



Environmental Services Department

MEMORANDUM

TO: Committee of the Whole – Environmental Services

FROM: Erin Mahoney, Commissioner of Environmental Services

DATE: September 4, 2014

RE: **York Region 2013 Waste Diversion Report**

The attached “York Region 2013 Annual Waste Diversion Report” summarizes York Region's integrated waste management system. To satisfy the Durham York Energy Centre Environmental Assessment condition for diversion reporting, the final version of this report will be submitted to the Ministry of the Environment and Climate Change by November 3, 2014 and posted on the York Region website www.york.ca/waste.

York Region, in partnership with our local municipalities, continues to strive for innovative solutions and continuous improvement of waste management services to meet the needs of our growing population, currently over 1.1 million residents. Together we have developed the SM4RT Living Integrated Waste Management Master Plan that has set the course for waste management within York Region over the next 25 to 40 years. The Plan was approved by Regional Council in September 2013, allowing the Region to maintain its position as a leader in waste management. By focusing on driving reduction and reuse, while maximizing recycling, composting and energy recovery opportunities, we will continue moving towards more sustainable waste management.

Key findings summarized in the York Region 2013 Waste Diversion Report include:

- 59 per cent (WDO verification pending) Waste Diversion Ontario rate (which does not recognize energy from waste as diversion from landfill)
- 87 per cent York Region diversion from landfill, including energy from waste management
- 87,879 tonnes blue box recyclables processed and 94,591 tonnes of organics collected
- 40,486 tonnes of yard waste collected curbside and from public drop-off areas
- 6,297 tonnes of tires, clean fill, textiles, wood waste, scrap metal and other diversion received at public drop-off facilities
- \$8.53 million revenue generated from sale of blue box recyclables

York Region's waste diversion monitoring is consistent with the Waste Diversion Ontario annual municipal datacall that gathers information on residential materials diverted and disposed by Ontario municipalities. In 2013, the Region achieved 59 per cent (WDO verification pending) diversion from landfill after curbside collection, calculated in accordance with the Waste Diversion Ontario requirements.

Erin Mahoney, M. Eng.
Commissioner of Environmental Services

MZ/lf
Attachment – York Region 2013 Waste Diversion Report
#5527079

PARTNERSHIPS DRIVING REDUCTION REUSE RECYCLING RECOVERY



The Regional Municipality of York
2013 Annual Diversion Report

Partnership

The partnership developed between The Regional Municipality of York and our nine local municipal partners during the creation of the SM4RT Living Integrated Waste Management Master Plan (SM4RT Living Plan) continues through the Strategic Waste Policy group. The Strategic Waste Policy group focuses on making holistic, system-based decisions to ensure value of service for our residents. On an annual basis, the Strategic Waste Policy group undertakes collaborative business planning to evaluate potential program changes and tonnage forecasts, review SM4RT Living Integrated Waste Management Master Plan progress on pilots, as well as develops metrics to measure performance.



reduce

Over the next 25 to 40 years, York Region will extend the life of built infrastructure through waste reduction. This will be achieved through education and outreach to encourage behaviour change as well as strategic partnerships with community groups. Continued advocacy efforts to reduce packaging are co-ordinated through municipal organizations such as Regional Public Works Commissioners of Ontario, Association of Municipalities of Ontario and the Municipal Waste Association.



reuse

Partnerships with community partners such as Goodwill Industries at the Region's two Community Environmental Centres (CEC) assist in diverting unwanted reusable household items from disposal. Reusable goods collected at CECs are given a second life and distributed for resale at Goodwill retail locations within York Region. Future partnerships with other community partners will be considered through the SM4RT Living Plan, with a focus on expanding reuse opportunities available to residents across the Region.

recycle

Materials collected in local municipal Blue Box Programs across York Region, such as aluminum cans, plastic and glass bottles and newspapers, are processed at York Region's Material Recovery Facility in the Town of East Gwillimbury. Blue box materials are separated and sent to end markets, where they are turned into new products. The Material Recovery Facility is owned by York Region and operated under contract by Miller Waste Systems.



recover

The Durham York Energy Centre is an energy-from-waste facility being constructed in the Municipality of Clarington, Ontario. Co-owned by The Regional Municipalities of Durham and York, the facility will process up to 140,000 tonnes of non-hazardous, municipal solid waste per year. Heat generated by waste combustion will be used to generate electricity and recyclable metals will also be recovered.

The Region continues to be a leader in waste management, as this is the first energy-from-waste facility to be constructed in the Province of Ontario in more than 20 years. The facility was designed, built and will be operated by Covanta Durham York Renewable Energy L.P. The facility is scheduled to be operational in late 2014.





At-a-Glance

York Region and our local municipal partners plan, finance and deliver sustainable waste management programs and infrastructure.

York Region consists of 1,776 square kilometres, from Lake Simcoe in the north, to Steeles Avenue in the south; it borders Simcoe County and Peel Region in the west and Durham Region in the east and Toronto to the south.

The Region's solid waste management infrastructure includes:

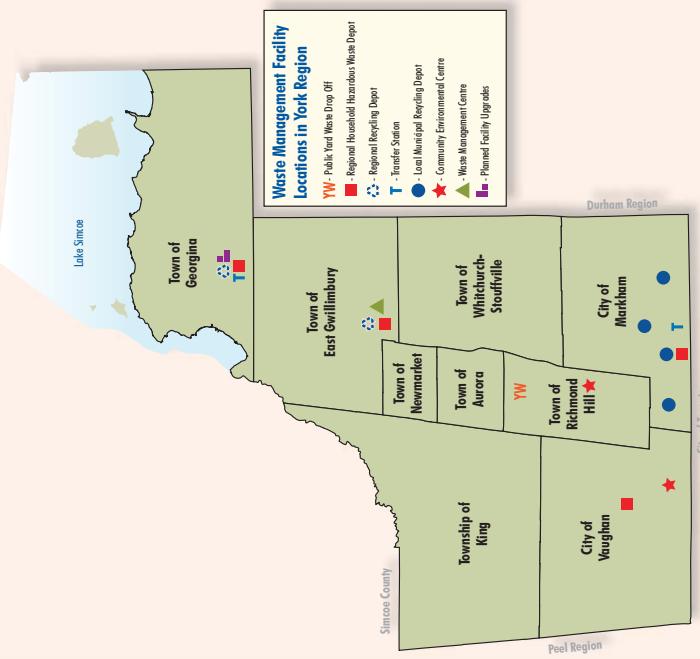
- Waste Management Centre - material recovery facility to process blue box recyclable materials
- McCleary Court Community Environmental Centre
- Elgin Mills Community Environmental Centre
- Georgina Waste Transfer Station and Recycling Depot
- Household Hazardous Waste depots in the Towns of East Gwillimbury and Georgina, the City of Markham and the Township of King.

Curbside collection of blue box, green bin, yard waste and residual waste is managed by York Region's nine local municipal partners: the Towns of Aurora, East Gwillimbury, Georgina, Newmarket, Richmond Hill, Whitchurch-Stouffville, City of Markham, City of Vaughan and the Township of King.

All collected materials are delivered to York Region facilities for processing, energy recovery and/or disposal by external contractors. Regional and municipal depots offer additional opportunities for waste diversion.

IN THE YEAR 2031, ESTIMATES SUGGEST:

- There will be 1.5 million people living in York Region
- There will be almost 2.5 times as many people over the age of 50, as compared to 2010
- A projection of 446,187 tonnes of waste generated with integrated Solid Waste Management Master Plan initiatives, lower than the 2031 baseline projection of 476,744 (based on 2012 actual tonnes)





Quick Facts

In 2013, York Region and our local municipalities diverted 59 per cent* of collected materials from landfill for disposal

- **1,130,386 (2013):** York Region's population (estimated)
- **40,486 tonnes:** Yard waste collected curbside and at public drop-off areas
- **298,740:** York Region single-family residences
- **6,297 tonnes:** 'Other diversion,' including tires, clean fill, textiles, wood waste, scrap metal and other diversion
- **41,398 apartments (approximate)**
- **87,879 tonnes:** Blue box material processed
- **\$8.53 million:** Revenue generated from sale of blue box recyclables
- **94,591 tonnes:** Green bin material collected
- **120,260 tonnes:** Residual waste collected
- **40,486 tonnes:** Yard waste collected curbside and at public drop-off areas
- **6,297 tonnes:** 'Other diversion,' including tires, clean fill, textiles, wood waste, scrap metal and other diversion
- **2,629 tonnes:** Household hazardous waste (HHW), waste electronics and electrical equipment (WEEE) collected at depots

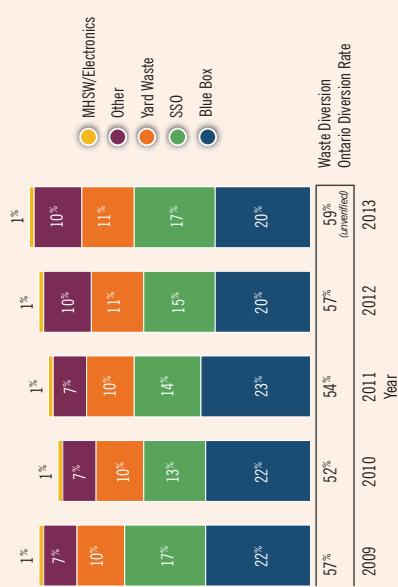
59%*

87%

2013 Waste Diversion Ontario diversion from landfill after curbside collection.
*2013 diversion data presented is unverified by WDO at time of printing.

2013 diversion from landfill including energy-from-waste management.
York Region's Regional Official Plan target is 90 per cent diversion from landfill (including energy from waste tonnage) by 2016 and 100 per cent by 2020.

Annual Waste Diversion, 2009 to 2013



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



Partnerships for success

Waste diversion in York Region is a collaboration between all 10 municipal partners

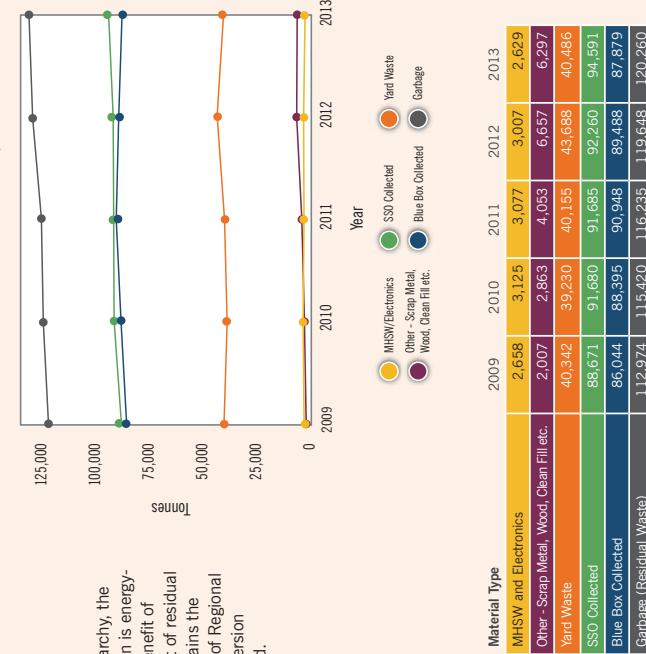
COLLECTION
In 2013, York Region residents generated a total of 311.2 kg of total waste per household, representing the lowest generation rate among our municipal neighbours in the Greater Toronto Area.

PROCESSING
Processing is accomplished through a combination of Regional programs and contracted services for organics processing, energy-from-waste processing and landfill disposal for residual waste.

DISPOSAL
Within the Region's 4R hierarchy, the preferred disposal destination is energy-from-waste to receive the benefit of capturing the energy content of residual waste. Landfill disposal remains the last option for management of Regional materials, once all other diversion options have been exhausted.

Each of the local municipalities have chosen to implement some form of pay-as-you-throw program and/or bag limit system, targeting waste reduction in single family households as a means to increase diversion.

Bulky waste and white goods (large appliance) collection is also provided by local municipalities to single-family households. In most cases, white goods collection is provided to residents by scheduling a pick up directly with the local waste management service provider.



SM4RT Living Plan

Integrated Waste Management Master Plan



The SM4RT Living Plan combines traditional approaches and innovative, community-driven programs to maximize long-term benefits.

The Regional Municipality of York SM4RT Living Plan identifies more than 60 initiatives that set the stage for waste management in York Region over the next 25 to 40 years. Starting with 32 of these initiatives within the next five years, the focus will be on the 4Rs: reduce, reuse, recycle and recover.

The SM4RT Living Plan was approved by Regional Council in September 2013 after an intensive and collaborative effort among the 10 municipal partners.

Together, our actions will make a difference.

Where we've been



More than 6,000

points of interaction with residents + stakeholders



Team + committee meetings, events, SM4RTLiving.ca, York ca, idea workshops, youth forum, SM4RT Living Family Challenge

Where we are



60 initiatives

32 initiatives in first five years



Where we are going



80%

of York Region households participate in Green Bin and Blue Box Programs.

87%

of materials collected were diverted from landfill in 2013.

*Based on system costs as of July 2013 and planned Durham York Energy Centre expansion by 2027

It's about getting the most out of current facilities, protecting investments, engaging community + focusing on reduction + reuse



Joint Waste Management Summary

2013 CURBSIDE COLLECTION

Alternating Week Blue Bag Collection Limit (Bags per Bag)	Weekly Green Bin Collection	White Goods Collection Frequency	Bulky Item Collection Cost Per Item	Multi-residential Collection (Details)	2013 OTHER INITIATIVES	2013 CURBSIDE COLLECTION
(No bags)	3	(18/year)	(\$1 bag tag)	• 20 buildings serviced weekly • Recyclables collected from carts (No fee)	AURORA	Alternating Week Blue Bag Collection Limit (Cost per Bag)
(No bags)	2	(18/year)	(\$1 bag tag)	• 20 buildings serviced weekly • Recyclables collected from carts (No fee)	EAST Gwillimbury	Weekly Green Bin Collection
(\$1, limit 5 items)	1	(17/year)	(\$1 bag tag)	• One building and 705 apartments located above retail outlets serviced weekly • Recyclables from the building placed in a cart • Apartments utilize the curbside Blue Box Program (\$1 bag tag)	GEORGINA	White Goods Collection Frequency
(\$1, limit 5 items)	2	(17/year)	(\$20*) ^c	• Buildings serviced weekly, recyclables from 91 buildings, recyclables and organics from 47 buildings • Mandatory interior storage of all containers • White goods collection program (\$11 per item) (\$10*) ^c	KING	Bulky Item Collection Cost Per Item
(No bags)	0	(18/year)	(\$11)	• Buildings serviced weekly, recyclables from 91 buildings, recyclables and organics from 47 buildings • Mandatory interior storage of all containers • White goods collection program (\$11 per item) (No fee)	MARKHAM	Multi-residential Collection (Details)

^cMost bags are sold in sheets of five or 10. ^dGlass drop-offs are accepted.

Community Environmental Centres, which accept materials collected curbside, as well as materials not currently collected at curbside, such as household hazardous waste. The City of Markham also operates four recycling/reuse depots.

In addition to the above collection programs, the Region and local municipalities collect a range of waste, recyclable and compostable materials to varying degrees at parks, Regional and municipal facilities and special events. The Region operates Recycling and Household Hazardous Waste Depots and



REDUCE

Community Environmental Centres

True “one stop shop” public drop off facilities offering a convenient outlet for reduction, recycling and disposal

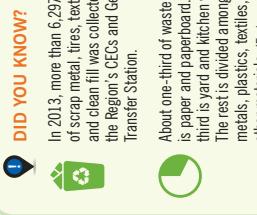
York Region currently has two Community Environmental Centres (CECs): McCleary Court in the City of Vaughan, which opened in 2009 and Elgin Mills in the Town of Richmond Hill, which opened in 2011. Community Environmental Centres provide a convenient outlet for residents to drop-off materials including reusable goods such as clothing, housewares, books, textiles, electronics, home furnishings, appliances, collectibles and building materials for resale by local charities.

York Region partnered with Goodwill Industries and Habitat for Humanity York Region to operate and staff the on-site reuse buildings.

Bulky recyclables, construction and demolition materials are diverted from landfill through the CECs, while items that cannot be diverted are disposed of safely as residual waste.

- In 2013, 18,762 tonnes of materials were collected at the CECs:
- Goodwill and Habitat for Humanity* collected 280 tonnes of reuse materials (two per cent)
- Blue box, shredded paper, electronics, tires, scrap metal and polystyrene accounted for 1,194 tonnes (nine per cent)
- Construction and demolition materials, including wood, drywall, clean fill, concrete and rubble represented 4,980 tonnes (27 per cent)
- Residual waste was 11,740 tonnes (63 per cent)

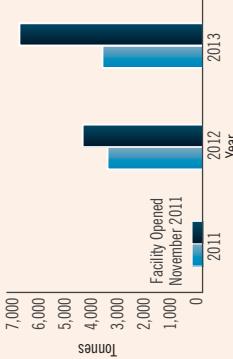
As of August 2013, the used cooking oil collection program became available at all Regional public drop off depots including the Elgin Mills CEC. The integration of Household Hazardous Waste (HHW) facilities into both CECs is also scheduled to be completed by 2015.



McCleary Court Community Environmental Centre
Diversion and Disposal tonnes, 2009 to 2013



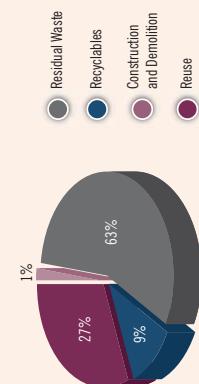
Elgin Mills Community Environmental Centre
Diversion and Disposal tonnes, 2011 to 2013



Elgin Mills Community Environmental Centre
Diversion and Disposal tonnes, 2011 to 2013



*The Habitat for Humanity donation areas operating at Community Environmental Centres closed in March 2014.





RECYCLE

Blue Box

York Region blue box participation rates among highest in GTA



RECYCLE

Organic Waste

Processing source separated organic waste is a key component of waste diversion



Blue box materials are separated into individual commodities and shipped to markets internationally for conversion into new products. High participation in the blue box program in creation of new products using recycled materials, therefore saving both energy and resources by avoiding extraction and depletion of natural resources. Producers contribute slightly less than 50 percent of blue box program costs to partially offset collection, processing and marketing their products and packaging. Residents and small businesses may drop off recyclables free of charge at the McCleary Court and Elgin Mills CECs, East Gwillimbury HHW and Recycling Depot and the Georgina Transfer Station.

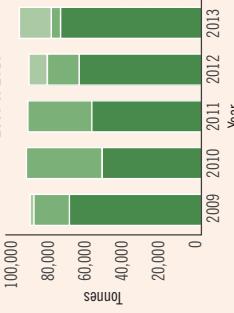
DID YOU KNOW?

Recycling one tonne of glass saves approximately 34 litres of fuel oil.
(Recycling Council of Ontario)

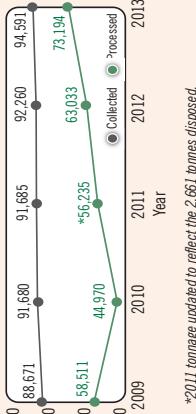
Processing organic waste into compost, a beneficial agricultural growing medium supplement, currently represents one-third of the Region's overall diversion achievement. In 2013, York Region residents generated approximately 94,591 tonnes of source separated organics and 40,486 tonnes of yard waste. The amount of organics collected province-wide has outpaced the establishment of reliable compost processing capacity. Operational challenges and odour problems have also plagued the organics processing industry.

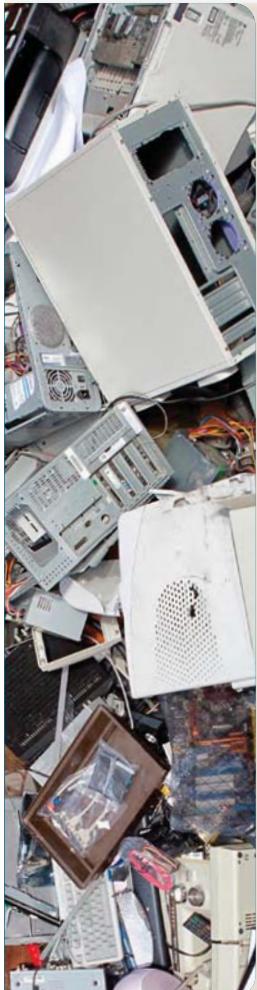
In 2013, York Region shipped 57,296 tonnes of source separated organic waste to Orgoworld in London, Ontario and 15,898 tonnes to Lafleche in Moose Creek, Ontario for processing. As Lafleche was expanding its composting facility capacity, the remaining 17,033 tonnes of organics was managed through Covanta, an energy-from-waste facility in New York State, and 3,479 tonnes was sent to landfill disposal in Ontario. The remaining tonnes were managed through approved leachate treatment facilities in Ontario.

Source Separated Organics Management by Destination (outbound) 2009 to 2013



Source Separated Organics Historical Tones Collected and Processed, 2009 to 2013





RECYCLE

Leaf and Yard Waste

Composted leaf and yard waste enhance soil conditions



RECYCLE

Waste Electronics

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

ASIAN LONG HORNED BEETLE

In 2005, the Canadian Food Inspection Agency (CFIA) confirmed an infestation of the Asian Long-Horned Beetle (ALHB) in the City of Vaughan. All yard waste from this regulated area required pre-treatment to meet CFIA specifications prior to being composted at the Miller Bloomington Site. The ALHB restriction was lifted in April 2013 as no new findings of the ALHB were reported. In 2013, 2,385 tonnes of yard waste material was managed at York Region – the Georgia Transfer Station and the Miller Waste Bloomington Road Facility (contracted with the Region and owned/operated by Miller Waste). In 2013, 40,486 tonnes of yard waste were managed at the Miller Bloomington Yard Waste site, including yard waste from the Asian Long Horned Beetle infestation zone. As a result of the severe ice storm in December 2013, it is anticipated there will be an increase in yard waste tonnages in 2014 due to clean-up efforts.

EMERALD ASH BORER

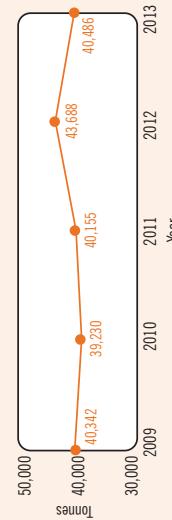
The Emerald Ash Borer (EAB) was discovered in York Region in 2008. It is an invasive insect that poses no risk to human health, but kills all types of ash trees and poses a significant threat to our forests and street trees. York Region Forestry has confirmed infestations in all local municipalities within the Region and is working with local municipalities, local conservation authorities, the CFIA and the Ontario Ministry of Natural Resources to co-ordinate efforts to monitor and manage EAB's impacts in the Region. As part of York Region's approved Emerald Ash Borer Management Plan, the Region will continue to monitor the spread of the Emerald Ash Borer.

other precious metals; recycling these materials helps reduce the need for new raw materials. These components are valuable in the marketplace, resulting in service providers paying the Region for electronics collected at municipal depots.

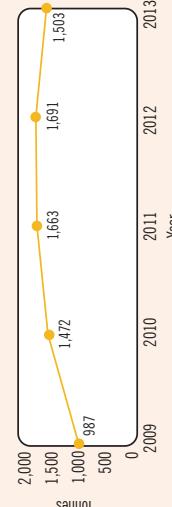
In 2013, 1,503 tonnes of WEEE materials were collected at York Region depots. The decrease in amount of WEEE collected at depots is a result of newer, lightweight electronics in the marketplace coupled with increased special WEEE community events and retail take back locations available to York Region residents through RecycleYourElectronics.ca website sponsored by Ontario Electronic Stewardship.

While electronic materials can contain harmful substances such as mercury, lead and cadmium, which require special handling, there are also valuable and limited resources in electronics, such as steel, copper, aluminum and

Curbside Yard Waste and Asian Longhorned Beetle Historical Tonnes Collected, 2009 to 2013



Waste Electrical and Electronic Equipment Historical Tonnes Collected, 2009 to 2013



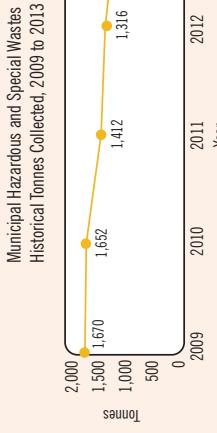


Household Hazardous Waste

Protecting the environment by safely managing and diverting municipal hazardous and special wastes

York Region provides its residents with a network of facilities where they can drop off municipal hazardous or special waste (MHSW) including the Georgina Transfer Station, East Gwillimbury HHW and Recycling Depot, Markham HHW Depot and the Vaughan HHW Depot. The Region is currently working on integrating the Vaughan HHW Depot into the McCleary CEC operation and a new HHW Depot into the Elgin Mills CEC operation by 2015. Through specialized contract services at these locations, these materials are recycled or treated and disposed in an environmentally responsible manner.

In 2013, the amount of MHSW materials collected at Regional depots declined from previous years as retail take-back programs increased capture. Both municipal depots and retail take-back programs ensure materials are safely managed to end-of-life and divert harmful substances from landfill, waterways and forests. In addition, 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.



RECYCLE

Tires, Scrap Metal and Cooking Oil

Depot based recycling programs offer further diversion opportunities

TIRE RECYCLING

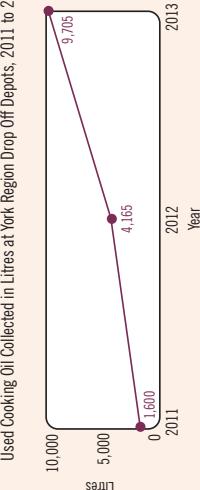
York Region collects used tires at Elgin Mills and McCleary Court CECs, as well as the Georgina Transfer Station. Residents can drop off up to four residential tires per visit, including car and passenger vehicle tires, heavy truck tires or farm tractor tires. These tires are recycled into new products such as rubber mulch, playground surfacing and rubber bricks. This program is funded by tire stewards through the Used Tire Program and supported by Tire Stewardship Fees levied on each new tire supplied in Ontario. These fees are collected by Ontario Tire Stewardship. In 2013, the Region diverted 145 tonnes of tires through our facilities.

METAL RECYCLING

York Region residents can bring their scrap metal including metal appliances for recycling to the East Gwillimbury HHW and Recycling Depot, the Georgina Transfer Station or the Elgin Mills or McCleary Court CECs. Some examples of acceptable scrap metal include: appliances, metal sinks, bicycles unfit for reuse and metal furniture unfit for reuse. In 2013, York Region collected 1,178 tonnes of scrap metal for recycling.

USED COOKING OIL DRD-OFF AND RECYCLING

Prior to 2011, cooking oil was managed through the Region's MHSW program. An increase in the volumes collected and the opportunity to recycle cooking oil, lead to the development of this program. Collection of used cooking oil for recycling was initiated in 2011 at the McCleary Court Community Environmental Centre and has been extended to a permanent program to all HHW Depots and the Elgin Mills CEC in 2013. York Region has partnered with Sanimax, a company that collects used cooking oil and processes it into high quality materials such as pet food, soaps and biodiesel. In 2013, York Region collected 9,705 litres of used oil for recycling.





Residual Waste

Sustainable residual management through energy recovery

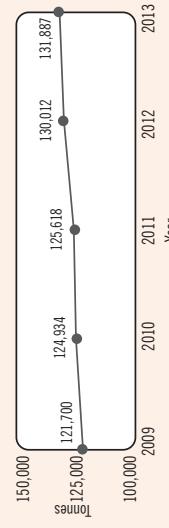
York Region manages its residual waste primarily through energy recovery, with landfill disposal remaining as the final and least preferred option. Residual waste refers to waste not captured by any of the Region's recycling programs. In 2013, Dongara processed 54,641 tonnes of Region residual waste. Following the closure of Dongara in 2013, additional contract capacity was secured to replace 75,000 tonnes of residual waste previously managed by Dongara. New capacity includes energy-from-waste contracts with Covanta in Niagara Falls, New York and Algonquin Power in Brampton, Ontario.

The Durham York Energy Centre, being built in Clarington, is scheduled to be operational in late 2014. Once in service, York Region will ship 30,000 tonnes of residual waste for energy recovery annually. Once this facility is operational, most of the Region's residual waste will be processed to recover energy. For managing bulky materials, the Region has landfill contracts with the City of Toronto at their Green Lane Landfill in St. Thomas, Ontario and Niagara Waste Landfill in Thorold, Ontario. This residual waste management plan represents a sustainable approach to management of York Region's residual waste, deriving a beneficial use from York Region's residual waste while providing security and resiliency through a diverse roster of treatment facilities and disposal options.

Waste Promotion and Education

Continued promotion and outreach activities drive participation success in waste diversion programs

- Launched 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
- Continued promotion of certified compostable bags for use in the Green Bin Program through print ads, online advertising, brochure distribution and social media
- Contributed to a multi-municipality "Recycle More" plastics campaign across the Golden Horseshoe in partnership with Stewardship Ontario including billboards, print ads, radio ads and point-of-sale digital ads
- Promoted the new, used cooking oil recycling program at the Elgin Mills CEC, as well as all the other York Region public drop-off depots through distribution of a flyer at Richmond Hill municipal locations, print ads in Richmond Hill and Markham, and mobile signs.
- Co-ordinated production of two promotional videos for educational purposes, detailing the Green Bin and Blue Box programs
- YORK REGION PARTICIPATED IN THE FOLLOWING COMMUNITY OUTREACH INITIATIVES IN 2013:**
 - Attended 51 special events to distribute waste information
 - Conducted 26 presentations / Material Recovery Facility tours to students and community organizations, a total of approximately 1,700 attended
 - Co-ordinated 24 Greener Home and Garden Seminars with 830 residents in attendance. Topics presented supported 4R messages, including seminars reinforcing SM4RT Living Plan, waste reduction and reuse initiatives
 - Continued promotion of both the McCleary Court and Elgin Mills Community Environmental Centres (CECs) through new "Take Back your Space" campaign featuring print advertising, online advertising, social media, flags onsite, billboards and mobile signs throughout the year
 - Published yard waste fee reminders for users of the Georgina Transfer Station through print advertising, brochures and signage





THE REGIONAL MUNICIPALITY OF YORK

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Accessible formats or communication supports are available upon request
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