. In addition to urban areas, York Region's landscape includes farmlands, wetlands and lakes, the Oak Ridges Moraine and more than 2,200 hectares of York Regional forest.

York Region is a two-tier municipality, home to almost 1.2 million residents and approximately 360,298 households and is one of Canada's largest regional municipalities. Within York Region are nine fast-growing local municipalities: the Towns of Aurora, East Gwillimbury, Georgina, Newmarket, Richmond Hill, Whitchurch-Stouffville, the Township of King and the Cities of Markham and Vaughan.





Quick Facts

In 2015, York Region and our local municipal partners diverted 87 per cent of collected materials from landfill disposal

87%

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2015 Diversion from landfill including energy-from-waste initiatives.

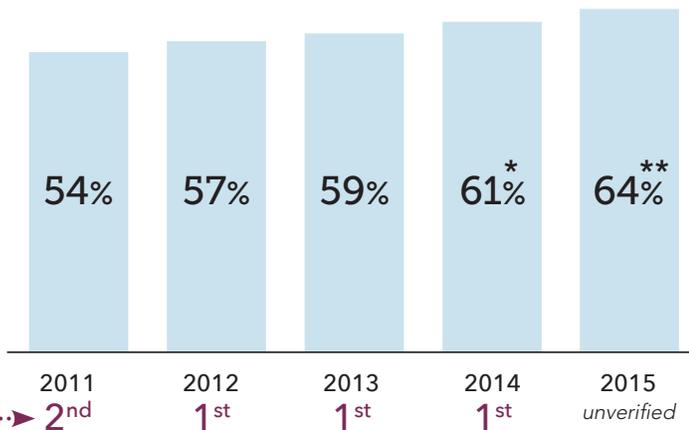
Total Tonnes Collected

Material Type	2011	2012	2013	2014	2015
Residual Waste Collected	116,235	119,648	120,260	124,011	128,148
SSO Collected	91,685	92,260	94,591	94,700	96,593
Blue Box Collected	90,948	89,488	87,879	87,645	85,335
Yard Waste	40,155	43,688	40,486	52,457	44,370
Other Diversion - Depot	4,053	6,657	6,297	4,930	5,944
HHW and Electronics	3,077	3,007	2,629	2,531	2,859

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Waste Diversion Ontario calculates diversion from landfill after processing of materials and does not include York Region-approved energy-from-waste initiatives.

WDO Annual Waste Diversion



Waste Diversion Ontario Ranking for Large Urban Municipalities

*Updated to reflect verified 2014 WDO diversion rate after annual adjustments.
 **2015 diversion data presented is unverified by WDO at time of printing. Until this method is revised, future York Region Datacall submissions and resulting WDO diversion rates will continue to be adjusted.



Partnerships for Success

York Region collaborates to provide integrated waste management services

York Region and its nine local municipal partners work together through the Strategic Waste Policy Committee to provide integrated waste management services to meet the needs of our growing communities. Twice each year, the Committee meets to discuss policy and program changes, review *SMART Living Plan* progress and develop metrics to measure performance. These meetings help facilitate greater communication, cooperation and information sharing.

Curbside collection of recyclables, organics, yard waste and garbage is managed by the local municipalities. These materials are delivered to York Region facilities for processing, energy recovery and disposal by external contractors. Regional and municipal recycling depots offer further opportunities for waste diversion.

Local municipalities also offer community waste reduction initiatives such as:

- Environment Days and Waste Reduction Week events

- Multi-residential waste management development standards
- Household hazardous waste disposal bans
- Pilot programs for reuse, organics, electronics and textile collection in multi-residential buildings
- Public recycling and reuse depots
- Special electronic waste collection days, mulch giveaways and community reuse events
- Three-stream waste collection in public spaces

LOCAL MUNICIPAL WASTE MANAGEMENT PROGRAMS

	Aurora	East Gwillimbury	Georgina	King
Curbside Collection				
Special Collection & Events				
School Collection		No service		No service
Municipal Facilities Diversion Programs				
Multi-Residential Programs		Does not service multi-residential buildings		Does not service multi-residential buildings

Garbage collection/ Number of bags	Recycling collection	Green bin collection	Yard waste collection	White goods collection	Textile collection
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WASTE MANAGEMENT INFRASTRUCTURE

 Blue Box	Waste Management Centre	 York Region Depots	East Gwillimbury Household Hazardous Waste and Recycling Depot, Elgin Mills Community Environmental Centre (CEC), Georgina Transfer Station, McCleary Court CEC	
 Organics	Orgaworld, Lafleche Environmental		 Energy-From-Waste	Covanta Niagara, Emerald Energy-From-Waste, Durham York Energy Centre
 Yard Waste	Bloomington Yard Waste Depot			 Landfill
 Household Hazardous Waste	Hotz Environmental			
 Electronic Waste	Global Electric Electronic Processing			

Markham	Newmarket	Richmond Hill	Vaughan	Whitchurch-Stouffville
 Clear Bags  	 3  	 3  	 3  	 3  
  	  	  	  	  
   	  		 	 
 	No service		No service	
  	 	 	 	
   	 	   	 	 

 Bulky item collection

 Electronic waste collection

 Education and outreach

 Compost giveaways

 Swap events

 Fee applies

 Battery collection



Community Environmental Centres

One-stop location for reuse and recycling programs

York Region's two Community Environmental Centres (CECs), McCleary Court in the City of Vaughan and Elgin Mills in the Town of Richmond Hill, provide a convenient outlet for York Region residents and small businesses to drop off a variety of materials, including reusable goods. Bulky recyclables, construction and demolition materials are also diverted from landfill through the CECs. Items that cannot be diverted are disposed of safely as residual waste.

In 2015 there were 25,476 tonnes of materials collected at the CECs:

- Goodwill Industries collected 307 tonnes of reuse materials (one per cent)
- Blue box, shredded paper, electronics, tires, scrap metal, foam packaging, election signs and cooking oil accounted for 1,953 tonnes (eight per cent)
- Construction and demolition materials, including untreated wood, drywall, concrete and rubble represented 3,977 tonnes (16 per cent)
- Residual waste was 19,239 tonnes (75 per cent)

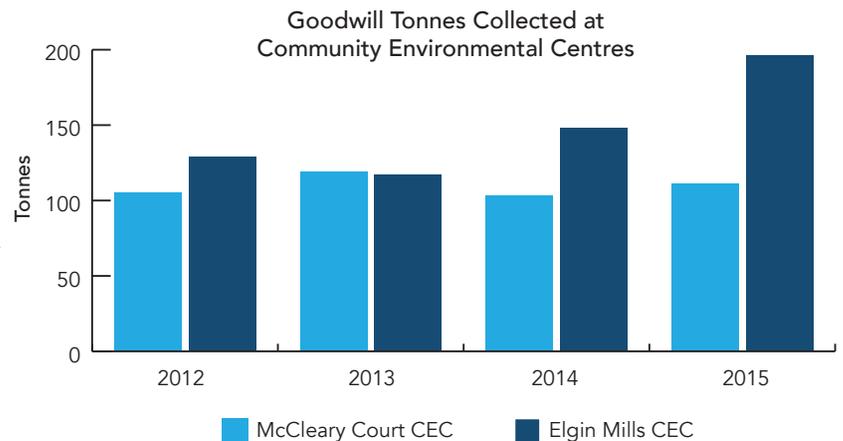
York Region has partnered with Goodwill Industries to operate and staff the on-site donation centres at the CECs. Since the opening of the McCleary Court CEC in 2009 and the Elgin Mills CEC in 2011, reusable goods donations have increased. In 2015, there was a 22 per cent overall increase in reuse donation tonnage over 2014.

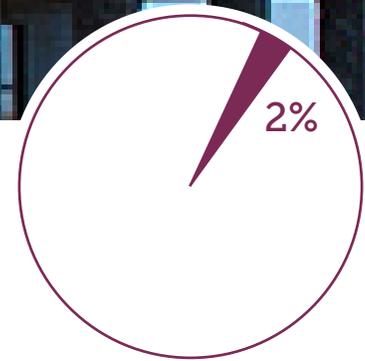


Did you know?

In the fall of 2016, York Region will begin construction at both CECs to integrate household hazardous waste depots and install weigh scales to support weight-based fees.

In January 2016, Goodwill Industries unexpectedly ceased operation. As a result, Goodwill Donation Centres at York Region's CECs are permanently closed.





Other Diversion Programs

Depot-based recycling programs offer further diversion opportunities

CONSTRUCTION AND DEMOLITION MATERIALS

York Region accepts construction and demolition materials including drywall, concrete, rubble and untreated wood for recycling at the Elgin Mills and McCleary Court Community Environmental Centres (CECs). When CEC upgrades are complete, weight-based fees will be introduced to help offset the cost of material management and improve cost recovery for higher cost recyclables like construction and demolition materials.

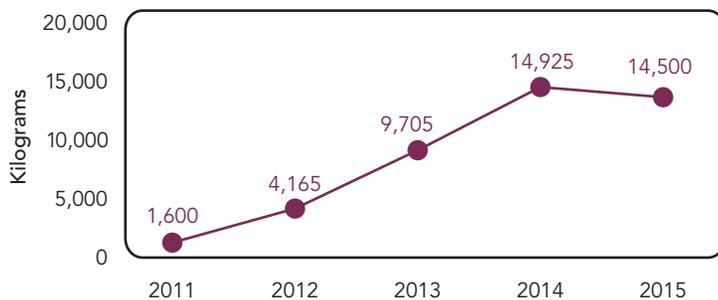
FOAM PACKAGING

York Region residents can bring their large, clean foam packaging, typically used for protecting appliances and electronics to the CECs for recycling. Foam meat trays, plates and cups are not accepted. In 2015, York Region collected 14 tonnes of foam packaging for recycling. Plans are underway to implement a foam packaging recycling program at the Georgina Transfer Station. Collected foam packaging is recycled by a local company and made into foam insulation used in the building industry.

USED COOKING OIL

York Region's Sewer Use Bylaw Enforcement Program educates residents on how to safely dispose of fats, oil and grease and the associated dangers of creating clogs and backups when placed down the drain or toilet. Used cooking oil can be dropped off for recycling at the Georgina Transfer Station, East Gwillimbury HHW and Recycling Depot, Markham and Vaughan HHW Depots, as well as the McCleary Court and Elgin Mills CECs. Collection of used cooking oil was initiated in 2011 at McCleary Court CEC. Between 2012 and 2014, collection of used cooking oil was expanded to all remaining drop-off depots and Elgin Mills CEC. In 2015, York Region collected 14,500 kilograms of used cooking oil for recycling that was processed and returned to the market as ingredients in greases and animal feed.

Used Cooking Oil Kilograms Collected at York Region Drop-Off Depots



Did you know?

In 2015, each resident in York Region generated on average 313 kg of waste. That's the weight of a grand piano!



Blue Box

Blue Box recycling supports sustainable resource management

York Region has been advocating for improvements to the *Waste Diversion Act, 2002*. In November 2015, the province tabled enabling legislation, the proposed *Waste-Free Ontario Act*, to replace the current *Waste Diversion Act, 2002*. While proposed legislation aligns with the *SM4RT Living Plan* at a high level, details about implementation are still to be determined. York Region and its local municipal partners continue to advocate for a strong municipal role in the new system to ensure environmental performance and service levels are maintained. Impacts of legislative changes will be tracked and reported in future Annual Diversion Reports.

In 2015, Waste Diversion Ontario confirmed Ontario municipalities will receive the full 50 per cent of blue box costs from producers for the 2014 reporting year. York Region will continue to be engaged in the process in 2016 to ensure accurate budget estimates.

The blue box made up 20 per cent of the total materials collected and processed in York Region in 2015. Based on audits conducted in 2015, the newly installed mixed paper clean-up system technology removed 93 per cent of misdirected containers from the paper stream. The mixed paper clean-up system also reduced overall residue generation by half a per cent.



Did you know?

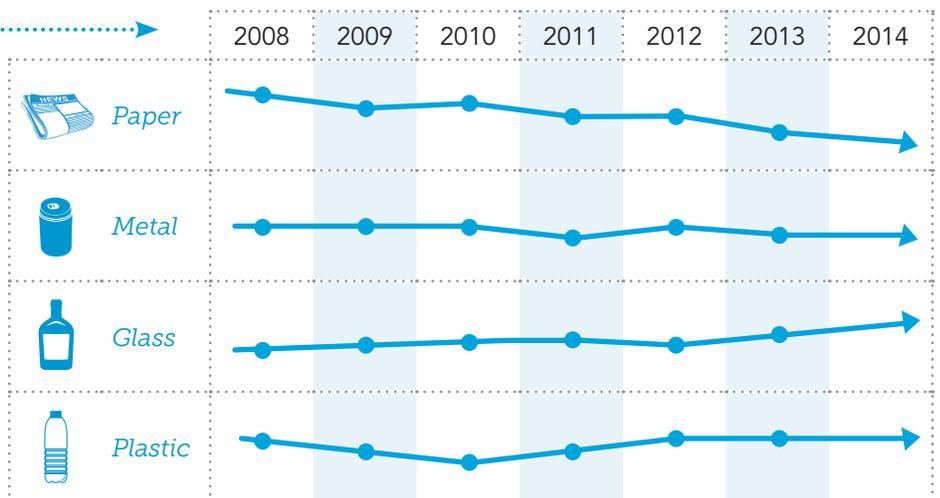
In 2015, York Region generated \$6.7 million from the sale of blue box recyclables.

This resulted in improved quality of the paper products sent to end markets for recycling and an increase in production of plastic, polycoat and aluminium bales.

York Region regularly conducts blue box audits and results indicate the

BLUE BOX COMPOSITION ANALYSIS

Over the years, the composition of blue box materials has changed with an increase in lightweight and high-volume materials such as new lighter plastic containers and a decrease in the heavier, dense materials like newspaper. The decrease in paper can be attributed to changes in societal trends driven by the digital revolution that has replaced daily newspapers with online news applications and books for e-readers.

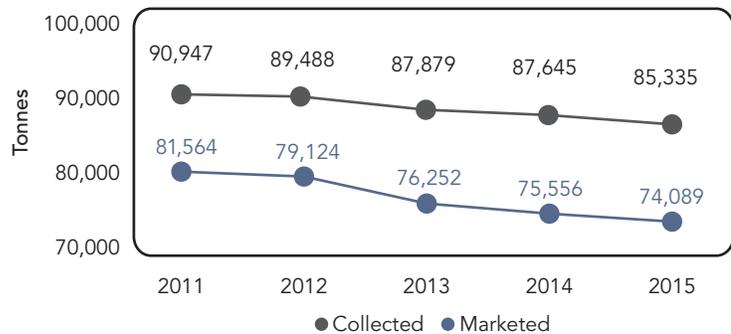




top three contaminants contributing to residue are newspapers in plastic delivery bags, garbage in plastic bags and non-recyclable plastics such as blister packaging.

With full producer responsibility through the proposed legislation, producers should be motivated to improve the reusability and recyclability of materials through better product and packaging design. In partnership with local municipalities, York Region continues to deliver multi-faceted, award-winning promotion and educational campaigns to address these key contamination issues.

Blue Box Tonnes Collected and Marketed



I need my space

Recyclable items should be free from one another in your blue box.
Please ensure recyclables are placed separately and cardboard is flattened in your blue box. It's difficult to process blue box items packed inside of one another.
For more information on what can go in your blue box, please visit www.york.ca/bluebox

BETTER BLUE STARTS WITH YOU

You're just not my type

Not all types of plastic are recyclable in your blue box.
Toys, utensils and plastic wrap are just a few items NOT accepted in the blue box. Plastic that cannot be recycled or reused should go in the garbage.
For more information on what can go in your blue box, please visit www.york.ca/bluebox

BETTER BLUE STARTS WITH YOU

I need to be alone

Plastic bags do not belong in your blue box.
Newspaper should go in your blue box, but please remove the plastic sleeve first. Leaving it on prevents the newspaper from being recycled. The plastic sleeve should be reused or go in the garbage.
For more information on what can go in your blue box, please visit www.york.ca/bluebox

BETTER BLUE STARTS WITH YOU



Organic Waste

Organics processing is a critical component of waste diversion

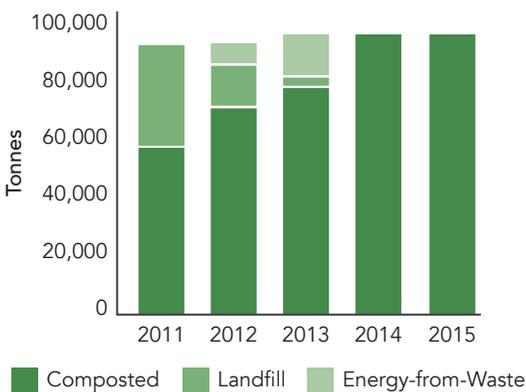
Processing of organic waste into compost currently represents one-third of the Region's overall diversion achievement. In 2015, York Region residents generated approximately 96,593 tonnes of source separated organics. York Region continues to secure reliable compost processing capacity for all collected organic material.

In 2015, York Region shipped 57,849 tonnes of source separated organic waste to Orgaworld in the City of London, Ontario and 36,479 tonnes to

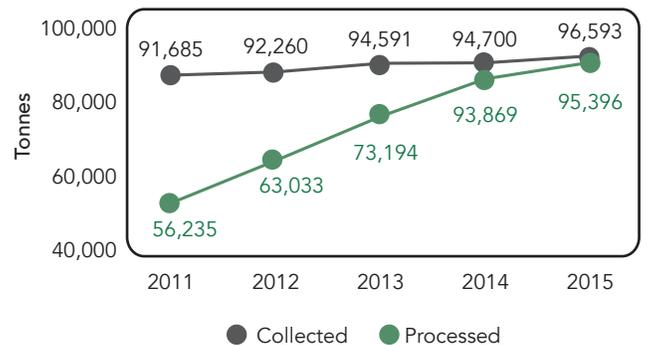
Lafleche in Moose Creek, Ontario for processing. The majority of collected organic material was processed into compost through reliable compost processing capacity. The remaining tonnes represent leachate (liquid produced from the decomposition of waste) and evaporation. In 2015, 1,068 tonnes of leachate was managed through approved treatment facilities in Ontario and 1,197 tonnes were lost to evaporation.

 **Did you know?**
50 per cent of avoidable food waste occurs at home.

Source Separated Organics Management by Destination (outbound)



Source Separated Organics Tonnes Collected and Processed





Leaf and Yard Waste

Composting leaf and yard waste improves soil conditions

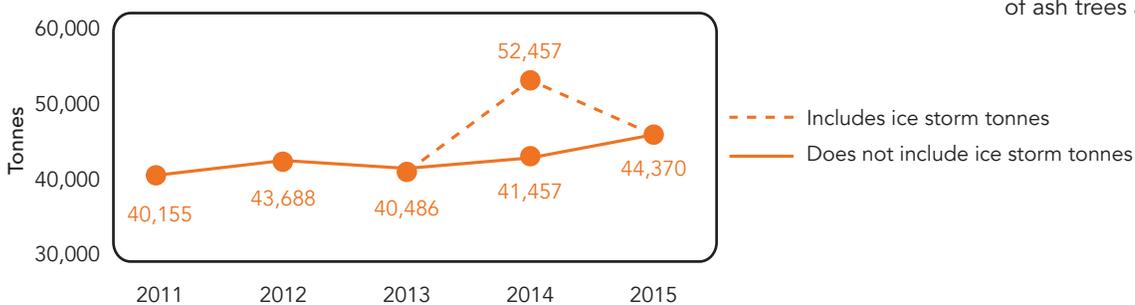
York Region’s local municipal partners are responsible for the seasonal curbside collection of leaf and yard waste. Collection starts in the spring and ends in the fall, with between 17 and 25 collections per year, depending on the municipality. Additionally, residents may drop off leaf and yard waste at two facilities in York Region – the Georgina Transfer Station and the Bloomington Yard Waste Depot in the Town of Richmond Hill. All yard waste collected in the Region continues to be processed at the Bloomington Yard Waste Depot.

In 2015, York Region residents generated approximately 44,370 tonnes of yard waste, representing 11 per cent of the total curbside waste stream. There is a direct correlation between yard waste tonnes collected and local weather patterns as warmer weather tends to extend the yard waste season. The Region typically sees between 40,000 – 44,000 tonnes of yard waste per year. In 2014, York Region processed an additional 11,000 tonnes related to ice storm tree debris.

EMERALD ASH BORER

The Emerald Ash Borer (EAB) 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. York Region Forestry has confirmed infestations in all Regional municipalities and is working with local municipalities, conservation authorities, the Canadian Food Inspection Agency and the Ontario Ministry of Natural Resources to coordinate efforts to monitor and manage EAB’s impacts in the Region. It is anticipated yard waste tonnages will increase over the coming years as ash trees die off, particularly in the northern-most municipalities, where a high number of ash trees are present.

Total Yard Waste Tonnes Collected





Household Hazardous Waste (HHW)

Protecting the environment by safely managing and diverting household hazardous waste

York Region provides a network of facilities where residents can drop off municipal household hazardous waste (HHW) including the Georgina Transfer Station, the East Gwillimbury HHW and Recycling Depot and the Markham and Vaughan HHW depots. The Region is currently working on integrating the Vaughan HHW depot operation into the McCleary Court CEC and introducing a new HHW depot into the Elgin Mills CEC operation. Through specialized HHW contract services, these materials are recycled or treated and disposed of in an environmentally responsible manner.

In 2015, the amount of HHW materials (1,305 tonnes) collected at Regional depots increased slightly over 2014. This is attributed to new promotion and education campaigns launched by York Region to remind residents to safely dispose of household hazardous materials. Both 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. Many of these items contain materials that can be recovered, refined and reused in the manufacturing of new products, reducing the need for virgin resources.

York Region continues to be engaged in the evolving stewardship funding organizational structure for HHW. Previous steward representation that resided with Stewardship Ontario has been transitioned to Product Care Association. Waste Diversion Ontario approved their Industry Stewardship Plan for paints and coatings on December 10, 2014 and pesticides, solvents and fertilizers on October 28, 2015. Product Care Association is now responsible for the entire supply chain and funding for these materials. There have been no financial or operational impacts to York Region as a result of this transition.



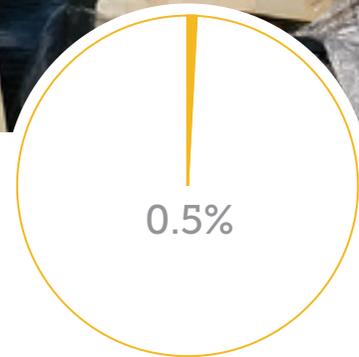
Did you know?

There are multiple return-to-retail locations for used paint in addition to the four York Region HHW Depots. Visit regeneration.ca for all locations, hours of operation and program guidelines.

Household Hazardous Waste
Tonnes Collected



*Updated to reflect unaccounted HHW material reconciled after 2014 reporting period.



Waste Electronics

Network of drop-off depots support reuse and recycling of waste electronics

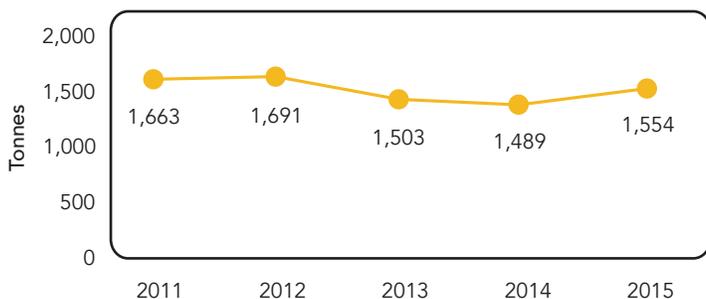
York Region provides its residents with a network of drop-off facilities for waste electronics, including Georgina Transfer Station, East Gwillimbury HHW and Recycling Depot, Markham HHW Depot, Vaughan HHW Depot, as well as McCleary Court and Elgin Mills CECs. The Waste Electrical and Electronic Equipment (WEEE) program was developed by Waste Diversion Ontario in cooperation with Ontario Electronic Stewardship in 2009. Waste Electrical and Electronic Equipment material has been designated under the Waste

Diversion Act, 2002, and collection, processing and disposal of this material is funded by brand owners and first importers of these products.

In 2015, 1,554 tonnes of WEEE materials were collected at York Region depots. Additionally, local municipalities organized 31 WEEE recycling special events in 2015. These special recycling events combined with York Region's drop-off depots provide residents with convenient options for the safe recycling of WEEE materials.

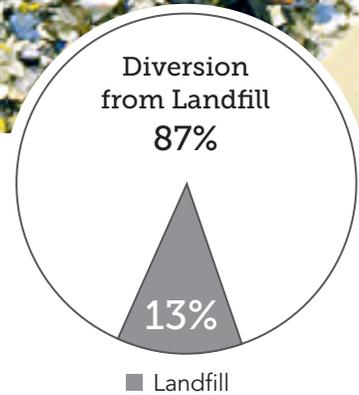
Waste Electrical and Electronic Equipment materials collected at Regional depots have marginally increased over 2014 due to several factors. Many electronics nearing their end of life are being replaced by all-in-one-electronic technologies like smart phones. One smart phone can take the place of multiple electronic items such as alarm clocks, cameras, watches, calculators, GPS, and mp3 players. As new technology trends continue, the overall weight of electronic products will be dramatically reduced.

Waste Electrical and Electronic Equipment
Tonnes Collected



Did you know?

Since 2009 manufacturers have decreased the weight of computer monitors by 59 per cent, by reducing the size of microprocessors. *(Ontario Electronic Stewardship)*



Residual Waste

Benefits of recovery to minimize landfill disposal

York Region supports energy-from-waste technology as the preferred alternative to landfill for residual waste after reduction, reuse and recycling diversion efforts have been expended. Energy-from-waste provides the benefits of capturing the energy content of residual waste, lowers greenhouse gas emissions, recovers metals and reduces the volume of waste going to landfill by 90 per cent.

In 2015, York Region shipped 93,438 tonnes of residual waste for energy recovery, with 51,927 tonnes processed at Covanta Niagara Limited Partnership in New York State and 19,736 tonnes processed at Emerald Energy in the City of Brampton, Ontario. The remaining 21,775 tonnes was sent to the Durham York Energy Centre (DYEC). Once fully operational in 2016, York Region will ship up to 30,000 tonnes of residual waste to the DYEC for energy recovery.

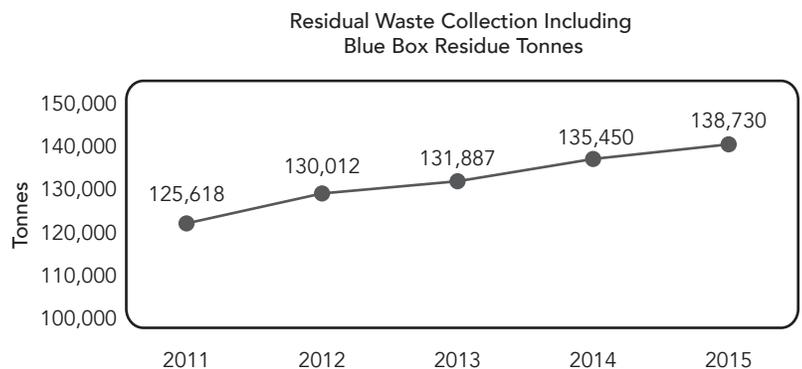
Landfill contracts are in place with Walker South Landfill in the City of Thorold, Ontario, the City of Toronto Green Lane Landfill in the City of St. Thomas, Ontario and Waste Management Incorporated Twin Creeks Landfill in Watford, Ontario for the Region's bulky materials, which are typically not appropriate for energy recovery. The Region landfilled 45,722 tonnes of residual waste in 2015. The tonnage surplus is attributed to tip floor residual waste that was carried over at year end.

York Region's maximizes energy-from-waste contracts in order to achieve the York Region Official Plan target of achieving more than 90 per cent diversion from landfill (including energy-from-waste tonnage) by 2016. The waste management portfolio represents a sustainable approach to management of York Region's residual waste to derive a beneficial use.

Did you know?



When compared to landfilling, energy-from-waste avoids 0.8 tonnes of greenhouse gas emissions, for every tonne of waste processed.





Durham York Energy Centre, Municipality of Clarington



Waste Promotion and Education

Extensive promotion and outreach activities increase participation and successful waste diversion programs

The objectives of York Region’s environmental promotion and education programs are to:

- Promote participation in waste reduction and diversion programs
- Encourage correct participation in waste diversion programs
- Ensure compliance with municipal and Regional waste management policies

York Region communicates regularly with our municipal partners, recognizing the importance of consistent messaging to minimize public confusion and to leverage economies of scale wherever possible.

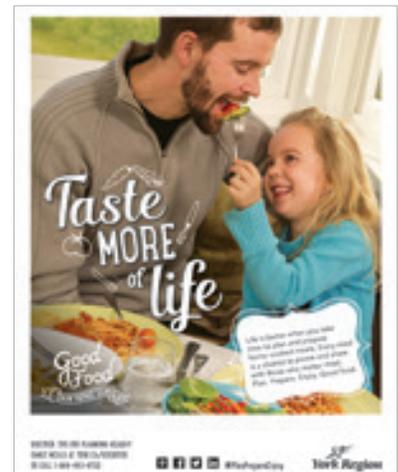
The Region actively promotes waste reduction and diversion through extensive public communication and education programs. Local municipalities also provide broad education and information through their own initiatives, including annual local waste collection calendars distributed to all York Region residents.

In 2015, York Region’s Waste Management communication campaigns included:

- *Good Food program* – promoting food waste reducing behaviors

- *Better Blue Starts With You* – multi-year blue box contamination campaign educating residents on the items that do not belong in the blue box as well as other blue box best practices
- *Take Back Your Space* campaign – promoting the use of Community Environmental Centres and Household Hazardous Waste Depots
- Electronic waste campaigns – highlighting the importance of safe disposal and recycling of these materials

In March 2015, York Region’s *Good Food* program was launched. The program focuses on making good food purchasing and cooking choices to improve health, reduce stress and allow more family time. Working in partnership with York Region’s Community and Health Services Department, the *Good Food* program regularly adds fresh content and useful tools to reinforce desired behaviors to reduce food waste, such as meal planning, shopping with a list, safe food storage and best-before-date education. Food waste reduction is also a benefit to implementing these activities. The *Good Food* program features online, print and radio advertising and has generated more than 4,000 visits to the Region’s website York.ca/goodfood





FREE SEMINARS



YORK REGION PARTICIPATED IN THE FOLLOWING COMMUNITY OUTREACH INITIATIVES IN 2015:

- Attended 29 special events to distribute waste information and engaged approximately 6,000 event attendees
- Conducted six presentations for students and community organizations, a total of approximately 200 attendees
- Coordinated 10 Greener Home and Garden Seminars with more than 229 attendees; topics presented supported 4R messages, including seminars reinforcing the *SM4RT Living Plan*, such as composting, DIY canning and preserving and smart consumerism.
- Continued promotion of both the McCleary Court and Elgin Mills Community Environmental Centres through the *Take Back your Space* campaign featuring print and online advertising, social media and magazine ads
- Continued multi-year blue box contamination campaign in an effort to educate residents on the items that do not belong in the blue box, as well as other blue box best practices
- Coordinated Waste Reduction Week open house for staff and local residents that included display booths, collection of electronics, pharmaceuticals and textiles, a Freecycle used goods exchange and a focus on DIY projects
- The *Good Food* program has incorporated a stronger social media approach to engage residents using contest mechanisms involving Pinterest and Facebook; the *Good Food Pin-to-Win* contest attracted 1,700 visits and 140 submissions



Did you know?

York Region's Administrative Centre became the first municipal building in Canada to achieve Gold level status under the Recycling Council of Ontario's 3RCertified Program for excellence in waste. The certificate was awarded for reduction and diversion in the commercial sector.





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