

Essex-Windsor Solid Waste Authority



ANNUAL REPORT

Essex-Windsor Residential Waste Diversion 2019

Report Date: March 31, 2020

Table of Contents

1	INTRODUCTION	1
1.1	Residential Waste Diversion Rate 2019	1
2	PROGRAMS	2
2.1	Residential Recycling Blue Box Program	2
	Table 1: Residential Recycling Blue Box Collection Tonnes by Month Comparison: 2018 with 2019	3
2.2	Recycling Residual Disposal	3
3	TONNES MARKETED	3
	Figure 1: Percent of Tonnes for 2019 Marketed Recyclables	4
3.1	Fibres	4
	Old Newspaper (ONP)	4
	Old Corrugated Cardboard (OCC)	5
	Hardpack	5
	Fine Paper	5
	Loose Fibre	5
3.2	Containers	5
	Steel Cans	5
	Aluminum Cans and Foil	6
	Glass	6
	Polyethylene terephthalate (PET)	6
	High-Density Polyethylene (HDPE)	6
	Polycoat and Gable Top	6
	Mixed Plastics	7
	Table 2: Marketed Fibres Summary Comparison: 2018 versus 2019	7
	Table 3: Marketed Containers Summary Comparison: 2018 versus 2019	7
	Table 4: Residential Recyclables Marketed Comparison: 2018 versus 2019	8
	Table 5: Revenue Comparison: 2018 versus 2019	8
	Table 6: Annual Revenue Comparison	9
	Figure 2: Percent of Revenue Marketed in 2019	9
3.3	Markets	10
4	OTHER RESIDENTIAL RECYCLING PROGRAMS	11
4.1	White Goods	11
	Table 7: Summary of White Goods Diversion for 2019	11
	Table 8: 2019 White Goods Collected by Month in Municipalities across Essex County	12
4.2	Tires	13
4.3	Scrap Metal	13

4.4 Electronics Recycling	13
4.5 Deposit/Return Program	14
Table 9: Other Recyclables Comparison: 2018 versus 2019	14
5 Residential Organics	14
5.1 Yard Waste	14
Table 10: 2019 Yard Waste Summary for all sites	15
Table 11: Yard Waste Tonnes Comparison: 2018 versus 2019	15
5.2 Screened Compost Sales	15
Table 12: Compost Sales 2019 Summary	16
5.3 Backyard Composting	16
Table 13: Residential Organic Waste Reduction Comparison: 2017 — 2019	17
6 PROMOTION AND EDUCATION	17
6.1 School and Community Presentations	17
6.2 Special Community Events	17
6.3 On-going Public Education Activities	17
6.4 Gold Star Program	18
7 MUNICIPAL HAZARDOUS OR SPECIAL WASTES (MHSW) PROGRAM	19
7.1 MHSW Depots	19
Reuse Centre	19
Mercury Roundup Program	20
Table 14: Municipal Hazardous or Special Waste for 2019 in Litres	20
Table 15: Municipal Hazardous or Special Waste for 2019 in Kilograms	21
Table 16: MHSW Diversion Comparison: 2018 versus 2019	21
7.2 Waste Motor Oil	21
Table 17: Motor Oil Collected (Litres) 2016 through 2019	22
8 OVERALL SUMMARY OF RESIDENTIAL DIVERSION QUANTITIES	22
8.1 Residential Waste Diversion	22
Table 18: Residential Waste Diversion Activity	22

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Essex-Windsor Residential Waste Diversion

Annual Report for January – December 2019

1 Introduction

The Annual Waste Diversion Report provides information on the waste diversion activities carried out by the Essex-Windsor Solid Waste Authority during 2019 in compliance with Condition 5.2 of the Environmental Assessment Approval for the Essex-Windsor Regional Landfill.

1.1 Residential Waste Diversion Rate 2019

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 2019, the seven County of Essex municipalities and the City of Windsor delivered 102,452 tonnes of residential waste to the Regional Landfill. During the same time period, 56,047 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 2019 residential diversion rate of 34.4%. The 2018 diversion rate was 36.3%.

2019 Residential Diversion Rate is calculated as follows:

$$\frac{56,047 \text{ Tonnes Diverted (see Table 18, Page 23)}}{102,452 \text{ Tonnes of Residential Refuse Collected Curbside} + 4,513 \text{ Residuals} + 56,047 \text{ Diverted Tonnes}} = \frac{56,047}{163,012} \times 100 = 34.4\%$$

2018 Residential Diversion Rate is calculated as follows:

$$\frac{58,750 \text{ Tonnes Diverted (see Table 18, Page 23)}}{100,565 \text{ Tonnes of Residential Refuse Collected Curbside} + 2,440 \text{ Residuals} + 58,750 \text{ Diverted Tonnes}} = \frac{58,750}{161,755} \times 100 = 36.3\%$$

2 Programs

2.1 Residential Recycling Blue Box Program

The tonnes of residential recyclable materials collected curbside during 2019 totaled 25,426 tonnes. The overall tonnes of recyclables collected in 2019 were slightly lower compared to the 26,011 tonnes collected in 2018.

A monthly summary and comparison of the tonnes collected curbside from the City and the County in 2018 and 2019 is shown in Table 1. Collection of recyclables in the County was carried out under contract in 2019 by Windsor Disposal Services Ltd. Collection of recyclables in Windsor 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.

In addition to the residential recyclables collected curbside, 495 tonnes of recyclables were delivered to the Authority's Public Drop Off Depots in 2019. This is down 33% from 2018 where 735 tonnes were delivered.

**Table 1: Residential Recycling Blue Box Collection Tonnes by Month
Comparison: 2018 with 2019**

Month	2019 County of Essex Tonnes	2019 City of Windsor Tonnes	2019 Combined Tonnes	2018 Comparable Tonnes
January	1,099.61	1,075.24	2,174.85	2,343.65
February	972.63	917.59	1,890.22	1,955.57
March	945.63	932.95	1,878.58	2,090.20
April	1,063.56	1,119.42	2,182.98	2,038.99
May	1,287.05	1,283.19	2,570.24	2,521.74
June	1,007.06	1,031.30	2,038.36	2,146.27
July	1,086.20	1,110.90	2,197.10	1,980.10
August	1,025.06	1,053.24	2,078.30	2,210.14
September	998.25	1,030.87	2,029.12	2,039.40
October	1,127.57	1,097.80	2,225.37	2,231.67
November	1,040.92	1,032.53	2,073.45	2,296.10
December	1,075.17	1,012.20	2,087.37	2,156.72
Column Totals:	12,728.71	12,697.23	25,425.94	26,010.55

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

2.2 Recycling Residual Disposal

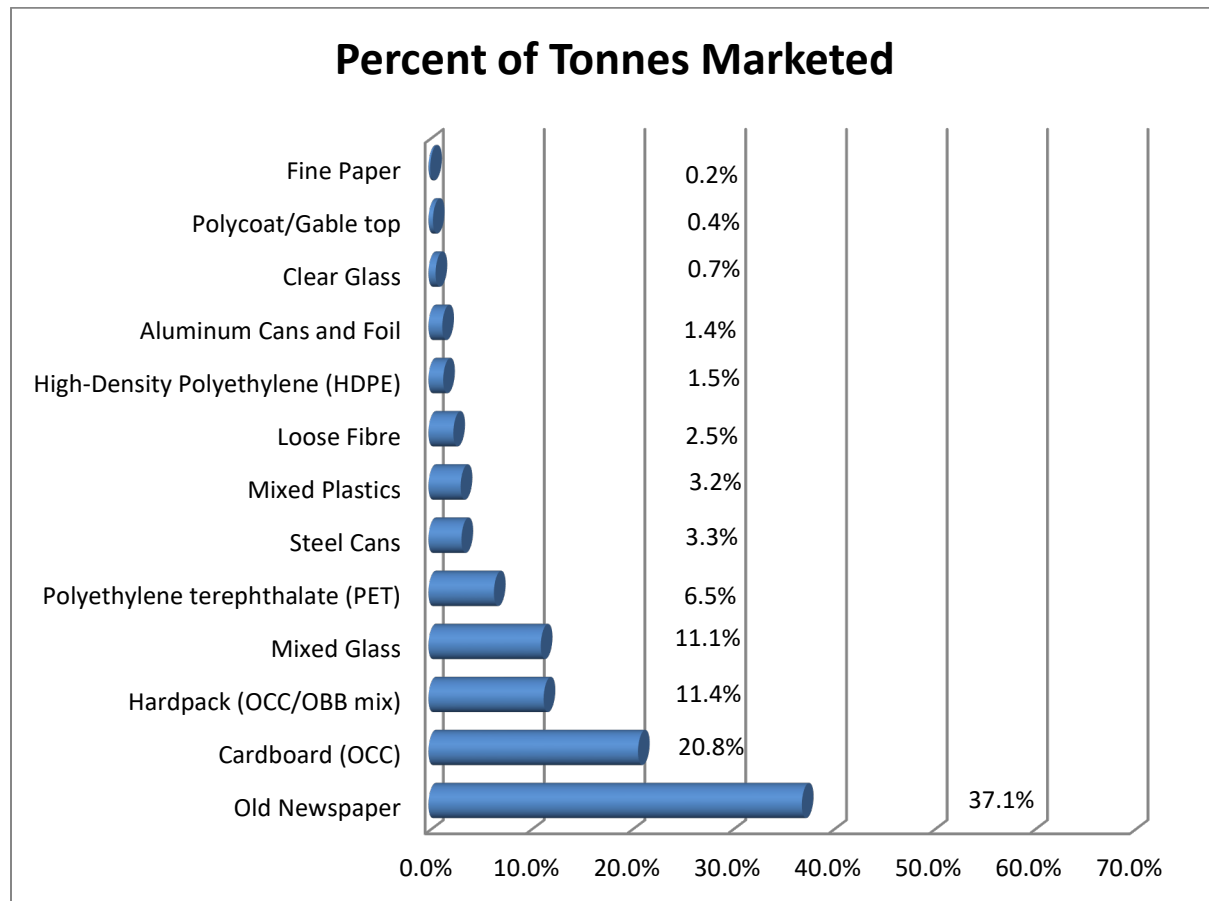
Recycling Residual is the material that is left over after the processing of the recyclable materials are collected and delivered to the MRF. The residuals consist of contaminated materials, non-recyclable materials, and packaging materials used to secure recyclables placed in the recycle box. A total of 4,513.29 tonnes of recycling residuals was disposed of in 2019.

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 Table 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 2019 was approximately \$2,070,666 (see Table 5) representing a basket-of-goods revenue of approximately \$101/tonne compared to a basket-of-goods revenue of \$134/tonne in 2018. A brief discussion on market conditions and prices for each of the materials follows.

Figure 1: Percent of Tonnes for 2019 Marketed Recyclables



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

3.1 Fibres

Old Newspaper (ONP)

Ontario market price trends are published annually by the Continuous Improvement Fund's (CIFs) Price Sheet (January 2020). For 2019, ONP prices started the year at a high of \$61 per tonne in January and then declined gradually to finally close out the year at \$33 per tonne in December. The EWSWA average price for 2019 was \$55 per tonne which is

higher than this provincially published CIF average of \$44 per tonne. The EWSWA 2018 average price for ONP was \$75 per tonne.

Old Corrugated Cardboard (OCC)

The EWSWA price for old corrugated cardboard again started the year high at \$122 per tonne and dropped due to global market conditions to a low of \$60 per tonne by the end of 2019. The 2019 EWSWA average price per tonne was \$81 compared to \$126 in 2018. The Authority's average price of \$81 per tonne was just short of the provincial average of \$84 per tonne per the CIF Price Sheet- January 2020.

Hardpack (OBB)

(Example: cereal boxes, cardboard)

EWSWA's prices for this cardboard/boxboard mix ranged from a high of \$88 to a low of \$1 per tonne in 2019. The 2019 EWSWA average price was \$17 compared to \$89 per tonne in 2018, again as a result of global market conditions. Even though market prices dropped severely in 2019, the Authority's average price of \$17 per tonne was slightly lower than the provincial average (\$19 per tonne) per the CIF Price Sheet- January 2020.

Fine Paper

Fine paper was sold in 2019 with an average price of \$207 per tonne. This is a decrease compared to the \$279 per tonne received in 2018 again as a result of the fibre market crisis.

Loose Fibre

As a result of a major equipment changeover in the Fibre MRF in 2019, the Fibre MRF was unable to process incoming delivered materials for a few days. Therefore, all incoming materials during this timeframe to the Fibre MRF were shipped loose to a fibre recycling processor with no charge to the Authority due to fibre market conditions.

3.2 Containers

Steel Cans

The pricing for steel cans ranged from a high of \$333 per tonne to a low of \$155 per tonne during 2019. The 2019 average price was \$248 per tonne compared to \$304 per tonne in 2018.

Aluminum Cans and Foil

The pricing for aluminium cans ranged from a high of \$1,615 per tonne to a low of \$1,338 per tonne. The 2019 average price was \$1,477 per tonne compared to \$1,761 in 2018. Aluminum foil was sold at an average price of \$374 during 2019.

Glass

The average price for clear glass, marketed for new containers, in 2019 was \$32 per tonne. This is slightly lower than the 2018 average price of \$36 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 \$493 per tonne to a low of \$168 per tonne in 2019. The average price was \$363 per tonne in 2019 which is lower than the 2018 average price of \$438 per tonne.

High-Density Polyethylene (HDPE)

(Example: Laundry Soap Bottles)

HDPE prices ranged from a high of \$562 per tonne to a low of \$315 per tonne in 2019. The average price was \$431 per tonne in 2019 compared to the 2018 average price of \$497 per tonne.

Polycoat and Gable Top

(Example: Milk Cartons)

Five loads of polycoat were shipped out in 2019 at an average price of \$32 per tonne compared to the average price of \$76 per tonne in 2018.

Mixed Plastics

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

In 2019, mixed plastic prices ranged from a high of \$117 per tonne to a low of \$80 per tonne. The average price was \$110 per tonne in 2019 compared to the average price of \$72 per tonne in 2018.

Table 2: Marketed Fibres Summary Comparison: 2018 versus 2019

Fibre Material	2019 Tonnes	2018 Tonnes	% Change
Old Newspaper (ONP)	7,608	11,472	-33.7%
Cardboard (OCC)	4,269	4,062	5.1%
Hardpack (OCC/OBB mix)	2,346	1,647	42.4%
Fine Paper	36	81	-55.6%
Loose Fibre	507	237	113.9%
Totals:	14,766	17,499	-15.6%

Table 3: Marketed Containers Summary Comparison: 2018 versus 2019

Container Material	2019 Tonnes	2018 Tonnes	% Change
Clear Glass	145	207	-30.0%
Mixed Glass	2,288	2,446	-6.5%
Steel Cans	672	773	-13.1%
Aluminum Cans and Foil	281	298	-5.7%
Polyethylene terephthalate (PET)	1,334	1,554	-14.2%
High-Density Polyethylene (HDPE)	300	312	-3.8%
Polycoat/Gable top	91	97	-6.2%
Mixed Plastics	656	718	-8.6%
Totals:	5,767	6,405	-10.0%

Table 4: Residential Recyclables Marketed Comparison: 2018 versus 2019

Tonnes Marketed	2019 Tonnes	2018 Tonnes
a) Total Tonnes Marketed	20,533	23,904
b) ICI Tonnes	(435)	(746)
Net Marketed Residential Recyclables	20,098	23,158

Notes: a) Total Tonnes Marketed less b) ICI Delivered Tonnes = Net Marketed Residential Recyclables.

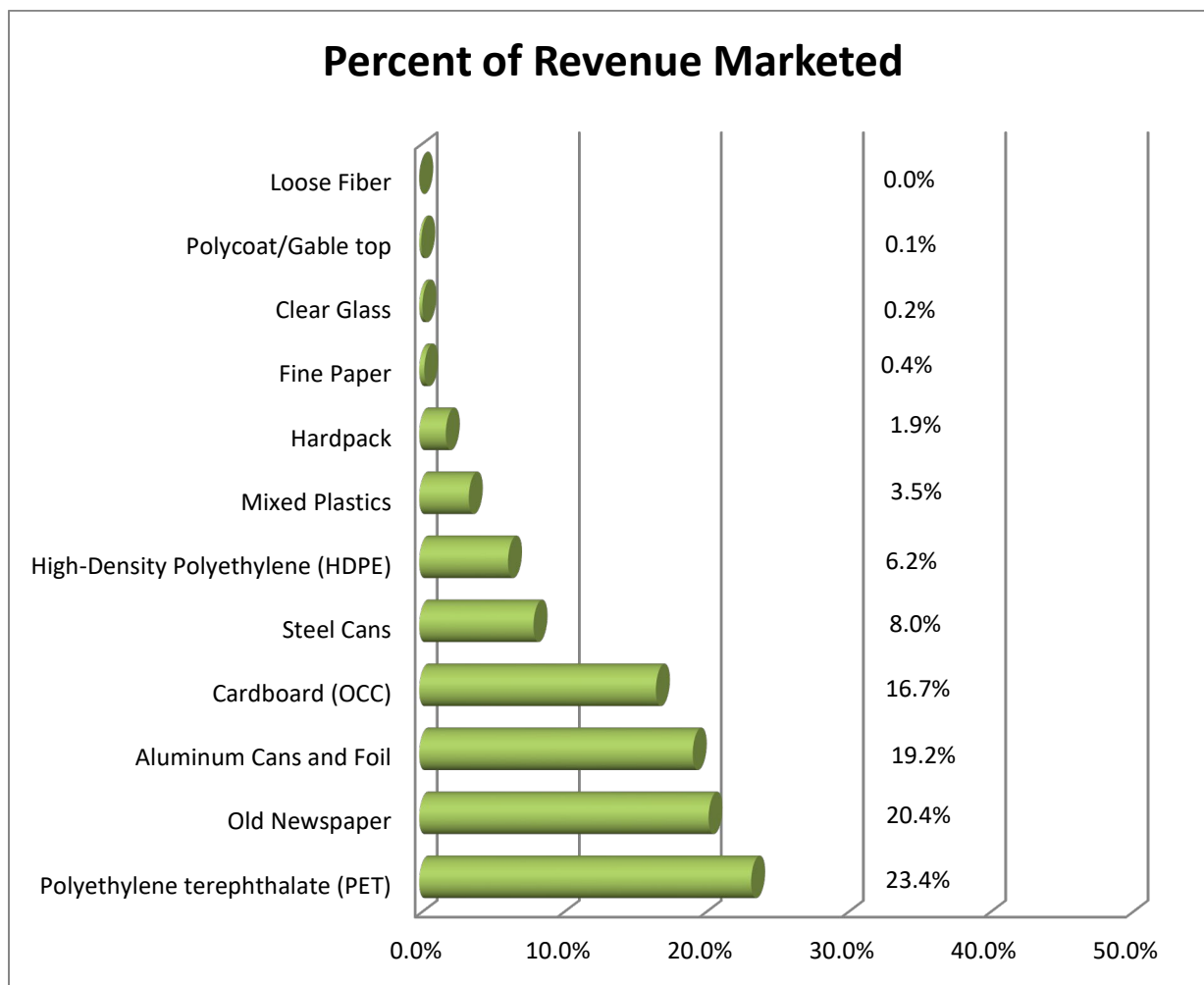
Table 5: Revenue Comparison: 2018 versus 2019

Recyclable Material	2019 Revenue	2018 Revenue
Old Newspaper (ONP#8)	\$421,670	\$858,637
Cardboard (OCC)	\$344,893	\$513,125
Hardpack	\$38,712	\$146,834
Fine Paper	\$7,416	\$22,470
Loose Fibre	\$0	\$1,182
Clear Glass	\$4,668	\$7,407
Steel Cans	\$166,520	\$235,222
Aluminum Cans and Foil	\$398,545	\$525,109
Polyethylene terephthalate (PET)	\$483,675	\$680,412
High-Density Polyethylene (HDPE)	\$129,411	\$155,100
Polycoat/Gable top	\$2,932	\$7,330
Mixed Plastics	\$72,224	\$51,916
Total Revenue	\$2,070,666	\$3,204,744

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	\$2,070,666

Figure 2: Percent of Revenue Marketed in 2019



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

3.3 Markets

While delivered tonnages for 2019 were similar to 2018, there was a significant reduction in revenue generated in 2019 from the recycling markets. Due to import regulations changing in China, the North American recycling markets in 2019 finally hit an all-time low. This impacted domestic markets in 2019 as witnessed by oversaturation with recycling materials and thereby imposing greater demands (e.g., quality specifications enforced, dropping prices) to domestic sellers like EWSWA.

As a result, early in 2019, the fibre markets were hit hardest, as prices fell to an all-time low and eventually stabilized at this new low market price by the end of the year. Container market prices didn't start their decline until late summer. It is important to note that while prices for containers dropped, this decrease was nowhere near the significance of the hardship experienced in the fibre markets in 2019. These significant market changes are reflected in Table 5 on page 9 of this report. More importantly, due to many EWSWA strategies like: pre-establishment in the domestic market, efforts of Waste Diversion staff to produce higher quality materials through continuous improvement efforts and capital investment, and ongoing successful work with buyers and contractors, EWSWA was able to move all materials in 2019.

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 2019, curbside collection of white goods from County municipalities captured 1,738 white good units (approximately 156 tonnes).

While the City of Windsor did not operate a white goods collection program during 2019 there were also 193 tonnes of white goods delivered to the Public Drop Off Depots for a combined total of approximately 349 tonnes. Using the Resource Productivity & Recovery Authority (RPRA) Municipal Datacall residual percentage of 20%, approximately 279 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 2019.

Table 7: Summary of White Goods Diversion for 2019

White Goods Summary	2019 Tonnes
Curbside Collection Converted to Tonnes	156.42
Drop Off Depots	192.92
Total White Goods Tonnes	349.34
Less 20% Residual Calculation Amount	(69.87)
Total Tonnes Recycled and Diverted	279.47

Table 8: 2019 White Goods Collected by Month in Municipalities across Essex County

Month	Tecumseh	Essex	LaSalle	Amherstburg	Leamington	Kingsville	Total for Month
January	7	13	22	21	11	24	98
February	8	18	20	29	16	20	111
March	12	15	19	24	14	17	101
April	11	18	32	29	17	20	127
May	18	9	34	29	34	27	151
June	17	25	39	43	24	29	177
July	16	20	32	44	22	28	162
August	22	21	20	32	25	33	153
September	20	30	30	35	26	12	153
October	14	22	42	34	35	28	175
November	28	31	37	42	30	30	198
December	15	26	20	22	17	32	132
Total Units	188	248	347	384	271	300	1,738

Notes: 1,738 units with the average weight of 90 kilograms per unit results in diversion of approximately 156.42 tonnes; there was no Tonnes reported for Lakeshore in 2019.

4.2 Tires

In 2019, EWSWA like all other municipalities transitioned their tire recycling program early in the year from the Ontario Tire Stewardship Used Tires Program to the Used Tire program under Resource Productivity and Recovery Authority (RPRA). RPRA's goal is to support a waste-free Ontario, where all resources are reused and recycled through the new Individual Producer Responsibility (IPR) framework. This is due to the Tires Regulation under the Resource Recovery and Circular Economy Act, 2016 (RRCEA) that designated tires as the first material under Ontario's IPR framework to transition.

While automotive tire recycling is now offered at many locations across Essex-Windsor, EWSWA does still collect and recycle used tires through the new RPRA program. In 2019, RPRA Datacall resulted in diversion of approximately 2,830.90 tonnes of used tires in the Essex-Windsor area.

4.3 Scrap Metal

There are 40-yard roll off bins located at the Public Drop-off Depot for collection of ferrous and non-ferrous scrap metal material. The metals are sold through a competitive bid process to local scrap dealers. In 2019, approximately 588.08 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". An additional 71.86 tonnes of mixed metals were received in 2019 for a total of 660 tonnes of scrap metal.

4.4 Electronics Recycling

Under contract to the Authority, Greentec supplies roll off bins for the collection of electronics at the Authority's Public Drop-off Depots. EWSWA staff place the electronic items from the public in these bins. In 2019, a total of 316.61 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 253.29 tonnes.

4.5 Deposit/Return Program

The Authority implemented 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 and continued to be successful in 2019. During 2019, approximately 39 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 2019 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: 2018 versus 2019

Recyclable Material	2019 Tonnes	2018 Tonnes	% Change
White Goods (all sites)	279	227	42.73%
Used Tire Program	2,831	2,831	0.00%
Scrap & Mixed Metal	660	644	2.48%
Electronics	253	270	-6.30%
Deposit/Return & Stewardship Program	2,197	2,197	0.00%
Total Other Recyclables	6,220	6,169	1.56%

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 many 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 one of the three yard waste depots operated by the Essex-Windsor Solid Waste Authority in 2019.

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 30,293 tonnes of yard waste was received in 2019, which a decrease of 12% compared to the 34,435 tonnes delivered in 2018.

Table 10: 2019 Yard Waste Summary for all sites

Material Type	Windsor Public Drop Off	Kingsville Transfer Station 2	Regional Landfill
Municipal Delivered	11,315	1,736	4,374
Residential Delivered	4,969	1,150	163
Total Res. Organics	16,284	2,886	4,537
ICI Organics and Pallets	492	341	5,753
Grand Total (Tonnes)	16,776	3,227	10,290

Note: ICI is Industrial, Commercial and Institutional delivered material type.

Table 11: Yard Waste Tonnes Comparison: 2018 versus 2019

Material Type	2019 Tonnes	2018 Tonnes
Municipal Delivered	17,425	15,959
Residential Delivered	6,282	7,462
Total Res. Organics	23,707	23,421
ICI Organics and Pallets	6,586	11,014
Grand TOTAL (Tonnes)	30,293	34,435

Note: 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 2019 compost was sold as bulk (delivered or pick-up), bag your own, and prepackaged items as listed in Table 12.

Table 12: Compost Sales 2019 Summary

Compost Material	Quantity Sold	Tonnes
Delivered	750 cubic yards	441
Bulk Sales	25,251 cubic yards	14,848
Bag Your Own Compost	1,488 bags	40
Prepackaged Garden Gold Compost	11,998 bags	228
		Total: 15,557

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 441 tonnes of bulk compost to local residents. Also 14,848 tonnes in bulk sales were sold to residents and businesses at EWSWA Depots. Additionally, about 11,998 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 15,557 tonnes. In 2019, compost sales totaled \$227,185.

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 2019. The Earth Machine was sold through local Home Hardware stores year-round. Both units were sold during the Truckload Sale held in the City of Windsor. Approximately 37 Earth Machine units were sold through the Home Hardware stores and 217 units were sold during the truckload and miscellaneous sales for a total of 254 units sold in 2019. There were 94 Green Cones sold in 2019. This brings the cumulative total to 752 Green Cones distributed since 2010, which is when they were first introduced to the area. The combined BYC distributed in 2019 was 348 units bringing the total number of units sold since 1988 to 39,881 units.

Current research has indicated that approximately 100 kg/year/BYC is diverted as a result of the backyard composting program. This translates into 3,988 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: 2017 — 2019

Residential Organic Programs	2019 Tonnes	2018 Tonnes	2017 Tonnes
BYC Program	3,988	3,953	3,912
Mulching Blades	1,343	1,343	1,343
Yard Waste (Residential)	23,707	23,421	19,099
Total Residential Organics	29,038	28,717	24,354

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

6.1 School and Community Presentations

In 2019, Authority staff conducted 24 presentations at various locations where 2,544 people from community groups, events, open houses, schools etc. attended. The emphasis in 2019 presentations was placed on how to reduce, reuse and recycle plastic.

6.2 Special Community Events

Authority staff organized displays and talked to area residents at various special events scheduled at the Horticultural Show, Earth Day Celebrations and the Truckload Sale. There were 65 special events serviced with recycling in 2019. Many special event venues have implemented their own sustainable recycling program throughout the season (April through September) and do not require the per event service offered by EWSWA.

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 2,964 e-newsletter subscribers. Industry standards indicate that a decent open rate is anything between 20-33%. Open rates for e-newsletters are as follows: Truckload Sale 63%; Gold Box, 87%; Waste Reduction Week, 63%.

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. Residents have access to instructions, tenders, reports, calendars, acceptable recycle box materials, incentives, etc. In 2019 there were approximately 38,000 hits on the website bringing the total hits to 281,077 hits since the launch of the new website in 2012; the monthly average hits in 2019 had a duration of approximately 1.47 minutes. The 'What Goes Where' material search database resulted in 8,598 searches; municipal calendar searches were at 13,396 and PDO, Windsor at 8,164 searches in 2019. In 2019, method of access by device was 53.6% mobile; 39.5% desktop computer and 6.9% 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, 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 2019:

- 9,619 total subscribers
- 130,743 resident interactions in 2019
- 10,895 average monthly resident interactions

EWSWA also continues to maintain a presence in social media sites such as Facebook and Twitter. EWSWA started with 30 Twitter followers in January 2015 and had 755 followers by December 2019. EWSWA has 1,130 followers on Facebook with the highest reach of 17,200 on the "What is the Oops Sticker?" in a 2019 post.

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. In 2017, 1,000 households were inspected and 604 gold boxes were awarded. In 2018, the fourth round of inspections were undertaken to complete the inspections of all 2,050 residents who registered in 2017. During 2018, 613 gold boxes were awarded. The program continued in 2019 being offered to the first 300 online applicants; 284 gold boxes were awarded in 2019 to keep offering this positive brand to the public.

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. All facilities were operated year-round in 2019. A total of 596,936 litres and 112,741 kg of MHSW materials were delivered to the sites in 2019. 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, 2,785 residents accessed the Reuse Centre and took 57,908 products or approximately 83,516 kg of paint and miscellaneous materials in 2019 compared to 54,555 products or 77,853 kg of reusable materials in 2018.

Demand for the Reuse Centre remains high, however quantities available depend largely on how good the products are that are delivered by households to the facility.

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. Residents who dropped off a product containing mercury received a free digital thermometer. Since June 2019, 118 products were received equalling about 0.6443 kilograms of mercury.

Table 14: Municipal Hazardous or Special Waste for 2019 in Litres

Material	MHSW from Facilities	Reuse Centre Quantities	Total Litres
Adhesives/Flammable Liquids	62,704	20,077	82,781
Aerosols	10,068	1,390	11,458
Antifreeze (Glycol)	9,447	0	9,447
Corrosive Liquid	6,162	343	6,505
Inorganic Acids	1,022	0	1,022
Paints & Coatings	222,554	52,927	275,481
Pesticides	6,600	692	7,292
Waste Oils (hydraulic fluid)	19,500	0	19,500
Recyclable Waste Oil	183,450	0	183,450
Total MHSW Litres	521,507	75,429	596,936

Table 15: Municipal Hazardous or Special Waste for 2019 in Kilograms

Material	MHSW from Facilities	Reuse Centre Quantities	Total Kgs
Car Batteries	30,350	0	30,350
Dry Cell Batteries	3,026	0	3,026
Fire Extinguishers	2,241	0	2,241
Fluorescents/Misc. Lamps/Ballasts	23,635	0	23,635
Inorganic Oxidizers	2,641	8,087	10,728
Mercury (HG items)/Lead	513	0	513
Pharmaceuticals	1,226	0	1,226
Plastic Used Oil Containers	16,991	0	16,991
Propane Cylinders	4,577	0	4,577
Propane Tanks/Misc. Tanks	18,093	0	18,093
Rechargeable & Mixed Batteries	1	0	1
Corrosive Solids (e.g. cement)	471	0	471
Waste Oil Filters	889	0	889
Total MHSW Kilograms	104,654	8,087	112,741

Table 16: MHSW Diversion Comparison: 2018 versus 2019

	2019 Tonnes	2018 Tonnes
MHSW Recycled or Reused	709	723
MHSW not Recycled	(18)	(19)
Total MHSW Diverted	691	704

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 2019 was 183,450 litres, which is down by 0.8% compared to the 184,950 litres collected in 2018. The quantity of oil collected by month is shown in Table 17 with historical data over four years.

Table 17: Motor Oil Collected (Litres) 2016 through 2019

Month	2019 Litres	2018 Litres	2017 Litres	2016 Litres
January	8,875	10,225	14,680	9,390
February	6,025	4,950	8,700	12,480
March	11,025	13,100	7,311	10,160
April	20,850	20,800	20,320	20,771
May	17,950	22,750	21,600	22,683
June	20,900	16,400	18,400	21,685
July	20,075	20,150	20,575	16,310
August	18,725	16,350	17,300	18,245
September	17,950	15,325	14,450	20,401
October	15,275	18,425	14,900	16,716
November	14,275	13,425	20,200	18,840
December	11,525	13,050	7,950	8,000
Total:	183,450	184,950	186,386	195,681

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	2018 Tonnes
Net Marketed Recyclables-Table 4	20,098	23,158
Other Recycling Programs-Table 9	6,220	6,169
Yard Waste, BYC & Mulching Blades-Table 13	29,038	28,719
MHSW Waste including Motor Oil-Table 16	691	704
Total Residential Tonnes Diverted	56,047	58,750

Residential Waste Diversion 2019 Report

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

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