



Waste Management Overview and Initiatives

Energy from Waste-Waste Management Advisory Committee

March 28, 2023

Why is Waste Management a Regional Service

- Under the Municipal Act waste disposal is a Regional responsibility.
- Collection is a local area municipal responsibility unless it has been uploaded to the Region.
- In Durham, the Town of Whitby and City of Oshawa have chosen to retain responsibility for waste collection services, except for the Blue Box.
- Waste Management staff work closely with Oshawa and Whitby staff to provide consistent waste management services throughout the Region.



Who Receives Waste Management Services

- The Region's mandate is to provide residential waste collection and disposal services.
- The Region services approximately 215,000 single-family households, 415 multi-residential buildings and some parts of Business Improvement Areas (BIAs) in downtown cores.
- BIAs are a unique mix of small businesses and storefronts with residential located above.
- The Region does not service Industrial, Commercial and Institutional businesses such as factories, hospitals, restaurants and retail plazas.
- Waste Management Facilities are available for resident and small business drop-off of waste and divertible materials.

A growing population means more waste to manage.

What Waste Management Services are Provided

- Waste processing for recycling or proper disposal
- Durham York Energy Centre
- Three Waste Management Facilities and one Household Special Waste Depot
- Promotion and education on waste management programs
- Perpetual care of seven closed, historic landfills



Long-term Waste Management Plan 2022-2040

The Region adopted a Long-term Waste Management Plan or Waste Plan in January 2022 to guide waste decisions until 2040.



Together, with our residents, we will reduce the amount of waste we create and manage the generated waste as a resource. We will build an innovative system, balancing financial needs and environmental sustainability.

Integrated Waste Management System

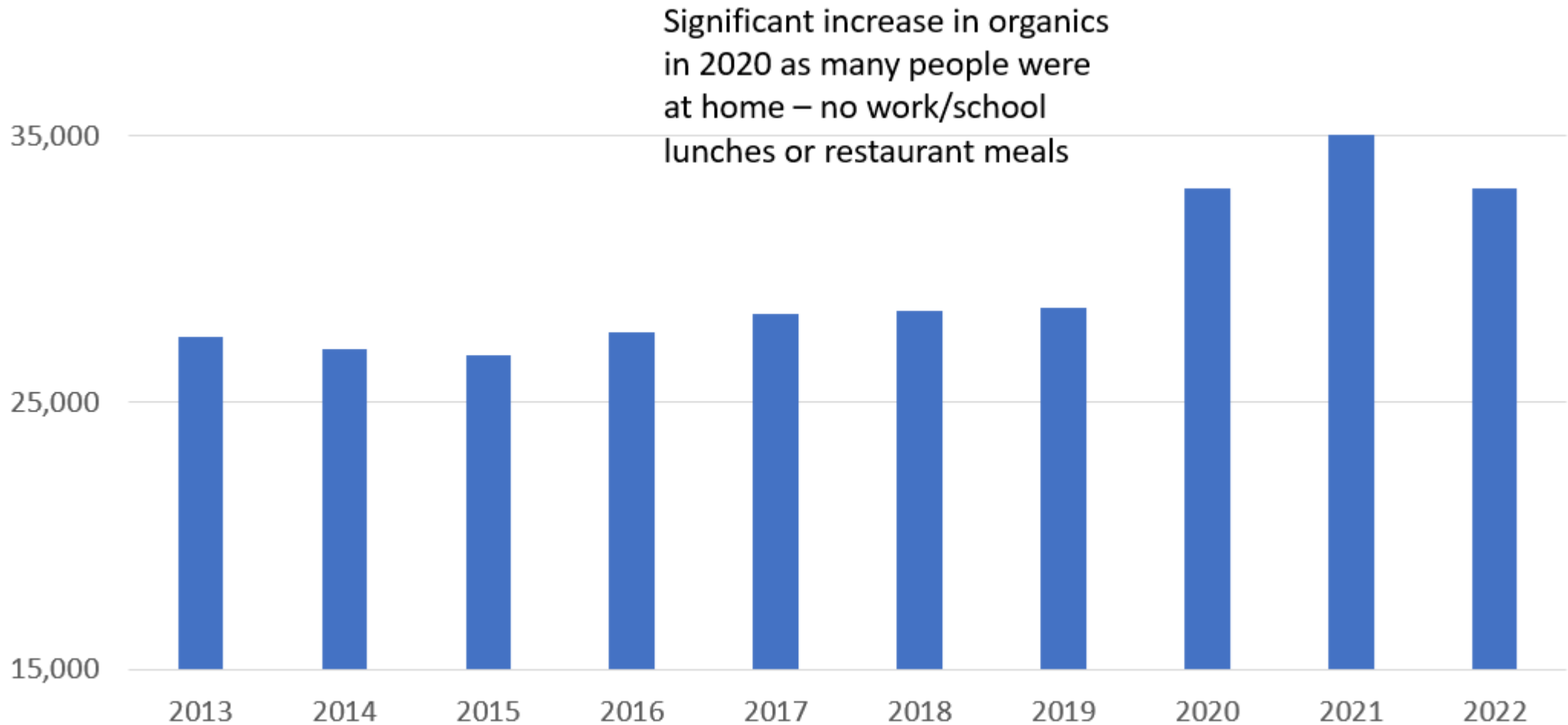
The goal is to maximize diversion from disposal.

- Regular curbside collection for:
 - Garbage
 - Source separated Green Bin organics
 - Leaf and yard waste
 - Blue Box recyclable materials (until July 2024)
 - Household batteries (2/year)
- Curbside collection by appointment for:
 - Electronics
 - Scrap metal
 - Porcelain
 - Bulky items.
- Residents can drop off household hazardous waste, tires and electronics at Waste Management Facilities.

2022 Trends

- Return to more 'normal' work and school = residential garbage generation approached pre-pandemic levels
- Green Bin tonnages (33,000) down 5 % year over year compared to 2021 tonnages (35,000)
- Blue Box marketed tonnes (34,000) down 6 % year over year compared to 2021 tonnages (36,000)
- Garbage tonnages (123,000) down 4 % year over year compared to 2021 tonnages (129,000)
- WMF visits continue to increase annually based on growth in the Region

Green Bin Organics Tonnages 2013-2022





Mixed Waste Pre-sort and Anaerobic Digestion Facility

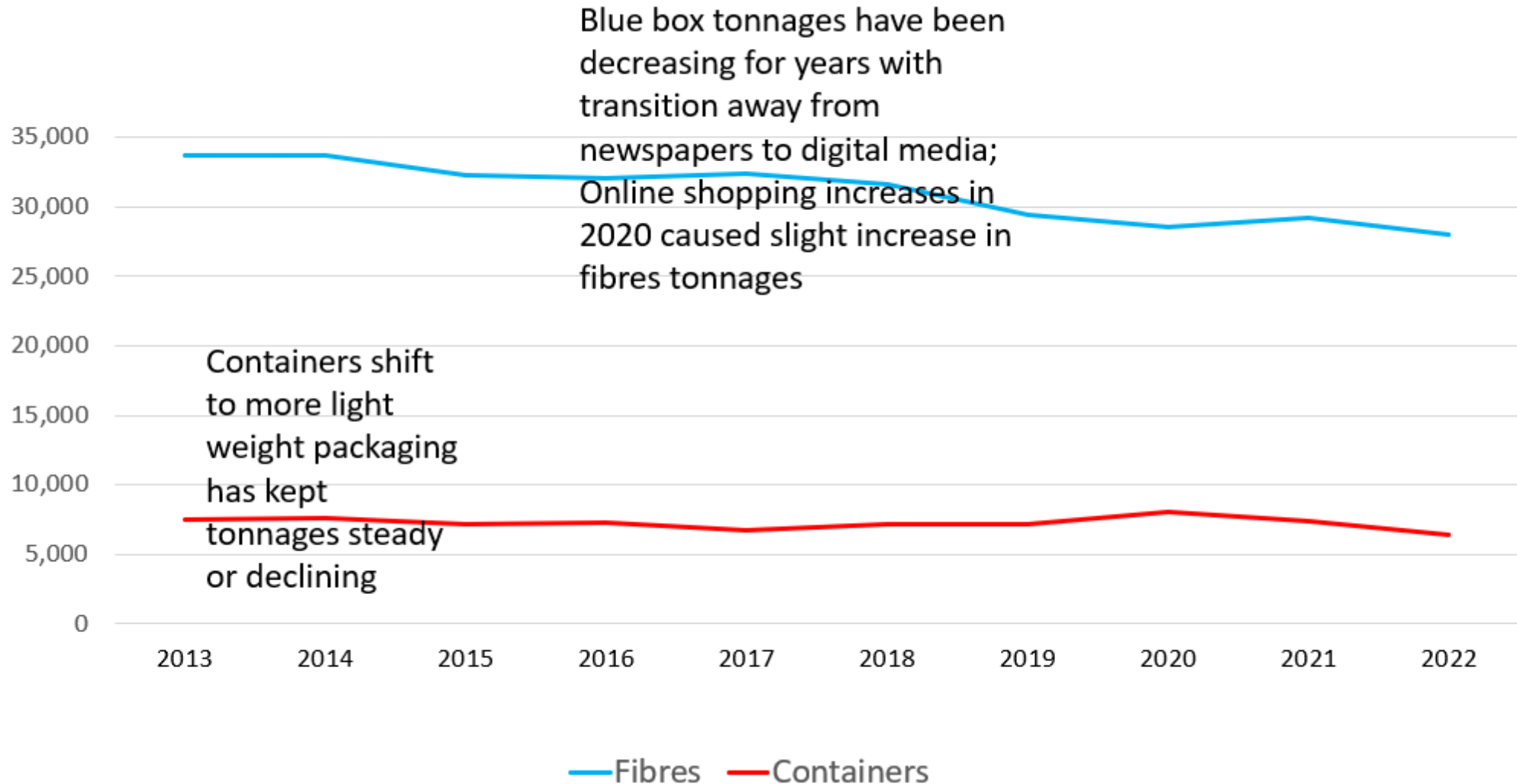
- Council approved a Mixed Waste Pre-sort and Anaerobic Digestion Facility as the preferred long-term organics management solution.
- The procurement process was cancelled in June 2022 due to supply chain risks and uncertainties that significantly impacted the cost estimates.
- Region still requires an organics management solution for source separated organics – the current contract expires June 30, 2024.
- Staff have developed a short-term and long-term organics management plan.



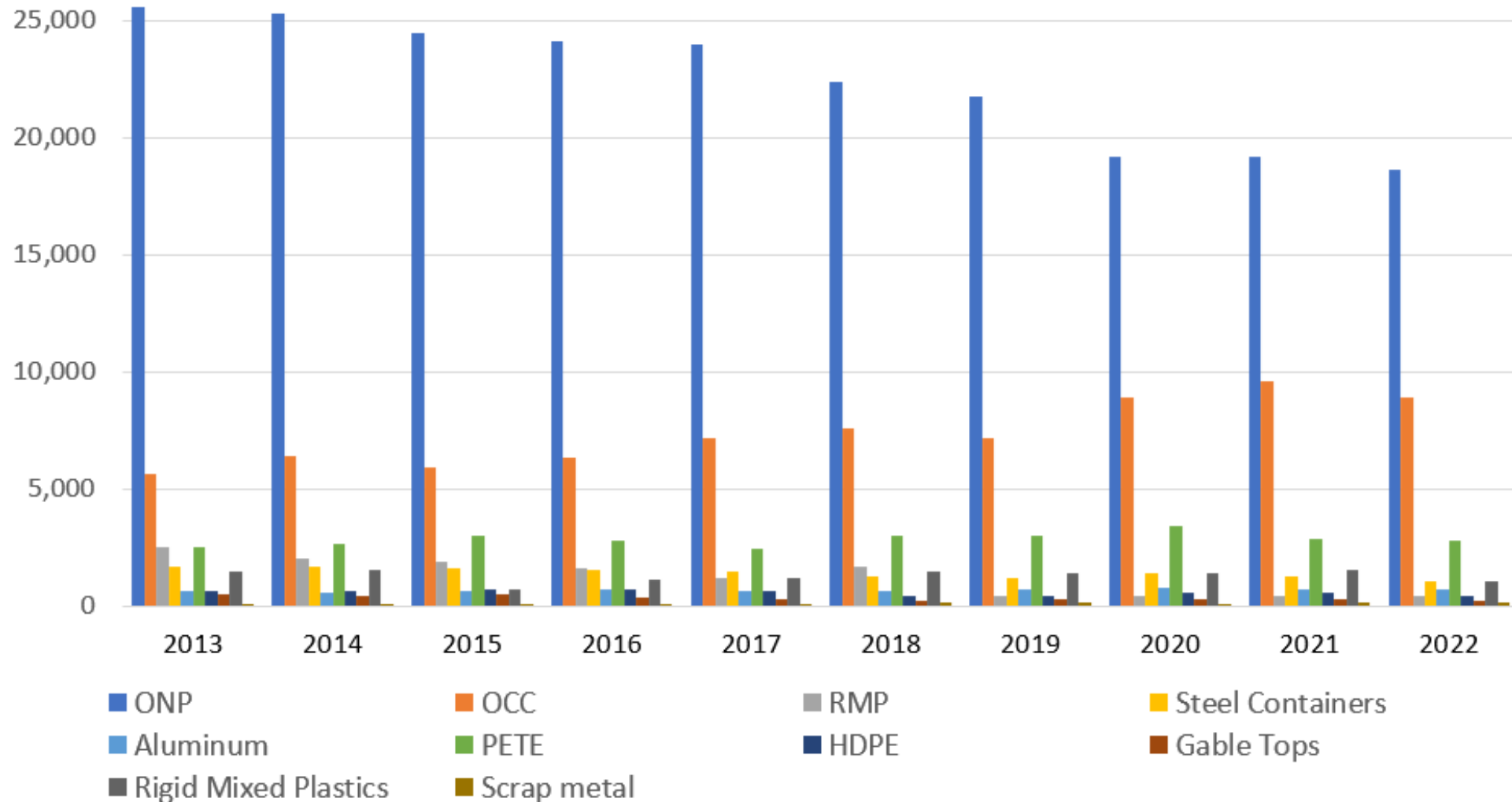
Short and Long-term Organics Management Solution

- Report to Council on March 1 outlining the short-term organics management plan as amended by Works Committee:
 - 10-year contract for wet AD processing of Enhanced Green Bin material.
 - Launch Enhanced Green Bin that accepts pet waste, pet litter, diapers, etc.
 - ~~Reduce the garbage bag limit from 4 to 3 bags every other week – reflects the shift of odorous waste from the garbage to the Green Bin.~~
 - Investigate a multi-residential source separated organics program for buildings where the Region provides waste and blue box collection.
- Works Committee voted to delete the recommendation to reduce the garbage bag limit from 4 to 3 bags every other week.
- The preferred long-term organics management solution remains a Region-owned facility.
- Council approved the report as amended at Works, staff will be tendering a 10-year contract for processing organics using anaerobic digestion.

Blue Box Marketed Tonnes 2013-2022



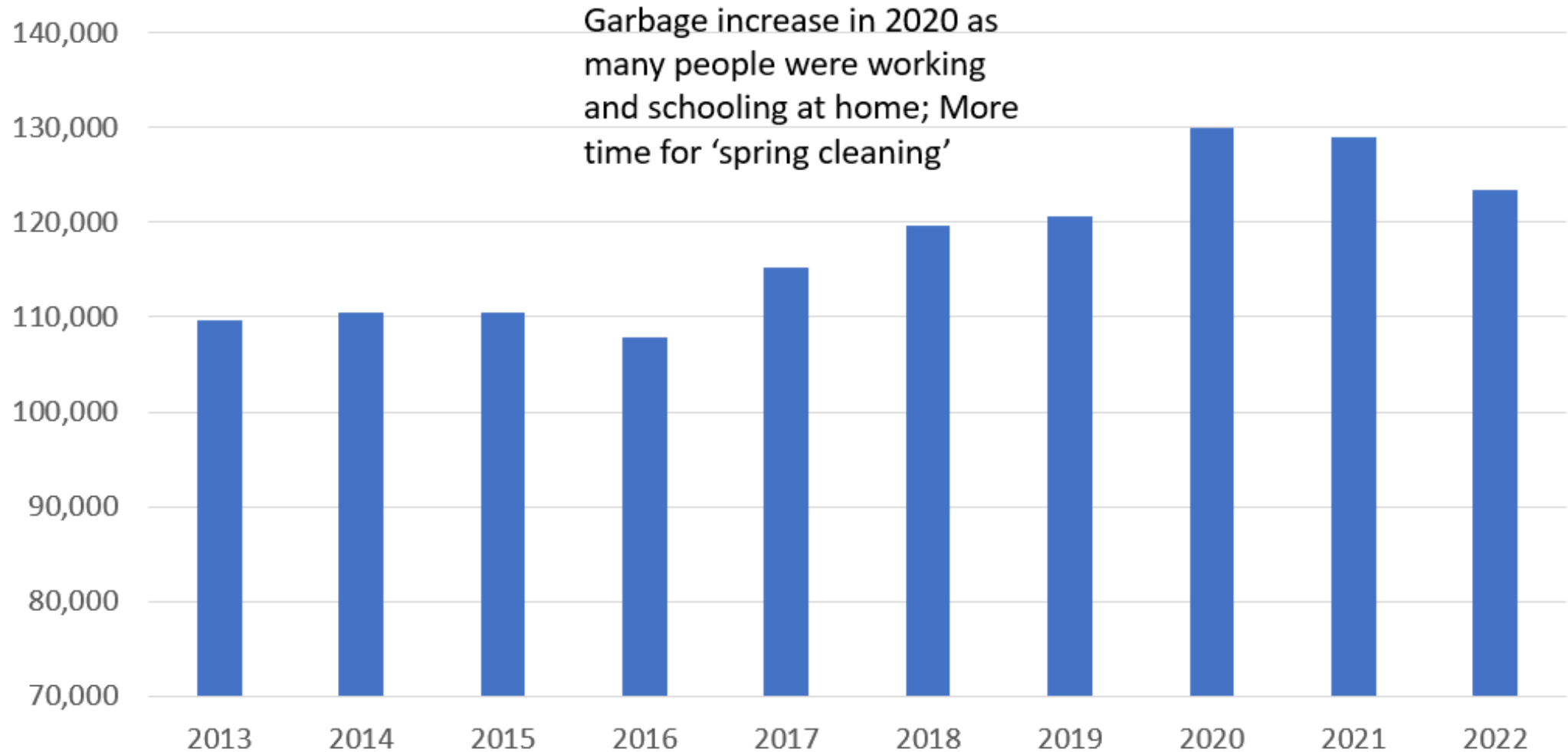
Blue Box Material Tonnes 2013-2022



Extended Producer Responsibility – Blue Box

- Durham transition date is July 1, 2024 – the producers of blue box materials will take over financial and operational responsibility for the Region’s blue box on that date.
- Post-transition, starting January 1, 2026, producers will be able to make changes to the collection system and requirements for providing collection at more locations take effect
- The first phase of transition begins on July 1, 2023 as Toronto and other municipalities transfer responsibility to producers

Garbage Tonnages 2013-2022



DYEC Operations



Managed 123,396 tonnes of garbage in 2021. The majority was processed at the Durham York Energy Centre to produce electricity. 110,000 tonnes of the facility's 140,000 tonne permitted capacity is used by Durham Region.

Submitted an Environmental Screening Report in 2022 to request a processing increase to 160,000 tonnes per year with no construction required. No response from Ministry of Environment Conservation and Parks at this time.

Focus of current projects is to maximize diversion of waste out of the garbage stream to preserve DYEC capacity and delay expansion of the facility. There is limited disposal capacity in Ontario with industry estimates of approximately 12 years of landfill space remaining.

Although DYEC expansion may not be needed for 10 or more years, environmental assessments and approvals can take 10 years and must be started well before capacity is needed.

DYEC Operations

- Meets stringent Ministry of Environment Conservation and Parks (MECP) emissions limits with daily, monthly, and annual monitoring of various parameters.
- DYEC air emission limits are equivalent to or more stringent than EU and Ontario standards.
- Source testing conducted twice per year is consistently below the emissions limits set by MECP.
- Monitoring of soil, surface water and groundwater is also conducted.



DYEC Capacity Increase

MECP completed the local air quality update. According to MECP statement:

- Air quality in Clarington is consistent with air quality in similar southern Ontario communities.
- Covanta and the Regions of York and Durham are operating the DYEC in compliance with MECP emission limits

Landfills

Oshawa Landfill-Biosystem Pilot

- Early spring/summer commencement of pilot project construction
- Testing effectiveness of a biocover at reducing fugitive methane emissions

Oshawa Landfill-Channel Erosion Control

- Construction to begin in summer 2023

Brock Landfill-Gas Flares

- Initial study completed to identify performance range for effective flaring.



Questions?

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