

To: Warden and Members of County Council

From: Director of Public Works

2020 Annual Waste Management Reports

RECOMMENDATION

1. That County Council receive Report No. PW 2021-09 entitled “2020 Annual Waste Management Reports” as information.

REPORT HIGHLIGHTS

- This report summarizes the annual performance of Oxford County’s waste management facilities and operations in 2020.
- Oxford County waste management facilities and operations provided effective services in 2020 and operated in general compliance with all applicable regulations.
- Based on the current residential and landfill waste diversion activities, including Blue Box curbside collection program, the County achieved an overall landfill waste diversion rate of approximately 40% in 2020 and has an estimated landfill remaining service life of approximately 30 to 35 years.

Implementation Points

The “2020 Annual Waste Management Reports” will be submitted to the Ministry of Environment, Conservation and Parks (MECP) in accordance with regulatory requirements, and also posted on the County’s website for public access.

Financial Impact







There are no financial impacts as a result of this report. Any required actions that will result in expenditures have been accounted for in the 2021 Operating or Capital Budget for Waste Management.

Communications

The 2020 Waste Management Annual Reports will be available for public viewing on the County website on March 25, 2021 at www.oxfordcounty.ca/wasteline. It will also be circulated to Area Municipalities and Zero Waste Oxford.

The County communicates the performance of key Public Works systems (Water, Wastewater, and Waste Management) annually to the public through an annual social media campaign after the last performance report has been submitted to Council.

Strategic Plan (2020-2022)

					
WORKS WELL TOGETHER	WELL CONNECTED	SHAPES THE FUTURE	INFORMS & ENGAGES	PERFORMS & DELIVERS	POSITIVE IMPACT
		3.iii.	4.ii.	5.ii.	

DISCUSSION

Background

In accordance with regulatory requirements, the 2020 Annual Waste Management Reports on the performance of Oxford County's waste management facilities and waste management operations have been prepared for submission to the MECP. The regulatory requirements of the Annual Waste Management Reports are set out in the Environmental Compliance Approval (ECA), Certificate of Approval (C of A) or by government regulation for the particular waste management facility or operation. The pertinent government regulation or requirement is included in each Annual Waste Management Report.

The reports generally include items such as:

- Received or processed material totals for the year;
- Mapping of facilities showing activities;
- A summary of facility equipment and staffing;
- A summary of operations including operating hours and municipalities served;
- A summary of services provided;
- A summary of changes in operations from previous years;
- A description of problems encountered and corrective actions taken;
- A record of any complaints received and corrective actions or responses;
- A summary and interpretation of all monitoring data required; and
- Recommendations on environmental compliance.

In addition, municipalities are required to prepare and present Blue Box performance monitoring results for all County-funded Waste Management Programs to Council annually, as per Municipal Datacall Best Practices (BP).

Comments

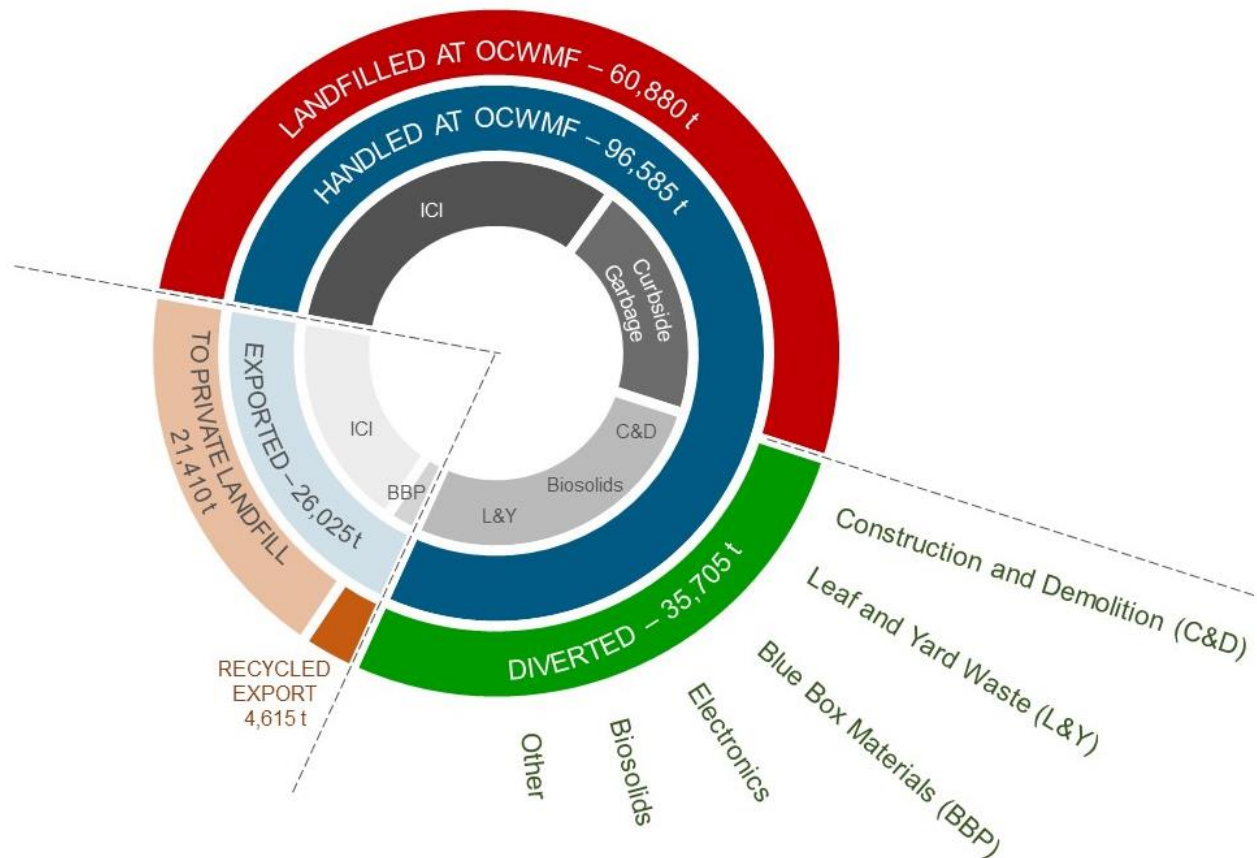
Summary of County-Wide Waste Generation

Approximately 122,600 tonnes of waste (an increase of 18,000 tonnes over 2019) was generated in Oxford County in 2020. Part of this increase is due to the amount of residential curbside garbage and large article waste generated, an increase of 9% over 2019. Roughly 96,600 tonnes (an increase of 21,400 tonnes over 2019) of waste was handled at the Oxford County Waste Management Facility (OCWMF) for processing and management. This increase can be attributed to annual growth, effects of the COVID pandemic during the spring, and special projects generating one time waste material.

About 26,000 tonnes of waste was exported out-of-County (without direct handling at the OCWMF) including an estimated 21,400 tonnes of waste collected from the Industrial, Institutional and Commercial (IC&I) sector which is disposed of by private haulers as well as 4,615 tonnes of Blue Box material that was directly hauled to the processing facility (curbside material collected in Woodstock as well as material from the County's curbside collection program from January to April 2020 under the previous service contract). Following the implementation of the County's new curbside collection contract on May 4, 2020, Blue Box material is now received at the OCWMF and then transferred for processing.

The waste quantity generated by the IC&I sector and exported out of the County is calculated based on the results of the County's 2017 curbside waste audit completed by AET with annual increases applied. Overall, approximately 34% of the waste generated by the IC&I sector is being landfilled out-of-County.

The 2020 summary of County-wide waste generation is depicted in the following info-graphic:



2020 Annual Waste Management Reports

The annual reports are listed and linked below, followed by a summary section for each.

- [Oxford County Waste Management Facility, Salford 2020 Operations and Monitoring Report](#)
- [2020 Annual Report Landfill Gas Collection and Flaring System, Oxford County Waste Management Facility](#)
- [Holbrook Landfill 2020 Water Monitoring Report](#)
- [Oxford County Permanent Household Hazardous Waste \(HHW\) Depot Annual Report 2020](#)
- [Oxford County 2020 Leaf and Yard Waste System Annual Report](#)
- [Oxford County 2020 Year End Blue Box Waste Management System Annual Report](#)
- [Oxford County 2020 Waste Diversion Achievements Year End Report](#)

Oxford County Waste Management Facility, Salford - 2020 Operations and Monitoring Report

- Approximately 96,600 tonnes of waste was handled at the site with approximately 35,700 tonnes being diverted and recovered as material resources. Overall resource recovery material brought to the OCWMF increased by 44%; however, landfilled material also increased by 22%.
- There was a 5% increase in the number of vehicles using the facility in 2020. Total trips by all vehicles averaged about 3,651 per month.
- A new film plastic drop-off recycling pilot program was successfully implemented in 2020 at the OCWMF, Town of Tillsonburg Transfer Station, and the City of Woodstock Enviro Depot and generated 1 tonne of film plastic.
- The ongoing bulky Expanded Polystyrene (Styrofoam) pilot program generated 5 tonnes of recycled packaging material for reuse in product manufacturing.
- The remaining landfill site service life in 2020 is calculated to be approximately 30 to 35 years based on the current landfilling rate and waste diversion rate (approximately 40%).
- There were no influences of leachate in the groundwater at the site boundaries.
- Private well monitoring showed no landfill influence.
- The site operated in full compliance of the ECA.

2020 Annual Report Landfill Gas Collection and Flaring System (LGCFS), Oxford County Waste Management Facility

- The LGCFS located at the OCWMF operated as intended in 2020 and successfully controlled emissions.
- The flare ran at an average of 120 cubic feet of gas volume per minute in 2020, a 10% decrease from 2019.
- The average methane concentration by volume was 42% in 2020, which remained unchanged from 2019.
- Current volumes and concentrations of methane gas are low.

Holbrook Landfill (Closed) 2020 Water Monitoring Report

- The site has been closed since 1986.
- There is no clear indication of leachate influence in the deeper groundwater system at the property boundaries in 2020.
- Private well monitoring showed no landfill influence.

Oxford County Permanent Household Hazardous Waste (HHW) Depot Annual Report 2020

- The depot was open 255 days, a decrease of 16% from 2019.
- The depot serviced 5,956 vehicles, a 5% increase over 2019.
- The depot received approximately 184 tonnes of HHW, an increase of 4% over 2019.
- No operational complaints, concerns, or adverse impacts on the environment were observed.
- The City of Woodstock's Enviro Depot was open 138 days in 2020; the HHW Depot serviced 2,258 vehicles compared to 5,000 vehicles in 2019, and collected 76 tonnes of HHW (decrease of 44% from 2019).

Oxford County 2020 Brush, Leaf and Yard Waste System Annual Report

The Brush, Leaf and Yard Waste program consists of 11 drop off depots operated by the Area Municipalities, with contracted services for centralized hauling of the collected material to the County's Compost Facility for processing. These depots are free to County residents and have operating hours that vary from municipality to municipality. The County funded all program costs in 2020 and generated the following results:

- Over 20,000 tonnes of material was received and processed (compost), resulting in a 65% increase of finished compost (over 2019) sold to end market.
- A total of 663 composters and green cones were sold to residents, a decrease of 13% over 2019.
- Home composters and green cones are sold throughout the County at a subsidized rate of \$10 each or \$40 each respectively.

Oxford County continues to undertake backyard composting program education and outreach to help reduce the amount of organics currently black bagged / landfilled.

Oxford County 2020 Year End Blue Box Waste Management System Annual Report

- Oxford County Waste Management provided curbside collection to all eight Area Municipalities in Oxford County. Curbside collection was performed by contracted services for six of the Area Municipalities and by Area Municipal staff in the City of Woodstock and the Township of South-West Oxford under contract to the County.
- Collection of garbage and recycling is offered to all households, including some multi-residential and commercial properties, provided they meet program requirements.
- Collection of Blue Box material is currently single stream weekly in the County collection area and two stream bi-weekly in the City of Woodstock. The Township of South-West Oxford continues on a six-business day collection of garbage and single stream recycling. Alternative residential drop-off depot locations for Blue Box material are located at the City of Woodstock (955 James Street) and the OCWMF (384060 Salford Road) sites.
- The residential diversion rate (from curbside, depots, brush, leaf and yard waste depots, Waste Management Facility) is estimated to be 57% and will be confirmed when the 2020 Datacall is verified in November 2021. The residential diversion rate has plateaued in recent years ranging between 57-59%.
- 8,000 tonnes of residential curbside Blue Box material was collected (4% decrease from 2019). Following removal of contaminated material (residual waste) during processing, approximately 7,200 tonnes of processed material was sent to recycling end markets.
- The contamination rate of 2020 County/SWOX recycling program is estimated at 11% based on an internal audit conducted by the County's recycling Processor and is similar to other comparative municipal single stream recycling programs. The contamination rate for the two stream recycling program in Woodstock was estimated at 4% based on audit data provided by City of Woodstock staff.
- The recycling collection tonnage per household (HH) for 2020 was 147 kg/HH for the entire County.

Oxford County 2020 Waste Diversion Achievements Year End Report

The Waste Diversion Achievement Report was created to satisfy a Best Practice requirement identified under the Municipal Datacall. This report reviews collection and diversion activities for Oxford County residentially generated waste only.

- The County's residential waste diversion rate remains at around 57% and will be confirmed in November 2021 after the Municipal Datacall results have been verified.
- Increases in 2020 residential garbage quantities can be attributed to more residents working from home and restricted public access to waste management facilities/depos as a result of the implementation of COVID-19 safety measures.
- Tonnage data from the City of Woodstock's Enviro Depot and the Town of Tillsonburg's Transfer Station indicate that while restricted by the COVID-19 pandemic, the facilities were well utilized in 2020.
- The County collaborated with the Town of Tillsonburg and City of Woodstock to establish diversion programs for hard to recycle materials (bulky Styrofoam, film plastic) and collected approximately 5 tonnes of bulky Styrofoam and 1 tonne of film plastic in 2020.

Advancing to Zero Waste

Based on the current residential, IC&I, and landfill diversion activities, including the Blue Box curbside collection program and other like diversion programs, the County achieved an overall landfill waste diversion rate of approximately 40% in 2020 (below the national average of 45%). At current rates of landfill waste disposal, resource recovery, and the current rate of waste being exported for disposal, the estimated remaining service life of the County landfill is approximately 30 to 35 years. This forecast is based on waste generation associated with an annual growth rate of 0.67% and assumes over 30% of the waste generated by the IC&I sector will continue to be landfilled out-of-County.

Staff is currently exploring regional organic waste diversion programs/options for potential future implementation to increase landfill diversion rates and meet 2025 diversion targets as established in the Provincial Food and Organic Waste Policy Statement. Detailed curbside waste audits will be undertaken in 2021 and this data will be utilized to determine viability of a potential County-wide organic waste diversion program for Council's further consideration.

Staff will continue to pursue diversion programs for hard to recycle material similar to the bulky Styrofoam and film plastic drop off programs. Ongoing collaboration with Area Municipalities to provide accessible and convenient collection points will support the success of these programs.

In the absence of waste recovery and reduction technological intervention, it will be very difficult to increase County waste diversion rates. Staff will continue to advocate and support provincial and federal waste diversion initiatives, and collaborate with municipal partners to consider viable and sustainable cost effective solutions for the end of life management of our waste.

Conclusions

The 2020 Annual Waste Management Reports demonstrate that the Oxford County Waste Management Programs and Facilities continue to perform well and in compliance with regulatory requirements.

Staff will continue to liaise with municipal waste management working groups and provincial agencies to explore new waste recovery and resource technologies and processes, which are necessary to achieve increased diversion rates and ultimately extend the life of the County's landfill.

SIGNATURES

Report Author:

Original signed by

Pamela Antonio, M.P.A, B.E.S
Supervisor of Waste Management

Departmental Approval:

Original signed by

David Simpson, P.Eng., PMP
Director of Public Works

Approved for submission:

Original signed by

Michael Duben, B.A., LL.B.
Chief Administrative Officer