



ANNUAL REPORT

Essex-Windsor Residential Waste Diversion 2022

Report Date: March 31, 2023

Table of Contents

- 1 INTRODUCTION** **1**
- 1.1 Residential Waste Diversion Rate 2022 1
- 2 PROGRAMS** **2**
- 2.1 Residential Recycling Blue Box Program 2
 - Table 1: Residential recycling blue box collection tonnes by month comparison 3
- 2.2 Recycling Residual Disposal 3
- 3 TONNES MARKETED** **4**
- Figure 1: Percent of tonnes for 2022 marketed recyclables 4
- 3.1 Fibres 5
 - Old Newspaper (SRPN #56) 5
 - Old Corrugated Cardboard (OCC) 5
 - Hardpack (OBB) 5
 - Fine Paper 5
 - Mixed Fibre (SRPN #54) 5
- 3.2 Containers 6
 - Steel Cans 6
 - Aluminum Cans and Foil 6
 - Glass 6
 - Polyethylene Terephthalate (PET) 6
 - High-Density Polyethylene (HDPE) 6
 - Polycoat and Gable Top 6
 - Mixed Plastics 7
 - Mixed Containers 7
 - Table 2: Marketed fibre summary comparison: 2021 versus 2022 7
 - Table 3: Marketed containers summary comparison: 2021 versus 2022 7
 - Table 4: Residential recyclables marketed comparison 8
 - Table 5: Revenue comparison: 2021 versus 2022 8
 - Table 6: Annual revenue comparison 9

Figure 2: Percent of revenue marketed in 2022 _____	9
3.3 Markets _____	10
4 OTHER RESIDENTIAL RECYCLING PROGRAMS _____	10
4.1 White Goods _____	10
Table 7: Summary of white goods diversion for 2022 _____	10
Table 8: 2022 White goods collected through the ESWA White Goods Program by month in municipalities across Essex County _____	11
4.2 Tires _____	12
4.3 Scrap Metal _____	12
4.4 Electronics Recycling _____	12
4.5 Deposit/Return Program _____	12
4.6 WE ReCYCLE Bike Program _____	13
Table 9: Bikes recycled through the WE ReCYCLE program in 2022 _____	13
4.7 Election Signs _____	13
Table 10: Other recyclables comparison: 2021 versus 2022 _____	14
5 RESIDENTIAL ORGANICS _____	14
5.1 Yard Waste _____	14
Table 11: 2022 Yard waste summary for all ESWA sites _____	15
Table 12: Yard waste tonnes comparison: 2021 versus 2022 _____	15
5.2 Screened Compost Sales _____	15
Table 13: Compost sales 2022 summary _____	16
5.3 Backyard Composting _____	16
Table 14: Residential organic waste reduction comparison: 2020 — 2022 _____	17
6 PROMOTION AND EDUCATION (P&E) _____	17
6.1 Community Outreach _____	17

Residential Waste Diversion 2022 Report

6.2 Special Community Events	18
6.3 Waste Reduction Hotline	18
6.4 Print Newsletter	18
6.5 E-Newsletter	18
6.6 ESWWA Website	19
6.7 Recycle Coach App	19
6.8 Agorapulse	20
6.9 Facebook	20
6.10 Twitter	21
6.11 Instagram	21
6.13 Google – Public Drop Off Depot Statistics	21
6.14 Organics Survey	22
6.15 Gold Star Program	23
6.16 LaSalle Buckslip	24
7 MUNICIPAL HAZARDOUS OR SPECIAL WASTES (MHSW) PROGRAM	24
7.1 MHSW Depots	24
7.2 Reuse Centre	24
Table 15: Municipal Hazardous or Special Waste for 2022 in litres	25
Table 16: Municipal Hazardous or Special Waste for 2022 in kilograms	25
Table 17: MHSW Diversion Comparison	26
7.3 Waste Motor Oil	26
Table 18: Litres Waste Oil collected	26
7.4 Waste Cooking Oil	27

8 OVERALL SUMMARY OF RESIDENTIAL DIVERSION QUANTITIES 27

8.1 Residential Waste Diversion _____ 27

Table 19: Residential Waste Diversion Summary _____ 27

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Essex-Windsor Residential Waste Diversion

Annual Report for January – December 2022

1 Introduction

The Annual Waste Diversion Report provides information on the waste diversion activities carried out by the Essex-Windsor Solid Waste Authority (EWSWA) during 2022 in compliance with Condition 5.2 of the Environmental Assessment Approval for the Essex-Windsor Regional Landfill.

1.1 Residential Waste Diversion Rate 2022

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

In 2022, the seven County of Essex municipalities and the City of Windsor delivered 108,059 tonnes of residential waste to the Regional Landfill. During the same time period, 51,435 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 2022 residential diversion rate of 32.0%. The 2021 diversion rate was 32.9%.

2022 Residential Diversion Rate is calculated as follows:

$$\frac{51,435 \text{ Tonnes Diverted (see Table 19)}}{108,059 \text{ Tonnes of Residential Refuse Collected Curbside} + 1,342 \text{ Residuals} + 51,435 \text{ Diverted Tonnes}} = \frac{51,435}{160,836} \times 100 = \mathbf{32.0\%}$$

2021 Residential Diversion Rate is calculated as follows:

$$\frac{56,303 \text{ Tonnes Diverted (see Table 19)}}{112,053 \text{ Tonnes of Residential Refuse Collected Curbside} + 2,632 \text{ Residuals} + 56,303 \text{ Diverted Tonnes}} = \frac{56,303}{170,988} \times 100 = \mathbf{32.9\%}$$

2 Programs

2.1 Residential Recycling Blue Box Program

The tonnes of residential recyclable materials collected curbside during 2022 totaled 21,978 tonnes. The overall tonnes of recyclables collected in 2022 were slightly lower compared to the 23,802 tonnes collected in 2021.

A monthly summary and comparison of the tonnes collected curbside from the City and the County in 2021 and 2022 is shown in Table 1. Collection of recyclables in the County was carried out under contract in 2022 by the City of Windsor. Collection of recyclables in the City of Windsor in 2022 was carried out by Green For Life Environmental Inc.

All materials were processed at the EWSWA owned Essex-Windsor Material Recovery Facility (MRF), located at E.C. Row and Central Avenue in Windsor where HGC Management Inc. via contract process delivered materials.

In addition to the residential recyclables collected curbside, 611 tonnes of recyclables were delivered to the EWSWA's Public Drop Off Depots in 2022. This is up slightly from 2021, where 605 tonnes were delivered.

Table 1: Residential recycling blue box collection tonnes by month comparison

Month	2022 County of Essex*	2022 City of Windsor Tonnes	2022 Combined Tonnes	2021 Comparable Tonnes
January	912	892	1,804	2,065
February	895	875	1,770	1,761
March	983	917	1,900	1,996
April	900	912	1,813	2,000
May	979	985	1,964	1,870
June	980	973	1,953	2,086
July	899	922	1,821	2,079
August	902	973	1,875	1,838
September	919	888	1,807	1,986
October	784	811	1,595	1,991
November	910	883	1,793	1,921
December	984	900	1,884	2,210
Total:	11,047.00	10,931.00	21,978	23,802

* 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. Due to rounding, sum of combined tonnes for 2021 and 2022 will not equal total value.

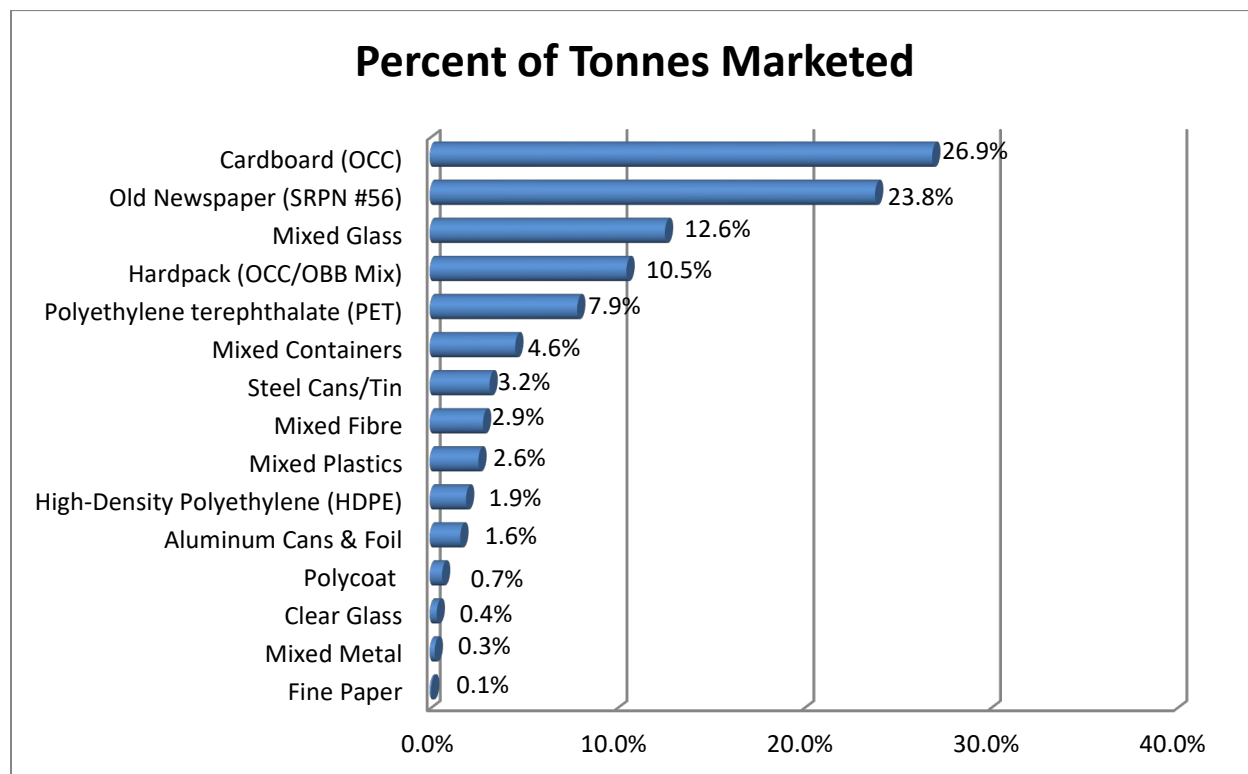
2.2 Recycling Residual Disposal

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 1,342 tonnes of recycling residuals was disposed of in 2022. This is a significant decrease in residuals from 2021 (2,632 tonnes), as there were great favourable changes in market demands and HGC Management Inc. made processing refinements that supported these new market opportunities.

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 EWSWA 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 2022 was approximately \$4,681,016 (see Table 5), representing a basket-of-goods revenue of approximately \$225/tonne compared to a basket-of-goods revenue of \$237/tonne in 2021. This is as a result of exceptionally strong market conditions for the majority of recyclable materials marketed in the first half of 2022. A brief discussion on market conditions and prices for each of the materials follows.

Figure 1: Percent of tonnes for 2022 marketed recyclables



3.1 Fibres

Old Newspaper (SRPN #56)

Ontario market price trends are published annually by the Continuous Improvement Fund's (CIFs) Price Sheet (December 2022). For 2022, SRPN #56 prices ranged from a low of \$82 per tonne to a high of \$218 per tonne. The EWSWA average price for 2022 was \$175 per tonne which is higher than this provincially published CIF average of \$146 per tonne. The EWSWA 2021 average price for SRPN #56 was \$155 per tonne.

Old Corrugated Cardboard (OCC)

The EWSWA price for old corrugated cardboard ranged from a low of \$69 per tonne to a high of \$235 per tonne in 2022. The 2022 EWSWA average price per tonne was \$189 compared to \$208 in 2021. The EWSWA's average price of \$189 per tonne was higher than the provincial average of \$170 per tonne per the CIF Price Sheet - December 2022.

Hardpack (OBB)

(Example: cereal boxes, cardboard)

The EWSWA's prices for this cardboard/boxboard mix ranged from \$11 per tonne to \$165 per tonne in 2022. In 2022, the EWSWA average price was \$112 compared to \$149 per tonne in 2021, again as a result of global market conditions. The EWSWA's average 2022 price of \$112 per tonne was higher than the provincial average of \$85 per tonne per the CIF Price Sheet - December 2022.

Fine Paper

One load of fine paper was sold in 2022 with an average price of \$419 per tonne. This is an increase compared to 2021, as no loads of fine paper were marketed last year due to lower amounts of this material delivered.

Mixed Fibre (SRPN #54)

The pricing for mixed fibre ranged from a low of \$0 per tonne to a high of \$118 per tonne in 2022. This is a decrease from 2021 as market demands for this low-grade fibre decreased and therefore the average price for 2022 was \$92 per tonne compared to \$103 per tonne in 2021.

3.2 Containers

Steel Cans

The 2022 average price was \$367 per tonne compared to \$429 per tonne in 2021. This market price per tonne in 2022 ranged from a low of \$224 to a high of \$566.

Aluminum Cans and Foil

The 2022 average price was \$2,560 per tonne compared to \$2,157 in 2021. Again, due to market fluctuations the price per tonne ranged from \$1,980 to \$3,218 per tonne. Aluminum foil was sold at an average price of \$886 during 2022, whereas in 2021, it sold at \$770 per tonne.

Glass

The 2022 average clear glass price of \$11 per tonne was higher than the 2021 average price of \$0 per tonne, due to markets. 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)

The average price was \$595 per tonne in 2022 which is much higher than the 2021 average price of \$491 per tonne.

High-Density Polyethylene (HDPE)

(Example: laundry soap bottles)

The average price was \$601 per tonne in 2022, compared to the 2021 average price of \$1,276 per tonne.

Polycoat and Gable Top

(Example: milk cartons)

Polycoat was sold in 2022 at an average price of \$55 per tonne compared to the average price of \$19 per tonne in 2021.

Mixed Plastics

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

The average price was \$160 per tonne in 2022 compared to the average price of \$168 per tonne in 2021.

Mixed Containers

In 2022, due to market availability, the EWSWA was successful to market a low-grade mixed container grade. This started in March and carried through to December 2022. The average price was \$14 per tonne.

Table 2: Marketed fibre summary comparison: 2021 versus 2022

Fibre Material	2021 Tonnes	2022 Tonnes	% Change
Old newspaper (SRPN #56)	4,963	4,976	0.3
Cardboard (OCC)	6,311	5,614	-11.0
Hardpack (OBB)	2,341	2,199	-6.1
Fine paper	0	17	N/A
Mixed fibre (SRPN #54)	787	596	-24.3
Totals:	14,402	13,402	-6.9%

Table 3: Marketed containers summary comparison: 2021 versus 2022

Container Material	2021 Tonnes	2022 Tonnes	% Change
Clear glass	142	79	-45.8
Mixed glass	2,737	2,628	-4.0
Steel cans	772	669	-13.3
Aluminum cans and foil	356	342	-3.9
Polyethylene terephthalate (PET)	1,601	1,648	2.9
High-density polyethylene (HDPE)	388	406	4.6
Polycoat/gable top	83	138	66.3
Mixed plastics	461	544	18.0
Mixed containers	N/A	956	N/A
Totals:	6,540	7,410	13.3%

Table 4: Residential recyclables marketed comparison

Tonnes Marketed	2021 Tonnes	2022 Tonnes
a) Total tonnes marketed	20,942	20,812
b) ICI Tonnes	(630)	(689)
Net marketed residential recyclables	20,312	20,123

Notes: a) Total tonnes marketed less b) ICI delivered tonnes = Net marketed residential recyclables.

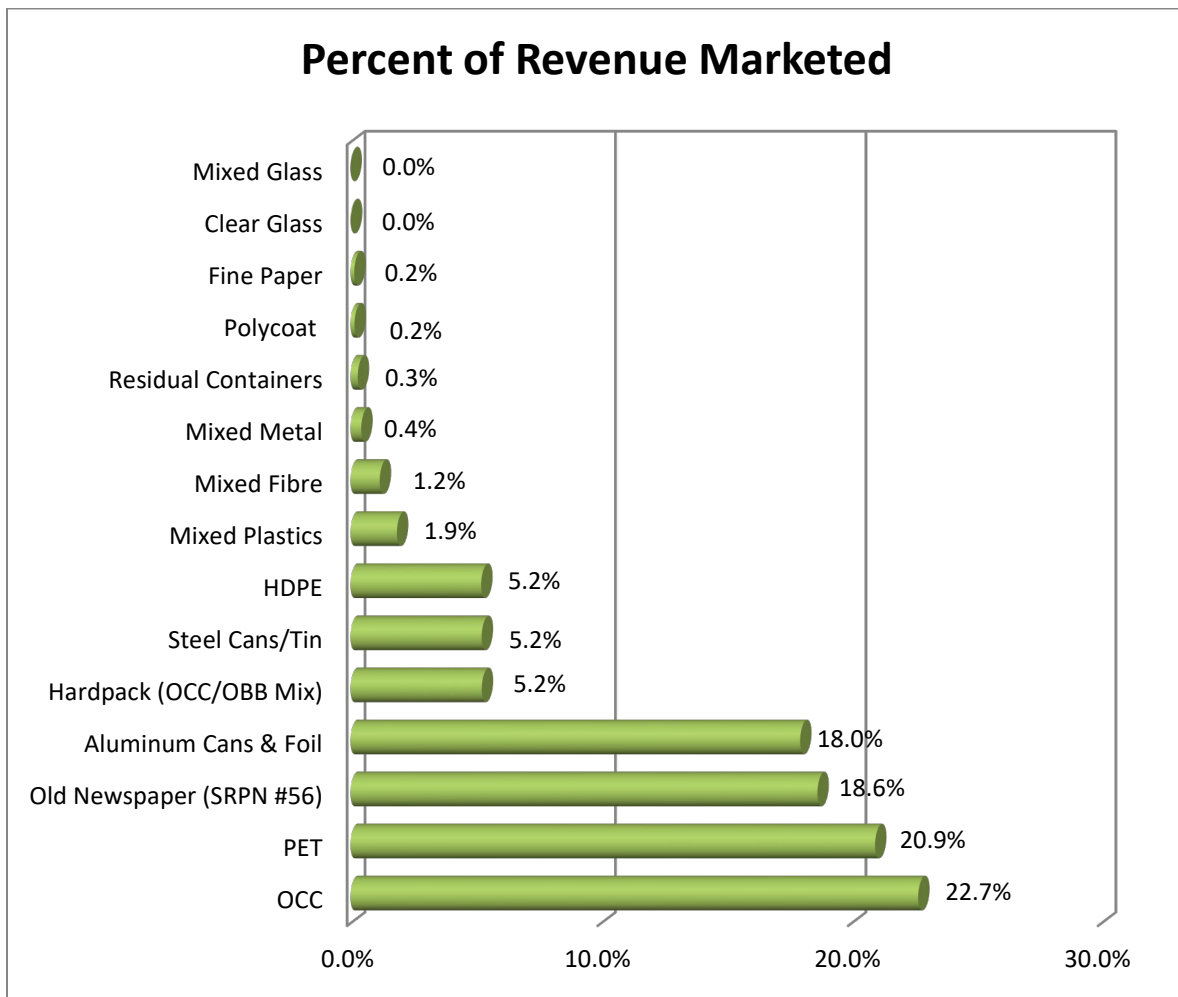
Table 5: Revenue comparison: 2021 versus 2022

Recyclable Material	2021 Revenue	2022 Revenue
Old newspaper (SRPN #56)	\$771,507	\$872,762
Cardboard (OCC)	\$1,311,714	\$1,061,269
Hardpack (OBB)	\$347,701	\$245,421
Clear glass	\$0	\$849
Mixed fibre (SRPN #54)	\$81,149	\$54,733
Steel cans	\$331,266	\$245,252
Fine paper	\$0	\$7,141
Aluminum cans and foil	\$747,075	\$840,396
Polyethylene terephthalate (PET)	\$786,433	\$980,506
High-density polyethylene (HDPE)	\$495,494	\$244,321
Mixed glass	\$0	\$0
Polycoat/gable top	\$1,626	\$7,631
Mixed metal	\$16,259	\$20,215
Mixed plastics	\$77,212	\$86,865
Residual Containers	\$0	\$13,655
Total Revenue	\$4,967,436	\$4,681,016

Table 6: Annual revenue comparison

Year	Revenue
2015	\$3,101,234
2016	\$3,414,055
2017	\$4,241,411
2018	\$3,204,744
2019	\$2,076,450
2020	\$2,180,781
2021	\$4,967,436
2022	\$4,681,016

Figure 2: Percent of revenue marketed in 2022



3.3 Markets

While overall delivered tonnages for 2022 were slightly lower than 2021, total marketed tonnes were very similar to 2021, as a result of market availability. Total revenue remained exceptionally high at the beginning of 2022 for both container and fibre market streams, but then significant market drops lowered final revenue outcomes. Similarly, producer shifts in materials (e.g., cardboard, PET) released out into the Ontario market had direct impacts on collected and marketed blue box tonnage numbers for 2022. Finally, as a result of strong market conditions, the EWSWA was able to market a low-grade mixed container material for the first time in 2022 which had a positive impact on waste diversion numbers.

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 2022, the EWSWA's curbside collection program for white goods across all municipalities in Essex County except Lakeshore (as they run their own program) captured 1,479 white good units (approximately 133 tonnes). The Municipality of Lakeshore reported that they diverted 8 tonnes of white goods through their 2022 program.

While the City of Windsor did not operate a white goods collection program during 2022, there were also 133 tonnes of white goods delivered to the Public Drop Off Depots for a combined total of approximately 274 tonnes. Table 8 details the white goods collection program for each of the municipalities in the County of Essex by month during 2022.

Table 7: Summary of white goods diversion for 2022

White Goods Summary	2022 Tonnes
EWSWA Curbside Essex County Collection	133
Municipality of Lakeshore Program	8
Drop Off Depots	133
Total Tonnes Recycled and Diverted	274

Table 8: 2022 White goods collected through the EWSWA White Goods Program by month in municipalities across Essex County

Month	Amherstburg	Essex	Kingsville	LaSalle	Leamington	Tecumseh	Total for Month
January	35	16	9	11	9	14	94
February	28	8	24	19	17	17	113
March	35	6	13	16	18	8	96
April	44	26	33	24	17	12	156
May	32	17	22	30	21	20	142
June	25	24	35	24	17	18	143
July	37	15	20	22	19	23	136
August	30	16	21	25	12	14	118
September	27	14	36	20	14	17	128
October	29	14	22	24	25	11	125
November	31	12	23	21	13	22	122
December	20	8	16	25	19	18	106
Total Units	373	176	274	261	201	194	1,479

Notes: 1,479 units with the average weight of 90 kilograms per unit results in diversion of approximately 133.11 tonnes.

4.2 Tires

In 2022, RPRA Datacall resulted in the diversion of approximately 3,001 tonnes of used tires in the Essex-Windsor area. While automotive tire recycling is now offered at many locations across Essex-Windsor, the EWSWA still collects and recycles used tires through the RPRA program. During 2022, approximately 101 tonnes of used tires were dropped off at EWSWA sites; which are included in the 3,001 tonnes diverted in Essex-Windsor.

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. Metal materials are dropped off here from PDO visitors and other programs across the site where it may have been improperly disposed of to ensure it is diverted from the landfill. The metals are sold through a competitive bid process to local scrap dealers. In 2022, approximately 445 tonnes of metals were collected and recycled.

4.4 Electronics Recycling

Under contract with the EWSWA, Quantum Lifecycle Partners Inc. supplies sea containers for the collection of electronics at the EWSWA's Public Drop-off Depots. The EWSWA staff place electronic items that are received from the public in these containers. In 2022, approximately 257 tonnes of computers, televisions, audio visual equipment, and various electronic items were collected through the Waste Electrical and Electronics Equipment (WEEE) stewardship program.

4.5 Deposit/Return Program

The EWSWA has a capture program at its Material Recovery Facility (MRF) for deposit/return containers (i.e. aluminum beer cans; glass, wine, and spirit bottles) that have been collected through the blue box collection program. During 2022, approximately 30 tonnes of deposit/return containers were received at the MRF and are included as part of the 2,329 tonnes that were diverted throughout Essex-Windsor as part of the deposit/return & stewardship program. The 2,329 diversion tonnes figure is calculated as part of the 2022 RPRA Datacall and is based on the Essex-Windsor population as determined by the latest Statistics Canada census data.

4.6 WE ReCYCLE Bike Program

The EWSWA recognizes the importance of providing waste diversion programs that are convenient and safe for the public to access. In 2021, the EWSWA Board approved a bike reuse program, that supports bikes that are collected at the EWSWA sites to be refurbished and recycled back into the Essex-Windsor area through a community partnership program. In 2022, a total of 813 bikes were dropped off at EWSWA sites, where 657 of those bikes were repaired/reused and the remaining 156 bikes were placed in our scrap metal bin for recycling.

Table 9: Bikes recycled through the WE ReCYCLE program in 2022

Location	Total # of Bikes Dropped Off	Total # of Bikes Repaired/Reused	Total # of Bikes Recycled as Metal
Windsor Public Drop Off	749	625	124
Kingsville Transfer Station #2	64	32	32
Totals:	813	657	156

As the average bike weighs 10 kg, it is estimated that a total of 8,130 kgs or 8.13 tonnes of bikes were dropped off at EWSWA Depots, 6,570 kgs or 6.57 tonnes of those bikes were repaired/reused, therefore, 1,560 kgs or 1.56 tonnes of unrepairable bikes were recycled through the WE ReCYCLE Program in 2022. It is important to note that the 2021 diversion number of 2 tonnes was for the last quarter of 2021, as the program was launched in October 2021.

4.7 Election Signs

As the EWSWA attempts to divert materials where feasible, it has been successful to offer a drop off program at its sites for election signs after an election. As 2022 was an election year that hosted two elections in our region, approximately 1,266 kgs or 1.27 tonnes of signs were dropped off at the EWSWA sites and later recycled.

Table 10: Other recyclables comparison: 2021 versus 2022

Other Recyclable Programs	2021 Tonnes	2022 Tonnes	% Change
White goods (all sites)	277	274	-1.1%
Used tires	3,001	3,001	0%
Scrap & mixed metal	550	445	-19.1%
Electronics	302	257	-14.9%
Deposit/return & stewardship	2,329	2,329	0%
Bicycles	2	7	250.0%
Election Signs	1	1	0%
Total Other Recyclables	6,462	6,314	-2.3%

Notes: RPRA Datacall calculation is based on population for used tires and Deposit/return & stewardship programs 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 Depots operated by the EWSWA in 2022.

The Essex-Windsor residents can set-out their yard waste in: paper bags, wheeled carts, garbage bins, and cardboard boxes to receive curbside collection. Yard waste will not be collected if it is placed in a plastic bag. Approximately 20,768 tonnes of yard waste was received in 2022, which represents a decrease of 15% compared to the 24,521 tonnes delivered in 2021.

Table 11: 2022 Yard waste summary for all EWSWA sites

Material Type	Windsor Public Drop Off	Kingsville Transfer Station 2	Regional Landfill	Total
Municipal Delivered	10,086	1,646	4,143	15,875
Residential Delivered	2,172	793	169	3,134
Total Res. Organics	12,258	2,439	4,312	19,009
*ICI Organics and Pallets	1,062	535	163	1,759
Grand Total (Tonnes)	13,320	2,974	4,474	20,768

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

Table 12: Yard waste tonnes comparison: 2021 versus 2022

Material Type	2021 Tonnes	2022 Tonnes
Municipal Delivered	17,994	15,875
Residential Delivered	5,525	3,134
Total Res. Organics	23,519	19,009
*ICI Organics and Pallets	1,002	1,759
Grand Total (Tonnes)	24,521	20,768

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

5.2 Screened Compost Sales

The EWSWA 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 2022, compost was sold as bulk (delivered or pick-up), bag-your-own, and prepackaged items as listed below.

Table 13: Compost sales 2022 summary

Compost Material	Quantity Sold	Tonnes
Delivered	1,052 cubic yards	526
Bulk sales	21,047 cubic yards	10,524
Bag-Your-Own	919 bags	51-52
Prepackaged Garden Gold	11,077 bags	199-244
Total Tonnes		11,300 -11,346

Notes: Pre-packaged bag weights are based on approximately 18 to 22 kg/bag; Bag-Your-Own is approximately 55-57 kg/bag; Bulk compost is approximately 500 kg/cubic yard. Compost weight is expressed in 'ranges' due to the differing moisture content & density. One cubic yard = one bucket from the small EWSWA loader in Windsor. Weights are approximate.

Under contract to the EWSWA, Frank Dupuis Landscaping and Trucking provided delivery services for the sale of 526 tonnes of bulk compost locally. In total, 10,524 tonnes of compost was sold through the bulk sale program to residents and businesses at EWSWA Depots. Additionally, approximately 11,077 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 in 2022 was approximately between 11,300 to 11,346 tonnes. In 2022, compost sales totalled \$239,327.

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 2022. The Earth Machine was sold through local Home Hardware stores year-round. Both units were sold during an EWSWA week long spring sale. Approximately 43 Earth Machine units were sold through the Home Hardware stores and 40 units were sold during the spring Inventory Sale for a total of 83 units sold in 2022. There were 5 Green Cones sold in 2022 through Home Hardware stores and 11 units were sold during the spring Inventory Sale for a total of 16 units sold in 2022. This brings the cumulative total to 835 Green Cones distributed since 2010, which is when they were first introduced to the area. The combined BYC distributed in 2022 was 99 units bringing the total number of units sold since 1988 to 40,247 units.

Current research has indicated that approximately 100 kg/year/BYC is diverted as a result of the backyard composting program. This translates into 4,025 tonnes of organic waste diverted from the landfill through this program. This does not consider homemade composters or composting done independent of the EWSWA’s backyard composting program.

Table 14: Residential organic waste reduction comparison: 2020 – 2022

Residential Organic Programs	2020 Tonnes	2021 Tonnes	2022 Tonnes
BYC Program	4,006	4,015	4,025
Mulching Blades	1,343	1,343	1,343
Yard Waste (Residential)	24,810	23,519	19,009
Total Residential Organics	30,159	28,877	24,377

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 Outreach

The EWSWA staff traditionally organize promotions and events to engage residents in waste diversion activities. Initiatives like the online Scavenger Hunt for Earth Day, actual in-person Earth Day Event at Malden Park, a spring inventory sale, a digital campaign for Waste Reduction Week and an information booth at County Council Orientation, as well as print information on various EWSWA programs are some of the many strategies use in 2022.

After Covid-19, in person presentations were limited again in 2022 as they were in the previous two years in schools. As a result, the EWSWA is supporting all school boards with waste diversion inquiries, resources, and questions as needed. As well, the EWSWA supported special requests by school boards like MRF tours to school ambassador programs to liaise and better educate the new waste diversion school leaders.

There were eighteen special events serviced with blue box program recycling carts in 2022 to better support waste diversion at local community events.

6.2 Special Community Events

One notable event that the EWSWA serviced in 2022 was the Can-Am Police-Fire Games. The City of Windsor was selected to host the games in 2022 and the event took place from July 25-31, 2022.

Early in the planning stages of the games, the organizing committee established that it was essential for the opening ceremonies at Festival Plaza to be “zero-waste”. As the EWSWA operates a special-events recycling program, the City of Windsor contacted the EWSWA to provide recycling services for the opening ceremonies, as well as support for conducting a zero-waste event. To promote the games, mobile billboards were designed for GFL’s trucks (76 in total) with GFL agreeing to cover the cost. Greener Farms, a local food waste diversion company, was brought on board as well to provide organics recycling and the YQG Green Team was tasked with providing volunteers to sort through waste at the event.

Estimated attendance for the opening ceremonies was 2,000. It was a very busy event, with substantial amounts of food being served. By the end of the night, all of the organics and recyclables had been picked up, sorted, recycled, and the residual waste (actual garbage) from the event which notably only filled two regular sized garbage bags.

6.3 Waste Reduction Hotline

The EWSWA maintains a Waste Reduction Hotline (1-800-563-3377), where EWSWA staff will answer residential questions, or redirect the call to the appropriate staff or department.

6.4 Print Newsletter

The EWSWA issues an annual newsletter called Enviro Tips which is delivered to each household and is available online. In fall 2022, the newsletter “Enviro Tips” was delivered to every household, apartment, farm, and business in Windsor/Essex County. Over 171,000 newsletters were delivered. The newsletter featured the Recycle Coach App, tips to reduce food waste, information about backyard composters and Green Cone digesters, and other waste diversion tips and program reminders.

6.5 E-Newsletter

E-newsletters are also part of the program as they are low cost and another way to reach residents. The EWSWA has 3,323 e-newsletter subscribers.

Industry standards indicate that a decent open rate is anything between 20-33%. Open rates for e-newsletters are as follows: Gold Star 2022, 53%; Spring Sale 2022, 49%; Earth Day 2022, 55%.

6.6 EWSWA Website

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 regarding waste diversion activities. Through the website, residents have access to instructions, tenders, reports, calendars, acceptable recycle box materials, incentives, etc. In 2022, there were approximately 51,634 hits on the website bringing the total hits to 467,894 hits since the launch of this website in 2012; the monthly average hits in 2022 had a duration of approximately 1.52 minutes. The 'What Goes Where' material search database resulted in 17,931 searches and municipal calendar searches were at 67,704 searches in 2022. In 2022, method of access by device was 60.1% mobile; 35.1% desktop computer, and 3.8% tablet.

6.7 Recycle Coach App

Recycle Coach is an app which makes recycling and collection schedule information easy to find. The app is continuously developing new programs to combat complacency and get people re-engaged in recycling. It promotes best practice ideas on better waste management to improve outcomes such as increasing recycling, proper disposal and diversion of solid waste, etc. In 2022, the 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 2022:

Total Users: 26,416*

Total Interactions: 2,922,775

- Reminders: 2,728,826
- Notifications: 80,992
- Material Searches: 17,931
- Page Views: 27,322
- Calendar Views: 67,704

* Note: In 2021, there was a tracking metric for EWSWA website users accessing Recycle Coach’s “What Goes Where” via the EWSWA website – which was included in the metrics as ‘subscribers’. This metric is no longer included in the subscriber number, as it tracks material searches, and therefore is tracked as a stand-alone metric “Material Searches”.

6.8 Agorapulse

In 2022, the EWSWA began using Agorapulse to better manage and enhance its capability to schedule social media posts. Agorapulse is a full-featured social media management platform. Some of its features include a variety of methods to publish content, schedule posts and report about social account usage. It allows the Waste Diversion team to stay organized, save time, generate reports, and easily manage social media accounts – all from one convenient platform. The EWSWA subscribed to the Agorapulse platform on March 16, 2022, therefore, the 2022 stats only include nine full months of data and reporting.

6.9 Facebook

- Fans: 267
- Engagement: 1,290
- Impressions: 178,197

Definitions

- *Fans are the number of people who are following the EWSWA’s Facebook page.*
- *Engagement is the number of fan interactions (reactions, comments, shares, clicks, and private messages) with the EWSWA Facebook page.*
- *Impressions are the number of times the EWSWA page has been viewed during the selected period (2022). This includes paid, organic, and viral impressions.*

Facebook Publishing:

- Posts Published: 309
- Posts Reach: 55,959
- Engaged Users: 1,708

6.10 Twitter

- Followers: 966
- Engagement: 476
- Users' Activity: 10 am on Tuesday

Definitions

- *Followers are the number of people who are following the EWSWA on Twitter.*
- *Engagement is the number of followers' interactions (likes, replies and retweets) with the EWSWA Twitter profile.*
- *Users' Activity refers to the average days and hours users interacted the most with the EWSWA's content – based on inbox activities (mentions and direct messages).*

Twitter Publishing:

- Tweets Published: 218
- Likes: 204
- Retweets: 253
- Engagement: 457

6.11 Instagram

The EWSWA added Instagram to its social media accounts in 2021.

- Followers: 171
- Engagement: 167
- Impressions: 6.2K

Definitions

- *Followers is the number of people following the EWSWA on Twitter.*
- *Number of followers' interactions (likes, saves, comments and direct messages) to the EWSWA Instagram profile.*
- *Impressions is the number of times the EWSWA profile's content has been viewed during the selected period.*

6.13 Google – Public Drop Off Depot Statistics

The EWSWA strives to always ensure Google information is up-to-date as many people visit Google for topics like:

- Holiday Closures
- Hours of Operation

- Traffic Flow (heavy traffic / light traffic)
- Photos
- Reviews
- Accepted Materials

During a search, Google logs 'behavior' metrics, as well as the resulting 'action' from the search (a visit to the organization's website, request directions, call, etc.).

Some key Google statistics for EWSWA's Public Drop Off Depot 'searches' (statistical average is over 3 months):

- 4.3/5 star rating - based on public reviews
- 4,201 EWSWA business profile interactions
- 26,252 people viewed the EWSWA profile (via mobile 69%, via desktop 22%, via Google maps 8% mobile, via Google maps desktop 1%)
- 10.5K activity (website, calls, photo views, direction requests)

Through "Google Business Profile Manager" (launched in 2018), the EWSWA staff have the ability to post updates (holiday closures, change in hours, photos), as well as post messages and respond to reviews.

6.14 Organics Survey

To comply with Ontario's Food and Organic Waste Policy Statement, which will require certain municipalities in Essex-Windsor to achieve specific reduction and recovery target rates by 2025, the Region will be implementing a new green bin program that will divert organic waste away from our greatest asset, the Essex-Windsor Regional Landfill.

To prepare for this massive waste management program change in Essex-Windsor, the EWSWA partnered with the City of Windsor to create a survey to ask residents about their values, beliefs, behaviours and barriers around a new green bin program. The survey launched on April 18, 2022 through Windsor's SurveyMonkey account and closed on May 31, 2022. This survey was launched just in time for the local Earth Day event to capitalize on high attendance numbers that are historically present at this annual event. It was promoted by all partners, as well as through the EWSWA's: EWSWA.org, e-newsletter, intranet to staff, and social media accounts. The

EWSWA also shared the survey with all of its municipal partners with the intention to reach more local residents through their municipal connections. Other organizations like Devonshire Mall, Essex-Windsor Conservation Authority (ERCA), and YQG Green also promoted this Survey. Finally, paid advertising through Facebook was done to boost overall participation.

The survey was provided to participants at multiple green events such as: Earth Day, on-line Earth Day scavenger hunt via the Goose Chase App, Devonshire Mall clean-up day, and ERCA's tree planting event. Administration was pleased by the participation at the EWSWA tent at the Earth Day event, as well as, the interest from the public on what a new green bin program would look like. Specifically, there was much dialog around odour and collection frequency, and many discussions around 'why are you waiting so long to launch the organics program?'.

- The survey consisted of nine questions
- A total of 2,534 residents filled out and submitted a complete organics survey
- 75% of residents answered "yes" that they would participate in a curbside green bin collection program

6.15 Gold Star Program

In 2016, the EWSWA 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 set out by residents and thereby decrease the amount of residual waste leaving the MRFs. The program was renewed in 2017 and 2,050 residents registered for the "Gold Star" program and by 2018, 1,217 more homes were awarded a gold box. Due to the community engagement in this program, it continues to be offered each year to residents. In 2022, 108 more applicants registered for the program and 102 were awarded gold star boxes (6 had no boxes out). To date, 2,769 homes have registered to have their recycling inspected and were rewarded for excellent recycling habits with a Gold Box.

6.16 LaSalle Buckslip

The EWSWA designed a buckslip for inclusion in the Town of LaSalle tax bills for publication in early 2022. The buckslip featured the Recycling Recharge campaign which reminded residents to have their recycling out on time, to separate containers from paper materials, and to look for an Oops Sticker if the recycling box/cart was not collected. The Town of LaSalle printed and delivered the buckslips in the tax bill to approximately 15,000 residences.

7 Municipal Hazardous or Special Wastes (MHSW) Program

7.1 MHSW Depots

The EWSWA opened its Windsor MHSW Depot in October 1995. In addition to the Windsor facility, the EWSWA 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 in October 2013. These Depots replaced the annual Household Chemical Waste Days held in Essex-Windsor. A total of 528,135 litres and 108,758 kg of MHSW materials were delivered to the sites in 2022. See Table 15 and 16 for details.

7.2 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, 1,403 residents accessed the Reuse Centre and took 37,829 products or approximately 54,530 kg of paint and miscellaneous materials in 2022 compared to 23,672 products or 33,954 kg of reusable materials in 2021. It is important to note that due to the Covid-19 pandemic, the Reuse Centre was not open for a portion of 2021.

Table 15: Municipal Hazardous or Special Waste for 2022 in litres

Material	MHSW from Facilities	Reuse Centre Quantities	Total
Adhesives/flammable liquids	65,455	10,885	76,340
Aerosols	7,407	988	8,395
Antifreeze (Glycol)	9,599	0	9,599
Corrosive liquid	5,379	1,196	6,575
Inorganic acids	1,715	0	1,715
Paints & Coatings	190,187	37,482	227,669
Pesticides	4,020	459	4,479
Waste oils (used motor oil, hydraulic oil, etc.)	183,488	0	183,488
Cooking oil	9,875	0	9,875
Total MHSW Litres	477,125	51,010	528,135

Table 16: Municipal Hazardous or Special Waste for 2022 in kilograms

Material	MHSW from Facilities	Reuse Centre Quantities	Total
Car batteries	22,281	0	22,281
Dry cell batteries	14,628	0	14,628
Fire extinguishers	2,852	0	2,852
Fluorescents/misc. lamps/ballasts	23,794	0	23,794
Inorganic oxidizers	2,394	3,520	5,914
Mercury (HG items)/lead	47	0	47
Pharmaceuticals	2,054	0	2,054
Plastic used oil containers	14,500	0	14,500
Propane cylinders	3,230	0	3,230
Propane tanks/misc. tanks	17,257	0	17,257
Corrosive solids (e.g. cement)	1,467	0	1,467
Waste oil filters	734	0	734
Total MHSW Kilograms	105,238	3,520	108,758

Table 17: MHSW Diversion Comparison

	2021 Tonnes	2022 Tonnes
MHSW recycled or reused	670	637
MHSW not recycled	(17)	(16)
Total MHSW Diverted	653	621

Note: Examples of MHSW materials not recycled include: inorganic acids, inorganic oxidizers, pharmaceuticals, corrosive liquids, and pesticides.

7.3 Waste Motor Oil

Waste motor oil is collected curbside alongside the residential recycling program. As well, residents are able to deliver waste oil to EWSWA's MHSW facilities. The quantity of waste oil collected during 2022 was 183,488 litres, which is down by 5.1% compared to the 193,375 litres collected in 2021. The quantity of oil collected by month is shown in Table 18 with historical data over four years.

Table 18: Litres Waste Oil collected

Month	2019 Litres	2020 Litres	2021 Litres	2022 Litres
January	8,875	13,825	7,950	9,150
February	6,025	5,925	4,300	4,175
March	11,025	11,425	23,625	14,875
April	20,850	19,125	20,700	12,675
May	17,950	6,750	14,625	18,500
June	20,900	21,625	21,950	24,973
July	20,075	23,825	17,000	18,665
August	18,725	20,475	19,250	17,750
September	17,950	26,700	18,775	19,083
October	15,275	20,900	14,850	17,838
November	14,275	18,900	15,925	17,072
December	11,525	15,175	14,425	8,732
Total:	183,450	204,650	193,375	183,488

Note: Due to contractor change in 2021, the data for 2021 and 2022 accounts for all types of oil collected, both hydraulic and motor.

7.4 Waste Cooking Oil

Used cooking oil is free for residents to drop off at EWSWA MHSW facilities at the City of Windsor Public Drop Off and the Kingsville Transfer Station #2. Sanimax collects the cooking oil which is then filtered and cleaned, and later marketed to be mixed with diesel fuel to create biodiesel. In 2022, the total amount of cooking oil collected at both sites totalled 9,875 kg or 9.875 tonnes.

8 Overall Summary of Residential Diversion Quantities

8.1 Residential Waste Diversion

This table below summarizes the residential waste diversion activities detailed in this report.

Table 19: Residential Waste Diversion Summary

Residential Waste Diversion Summary	2021 Tonnes	2022 Tonnes
Net Marketed Recyclables (Table 4)	20,312	20,123
Other Recycling Programs (Table 10)	6,462	6,314
Yard Waste, BYC & Mulching Blades (Table 14)	28,877	24,377
MHSW Waste including Waste Oil (Table 17)	653	621
Total Residential Tonnes Diverted	56,303	51,435

Due to rounding, the Total Residential Tonnes Diverted does not equate to the sum of tables 4, 10, 14, and 17.

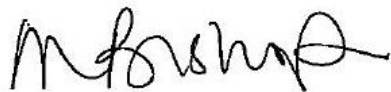
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