

Essex-Windsor Solid Waste Authority



ANNUAL REPORT

Essex-Windsor Residential Waste Diversion 2020

Report Date: March 31, 2021

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Essex-Windsor Residential Waste Diversion

Annual Report for January – December 2020

1 Introduction

The Annual Waste Diversion Report provides information on the waste diversion activities carried out by the Essex-Windsor Solid Waste Authority during 2020 in compliance with Condition 5.2 of the Environmental Assessment Approval for the Essex-Windsor Regional Landfill.

1.1 Residential Waste Diversion Rate 2020

This report also provides the Authority with the ability to track any changes in the percentage of waste diverted through its waste diversion initiatives from year to year.

In 2020, the seven County of Essex municipalities and the City of Windsor delivered 109,902 tonnes of residential waste to the Regional Landfill. During the same time period, 55,465 tonnes of residential waste were diverted from the landfill via the blue and red box recycling program, municipal hazardous or special waste program, composting, and other waste diversion programs. These waste diversion initiatives resulted in a 2020 residential diversion rate of 32.4%. The 2019 diversion rate was 34.3%.

2020 Residential Diversion Rate is calculated as follows:

$$\frac{55,465 \text{ Tonnes Diverted (see Table 18)}}{109,902 \text{ Tonnes of Residential Refuse Collected Curbside} + 5,636 \text{ Residuals} + 55,465 \text{ Diverted Tonnes}} = \frac{55,465}{171,003} \times 100 = \mathbf{32.4\%}$$

2019 Residential Diversion Rate is calculated as follows:

$$\frac{55,891 \text{ Tonnes Diverted (see Table 18)}}{102,452 \text{ Tonnes of Residential Refuse Collected Curbside} + 4,513 \text{ Residuals} + 55,891 \text{ Diverted Tonnes}} = \frac{55,891}{162,855} \times 100 = \mathbf{34.3\%}$$

Note: The 2019 diversion rate above, at 34.3% has been adjusted from the 34.4% as reported in the 2019 Waste Diversion report. This is due to an adjustment made to ICI tonnes for 2019.

2 Programs

2.1 Residential Recycling Blue Box Program

The tonnes of residential recyclable materials collected curbside during 2020 totaled 24,585 tonnes. The overall tonnes of recyclables collected in 2020 were slightly lower compared to the 25,426 tonnes collected in 2019.

A monthly summary and comparison of the tonnes collected curbside from the City and the County in 2019 and 2020 is shown in Table 1. Collection of recyclables in the County was carried out under contract in 2020 by Windsor Disposal Services Ltd until November 30, 2020. A new contract was awarded to the City of Windsor for the remainder of 2020. Collection of recyclables in the City of Windsor in 2020 was carried out by Green For Life Environmental Inc.

All materials were processed at the Authority owned Essex-Windsor Material Recovery Facility (MRF), located at E.C. Row and Central Avenue in Windsor where Windsor Disposal Services via contract process delivered materials until November 30, 2020. A new contract for the processing of delivered materials was awarded to HGC Management Inc. for the remainder of 2020.

In addition to the residential recyclables collected curbside, 455 tonnes of recyclables were delivered to the Authority's Public Drop Off Depots in 2020. This is down 8% from 2019 where 495 tonnes were delivered. It is important to note that the Windsor Public Drop Off Depot was closed for almost two months in 2020 when the Covid-19 outbreak began.

Table 1: Residential Recycling Blue Box Collection Tonnes by Month Comparison

Month	2020 County of Essex* Tonnes	2020 City of Windsor Tonnes	2020 Combined Tonnes	2019 Comparable Tonnes
January	1,203.81	1,177.19	2,381.00	2,174.85
February	889.99	835.29	1,725.28	1,890.22
March	981.05	1,000.16	1,981.21	1,878.58
April	1,118.79	1,067.66	2,186.45	2,182.98
May	1,070.77	1,066.77	2,137.54	2,570.24
June	958.57	1,037.95	1,996.52	2,038.36
July	1,053.62	1,091.46	2,145.08	2,197.10
August	902.36	928.98	1,831.34	2,078.30
September	1,033.29	1,075.18	2,108.47	2,029.12
October	958.05	1,057.28	2,015.33	2,225.37
November	896.98	981.42	1,878.40	2,073.45
December	1,130.84	1,067.68	2,198.52	2,087.37
Total:	12,198.12	12,387.02	24,585.14	25,425.94

* The County of Essex includes the Town of Amherstburg, the Town of Essex, the Town of Kingsville, the Municipality of Lakeshore, the Town of LaSalle, the Municipality of Leamington and the Town of Tecumseh.

2.2 Recycling Residual Disposal

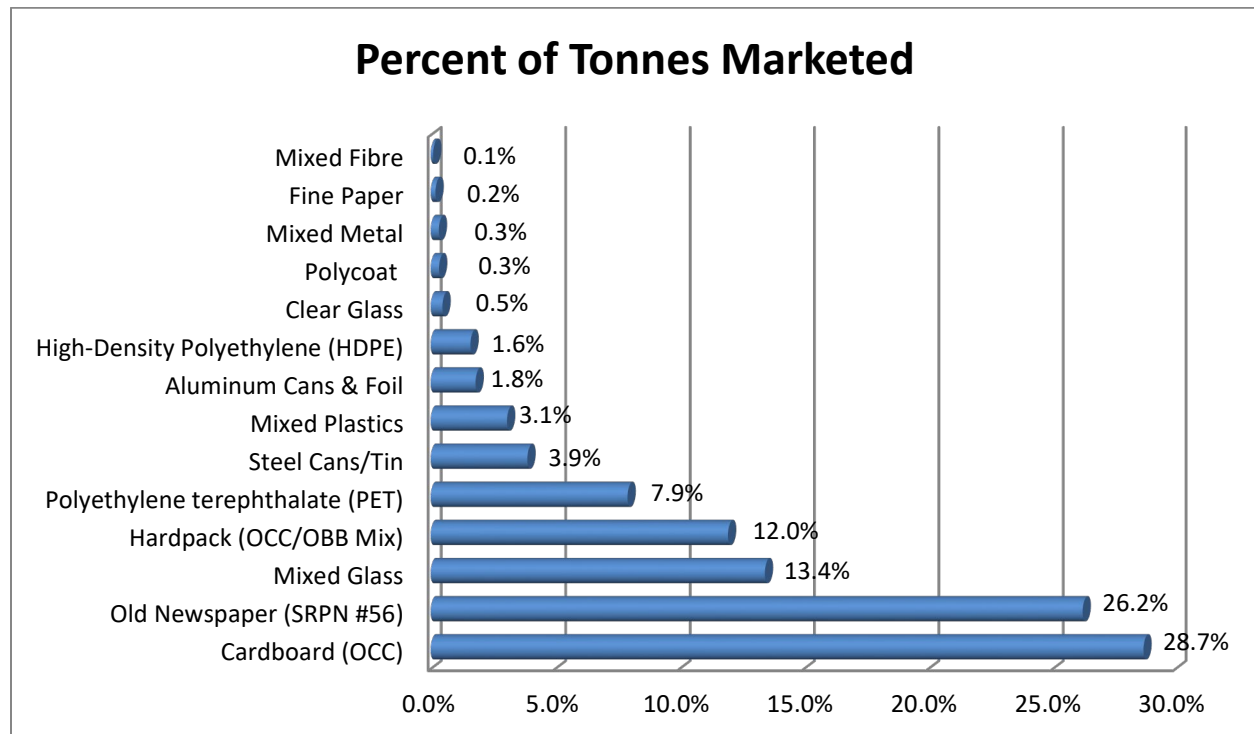
Recycling Residual is the material that is left over after the processing of the recyclable materials are collected and delivered to the MRF. The residuals consist of contaminated materials, non-recyclable materials, and packaging materials used to secure recyclables placed in the recycle box. A total of 5,635.94 tonnes of recycling residuals was disposed of in 2020.

3 Tonnes Marketed

For the purposes of waste diversion calculations, tonnes marketed are used instead of the tonnes collected curbside. The tonnes marketed by material type are shown in Tables 2, 3 and 4. The Essex-Windsor Solid Waste Authority markets all materials processed through the MRF, and retains 100% of the revenue from the sale of materials. Revenue from the sale of

material in 2020 was approximately \$2,170,080 (see Table 5) representing a basket-of-goods revenue of approximately \$114/tonne compared to a basket-of-goods revenue of \$101/tonne in 2019. A brief discussion on market conditions and prices for each of the materials follows.

Figure 1: Percent of Tonnes for 2020 Marketed Recyclables



Note: Due to rounding total tonnes marketed does not total 100%.

3.1 Fibres

Old Newspaper (SRPN #56)

Ontario market price trends are published annually by the Continuous Improvement Fund’s (CIFs) Price Sheet (January 2021). For 2020, SRPN #56 prices started the year at a low of \$24 per tonne in January and then increased gradually to finally close out the year at \$84 per tonne in December. The EWSWA average price for 2020 was \$74 per tonne which is higher than this provincially published CIF average of \$58 per tonne. The EWSWA 2019 average price for SRPN #56 was \$55 per tonne.

Old Corrugated Cardboard (OCC)

The EWSWA price for old corrugated cardboard ranged from a low of \$65 per tonne to a high of \$223 per tonne in 2020. The 2020 EWSWA average price per tonne was \$117 compared to \$81 in 2019. The Authority's average price of \$117 per tonne was equal to the provincial average of \$117 per tonne per the CIF Price Sheet - January 2021.

Hardpack (OBB)

(Example: cereal boxes, cardboard)

EWSWA's prices for this cardboard/boxboard mix start the year low at \$16 per tonne and increased due to the global market conditions to a high of \$157 per tonne in 2020. The 2020 EWSWA average price was \$56 compared to \$17 per tonne in 2019, again as a result of global market conditions. The Authority's average price of \$56 per tonne was higher than the provincial average of \$30 per tonne per the CIF Price Sheet - January 2021.

Fine Paper

Fine paper was sold in 2020 with an average price of \$153 per tonne. This is a decrease compared to the \$207 per tonne received in 2019.

Mixed Fibre (ONP #6)

Due to market demands of this low-grade fibre, only 1 load was shipped out in 2020, at 0\$ per tonne price, as all other marketable fibre streams were diverted.

3.2 Containers

Steel Cans

The pricing for steel cans ranged from a high of \$304 per tonne to a low of \$143 per tonne during 2020. The 2020 average price was \$196 per tonne compared to \$248 per tonne in 2019.

Aluminum Cans and Foil

The pricing for aluminium cans ranged from a high of \$1,459 per tonne to a low of \$1,146 per tonne. The 2020 average price was \$1,321 per tonne compared to \$1,477 in 2019. Aluminum foil was sold at an average price of \$449 during 2020, whereas in 2019 it sold at \$374 per tonne.

Glass

The average price for clear glass, marketed for new containers, in 2020 was \$27 per tonne. This is slightly lower than the 2019 average price of \$32 per tonne. Clear glass is the only product that is not marketed FOB (Freight On Board) at the Essex-Windsor MRF. Mixed coloured glass was delivered to the Regional Landfill for use as road base.

Polyethylene terephthalate (PET)

(Example: Plastic Water Bottles)

PET prices ranged from a high of \$336 per tonne to a low of \$97 per tonne in 2020. Due to market conditions, the average price was \$186 per tonne in 2020 which is lower than the 2019 average price of \$363 per tonne.

High-Density Polyethylene (HDPE)

(Example: Laundry Soap Bottles)

HDPE prices ranged from a high of \$630 per tonne to a low of \$120 per tonne in 2020. The average price was \$325 per tonne in 2020 compared to the 2019 average price of \$431 per tonne.

Polycoat and Gable Top

(Example: Milk Cartons)

Four loads of polycoat were shipped out in 2020 at an average price of \$21 per tonne compared to the average price of \$32 per tonne in 2019.

Mixed Plastics

(Example: tubs & lids, clamshells, trays, cups, plastic bottles, excludes polystyrene and plastic film bags)

In 2020, mixed plastic prices ranged from a high of \$112 per tonne to a low of \$53 per tonne. The average price was \$81 per tonne in 2020 compared to the average price of \$110 per tonne in 2019.

Table 2: Marketed Fibres Summary Comparison: 2019 versus 2020

Fibre Material	2019 Tonnes	2020 Tonnes	% Change
Old Newspaper (SRPN #56)	7,608	5,015	-34.1
Cardboard (OCC)	4,269	5,491	28.6
Hardpack (OCC/OBB mix)	2,346	2,287	-2.5
Fine Paper	36	37	2.8
Mixed Fibre	507	19	-96.3
Totals:	14,766	12,849	-13%

Table 3: Marketed Containers Summary Comparison: 2019 versus 2020

Container Material	2019 Tonnes	2020 Tonnes	% Change
Clear Glass	145	91	-37.2
Mixed Glass	2,288	2,571	12.4
Steel Cans	672	744	10.7
Aluminum Cans and Foil	281	345	22.8
Polyethylene terephthalate (PET)	1,334	1,514	13.5
High-Density Polyethylene (HDPE)	300	307	2.3
Polycoat/Gable top	91	65	-28.6
Mixed Plastics	656	588	-10.4
Totals:	5,767	6,225	7.9%

Table 4: Residential Recyclables Marketed Comparison

Tonnes Marketed	2019 Tonnes	2020 Tonnes
a) Total Tonnes Marketed	20,533	19,074
b) ICI Tonnes	(591)	(484)
Net Marketed Residential Recyclables	19,942	18,590

Notes: a) Total Tonnes Marketed less b) ICI Delivered Tonnes = Net Marketed Residential Recyclables. The 2019 diversion rate above, at 34.3% has been adjusted from the 34.4% as reported on the 2019 Waste Diversion report. This is due to an adjustment made to ICI tonnes for 2019.

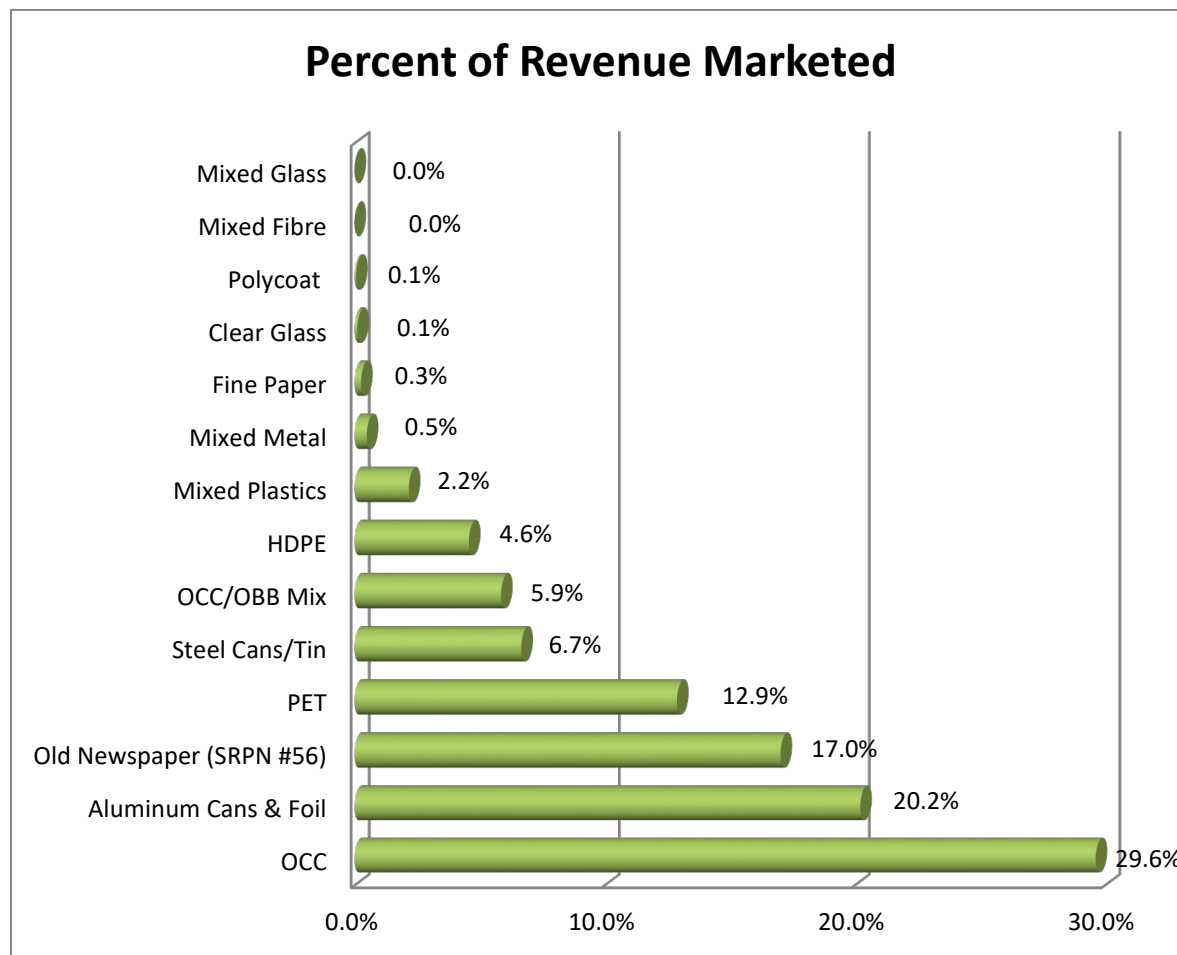
Table 5: Revenue Comparison: 2019 versus 2020

Recyclable Material	2019 Revenue	2020 Revenue
Old Newspaper (ONP#8)	\$421,670	\$371,557
Cardboard (OCC)	\$344,893	\$646,101
Hardpack	\$38,712	\$127,847
Clear Glass	\$4,668	\$2,423
Loose Fibre	\$0	\$0
Steel Cans	\$166,520	\$145,504
Fine Paper	\$7,416	\$5,740
Aluminum Cans and Foil	\$398,545	\$441,106
Polyethylene terephthalate (PET)	\$483,675	\$281,271
High-Density Polyethylene (HDPE)	\$129,411	\$99,769
Mixed Glass	\$0	\$0
Polycoat/Gable top	\$2,932	\$1,366
Mixed Plastics	\$72,224	\$47,396
Total Revenue	\$2,070,666	\$2,170,080

Table 6: Annual Revenue Comparison

Year	Revenue
2014	\$3,306,026
2015	\$3,101,234
2016	\$3,414,055
2017	\$4,241,411
2018	\$3,204,744
2019	\$2,076,450
2020	\$2,170,080

Figure 2: Percent of Revenue Marketed in 2020



Note: Due to rounding total revenue marketed does not total 100%.

3.3 Markets

While delivered tonnages for 2020 were similar to 2019, total revenue increased in 2020. Due to Covid-19 a favourable increase in fibre revenue was noted in 2020. This was mainly due to the increased demand in old corrugated cardboard needed to support the on-line retail shift due to Covid-19. On the flip side, an unfavourable shift in revenue in 2020 for the container market was a result of industry shutdown and thereby reduced demand for these materials.

4 Other Residential Recycling Programs

4.1 White Goods

Since 1991, white goods, such as fridges, stoves, air conditioners, washers, dryers, freezers dishwashers, etc. have been restricted from landfill disposal. In 2020, curbside collection of white goods from County municipalities captured 2,467 white good units (approximately 222 tonnes).

While the City of Windsor did not operate a white goods collection program during 2020 there were also 136 tonnes of white goods delivered to the Public Drop Off Depots for a combined total of approximately 358 tonnes. Using the Resource Productivity & Recovery Authority (RPRA) Municipal Datacall residual percentage of 20%, approximately 286 tonnes of white goods were recycled and diverted. Table 8 details the white goods collection program for each of the municipalities in the County of Essex by month during 2020.

Table 7: Summary of White Goods Diversion for 2020

White Goods Summary	2020 Tonnes
Curbside Collection Converted to Tonnes	222.03
Drop Off Depots	136.02
Total White Goods Tonnes	358.05
Less 20% Residual Calculation Amount	(71.61)
Total Tonnes Recycled and Diverted	286.44

Table 8: 2020 White Goods Collected by Month in Municipalities across Essex County

Month	Tecumseh	Essex	LaSalle	Amherstburg	Leamington	Kingsville	Total for Month
January	8	21	24	8	25	10	96
February	35	37	41	12	20	9	154
March	28	20	21	18	22	14	123
April	23	48	42	22	20	27	182
May	45	48	71	26	67	38	295
June	40	66	88	48	34	32	308
July	30	47	44	28	60	44	253
August	30	43	73	25	34	37	242
September	31	40	54	25	41	19	210
October	19	32	53	45	46	34	229
November	33	35	69	32	32	24	225
December	23	32	36	21	24	14	150
Total Units	345	469	616	310	425	302	2,467

Notes: 2,467 units with the average weight of 90 kilograms per unit results in diversion of approximately 222.03 tonnes; there was no Tonnes reported for Lakeshore in 2020.

4.2 Tires

In 2020, RPR Datacall resulted in the diversion of approximately 2830.9 tonnes of used tires in the Essex-Windsor area. While automotive tire recycling is now offered at many locations across Essex-Windsor, EWSWA does still collect and recycle used tires through the new RPR program.

4.3 Scrap Metal

There are 40-yard roll off bins located at the Windsor Public Drop-off Depot for the collection of ferrous and non-ferrous scrap metal material. The metals are sold through a competitive bid process to local scrap dealers. In 2020, approximately 495.55 tonnes of metals were collected and recycled. While the Authority does not advertise that it accepts other metal household objects besides steel cans in the blue box program, the Authority does receive and does try to capture any metal objects which are called "mixed metal".

4.4 Electronics Recycling

Under contract to the Authority, Greentec supplies sea containers for the collection of electronics at the Authority's Public Drop-off Depots. EWSWA staff place electronic items from the public in these containers. In 2020, a total of 322.14 tonnes of computers, televisions, audio visual equipment, and various electronic items were collected through the Waste Electrical and Electronics Equipment (WEEE) stewardship program. Based on a residual portion of 20%, the total electronics recycled was approximately 257.71 tonnes.

4.5 Deposit/Return Program

The Authority has a capture program at its Material Recovery Facility for deposit/return containers (i.e. aluminum beer cans; glass, wine and spirit bottles) that were placed curbside for blue box collection. During 2020, approximately 41 tonnes of deposit/return containers were received at the MRF and are included as part of the 2,196.94 tonnes that were diverted throughout Essex-Windsor as part of the Deposit/Return & Stewardship Program. The 2,197 diversion tonnes figure is calculated as part of the 2020 Resource Productivity and Recovery Authority Datacall and is based on the Essex-Windsor population as determined by the latest Statistics Canada Census data.

Table 9: Other Recyclables Comparison: 2019 versus 2020

Recyclable Material	2019 Tonnes	2020 Tonnes	% Change
White Goods (all sites)	279	286	2.5%
Used Tire Program	2,831	2,831	0.0%
Scrap & Mixed Metal	660	496	-24.8%
Electronics	253	258	2.0%
Deposit/Return & Stewardship Program	2,197	2,197	0.0%
Total Other Recyclables	6,220	6,068	-2.4%

Note: RPRA Datacall calculation is based on population for Used Tire Program and Deposit/Return & Stewardship Program in the Essex-Windsor area as reported by the Statistics Canada Census.

5 Residential Organics

5.1 Yard Waste

Grass, leaves, tree trimmings and brush are restricted from disposal at the Essex-Windsor Regional Landfill Site. As a result, all local municipalities have established separate collection systems for yard waste, including special collections in January for Christmas trees. Furthermore, individual residents and grounds maintenance contractors also brought yard waste to each of the three-yard waste depots operated by the Essex-Windsor Solid Waste Authority in 2020.

The Essex-Windsor area accepts the use of paper bags, wheeled carts, garbage bins and cardboard boxes for the collection of yard waste. Plastic bags are not accepted. Approximately 25,690 tonnes of yard waste was received in 2020, which a decrease of 15% compared to the 30,293 tonnes delivered in 2019.

Table 10: 2020 Yard Waste Summary for all sites

Material Type	Windsor Public Drop Off	Kingsville Transfer Station 2	Regional Landfill	Total
Municipal Delivered	12,938	1,651	4,779	19,368
Residential Delivered	4,247	899	296	5,442
Total Res. Organics	17,185	2,550	5,075	24,810
*ICI Organics and Pallets	382	383	115	880
Grand Total (Tonnes)	17,567	2,933	5,190	25,690

*ICI is Industrial, Commercial and Institutional delivered material type.

Table 11: Yard Waste Tonnes Comparison: 2019 versus 2020

Material Type	2019 Tonnes	2020 Tonnes
Municipal Delivered	17,425	19,368
Residential Delivered	6,282	5,442
Total Res. Organics	23,707	24,810
*ICI Organics and Pallets	6,586	880
Grand TOTAL (Tonnes)	30,293	25,690

*ICI is Industrial, Commercial and Institutional delivered material type.

5.2 Screened Compost Sales

The Authority undertakes an in-depth process to the organics and yard waste it receives to turn it into saleable, quality compost. The composting process involves grinding up yard waste and placing it in long rows called 'windrows'. The material is turned frequently and the temperature is maintained above 55 degrees Celsius in order to kill any pathogens or weed seeds. Once the compost has matured it is tested, screened, and then sold for use in landscaping, as well as flower and vegetable gardens.

In 2020 compost was sold as bulk (delivered or pick-up), bag your own, and prepackaged items as listed in Table 12.

Table 12: Compost Sales 2020 Summary

Compost Material	Quantity Sold	Tonnes
Delivered	1,245 cubic yards	732
Bulk Sales	28,341 cubic yards	16,665
Bag Your Own Compost	889 bags	24
Prepackaged Garden Gold Compost	11,252 bags	214
Total Tonnes		17,635

Notes: Prepackaged bag weights are based on approximately 19 kg/bag; bag your own compost is approximately 27 kg/bag and bulk compost is approximately 588 kg/cubic yard.

Under contract to the Authority, Frank Dupuis Landscaping and Trucking provided delivery services for the sale of 732 tonnes of bulk compost locally. Also 16,665 tonnes in bulk sales were sold to residents and businesses at EWSWA Depots. Additionally, about 11,252 prepackaged bags of compost were sold at the Depots. Many residents also bagged their own compost at one of the depots. The combined total weight of compost sold was approximately 17,635 tonnes. In 2020, compost sales totaled \$258,865.

5.3 Backyard Composting

Backyard composters (BYC) with the brand name “The Earth Machine” and “The Green Cone” were sold to Essex-Windsor residents in 2020. The Earth Machine was sold through local Home Hardware stores year-round. Both units were sold during an EWSWA week long fall sale. Approximately 99 Earth Machine units were sold through the Home Hardware stores and 37 units were sold during the fall sale and miscellaneous sales for a total of 136 units sold in 2020. There were 45 Green Cones sold in 2020. This brings the cumulative total to 797 Green Cones distributed since 2010, which is when they were first introduced to the area. The combined BYC distributed in 2020 was 181 units bringing the total number of units sold since 1988 to 40,062 units.

Current research has indicated that approximately 100 kg/year/BYC is diverted as a result of the backyard composting program. This translates into 4,006 tonnes of organic waste diverted from the landfill through this program. This does not consider homemade composters or composting done independent of the Authority’s backyard composting program.

Table 13: Residential Organic Waste Reduction Comparison: 2018 — 2020

Residential Organic Programs	2018 Tonnes	2019 Tonnes	2020 Tonnes
BYC Program	3,953	3,988	4,006
Mulching Blades	1,343	1,343	1,343
Yard Waste (Residential)	23,421	23,707	24,810
Total Residential Organics	28,717	29,038	30,159

Notes: The mulching blade program was no longer directly offered through EWSWA after 2001. Even though mulching blades and mowers are used by residents in the area, it can't be measured for the purposes of this report; therefore, no increase in diversion is indicated.

6 Promotion and Education (P&E)

6.1 Community Presentations and Outreach

In 2020, Authority staff conducted 4 presentations at various locations where 521 people from community groups, events, open houses, schools etc. attended. With Covid-19, public presentations were limited. The emphasis for the P&E program in 2020 was on the Plastic Bags Ban in the blue box program, which was an 8-month long mass media campaign. This No Plastic Bags Ban campaign began in February with a mass media campaign and many meetings and correspondences with Blue Box recycling user groups. Communications and support was offered to the multi-residential sector, ICI sector, residents and even Home Hardware a distributor of EWSWA branded merchandise. Emails, collaborative meetings, letters, social media, ewswa.org, Recycle Coach, e-newsletters, radio, on-line and print media blitzes were strategies used.

To evaluate the success of the campaign that happened well in advance of the ban, pre-ban and post-ban curbside audits were done across Essex-Windsor, where 7866 homes contained plastic bags pre-ban and only 924 had bags contained in their curbside recycling post-ban. Eventually this campaign was deemed successful as a 96% curbside compliance was achieved which in the supported a cleaner recycling program for Essex-Windsor.

6.2 Special Community Events

Authority staff usually organize displays and talk to area residents at various special events scheduled such as the Horticultural Show, Earth Day Celebrations and the Truckload Sale. Due to Covid-19 there was only one special event serviced with recycling in 2020. As a result, many special event venues had implemented their own sustainable recycling program throughout the season (April through September) to service small numbers and did not require the per event service offered by EWSWA in 2020.

6.3 On-going Public Education Activities

The Authority maintains a Waste Reduction Hotline (1-800-563-3377), a website (www.ewswa.org), and an annual newsletter called EnviroTips which is delivered to each household and is available online.

E-newsletters are also part of the program as they are low cost and reach residents quickly and effectively. The Authority has 3,035 e-newsletter subscribers. Industry standards indicate that a decent open rate is anything between 20-33%. Open rates for e-newsletters are as follows: No Plastic Bag Campaign 55.3%; Gold Box, 56.6%; Waste Reduction Week, 61.1%.

The EWSWA website (www.ewswa.org) is updated on a regular basis to provide detailed information and public education to residents. Topics covered range from waste management and reduction, to details about waste diversion activities. Through the website, residents have access to instructions, tenders, reports, calendars, acceptable recycle box materials, incentives, etc. In 2020 there were approximately 70,830 hits on the website bringing the total hits to 351,907 hits since the launch of this website in 2012; the monthly average hits in 2020 had a duration of approximately 1.41 minutes. The 'What Goes Where' material search database resulted in 47,457 searches and municipal calendar searches were at 69,992 searches in 2020. In 2020, method of access by device was 57.7% mobile; 36.6% desktop computer and 6.28% tablets.

Recycle Coach is an app which makes recycling and collection schedule information easy to find. The app is continuously developing new programs that combat complacency and gets people re-engaged in recycling. It promotes best practices ideas on better waste management to improve outcomes such as increasing the amount recycled, proper disposal and diversion of solid waste, etc. In 2019 & 2020, EWSWA made it a priority to

promote this app and get local residents onboard with accessing information around solid waste through this app. As a result, increased metrics listed below were noted for Recycle Coach in 2020:

- 15,456 total subscribers
- 1,960,860 resident interactions
- 163,405 average monthly resident interactions

EWSWA also continues to maintain a presence in social media sites such as Facebook, Instagram and Twitter. EWSWA started with 30 Twitter followers in January 2015 and had 834 followers by December 2020.

6.4 Gold Star Program

In 2016, the Authority launched a new recycling incentive program aimed at increasing public awareness regarding the red and blue box recycling program. Residents were encouraged to apply for a new “Gold Recycling Box” through a program that evaluated their curbside recycling, provided feedback and rewarded successful recyclers with a gold box. The program’s ultimate objective is to decrease the amount of contamination being put out by residents and thereby decrease the amount of contamination at the MRFs. The program was renewed in 2017 and 2,050 residents registered for the “Gold Star” program.

By 2018, all 2,050 homes were inspected and received feedback; where 1,217 homes were awarded a gold box. Due to the demand and success of this program, in 2019 300 more applicants were accepted into the program and 284 more gold boxes were awarded. In 2020 another 100 residents were accepted and all were awarded gold start boxes.

7 Municipal Hazardous or Special Wastes (MHSW) Program

7.1 MHSW Depots

The Essex-Windsor Solid Waste Authority opened its Windsor MHSW Depot in October 1995. In addition to the Windsor facility, the Authority opened a second MHSW Depot at Transfer Station No. 2 in the Town of Kingsville in 1997. A third depot was opened at the Essex-Windsor Regional Landfill Site in October 2013. The Depots replaced the annual Household Chemical Waste Days held in Essex-Windsor. In 2020, facilities were closed approximately for two months due to Covid-19. A total of only 596,936 litres and 112,741 kg

of MHSW materials were delivered to the sites in 2020. See Table 14 and 15 for details.

Reuse Centre

A Reuse Centre has been operational at the Windsor MHSW facility since 1995.

Paint is distributed in both 1-gallon and 5-gallon pails for reuse. According to the records, 359 residents accessed the Reuse Centre and took 10,201 products or approximately 14,663 kg of paint and miscellaneous materials in 2020 compared to 57,908 products or 83,516 kg of reusable materials in 2019. Due to Covid-19 this program was closed since March 2020.

Mercury Roundup Program

In June 2019, the Essex-Windsor Solid Waste Authority launched Mercury Roundup: an initiative designed to divert a toxic chemical—liquid mercury—from the waste stream. In partnership with Scout Environmental, and with funding from the Ontario Trillium Foundation, Essex-Windsor has become one of the first environmentally conscious municipalities to launch the Mercury Roundup program that will expand to six other Ontario municipalities by 2021. With this program only residents who dropped off a product containing mercury received a free digital thermometer. In 2020, 72 products were received equalling about 0.266 kilograms of mercury.

Table 14: Municipal Hazardous or Special Waste for 2020 in Litres

Material	MHSW from Facilities	Reuse Centre Quantities	Total
Adhesives/Flammable Liquids	60,026	3,064.10	63,090
Aerosols	8,270	261.63	8,532
Antifreeze (Glycol)	11,185	0	11,185
Corrosive Liquid	9,078	80.78	9,159
Inorganic Acids	1,415	0	1,415
Paints & Coatings	239,955	10,019.70	249,975
Pesticides	5,023	109.80	5,133
Waste Oils (hydraulic fluid)	18,500	0	18,500
Recyclable Waste Oil	204,650	0	204,650
Total MHSW Litres	558,102	13,536	571,638

Table 15: Municipal Hazardous or Special Waste for 2020 in Kilograms

Material	MHSW from Facilities	Reuse Centre Quantities	Total
Car Batteries	15,450	0	15,450
Dry Cell Batteries	7,449	0	7,449
Fire Extinguishers	2,136	0	2,136
Fluorescents/Misc. Lamps/Ballasts	17,103	0	17,103
Inorganic Oxidizers	2,999	1,127	4,126
Mercury (HG items)/Lead	33	0	33
Pharmaceuticals	758	0	758
Plastic Used Oil Containers	17,424	0	17,424
Propane Cylinders	3,566	0	3,566
Propane Tanks/Misc. Tanks	24,386	0	24,386
Rechargeable & Mixed Batteries	0	0	0
Corrosive Solids (e.g. cement)	1,591	0	1,591
Waste Oil Filters	873	0	873
Total MHSW Kilograms	93,768	1,127	94,895

Table 16: MHSW Diversion Comparison

	2019 Tonnes	2020 Tonnes
MHSW Recycled or Reused	709	667
MHSW not Recycled	(18)	(19)
Total MHSW Diverted	691	648

7.2 Waste Motor Oil

Waste motor oil is collected curbside with the residential recycling program. As well, residents are able to deliver oil to the MHSW facilities. The quantity of waste motor oil collected during 2020 was 204,650 litres, which is up by 11.6% compared to the 183,450 litres collected in 2019. The quantity of oil collected by month is shown in Table 17 with historical data over four years.

Table 17: Litres Motor Oil Collected

Month	2017 Litres	2018 Litres	2019 Litres	2020 Litres
January	14,680	10,225	8,875	13,825
February	8,700	4,950	6,025	5,925
March	7,311	13,100	11,025	11,425
April	20,320	20,800	20,850	19,125
May	21,600	22,750	17,950	6,750
June	18,400	16,400	20,900	21,625
July	20,575	20,150	20,075	23,825
August	17,300	16,350	18,725	20,475
September	14,450	15,325	17,950	26,700
October	14,900	18,425	15,275	20,900
November	20,200	13,425	14,275	18,900
December	7,950	13,050	11,525	15,175
Total:	186,386	184,950	183,450	204,650

8 Overall Summary of Residential Diversion Quantities

8.1 Residential Waste Diversion

Table 18 summarizes the residential waste diversion activities detailed in this report.

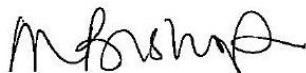
Table 18: Residential Waste Diversion Activity

Residential Waste Diversion Summary	2019 Tonnes	2020 Tonnes
Net Marketed Recyclables (Table 4)	19,942	18,590
Other Recycling Programs (Table 9)	6,220	6,068
Yard Waste, BYC & Mulching Blades (Table 13)	29,038	30,159
MHSW Waste including Motor Oil (Table 16)	691	648
Total Residential Tonnes Diverted	55,891	55,465

For further information please contact the Essex-Windsor Solid Waste Authority Hotline at 1-800-563-3377.



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