



WASTE MANAGEMENT

ANNUAL

REPORT

2023

Table of Contents

- 2023 At-A-Glance 3
- Overview 4
- Total Tonnes Managed Year over Year 4
 - Curbside and Multi-residential 2023 Total Tonnes..... 5
 - Waste Management Facilities and Community Events 2023 Total Tonnes 6
 - Waste Generation 8
- Long-term Waste Management Plan 2022-2040 10
- Climate Change 11
- Blue Box 12
- Green Bin 14
- Leaf and Yard Waste 15
- Multi-Residential Program 16
- Waste Management Facilities 17
- Residual Waste Processing..... 21
- Landfill Perpetual Care 24
- Community Engagement 28
- Summary 30
- Progress Report 31
 - Objective 1..... 32
 - Objective 2..... 34
 - Objective 3..... 36
 - Objective 4..... 42
 - Objective 5..... 44

2023 At-A-Glance



38,315
tonnes of blue box
recycling marketed



33,510
tonnes of green
bin organic waste
processed



27,101
tonnes of leaf
and yard waste
composted



123,502
tonnes of garbage
waste collected



4,694
tonnes of Waste
Management Facility
Diversion



1,093
tonnes municipal
Hazardous and
special waste safely
disposed.



121
tonnes of batteries
recycled



421
tonnes of electronic
waste recycled

Through our residents' participation in waste diversion programs, the Region of Durham continues to minimize waste generation, and use waste materials as resources in the circular economy wherever possible. We continue to plan, evaluate, and implement new cost-effective waste management policies and programs that enhance sustainability and provide service excellence to Durham residents.

The Region delivers innovative waste reduction, diversion and disposal programs and services to more than 753,000 residents in over 250,000 households within eight municipalities: Ajax, Brock, Clarington, Oshawa, Pickering, Scugog, Uxbridge and Whitby.



251,969

households



225,305

single-family households



26,664

multi-residential households

Overview

Durham Region is committed to following the 5Rs (Rethink, Reduce, Reuse, Recycle and Recover), with a strong focus on reduction and reuse to minimize waste generation

The Regional Municipality of Durham's 2023 Waste Management Annual Report summarizes Durham Region's integrated waste management system and reports on progress of the Region's Long-term Waste Management Plan 2022-2040 (Waste Plan). This report is submitted annually to the Ministry of the Environment, Conservation and Parks to fulfill the Durham York Energy Centre Environmental Condition Assessment for annual waste diversion monitoring and reporting.

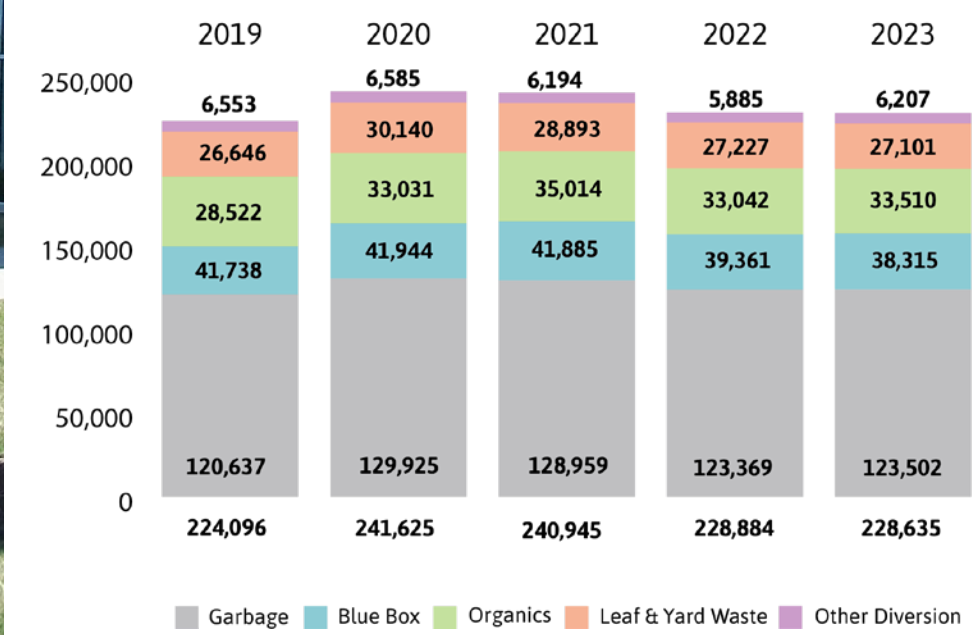
Durham Region manages curbside and multi-residential collection of residential recycling, organics, leaf and yard waste, garbage and special collections in Ajax, Brock, Clarington, Pickering, Scugog and Uxbridge. The Region only collects recycling in Whitby and Oshawa, but partners with both municipalities to offer consistent collection programs Region-wide.

Following collection, the processing of all materials is handled by Durham Region. This is accomplished through a combination of Regional blue box recycling, external contractors for processing of organics, leaf and yard waste and energy-from-waste recovery.

Durham Region manages disposal of residential waste from all eight of its local area municipalities. Within the 5R hierarchy, the preferred final disposal destination is energy-from-waste to maximize the benefits of capturing energy from residual waste.



Total Tonnes Managed Year over Year

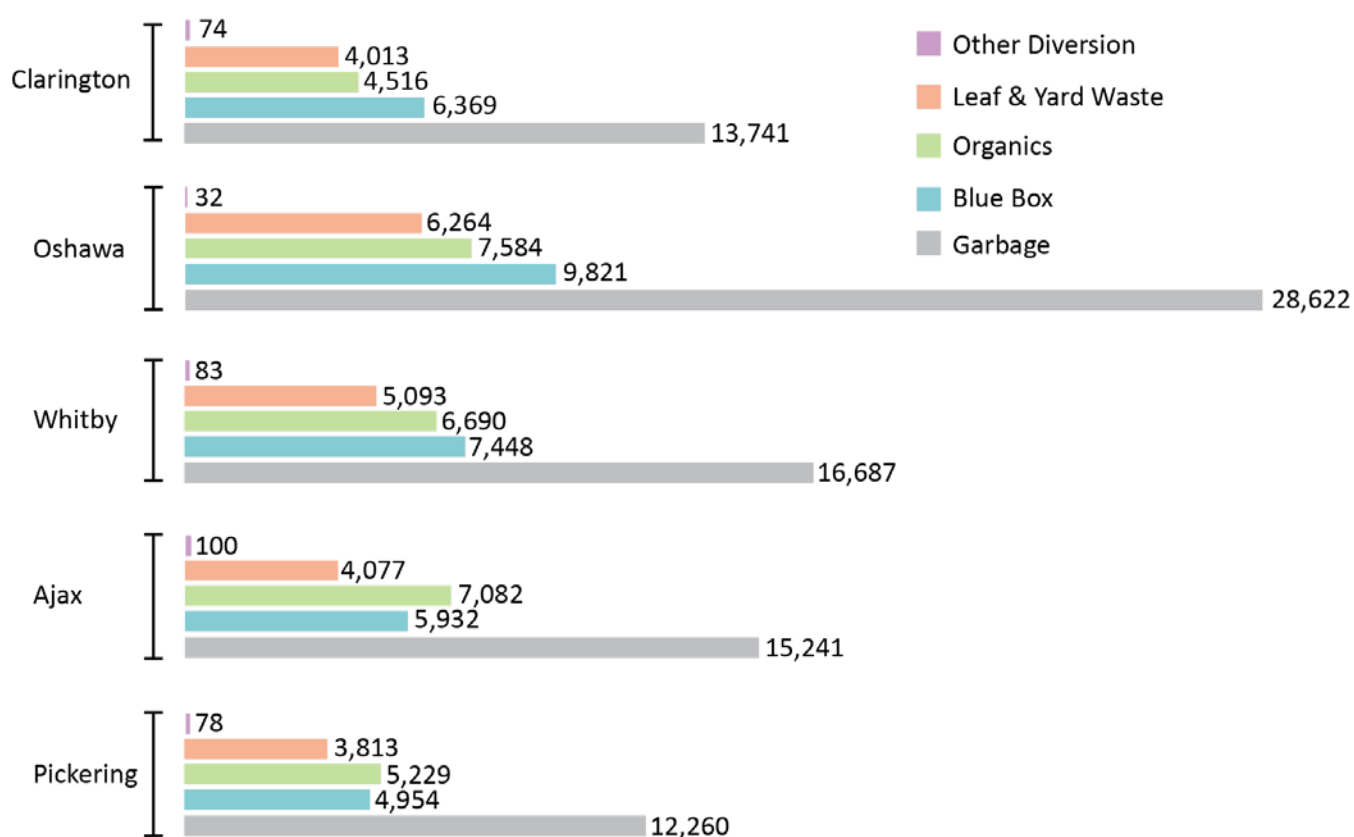


Curbside and Multi-Residential 2023 Total Tonnes Managed by Area/Source

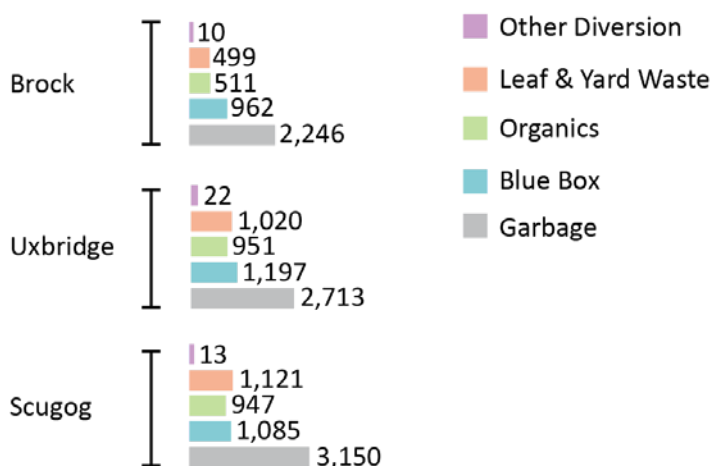
	Curbside Garbage	Multi-Residential Garbage	Bulky/Other Goods	Curbside Recycling	Multi-Residential Recycling	Curbside Organics	Leaf & Yard Waste	Other Diversion	Total Waste
Pickering	10,901	906	453	4,730	224	5,229	3,813	78	26,318
Ajax	13,421	1,579	241	5,747	185	7,082	4,077	100	32,450
Whitby	13,780	2,547	360	7,210	238	6,690	5,093	83	36,001
Oshawa	19,685	8,599	338	9,062	759	7,584	6,264	32	52,365
Clarington	13,156	145	440	6,296	73	4,516	4,013	74	28,709
Scugog	2,922	166	62	1,079	6	947	1,121	13	6,310
Uxbridge	2,509	120	84	1,174	23	951	1,020	22	5,880
Brock	2,161	N/A**	85	951	11	511	499	10	4,217
Totals	78,535	14,062	2,063	36,249	1,519	33,510	25,900	412	192,250

*Amounts rounded to the nearest whole number. **Brock Multi-residential Garbage included in Curbside Garbage number.

Waste Managed – Lakeshore Communities (measured in tonnes)



Waste Managed - Township Communities (measured in tonnes)



Waste Management Facilities and Community Events 2023 Total Tonnes Managed

	Bulky/Other Goods	Recycling	Leaf & Yard Waste	Other Diversion (Hazardous Waste, E-Waste, Batteries, Textiles)	Total Waste
Oshawa	16,781	323	455	3,245	20,804
Scugog	4,065	179	507	1,629	6,380
Brock	2,946	45	239	602	3,832
Recycling Facility Residue	5,050				5,050
Pickering				202	202
Clarington				99	99
Community Events				18	18
Totals	28,842	547	1,201	5,795	36,385

The Resource Productivity and Recovery Authority manages the Ontario datacall process. With the Blue Box Program moving to full producer responsibility, Durham Region's last datacall submission was in 2022.

Durham ranked first for Urban Regional Municipalities, second overall in the Province with 62 per cent in 2022.



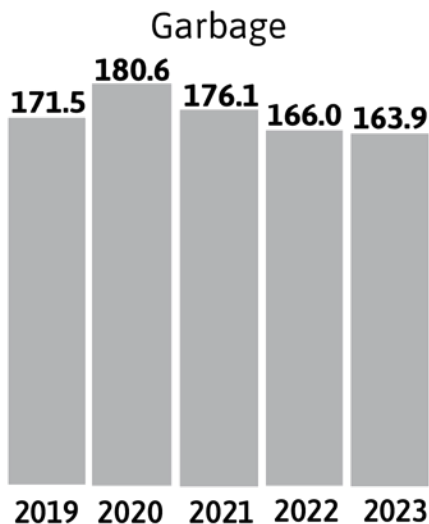
Waste Generation

Waste generation rate is a tonnage per person measurement (kg/capita) used to track progress towards the Long-term Waste Management Plan waste reduction efforts.

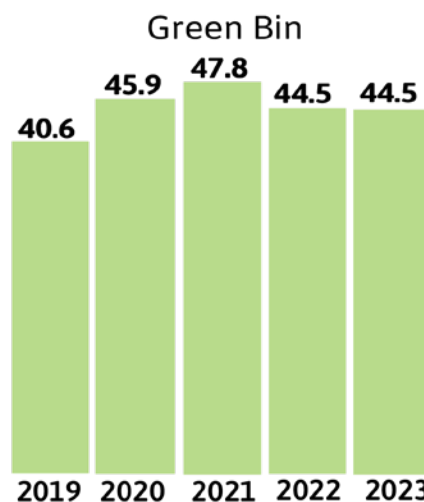
With the move to extended producer responsibility for the Blue Box program July 1, 2024, Durham Region will focus on two key streams of collected waste — green bin organics and garbage. Yard waste generation is not included as this waste is mostly unpredictable, with yard waste tonnage influenced by weather.

Waste includes residential garbage collected from single family dwellings, multi-residential units and business improvement areas serviced by the Region and garbage managed through the Region’s three waste management facilities.

Durham Region Waste Generation Rate (kg/capita)



Durham Region Green Bin Generation Rate (kg/capita)



What is in your garbage?

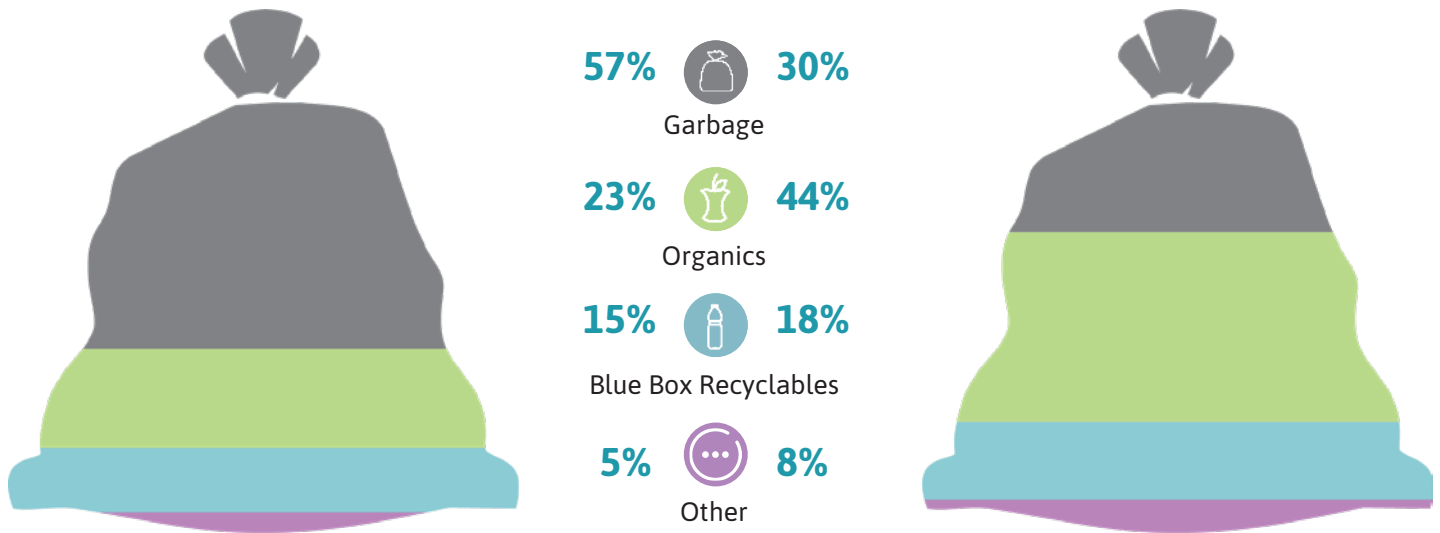
Waste audits took place late 2022, early 2023 including curbside setouts from 1,000 homes across Durham Region, and six multi-residential buildings.



Single Family Garbage
December 2022



Multi-Residential Garbage
March 2023



Waste audits provide a snapshot in time of what residents are setting out for waste collection and composition varies from season to season. From this data, we can see there is an important opportunity in both single family and multi-residential homes to capture more organics. By offering an Enhanced Green Bin program with additional material categories starting July 1, 2024, Durham Region will support residents in moving these valuable organic resources out of the garbage. Multi-residential organics collection is also under development as a future program offering.



Long-term Waste Management Plan 2022-2040

Developed in consultation with Durham Region's many stakeholders, the Long-term Waste Management Plan, 2022-2040 is a roadmap that describes the Region's Guiding Principles, Vision, and Objectives for waste management

In 2023, Durham Region completed its second year of implementing the Long-term Waste Management Plan, 2022-2040. Actions continued to support the overall goal to divert as much material as possible from garbage to minimize the need for disposal and recover resources including energy from the waste that is left. The 2023 progress report is included in this annual report.

The current five-year Action Plan is in place until 2026 and is focused on short-term goals, allowing time to evaluate and revise the long-term goals to meet the Regions' changing needs. Many of our targets will carry forward into the next plan, with revisions and adjustments as needed.

To learn more and read the full Long-term Waste Management Plan, visit durham.ca/WastePlan.

Climate Change

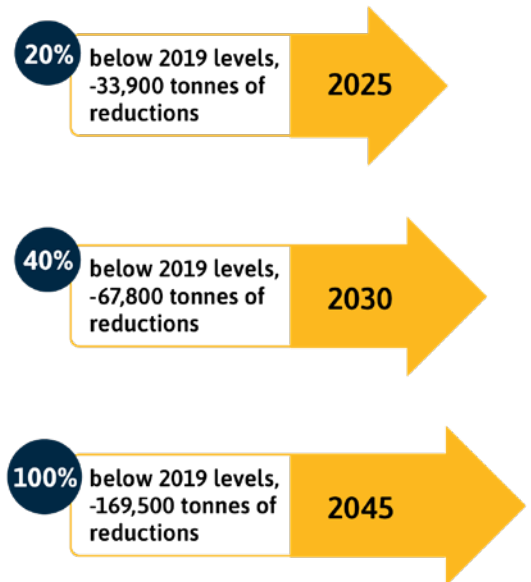
The Corporate Climate Change Action Plan is the Region's over-arching framework that sets greenhouse gas (GHG) emissions reduction targets to become Net Zero by 2045

In 2020, Durham Regional Council declared a climate emergency. Over the last 10 years, the Region has been making decisions supporting the need to focus on climate change and adaptation as critical priorities. Recently, the Region developed the Corporate Climate Action Plan (CCAP) which outlines actions to reduce Greenhouse Gas (GHG) emissions from the Region's corporate operations. The CCAP and the Corporate GHG emission reduction targets were approved in March 2021.

Waste Management Services is focused on reducing greenhouse gas emissions from waste management operations. Actions in 2023 include:

- Award of a 10-year contract for anaerobic digestion of organic waste starting in 2024. Residents will be able to divert more items such as diapers and pet waste out of the garbage.
- Develop a proposal to provide source separated organics to multi-residential buildings where the Region collects garbage.
- Implement a pilot project using a biocover system at the Oshawa Landfill to reduce fugitive methane emissions. Data from this pilot project will help develop additional methane reduction options for the Region's closed landfills.
- Plan to optimize the traffic flow and diversion options at the Oshawa Waste Management Facility to provide more efficient services to residents.

Corporate Climate Action Plan and Corporate Green House Gas emission reduction targets



Starting July 1, 2024, Durham's recycling program will be managed by Circular Materials, a Producer Responsibility Organization representing the producers of the products and packaging recycling in the Blue Box.

What does this mean for residents?

- Reporting a missed collection and blue box replacement will be managed by Circular Materials' local recycling contractor.
- No change to the current schedule or materials for recycling.

Blue Box

Transitioning Blue Box responsibility to producers

Blue Box regulation (Ontario Regulation 391/21) came into effect on June 3, 2021. This regulation lays out terms by which Ontario's entire Blue Box recycling program will be overhauled over the next few years and transitioned to full Extended Producer Responsibility (EPR) where the responsibility for operating Ontario's Blue Box program will shift from municipalities to the producers and importers of the materials managed in the Blue Box. This transition will be phased in between July 1, 2023, and December 31, 2025.

Durham Region's Blue Box Program transitions to full EPR on July 1, 2024.

Blue Box materials are sorted at Durham Region's Material Recovery Facility

Durham Region has a two-stream recycling program which requires that containers and paper materials be collected in separate Blue Boxes. Materials set out at the curb, collected from multi-residential buildings or through the Region's three Waste Management Facilities are delivered to the Region's Material Recovery Facility (MRF) in Whitby for sorting and marketing.

Last year, 38,315 tonnes of blue box recycling collected through the program was sold to markets to be repurposed into new products. Most of the materials from the Blue Box program were sent to markets in Canada and the United States.



Blue Box Collected and Marketed

Year	Collected (Tonnes)	Marketed (Tonnes)
2019	45,423	41,273
2020	46,107	41,944
2021	46,155	41,885
2022	43,712	39,361
2023	43,353	38,315

The federal government's ban on single-use plastics

To complete the phase in of the federal Single Use Plastics Ban, the ban on the sale of single-use plastic straws, checkout bags, cutlery, stir sticks and takeout containers took place on December 22, 2023.

The ban is in place despite a court ruling in November that adding manufactured plastic items to the toxic substance list was invalid. The government has appealed this ruling and while the appeal is being heard, the single use plastics ban remains in effect.

It is still the government's intent to ban the manufacture and import of all six categories of single-use plastics identified in the original regulation. These include single-use plastic straws, checkout bags, cutlery, stir sticks, takeout containers, and plastic ring carriers. These items are difficult to recycle and quickly become garbage or litter.

Over the next decade, the ban on single-use plastics will result in the estimated elimination of more than 1.3 million tonnes of hard-to-recycle plastic waste and more than 22,000 tonnes of plastic pollution, which is equivalent to over one million full garbage bags.



Green Bin

The Green Bin Program Reduces Greenhouse Gas Emissions and Captures Valuable Resources from Food and Organics

Removing organics from the garbage bag is a key waste diversion strategy in Durham Region. Last year, Durham residents removed 33,510 tonnes of organics from garbage using the Green Bin program.

In February 2023, Regional Council approved the launch of an Enhanced Green Bin program, starting July 1, 2024, that adds diapers, menstrual products, incontinence products, pet waste, and pet litter to the list of acceptable materials in Durham’s Green Bin program.

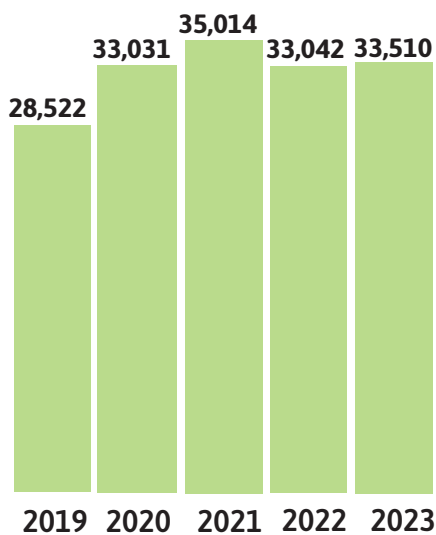
This change aligns the Region with Ontario’s Food and Organic Waste Policy statement, which requires municipalities to achieve:

- 70 per cent waste reduction and resource recovery of food and organic waste generated by single-family homes by 2023.
- 50 per cent waste reduction and resource recovery of food and organic was generated at multi-residential properties by 2025.

This program change was made possible by the Region’s new Source Separated Organics Anaerobic Digestion processing agreement.

Under this new contract, collected organics will be shipped to a contracted anaerobic digestion facility in Ontario and processed into nutrient-rich fertilizer and biogas, which is used to produce electricity and heat local greenhouses.

Green Bin Tonnes Collected



Leaf and Yard Waste

Collected leaf and yard waste is processed into nutrient-rich compost

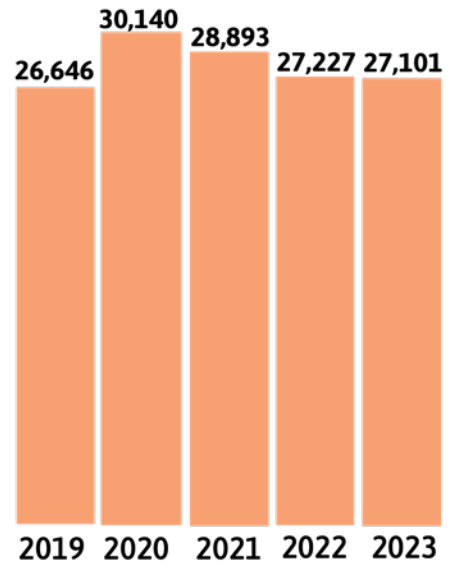
Residents receive seasonal curbside leaf and yard waste collection throughout April to early December with Christmas tree collection in January. Up to 70 per cent of leaf and yard waste is collected in the fall each year.

The Region's Waste Management Facilities have suspended accepting leaf and yard waste. Residents are encouraged to take advantage of the free curbside leaf and yard waste collection.

Leaf and yard waste is collected in paper yard waste bags, open-top reusable containers or tied bundles for outdoor windrow composting. Collected leaf and yard waste is processed into nutrient-rich compost. In the spring, residents are invited to the Region's complimentary compost giveaways.



Yard Waste Tonnes Collected





Multi-Residential Program

Durham Region picks up garbage and recycling from multi-residential buildings and townhouse sites

Municipal waste and recycling collection services are provided to 421 approved condominium, rental townhouse, and apartment properties totaling 26,664 households. Each year the Region adds collection sites through its approvals process.

Special collection services at multi-residential properties include onsite battery, electronic waste, and textile collections.

Durham Region works actively with property management companies and building owners to encourage and promote diversion as well as the City of Oshawa and the Town of Whitby who manage collections in their area.

In December 2023, Durham Regional Council approved the implementation of a multi-residential Enhanced Source Separated Organics Collection Program to meet the requirements of Ontario's Food and Organic Waste Policy Statement. The program is anticipated to launch in 2025.

Waste Management Facilities

Waste Management Facilities provide convenient access to additional waste diversion programs

Growth continues to drive the number of residents using the Region's Waste Management Facilities. Planning will ensure existing and proposed facilities remain adequate and efficient at managing the projected demand, as well as ensuring the available programs match users' needs.

In 2023, Durham selected the preferred conceptual design for the expansion and optimization of the Oshawa Waste Management Facility and commenced procurement for architectural and engineering services for creation of a Master Plan for the renovated facility.

The Master Plan will be based on the selected conceptual design to utilize as much of the existing infrastructure as possible and further refine the Region's requirements to ensure the facility can support the needs of the Region's rapidly expanding population and programs.

All three Waste Management Facilities experienced their busiest day of the year on Saturday, April 15, 2023.

Facility Visitors

Oshawa

Waste Management Facility – **1,930**

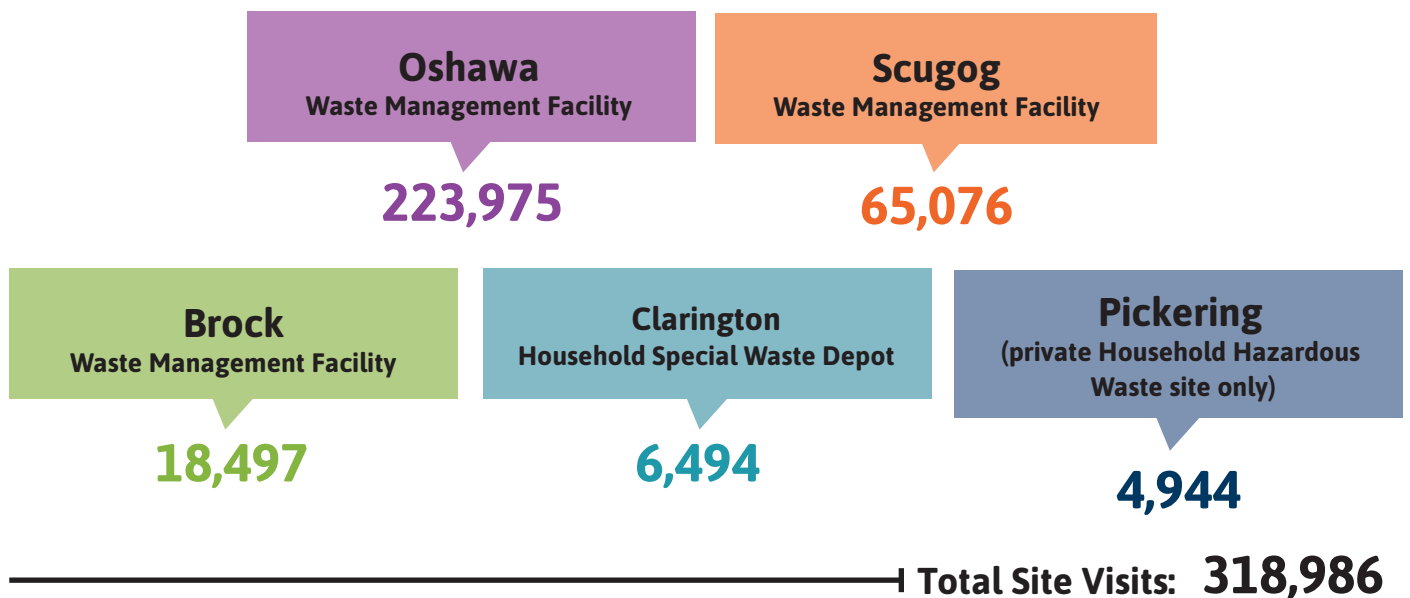
Scugog

Waste Management Facility – **647**

Brock

Waste Management Facility – **232**

Annual Facility Visitors



2023

Waste Management Facilities	Recycling	Leaf and Yard Waste	Other Diversion	Garbage
Oshawa	322	455	2,706	16,781
Scugog	178	506	1,447	4,066
Brock	45	240	541	2,946
Total Tonnes	545	1,201	4,694	23,792

Tonnes of Other Diversion



Textiles
51 tonnes



Drywall
245 tonnes



Electronics
341 tonnes



Porcelain
171 tonnes



Scrap Metal
718 tonnes



Tires
502 tonnes



Wood
2,666 tonnes



Electronic Waste

Durham Region provides residents with a network of drop-off facilities for waste electronics, including Oshawa, Scugog and Brock Waste Management Facilities. The Region also provides curbside collection programs for waste electronics in Ajax, Brock, Clarington, Pickering, Scugog and Uxbridge. In the Town of Whitby, collection curbside of bulky items includes electronic material. The City of Oshawa treats waste electronics as regular waste and encourages residents to take their items to the Region's Waste Management Facilities. Many multi-residential buildings also receive electronics collection by the Region.

2023 Electronic Waste Collected by Source

Source	Tonnes
Curbside Collection	34
Multi-Residential Buildings	40
Events	6
Waste Management Facilities	341
Total	421

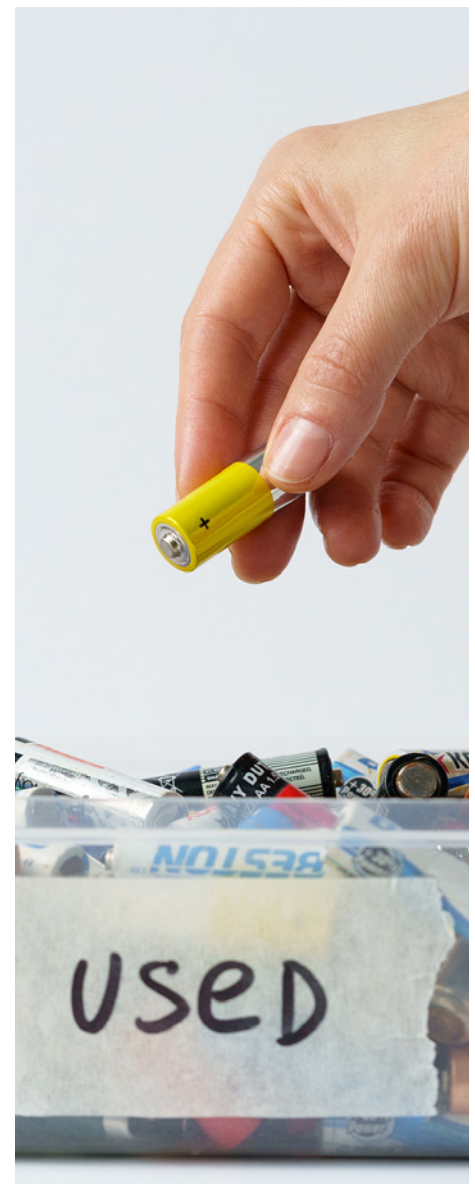
Battery Collection

Durham's battery collection programs continue to maximize the capture of batteries, while keeping mercury, cadmium, and other heavy metals out of the waste stream and out of the Region's natural environment. Household batteries are actively managed in Ontario and recycled responsibly through proper processing and conservation of valuable recoverable resources.

2023 Batteries Collected by Source

Source	Tonnes
Curbside Collection	40
Multi-Residential Buildings	3
Waste Management Facilities	78
Total	121

On November 15, 2012, the Region of Durham collected an incredible 11,288 pounds (almost 5,120 kilograms) of batteries, earning a Guinness World Record for most batteries collected in a 24-hour period.












Hazardous Waste

The Region provides residents with a network of facilities and special events where residents can drop off household hazardous waste. Drop-off locations include the waste management facilities in Oshawa, Scugog and Brock. The Region also has a hazardous waste depot in Clarington and partners with a private site in Pickering to offer free disposal of hazardous waste. Hazardous waste is recycled or treated and disposed of in an environmentally responsible manner through specialized contract services.

Hazardous Waste Collected

Tonnes

	Paint (latex and alkyd)	367
	Motor Oil	309
	Batteries (single-use and rechargeable)	20
	Automotive Batteries	58
	Propane Tanks and Cylinders	54
	Aerosol Containers	34
	Other Materials	251

2023 Hazardous Waste Collected

Source	Tonnes
Events	11
Brock	61
Clarington	98
Scugog	181
Pickering	202
Oshawa	540
Total	1,093

Residual Waste Processing

After maximizing waste diversion, Durham Region manages its remaining waste primarily through the Durham York Energy Centre (DYEC), an energy-from-waste facility in Clarington.

The facility began commercial operations in 2016 and is owned by the Region of Durham and York Region. The DYEC is a waste management facility that produces energy from the combustion of waste. It generates enough electricity to power approximately 10,000 homes a year, captures residual metals and reduces the volume of waste going to landfill by approximately 90 per cent.

In 2023, the DYEC processed 140,000 tonnes of garbage while recovering 3,982 tonnes of metal and generating 94,886 MWh of electricity, which was exported for sale to the provincial grid.

Using pollution control systems and proven, reliable, energy-from-waste technology, the DYEC meets stringent environmental standards and significantly reduces greenhouse gas emissions compared to the existing landfill options. In addition to continuous emissions monitoring, independent stack tests to monitor all emissions from the stack were conducted in April and September 2023. Results from both testing periods demonstrated the facility operates well within the DYEC environmental compliance approval requirements. Monitoring activities in place for groundwater, odour, and ambient air conditions did not indicate any any negative impacts from DYEC activities in 2023.

The DYEC is approved to process up to 140,000 tonnes of waste per year. However, it is technically able to process up to 160,000 tonnes of waste per year. This additional waste processing capacity will allow the facility to operate more efficiently and will meet the increasing demand due to population growth. The Regions continue to work with the Ministry of Environment, Conservation and Parks to move this waste management plan forward.



In June 2022, the Region of Durham retained a consultant to conduct a comprehensive study focusing on an analysis of ambient air and emissions monitoring to identify Local Airshed Impacts in Clarington. A review of trends, sources, and patterns were analyzed using historical monitoring data and was compared against Canada and Ontario’s Ambient Air Quality regulatory criteria and the National Pollutant Release Inventory. A broad range of activities contribute to local air quality in the Durham and York regions, including industrial, construction, residential, commercial, agricultural, transportation, and transboundary pollution sources outside the region and province. The conclusions reported that the DYEC’s pollution control technology is effectively controlling emissions so that it does not significantly contribute to air pollution in the local airshed.

Garbage Waste Tonnes Processed for Durham Region

Destination Energy-from-waste	Tonnes
Durham York Energy Centre	109,697
Bypassed to another EFW facility	652
Landfill	9,000
Metal Recovery	3,146
Year-End Carry Over	1,007
Total Garbage Waste	123,502

The DYEC has storage capacity that allows the facility to process a steady stream of material through the boilers, even though waste generation can fluctuate week to week. During planned maintenance and occasions when the facility is required to temporarily shut down, waste can be bypassed to other EFW facilities or be sent to landfill for disposal.

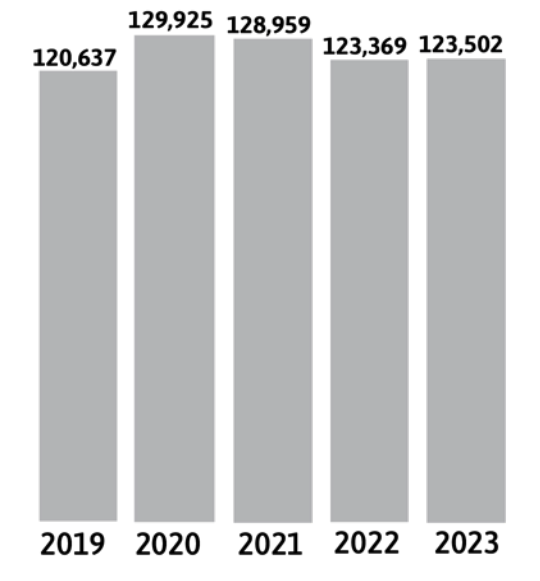
DYEC Facts

The DYEC operates in accordance with a strict environmental monitoring program to ensure that emissions are below limits to be fully protective of human health and the environment.

- The Durham York Energy Centre is 100 per cent publicly owned by Durham and York Regions.
- Only household waste from Durham and York is accepted.
- Processes approximately 110,000 tonnes of Durham garbage and 30,000 tonnes of York garbage per year.
- Recovers and recycles the equivalent of approximately 36 million aluminum cans and 3,000 cars worth of steel per year.
- The volume of incoming waste is reduced by approximately 90 per cent through combustion.
- Ash from the combustion process is beneficially used as daily landfill cover.



Garbage Waste Tonnes Collected



Landfill Perpetual Care

Durham Region is taking steps to mitigate the potential effects of the historic landfill sites managed by the Region.

Oshawa Landfill

A post-closure care and monitoring plan was completed for the Oshawa Landfill site in 2013. The findings and recommendations are used to plan Durham's maintenance activities and capital projects each year. Half of the landfill boundaries are surrounded by Oshawa Creek and its tributaries. Over time, natural stream flow and storm events cause erosion within the Oshawa Creek's banks. In some areas this erosion can be severe, so the Region performed a detailed stream evaluation in 2015 to identify potential long-term impacts to the landfill slopes caused by the creek and surface water flow.

The study prioritized the areas of concern and provided the appropriate solutions. Since 2015, seven slope stabilization projects have been undertaken to:

- Re-align the creek to prevent erosion along the bottom of the landfill slopes.
- Re-grade the underlying soils to reduce the severity of the slope.
- Re-vegetate the slopes to prevent erosion.
- Introduce sand and/or stone filter layers within the slopes.
- Incorporate the use of successful pilot product FilterSoxx™ media (long tubes of fine mesh filled with Durham Region's compost and a native seed mixture – to function as a final cover and introduce vegetation to reduce erosion).
- Create salmon and trout habitat within the creek.

In 2023, a slope stabilization project was completed along the Oshawa Creek tributary just north of the landfill. A slight creek alignment, and regrading and reinforcement of the creek banks were done to prevent further erosion along the bottom of the landfill slope. Monitoring of other active erosion areas will continue in 2024.



Biocover Pilot (Methane mitigation measurement)

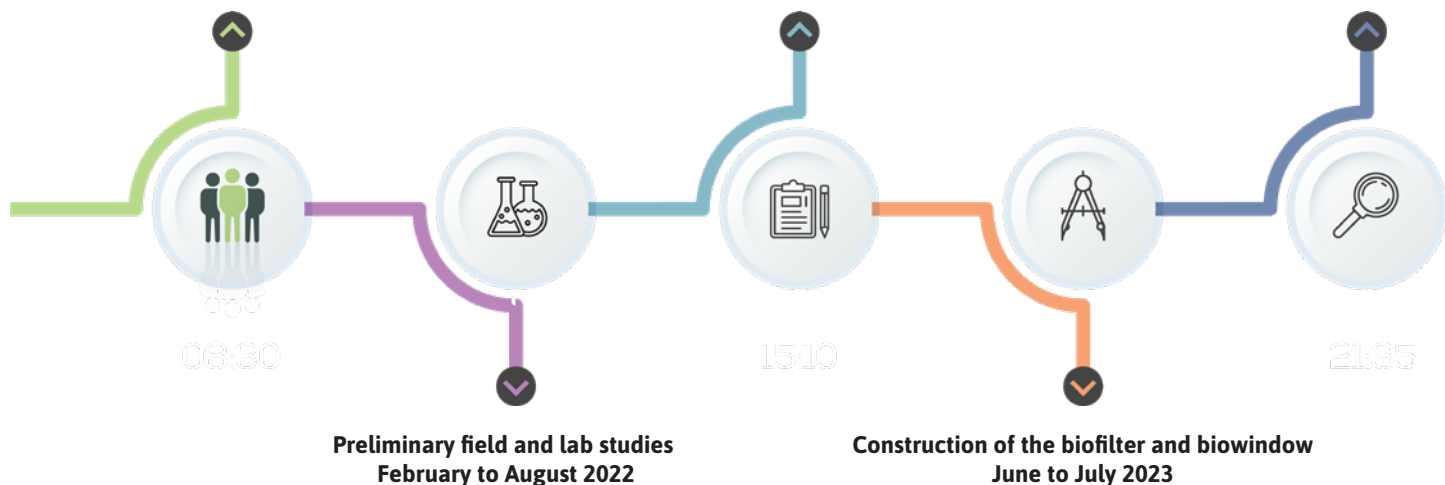
In 2022, the Region began a pilot project at the Oshawa Landfill to assess the efficiency of using a biofilter and biowindow to reduce methane gas emissions from the site.

In the pilot systems, landfill gas passes through a bed of organic material, containing naturally occurring methanotrophic (methane-eating) bacteria. The bacteria convert the methane into carbon dioxide, a much less potent Greenhouse Gas (GHG). Construction of the systems was completed in July 2023, beginning an 18-month monitoring period. Initial data collected in 2023 shows that the biofilter consistently achieved a 90 per cent conversion rate of the methane entering in the system into carbon dioxide. The full study period will continue to determine the efficiency of the systems.

Consultant retained
January 2022

Pilot granted ministry approval
November 2022

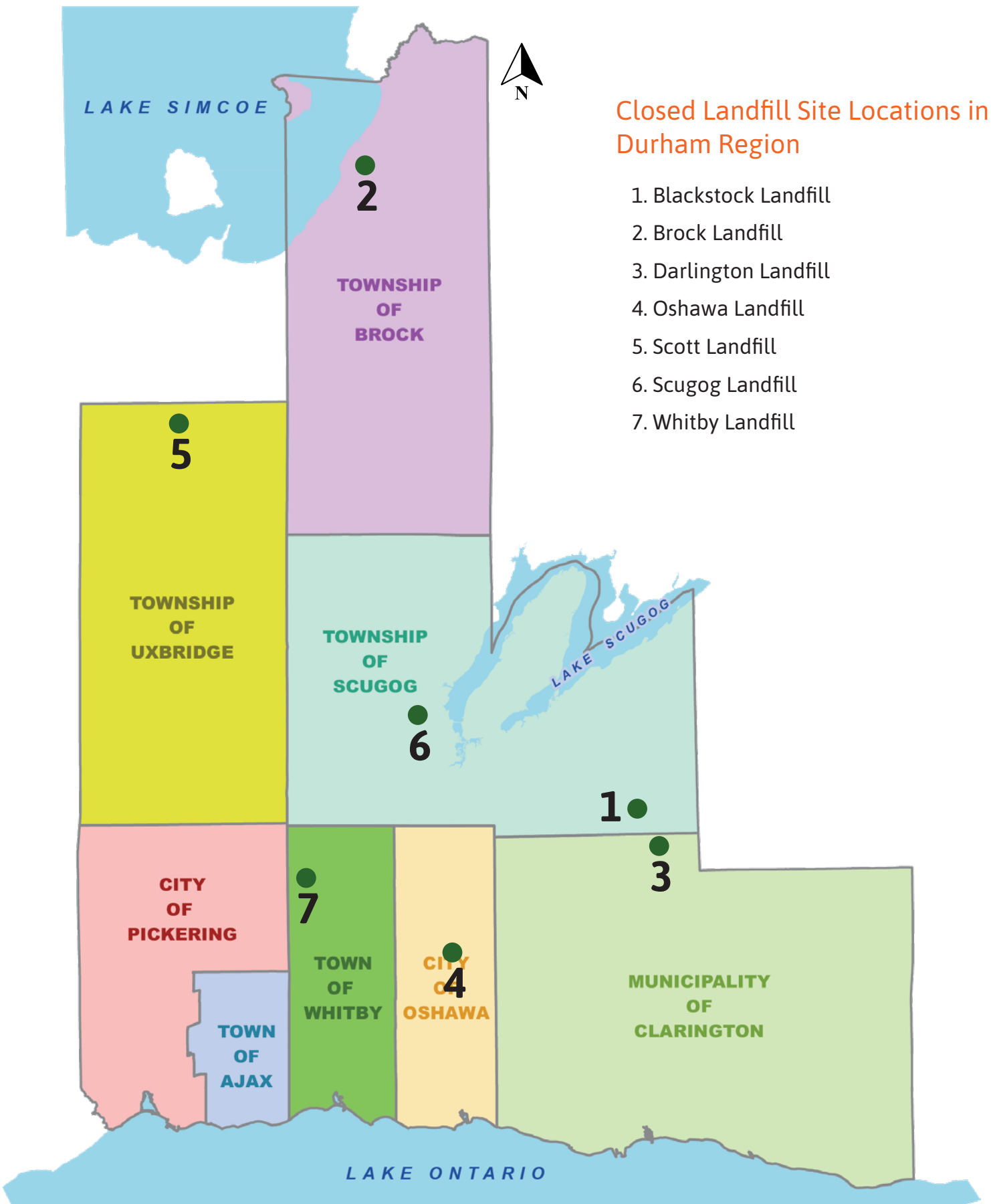
Monitoring program for the initial pilot
September 2023 to February 2025



Other Landfill Perpetual Care Activities

The Region maintains perpetual care of seven closed landfill sites. All sites are monitored regularly and maintained as needed to ensure that there are no adverse environmental impacts on the surrounding lands and surrounding surface water areas including wetlands and creeks. Maintenance activities include groundwater and surface water monitoring, well repairs, soil erosion control, landfill cover maintenance and landscaping. All sites have individual monitoring programs which monitor groundwater, surface water and landfill gas tailored for each site. Annual reports are prepared and submitted to the Ministry of Environment, Conservation and Parks for review.





Closed Landfill Site Locations in Durham Region

1. Blackstock Landfill
2. Brock Landfill
3. Darlington Landfill
4. Oshawa Landfill
5. Scott Landfill
6. Scugog Landfill
7. Whitby Landfill

Community Engagement

Durham Region actively promotes waste reduction, reuse and diversion through various community outreach and public education initiatives

Outreach and education have proven to be an effective way of improving waste program participation and encourages a culture that embraces the principles of rethink, reduce, reuse, recycle and resource recovery. Influencing behaviour around waste generation and waste diversion requires recurring messaging, innovative delivery methods and incentives. The Region provides promotion and education information through its website, waste app, social media channels, public space advertising, digital advertising, newspaper, radio, and television advertising.

In 2023, outreach focused its targeted messaging to reduce food waste through behaviour change, 'Safe with Your Waste' practices, community events and promotion of the Durham Region Waste App as the Region transitioned to paperless waste calendars.

Durham's Waste Management school outreach program continued to offer online resources and virtual presentations

The Region's waste management school outreach program continued to offer online resources and virtual presentations to both elementary and secondary school audiences. In-person presentations and tours of the Durham York Energy Centre (DYEC) continued to be offered to the post-secondary school audience. Staff also participated in larger in-person school events (including three watershed festivals) and offered in-person education sessions for kindergarten classes.

The Region provided in-person presentations and tours for special interest groups, professional affiliations, and community groups at the DYEC. In addition, the Region hosted an open house at the DYEC as part of National Public Works Week on May 27, 2023. This provided an opportunity for the community to learn more about the Region's waste management programs. Staff also participated in an Earth Day event hosted by the Central Lake Ontario Conservation Authority.

Curbside Giveaway Day encouraged residents to 'Shop at The Curb'

A Curbside Giveaway Day pilot event was organized in co-operation with the local municipalities, where residents set out unwanted household items and pick up pre-loved items they have been wanting—all for free.

After a successful pilot event, Regional Council approved a Curbside Giveaway event twice per year in the Spring and Fall. It is a fun way to help the environment while connecting with your community.



Presentations to over 6,700 Kindergarten to Grade 12 students across Durham's school boards



Four in-person Durham York Energy Centre presentation/tours to college students reaching 80 participants.



26 in-person Durham York Energy Centre presentations/tours, reaching 257 participants.



National Public Works Week included Durham York Energy Centre Open House, reaching 180 participants.



One multi-residential building management waste education session, reaching 30 participants.



Eight Compost Giveaway Events



Four Environment Days Events



Participated in the Central Lake Ontario Conservation Authority Earth Day event.



Three Watershed Festival Events

Summary

Durham Region's success in reducing and diverting waste is a testament to the ongoing commitment of its residents to reduce waste and manage it responsibly, contributing to positive environmental outcomes in the Region's community. Each year, the Region continues to improve and expand services in alignment with the principles, vision, and objectives of the Long-term Waste Management Plan. Managing waste materials as a resource builds a circular economy, turning waste into new consumer products, fertilizer for Ontario farms, and energy for the local electricity grid. Our residents' dedication to environmental practices has made Durham Region a leader among Ontario municipalities, and across the country.





Progress Report

2022, 2023, 2024, 2025, 2026

Summary Snapshot

Objective/Target
1A — Education
2A — Reduce Food Waste
2B — Reduce Waste
3A — Increase Organics Diversion
3B — By-Law Update
3C — Extended Producer Responsibility Transition
3D — Extended Producer Responsibility Advocacy
4A — Reduce Green House Gas Emissions
5A — Optimize Waste Management Facilities
5B — Increase Accessibility
5C — Closed Landfill Options





Objective 1

Engage with residents to build an understanding and awareness of the 5Rs (Rethink, Reduce, Reuse, Recycle, Recover) and the Region’s waste management programs and services.

Legend



Projected to meet or surpass target



Projected to be near target



Projected to not meet target (external factors may contribute)



Complete



Future reporting period

Targets	Action to Achieve Target	Baseline Measurement	Status	Summary of Progress
Target A Increase public engagement on the 5Rs through partnerships, increased accessibility, and different media.	Work with schools to provide educational content for youth.	Progress since 2018 2018 school engagement: 41 schools		<ul style="list-style-type: none"> Presentations to over 6,700 Kindergarten to Grade 12 students across Durham’s school boards. Four in-person Durham York Energy Centre presentations/tours to college students, reaching 80 participants. Over 50 schools (plus one virtual classroom via Durham District School Board at home).
	Increase Waste app subscribers and explore the possibility of including donation locations on the app.	Progress since 2018 2018 app subscribers: 50,000		<ul style="list-style-type: none"> 2023 new app subscribers: 13,605 All time app subscribers: 136,534 All time average rating 4.8
	Launch a dedicated web page on Reduction and Reuse.	New initiative (no baseline)		<ul style="list-style-type: none"> New web page launched with linked resources. Includes Textile Recycling Donation Site locator.
	Digital and/or in-person educational opportunities for all residents.	Progress since 2018		<ul style="list-style-type: none"> 26 in-person Durham York Energy Centre presentations/tours, reaching 257 participants. National Public Works Week including Durham York Energy Centre Open House, reaching 180 participants. One multi-residential building management waste education session, reaching 30 participants. 11 new videos developed and posted on the Region’s You Tube channel.
	Evaluate more languages for publications, and promotional and educational materials.	New initiative		<ul style="list-style-type: none"> Waste app available in different languages. Multi language website using Google translate.
	Transition to myDurham 311 for residents to obtain waste information.	New initiative		<ul style="list-style-type: none"> Waste management call centre transitioned to myDurham 311 December 2022.



Objective 2

Reduce the quantity of waste we create.

Legend



Projected to meet or surpass target



Projected to be near target



Projected to not meet target (external factors may contribute)



Complete



Future reporting period

Targets	Action to Achieve Target	Baseline Measurement	Status	Summary of Progress
Target A Support residents in making behavioural changes to reduce food waste.	Continue the Buy it, Eat it food waste reduction campaign.	Less avoidable food waste in the Green Bin program. Baseline reduction targets to be determined with implementation of regular waste audits.		<ul style="list-style-type: none"> Initial waste audits completed in 2022. Baseline for avoidable food waste will be determined in second audit round.
Target B Support residents in making behavioural changes to reduce the amount of waste generated.	Reduce quantities of waste materials generated, such as textiles and single-use plastics.	Progress since 2018 2018 garbage generation rate: 173.1 kilograms garbage disposed per capita.		<ul style="list-style-type: none"> 2023 garbage generation rate: 163.9 kg garbage disposed per capita. Promoted a pilot Curbside Giveaway Day in September that was well received by residents. Future audits will focus on quantities of textiles and single use items in the garbage.
	Develop waste audit program to measure progress.	New initiative		<ul style="list-style-type: none"> Initial waste audit is completed; audit program refined in 2023.



Objective 3

Increase diversion of waste from disposal and support the circular economy.

Legend



Projected to meet or surpass target



Projected to be near target



Projected to not meet target (external factors may contribute)



Complete



Future reporting period

Targets	Action to Achieve Target	Baseline Measurement	Status	Summary of Progress
Target A Increase diversion of organics from disposal.	Build the Mixed Waste Pre-sort and Anaerobic Digestion Facility.	Increase Green Bin organics diversion from disposal up to 10% by 2026. 2018 baseline: <ul style="list-style-type: none"> 41 kilograms Green Bin organics collected per capita. 50 kilograms of food waste in garbage per capita. 		<ul style="list-style-type: none"> Project cancelled due to significant and continuing inflation in 2021/2022. Action will be re-evaluated for next five year action plan. Request for Proposal awarded for processing Source Separated Organics. New contract begins July 1, 2024.
	Enhance the Green Bin program for single-family residences.			<ul style="list-style-type: none"> Enhanced curbside Green Bin program to be launched July 1, 2024.
	Encourage backyard composting.			<ul style="list-style-type: none"> Appeared in an episode of TVOkids "Green Squad" to help an inquisitive 10-year old learn about backyard composting. 794 online views. Provided a backyard composter to a school with a community garden program. Backyard composters continue to be sold at bin exchange events and at the Waste Management Centre.
	Expand collection services to Regional facilities and consider service for municipal and institutional facilities (e.g. school boards).			<ul style="list-style-type: none"> Efforts on this action are on hold pending launch of Enhanced Green Bin and transition of the Blue Box system.
Target B Revise by-law 46-2011 to reflect changes to collection and processing programs.	Revise by-law to reflect new Extended Producer Responsibility programs and include a section on mixed waste pre-sorting.	Existing by-law 46-2011		<ul style="list-style-type: none"> Revisions to the by-law for council approval in 2024.
	Explore options for collecting waste in mid-to high-density developments.			<ul style="list-style-type: none"> Council approved the development of a Multi-residential Source Separated Organics program and planning for the program commenced with building owners and property managers.

Objective 3 (Continued)

Legend



Projected to meet or surpass target



Projected to be near target



Projected to not meet target (external factors may contribute)



Complete



Future reporting period

Targets	Action to Achieve Target	Baseline Measurement	Status	Summary of Progress
Target C Develop a plan that supports Extended Producer Responsibility (EPR) programs.	Work with producers to understand how programs will be rolled out and the impact on the Region.	Successful transition to EPR in 2024		<ul style="list-style-type: none"> Ongoing discussions in 2023 regarding transition.
	Education campaigns to inform residents of changes to programs.	New initiative (no baseline)		<ul style="list-style-type: none"> Program planning in 2022/2023 as program details are finalized. Developed new Blue Box transition videos for use on social media and the waste app in 2024.
	Transition the programs to producers.	New initiative (no baseline)		<ul style="list-style-type: none"> Blue Box program is last municipal diversion program to transition to Extended Producer Responsibility. Durham Region's transition date is July 1, 2024.
	Investigate ways to reuse or recycle Household Hazardous Waste not covered under regulations.	New initiative (no baseline)		
	Determine best options for Material Recovery Facility and equipment when no longer needed by the Region.	New initiative (no baseline)		<ul style="list-style-type: none"> Contract to lease of Material Recovery Facility to third party executed in 2022. Lease starts July 1, 2024.
	Evaluate possible changes at waste management facilities to adapt to Extended Producer Responsibility regulations.	New initiative (no baseline)		<ul style="list-style-type: none"> Ongoing discussions in 2023.
	Consider options to continue to provide recycling collection service to ineligible sources.	New initiative (no baseline)		<ul style="list-style-type: none"> Negotiations with Circular Materials in 2023 allow for continued Blue Box collection in the Business Improvement Areas until the end of 2025.

Objective 3 (Continued)

Legend



Projected to meet or surpass target



Projected to be near target



Projected to not meet target (external factors may contribute)



Complete



Future reporting period

Targets	Action to Achieve Target	Baseline Measurement	Status	Summary of Progress
Target D Advocate for the expansion of Extended Producer Responsibility programs and increased materials management.	Continue participation in waste management committees, advocacy organizations and industry associations.	Existing participation		<ul style="list-style-type: none"> Durham Region supported several initiatives by municipal organizations advocating for higher diversion targets and more diversion programs in 2023.
	Continue to participate in consultations for Federal and Provincial waste management changes.	Existing advocacy efforts		<ul style="list-style-type: none"> Participation continued in 2023.



Objective 4

Support the Region’s greenhouse gas reduction and climate change mitigation efforts.

Legend



Projected to meet or surpass target



Projected to be near target



Projected to not meet target (external factors may contribute)



Complete



Future reporting period

Targets	Action to Achieve Target	Baseline Measurement	Status	Summary of Progress
Target A Develop initiatives to offset or reduce corporate greenhouse gas emissions from solid waste.	Explore opportunities to convert contracted collection vehicles to alternative fuels.	Aligned with the Region’s Corporate Climate Change Action Plan Actions taken to reduce the Corporate GHG emissions to 40 per cent below 2019 levels by 2030 (and 100 per cent below 2019 levels by 2045).		<ul style="list-style-type: none"> Renewable Natural Gas vehicles required in the new Ajax/Pickering collection contract. Contract starts July 1, 2024.
	Explore opportunities to convert biogas to renewable natural gas at facilities owned by the Region.			<ul style="list-style-type: none"> Mixed Waste Pre-sort and Anaerobic Digestion project cancelled. Action will be re-evaluated for next five year action plan.
	Identify methodologies to capture greenhouse gas emissions avoidance resulting from waste diversion.			
	Analyze how to better recover energy resources from waste operations.			



Objective 5

Protect or improve water, land, and air quality in Durham Region.

Legend



Projected to meet or surpass target



Projected to be near target



Projected to not meet target (external factors may contribute)



Complete



Future reporting period

Targets	Action to Achieve Target	Baseline Measurement	Status	Summary of Progress
Target A Optimize waste management facilities.	Develop options to improve traffic flow and renovate the Oshawa Waste Management Facility (WMF).	Existing waste management facility operations and annual actions to optimize operations at Oshawa WMF.		<ul style="list-style-type: none"> Staff selected a preferred conceptual design to form the basis of a Master Plan from the optimized facility.
	Develop actions to improve waste sorting levels at waste management facilities in general.	Existing waste management facility operations and annual actions to optimize operations.		<ul style="list-style-type: none"> To be explored with consultant in the Master Planning phase.
Target B Increase accessibility to waste management programs and services.	Investigate improving convenience for users of the waste management facilities.	Existing waste management facility hours and signage and changes to operating hours and physical accessibility of WMFs.		<ul style="list-style-type: none"> New bin identification signage at Oshawa waste management facility.
	Assess physical accessibility of all waste management facilities.			<ul style="list-style-type: none"> Region's Facilities Division completed Accessibility Audit at Oshawa waste management facility and assessed compliance with AODA, making recommendations for improvement. Accessibility to be considered in design of the improved facility.
Target C Explore options to reduce environmental impacts of closed landfills and their potential for future community use.	Evaluate outcome of pilot project at Oshawa Landfill for an alternative landfill cover system.	Existing closed landfill perpetual care program and annual progress toward implementing alternative landfill cover.		<ul style="list-style-type: none"> Biocover pilot began in 2023 at the Oshawa landfill site. Monitoring started in August 2023 and will continue throughout 2024. Initial monitoring results show an approximate decrease in methane concentration of 90 per cent. The performance of the biocover will be evaluated to determine if a full-scale bio cover system should be constructed.





Works Department, Waste Management Services
durham.ca/Waste

If you require this information in an accessible format, contact 311 (within Regional limits)
or 1-800-372-1102.

