Ontario County
NEW YORK

County Solid Waste Characterization Study

FINAL REPORT

May 2025

MSW CONSULTANTS

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1. INTRODUCTION

Ontario County (County), located in the Finger Lakes area of New York, is a popular vacation destination that is home to over 112,000 residents. Residents live within the County's 26 municipalities comprised of a mix of cities, towns and villages. The County's Department of Sustainability and Solid Waste Management (Department) administers the Local Solid Waste Management Plan (LSWMP) that identifies the economic and environmental goals of the County and State related to the conservation of resources, encouragement of waste diversion, and the implementation of recycling and organics programs including advanced recyclers.

The reduction in waste generation and alternatives to traditional landfill disposal are of increasing importance for the County as the County Board of Supervisors recently voted to close the Ontario County Landfill by December 31, 2028. The County-owned landfill, located in the Town of Seneca and operated by Casella, is permitted to receive 2,999 tons per day from multiple counties, including Ontario. The onsite Materials Recovery Facility (MRF), also operated by Casella, may or may not remain operational following the closure of the landfill.

As part of the Department's ongoing solid waste management efforts, MSW Consultants was retained to perform a 2025 Waste Characterization Study (WCS). The 2025 WCS serves as an update to a similar study performed in 2022, analyzing municipal solid waste (MSW) disposed at the landfill. Both studies were single season studies, although the 2022 WCS took place in summer (June) and the 2025 WCS occurred in winter (January).

The 2022 and 2025 studies targeted representative samples from the inbound municipalities and haulers for the residential and commercial generator sectors based on tonnage data provided by the County, and only Ontario County waste was targeted. The 2025 WCS included an add-on task of sampling inbound recycling samples at the County's MRF.

2. ONTARIO COUNTY WASTE GENERATION

Based on the sampling protocol of the 2022 WCS and review of annual tonnage data, the following generator sectors were defined in the 2025 WCS for both MSW and recycling sample targets:

- **Residential – Private Hauler:** material collected by third-party private haulers from single-family and multi-family residences throughout the County,
- **Residential – Municipal Hauler:** material collected by municipal haulers from single-family residences throughout the County,
- **Residential – Convenience Center:** residential drop-off (self-haul) locations at convenience centers/transfer stations for refuse and recycling, and
- **Industrial/Commercial/Institutional (ICI):** material collected from businesses and institutions within the County, such as restaurants, offices, manufacturing, warehouses, retail, medical facilities and schools.

Table 2-1 shows three years of annual scale data provided by the County for the Casella operated landfill and MRF. Annual tonnage data for 2024 shows a moderate increase in landfill tonnage and relatively consistent recycling generation over the last few years.

Table 2-1 Annual Ontario County MSW and Recycling Tonnage (2022-2024)

	Tons		
Generator	2022	2023	2024
MSW to Landfill	54,475	54,525	57,513
Recyclables to MRF	7,256	6,168	7,070
Total	61,731	60,693	64,582

Reported refuse tonnage data provided did not break down inbound materials by generator sector (residential, ICI) or hauler type. Table 2-2 shows the results of a detailed review of landfill scale transactions to assign inbound waste tons to generator and hauler type based on County feedback and fieldwork observations.[1]

Table 2-2 Allocated Ontario County MSW Disposal

Generator	2023 Tons	2023 Pct	Implied 2024 Tons
Residential Total	37,698	69.1%	39,763
Residential Convenience Center	6,404	11.7%	6,754
Residential Private Hauler	21,842	40.1%	23,038
Residential Municipal	9,452	17.3%	9,970
ICI	16,828	30.9%	17,750
Total	54,525	100.0%	57,513

*Totals may be slightly off due to rounding.

Table 2-3 provides the same results of allocating annual recycling tonnage to generator sectors and hauler types at the MRF. Recycling scale data provided a breakdown of inbound residential and ICI tons and hauler types were verified during fieldwork.

Table 2-3 Allocated Ontario County Recyclables Tonnage

Generator	2023 Tons	2023 Pct	Implied 2024 Tons
Residential Total	3,974	64.4%	4,554
Residential Convenience Center	839	13.6%	961
Residential Private Hauler	1,734	28.1%	1,987
Residential Municipal	1,401	22.7%	1,606
ICI	2,195	35.5%	2,515
Total	6,168	100.0%	7,070

*Totals may be slightly off due to rounding.

[1] It should be noted that the basis for both MSW and recycling allocations were supplemented by random sampling during the field data collection, described later in this report.

The tonnages shown above have been used for the purpose of aggregating composition results, and for reporting on countywide disposed MSW and recycled material quantities. The availability of accurate underlying tonnages in this 2025 WCS is a distinct improvement over the 2022 WCS, which did not incorporate such a detailed analysis of underlying scale data.

3. STUDY DESIGN

Elements of the study design and field operations methodology are summarized in the following subsections.

3.1 SAMPLE TARGETS

Table 3-1 and Table 3-2 show the stratified sampling targets for MSW and recycling based on tonnage data provided by the County and Casella.

Table 3-1 MSW Sampling Plan

Hauler	Targeted	Actual
Casella	20	21
Miscellaneous Haulers	10	10
K&D Disposal	8	7
Finger Lakes Refuse Disposal	6	5
Lyons Road Trash Removal	4	5
Canandaigua City DPW	2	4
Total	50	52

Table 3-2 Recycling Sampling Plan

Hauler	Targeted	Actual
Miscellaneous Haulers (inc. Casella)	9	14
Appleton Disposal	7	4
Canandaigua City DPW	3	0
Canandaigua Town	2	4
Lyons Road Trash Removal	2	3
Finger Lakes Refuse Disposal	2	3
Town of Gorham	0	2
Total	25	30

As shown in these tables, sample targets were allocated across the many haulers and municipalities collecting material in Ontario County. Refuse tonnage data provided by the County did not specify generator sector and therefore the sampling plan was supplemented in the field based on driver interviews and available trucks for sampling. Recycling scale data provided a better view of inbound vehicles separated by residential and ICI tonnage. Recycling trucks were selected during a sampling window between Monday afternoon and Thursday morning. Not all targeted haulers (e.g., City of Canandaigua) arrived during the sampling window at the MRF; therefore, alternate vehicles were selected.

A stratified “nth” truck approach was used for MSW and recycling sampling when feasible; however, because inbound Ontario loads arrive somewhat infrequently at the landfill and MRF, the scalehouses

for both facilities also assisted in directing targeted Ontario loads to the sort team on arrival to the landfill tip face and MRF tip floor.

Table 3-3 summarizes the total samples captured for both MSW and recyclables. Over 16,000 pounds of materials were intercepted during the study, and sample weight targets were met.

Table 3-3 Samples Collected by Stream

	MSW		Recyclables	
Generator Sector	Samples	Sorted Lbs	Samples	Sorted Lbs
Residential Private Hauler	22	5,039	15	2,085
Residential Municipal Hauler	6	1,319	2	296
Residential Convenience Centers	5	1,214	8	1,114
Industrial/Commercial/Institutional (ICI)	19	4,234	5	736
Total	**52**	**11,806**	**30**	**4,231**
Average pounds per sample		*229*		*143*

3.2 MATERIAL CATEGORIES

The refuse material categories used for the 2025 WCS are shown in Table 3-4. Material definitions are provided in Appendix A. These categories remained unchanged from the 2022 WCS for comparability and representativeness of the County's collection programs. However, the material group designations for some material categories were modified in 2025 for a better presentation of the results. For example, the Organics material category was reduced to food waste, yard waste and remainder/composite organics. This material group previously included material categories such as diapers and sanitary products and textiles. The material groups and results for both the 2022 and 2025 studies presented in later sections were updated for comparability.

Table 3-4 also presents a "divertibility" classification for each material category, which shows the potential to reduce waste to landfill and includes the following designations:

- **Targeted Recyclable –** includes commonly accepted curbside or drop-off program recyclables for residents and businesses such as recyclable fiber and plastic, metal and glass containers.
- **Compostable Organics –** organic items typically accepted in organics collection programs including food waste, compostable paper (uncoated fiber such as paper towels) and yard waste (grass, leaves, prunings and trimmings).
- **Special Collection –** includes materials not readily acceptable in curbside recycling but that may be accepted at municipal drop-off locations or third-party recyclers such as electronic and household hazardous waste, retail film, textiles, tires and mattresses. Textiles were previously listed as not readily recoverable in the 2022 WCS.
- **Not Readily Recoverable –** includes all other materials that are not currently readily recoverable in Ontario County such as bulky items, diapers, construction and demolition materials, and composite products.

Table 3-4 Refuse Material Categories and Divertibility Classifications

Material Category	Material Category
Paper	**Metals**
Corrugated Cardboard/Kraft Paper (Uncoated)	Aluminum Cans & Containers
Newsprint	Other Aluminum
Magazines	Tin/Steel Containers
High Grade Office Paper	Other Ferrous
Mixed Recyclable Paper	Other Non-Ferrous
Aseptic Containers/Gable Top Cartons	Oil Filters
Compostable Paper	**Organics**
Remainder/Composite Paper	Food Waste
Plastic	Yard Waste
PET (#1) Bottles/Jars	Remainder/Composite Organic
PET (#1) Non-Bottle Containers	**C&D/Bulky Items**
HDPE (#2) Natural Containers	Wood - Clean/Untreated
HDPE (#2) Colored Containers	Wood - Painted/Stained/Treated
Clean Retail Film Bags	Drywall/Gypsum Board
Clean Industrial/Commercial Film (Non-Bag)	Asphalt, Brick, Concrete, & Rocks
Contaminated Film/Other Film	Carpet & Carpet Padding
Plastic Containers #3 - #7	Other Construction & Demolition
Expanded Polystyrene	Bulky Items
Bulky Durable Plastic Products	Furniture
Remainder/Composite Plastic	Mattresses/Box Springs
E-Waste/HHW	Tires
Electronic Waste	**Other Waste**
HHW	Textiles - Clothing
Glass	Textiles - Non-Clothing
Clear Glass Containers	Shoes/Belts/Leather
Brown Glass Containers	Disposable Diapers & Sanitary Products
Green Glass Containers	Other/Not Classified
Remainder/Composite Glass	Fines

Key: *Targeted Recyclable* *Compostable Organics* *Special Collection* *Not Readily Recoverable*

The same material categories were used for the recycling sorts. However, mixed cullet and "opaque bagged material" categories were added to better evaluate the recycling composition as these materials are typically readily found in inbound recycling. It was confirmed with MRF and County staff that the sorting should replicate MRF operations where clear bags of recycling are opened on the processing line but opaque bags (no matter what the material) are not opened. As a result, opaque bags were weighed but not opened. Table 3-5 shows the recycling material categories and their recoverability potential, which includes the following categories:

- **Targeted Fiber –** includes recyclable paper products such as cardboard, newsprint, magazines and mixed paper.
- **Targeted Plastic –** includes rigid #1-#7 plastic containers such as bottles, jars, cups and thermoforms.
- **Targeted Metal –** includes aluminum and tin/steel food, beverage and other product containers, other aluminum (foil trays and sheets) and ferrous scrap metal.
- **Targeted Glass –** includes glass food, beverage and other product bottles, jars and containers, any color. Also includes 2" plus mixed cullet (broken glass) if can be identified as a bottle, jar or other container.
- **Contaminant –** items not currently targeted for recycling or cannot be processed by a MRF, such as expanded polystyrene, film plastics, composite items, textiles, organics and household goods.

Table 3-5 Recycling Material Categories and Recoverability Classifications

Material Category	Material Category
Paper	**Metals**
Corrugated Cardboard/Kraft Paper (Uncoated)	Aluminum Cans & Containers
Newsprint	Other Aluminum
Magazines	Tin/Steel Containers
High Grade Office Paper	Other Ferrous
Mixed Recyclable Paper	Other Non-Ferrous
Aseptic Containers/Gable Top Cartons	Oil Filters
Compostable Paper	**Organics**
Remainder/Composite Paper	Food Waste
Plastic	Yard Waste
PET (#1) Bottles/Jars	Remainder/Composite Organic
PET (#1) Non-Bottle Containers	**C&D/Bulky Items**
HDPE (#2) Natural Containers	Wood - Clean/Untreated
HDPE (#2) Colored Containers	Wood - Painted/Stained/Treated
Clean Retail Film Bags	Drywall/Gypsum Board
Clean Industrial/Commercial Film (Non-Bag)	Asphalt, Brick, Concrete, & Rocks
Contaminated Film/Other Film	Carpet & Carpet Padding
Plastic Containers #3 thru #7	Other Construction & Demolition
Expanded Polystyrene	Bulky Items
Bulky Durable Plastic Products	Furniture
Remainder/Composite Plastic	Mattresses/Box Springs
E-Waste/HHW	Tires
Electronic Waste	**Other Waste**
HHW	Textiles - Clothing
Glass	Textiles - Non-Clothing
Clear Glass Containers	Shoes/Belts/Leather
Brown Glass Containers	Disposable Diapers & Sanitary Products
Green Glass Containers	Other/Not Classified
Remainder/Composite Glass	Fines
Cullet	Opaque Bagged Material

Key: *Targeted Fiber* *Targeted Plastic* *Targeted Metal* *Targeted Glass* *Contaminant*

This table also indicates whether each category is targeted at the MRF, or else represents a contaminant that should not be in the recycling stream.

3.3 FIELD DATA COLLECTION

The 2025 WCS study took place in January 2025 and largely followed the 2022 WCS methodology for comparability of results. Winter weather delays resulted in the previously planned seven-day 2025 WCS extending into ten days; however, representative days and trucks were still captured at the landfill and MRF. Refuse sorting took place at the Ontario County landfill located at 1879 NY-5, Stanley, NY 14561, while the recycling sort was located at the onsite MRF located at 3555 County Rd 49 Stanley, NY 14561.

Only Ontario County loads were targeted at the landfill and MRF, which both receive waste from other counties. Therefore, scalehouse staff and drivers were asked to confirm the origin of loads, including the county of origin and generator sector. Once a load was selected for sampling it was directed to tip in the designated area so a "grab" sample of material could be retrieved from a randomly selected cell of the load. The minimum sample weight was 200 pounds for refuse samples and 125 pounds for recycling samples, following industry standards (ASTM D5231-92 (2024), *Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste)*.

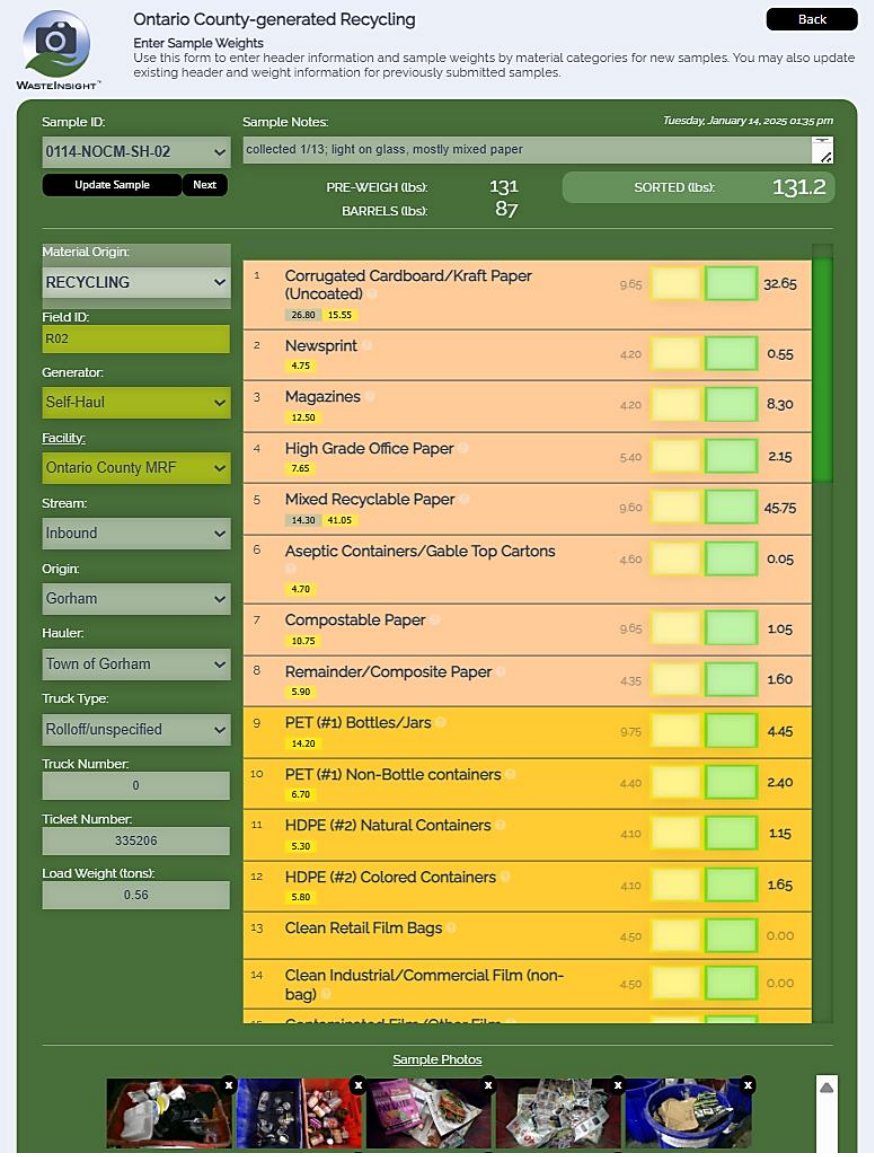
Figure 3-1 shows images of the landfill tip face and MRF tip floor used for sample retrieval and sort operations.

Figure 3-1 Sort Site Layout at Landfill and MRF

After samples were collected, they were assigned a unique sample ID and staged for sorting by the MSW Consultants professional sort crew. The sort crew used a 4' x 8' table to open bags and separate material by group and category into 5-gallon buckets, 18-gallon bins and 35-gallon barrels. At the

conclusion of each sample all material was weighed and recorded using an electronic tablet with built-in functionality to verify sample ID, total targeted weight and any missing or erroneously entered values in real-time. Figure 3-2 provides a screenshot of the tablet-based app that was used to record data in the field. As shown, this robust interface gives the field supervisor detailed information to assure the accuracy and completeness of sample data.

Figure 3-2 Data Recording App (Screenshot)



Data was uploaded regularly throughout the day allowing for additional in-office quality control and setting up the results for the analysis performed in the next section.

3.4 DATA ANALYSIS

The statistical methods used in this study for manually sorted MSW samples follow the US EPA's guidance on solid (hazardous) waste sampling.[2] This approach involves converting the weight of each material category within a sample into a percentage of the sample's total weight. The average percentage and margin of error are then calculated across all samples. The resulting statistical measures are provided in the results:

- **Sample Mean**: The sample mean, or average, composition is considered the "most likely" fraction for each material category in the waste stream.
- **Margin of Error**: Margins of error (MOE) are calculated for each material category to provide a measure of the uncertainty in the sample mean. Because the estimated composition percentage is based on sampling, there is inherent variability in the estimate. The MOE quantifies this variability, reflecting the possible difference between the sample mean and the true population value due to sampling error. MOEs are calculated at a 90 percent level of confidence in this study.

4. REFUSE COMPOSITION RESULTS

This section presents the results of the aggregate, residential and ICI disposed MSW streams and includes comparisons between the 2025 and 2022 studies.

4.1 COUNTYWIDE AGGREGATE MSW COMPOSITION

Figure 4-1 shows the aggregate composition by material group for the combined residential (Private Hauler, Municipal Hauler, Convenience Center) and ICI generator sectors. Organics (food waste, yard waste, remainder/composite organics) and Paper (all types) are shown to be the largest material groups disposed of at the landfill. The Other Waste material group includes textiles, diapers and sanitary products, other/not classified waste, and fines. Of note, the material groups in Figure 4-1 include both recoverable/recyclable and non-recoverable/non-recyclable materials whereas Figure 4-2 provides the divertibility potential of each material category based on the breakdown provided in Table 3-4.

[2] *Hazardous Waste Test Methods/SW-846*, Chapter 9: Sampling Plans, US EPA, November 22, 2023.

Figure 4-1 Disposed Aggregate MSW Composition by Material Group

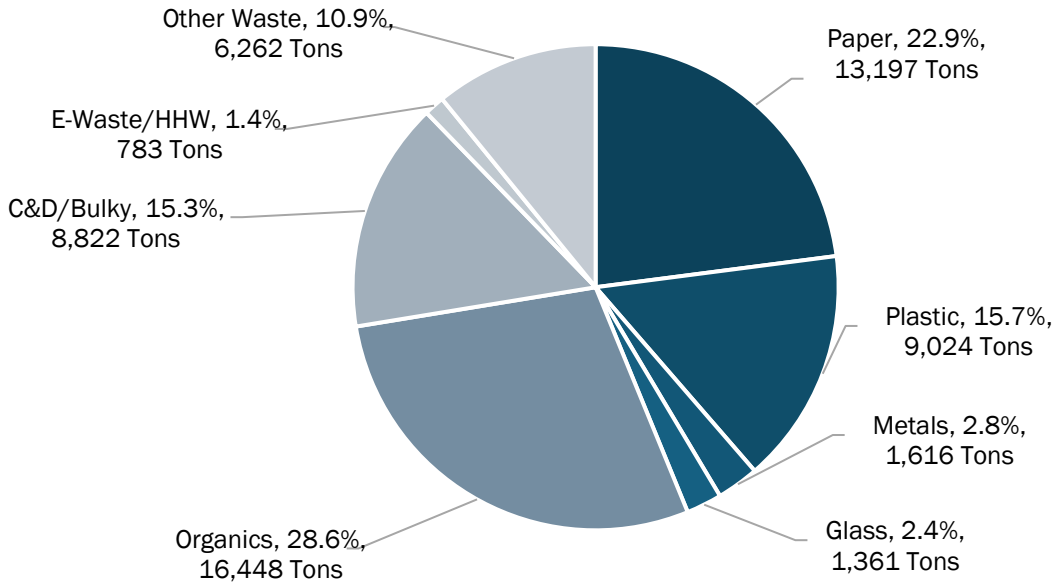


Figure 4-2 recasts these results to illustrate the divertibility of disposed MSW. Over 18 percent of the disposed waste stream was made up of Targeted Recyclables, with over 36 percent of the waste stream potentially recoverable through Organics and Special Collection programs, based on the divertibility classifications provided in Table 3-4. It is important to note, some fraction of potentially recoverable materials may have been too degraded or contaminated for recovery, such as moisture or food soiled fibers or film, and so this figure should be considered a higher estimate of truly recyclable materials being disposed.

Figure 4-2 Disposed Aggregate MSW Composition by Divertibility

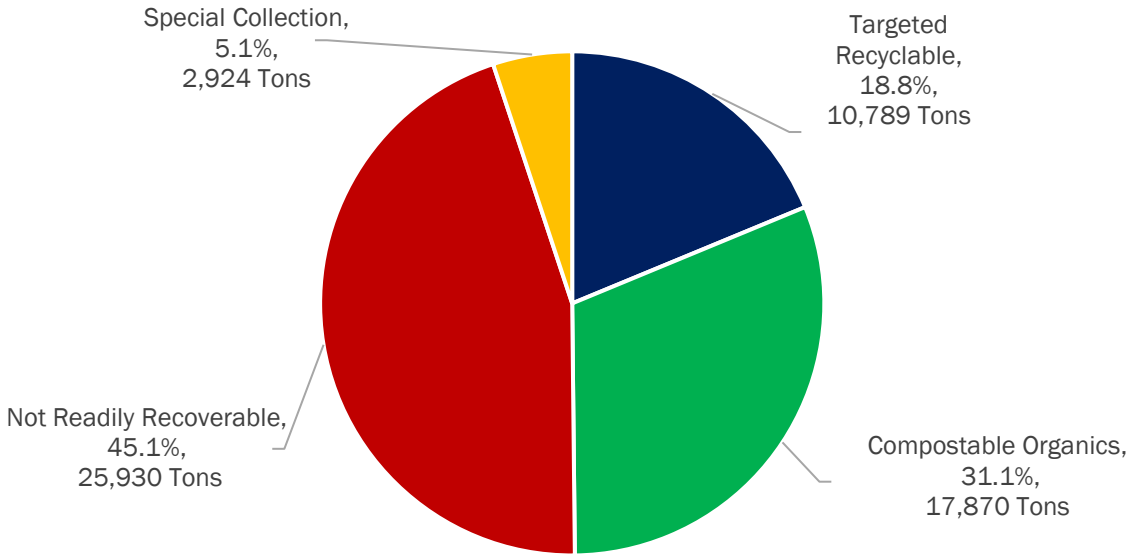


Table 4-1 presents the weighted aggregate results for each material group and category for the combined residential and ICI generator sectors. Consistent with industry standards, the margin of error is calculated at a 90 percent level of confidence.

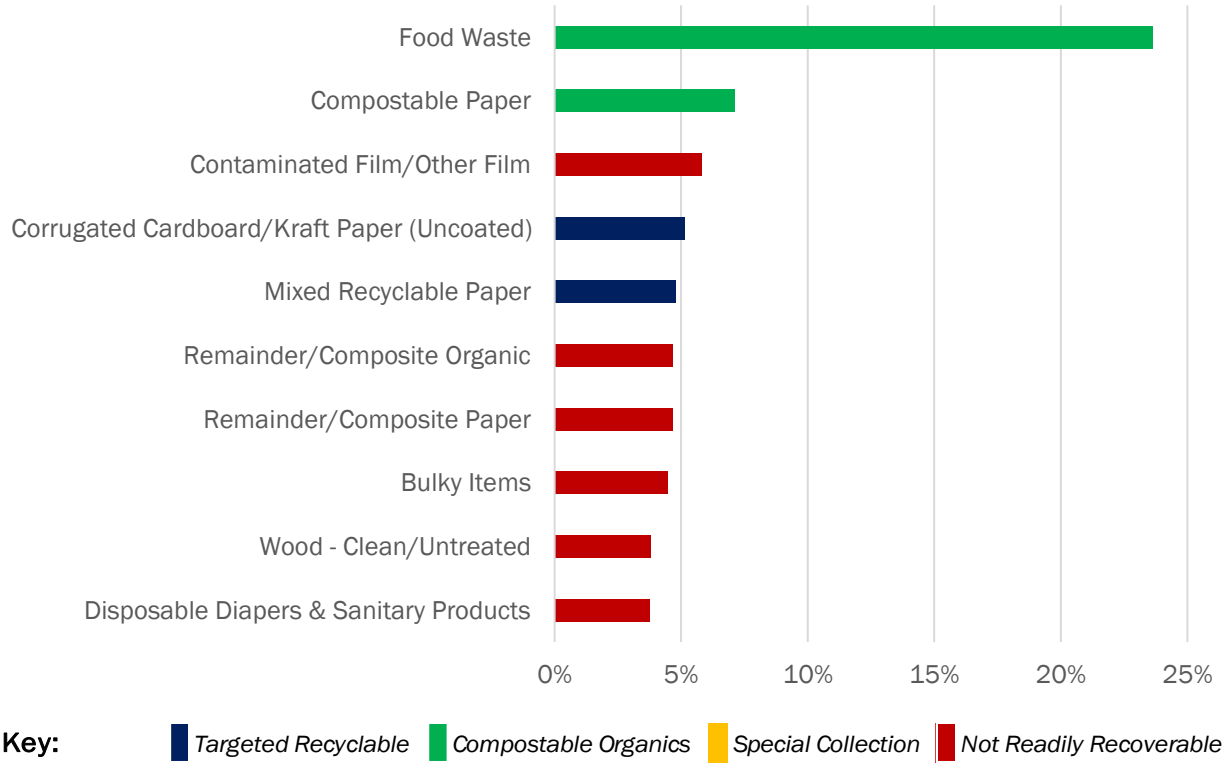
Table 4-1 Detailed Aggregate Disposed MSW Composition

Material Category	Mean	MOE	Tons	Material Category	Mean	MOE	Tons
Paper	**22.9%**	**1.9%**	**13,197**	**Glass**	**2.4%**	**0.9%**	**1,361**
Corrugated Cardboard/Kraft Paper	5.2%	1.2%	2,966	Clear Glass Containers	0.9%	0.2%	534
Newsprint	0.1%	0.0%	79	Brown Glass Containers	0.2%	0.0%	109
Magazines	0.3%	0.1%	193	Green Glass Containers	0.5%	0.1%	292
High Grade Office Paper	0.4%	0.1%	228	Remainder/Composite Glass	0.7%	0.2%	426
Mixed Recyclable Paper	4.8%	1.1%	2,751	**Organics**	**28.6%**	**3.0%**	**16,448**
Aseptic Containers/Gable Top Cartons	0.3%	0.1%	199	Food Waste	23.6%	5.5%	13,595
Compostable Paper	7.1%	1.7%	4,105	Yard Waste	0.3%	0.1%	170
Remainder/Composite Paper	4.7%	1.1%	2,677	Remainder/Composite Organic	4.7%	1.1%	2,683
Plastic	**15.7%**	**1.7%**	**9,024**	**E-Waste/HHW**	**1.4%**	**0.4%**	**783**
PET (#1) Bottles/Jars	1.1%	0.3%	655	Electronic Waste	0.8%	0.2%	438
PET (#1) Non-Bottle Containers	0.5%	0.1%	268	HHW	0.6%	0.1%	345
HDPE (#2) Natural Containers	0.3%	0.1%	182	**C&D/Bulky**	**15.3%**	**4.3%**	**8,822**
HDPE (#2) Colored Containers	0.5%	0.1%	259	Wood - Clean/Untreated	3.8%	0.9%	2,194
Clean Retail Film Bags	0.1%	0.0%	37	Wood - Painted/Stained/Treated	1.2%	0.3%	683
Clean Industrial/Commercial Film	0.5%	0.1%	300	Drywall/Gypsum Board	0.6%	0.1%	317
Contaminated Film/Other Film	5.8%	1.4%	3,349	Asphalt, Brick, Concrete & Rocks		Not Found	
Plastic Containers #3 thru #7	1.3%	0.3%	750	Carpet & Carpet Padding	1.9%	0.4%	1,101
Expanded Polystyrene	0.2%	0.1%	128	Other Construction & Demolition	1.3%	0.3%	745
Bulky Durable Plastic Products	3.3%	0.8%	1,904	Bulky Items	4.5%	1.0%	2,579
Remainder/Composite Plastic	2.1%	0.5%	1,191	Furniture	1.7%	0.4%	976
Metals	**2.8%**	**0.4%**	**1,616**	Mattresses/Box Springs	0.2%	0.0%	97
Aluminum Cans & Containers	0.5%	0.1%	302	Tires	0.2%	0.1%	131
Other Aluminum	0.4%	0.1%	224	**Other Waste**	**10.9%**	**1.5%**	**6,262**
Tin/Steel Containers	0.8%	0.2%	480	Textiles - Clothing	1.3%	0.3%	732
Other Ferrous	0.6%	0.1%	319	Textiles - Non-Clothing	1.6%	0.4%	938
Other Non-Ferrous	0.5%	0.1%	290	Shoes/Belts/Leather	0.4%	0.1%	206
Oil Filters	0.0%	0.0%	2	Diapers & Sanitary Products	3.8%	0.9%	2,173
				Other/Not Classified	1.9%	0.4%	1,074
				Fines	2.0%	0.5%	1,139
				Total	**100.0%**		**57,513**
				Sample Count	*52*		

Key: *Targeted Recyclable* *Compostable Organics* *Special Collection* *Not Readily Recoverable*

The top ten most prevalent material categories disposed in the aggregate MSW are shown in Figure 4-3. Compostable Organics including Food Waste and Compostable Paper are the largest material categories; however, it should be noted that the food waste may be slightly elevated due to the presence of packaging that could not be readily separated from food.

Figure 4-3 Top 10 Material Categories in Disposed Aggregate MSW



4.2 RESIDENTIAL MSW COMPOSITION

Figure 4-4 shows the aggregate residential waste disposed by material group, with Organics being the largest contributor at over 33 percent, followed by Paper. This figure combines the Residential Private Hauler, Residential Municipal Hauler and Residential Convenience Center hauler types.

Figure 4-4 Disposed Residential MSW Composition by Material Group

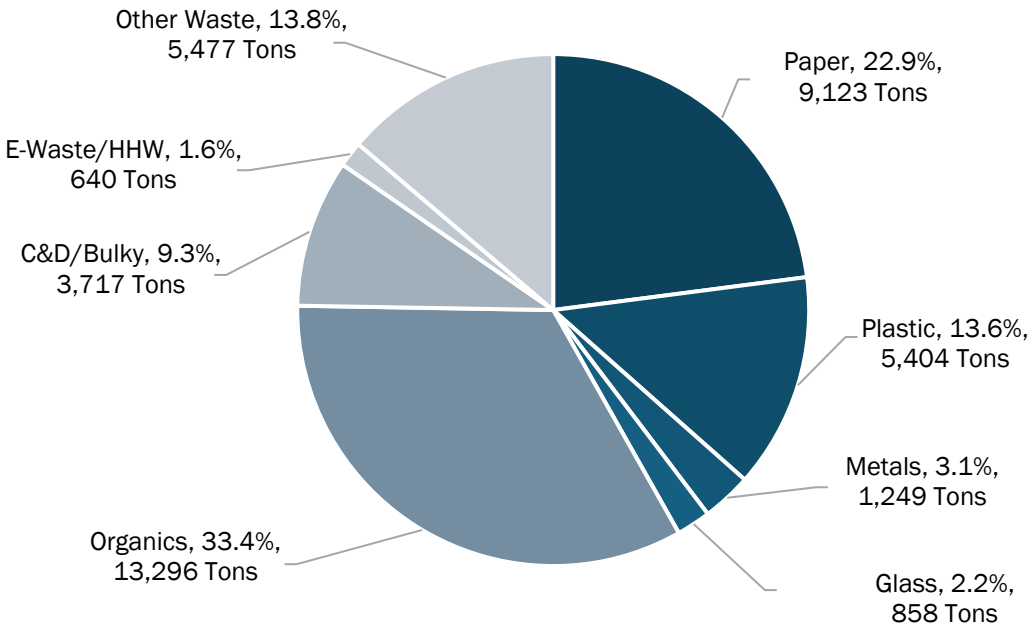


Figure 4-5 shows the divertibility of residential MSW, with over 60 percent of the waste stream being potentially divertible through curbside and drop-off recycling programs, potential organics diversion, and special collection programs.

Figure 4-5 Disposed Residential MSW Composition by Divertibility

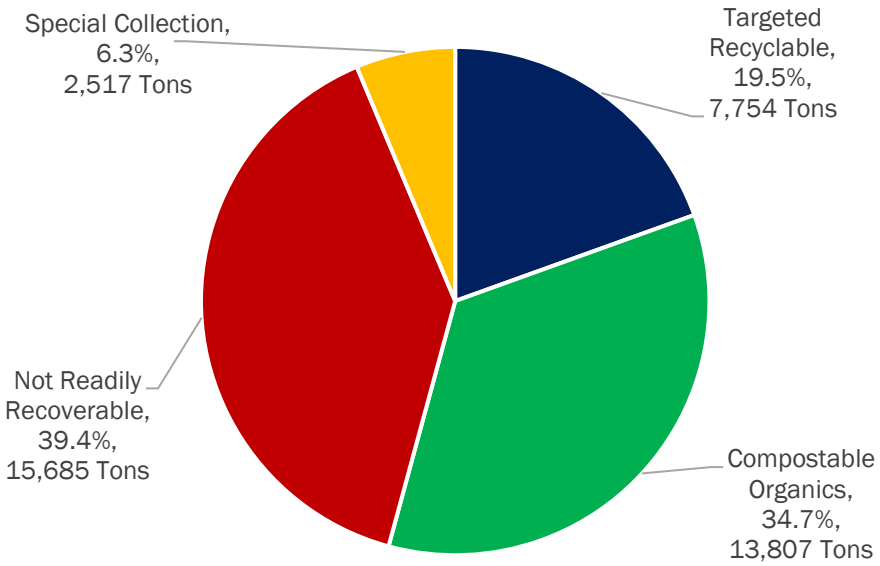


Table 4-2 provides the detailed statistical analysis of the residential MSW composition in tabular format by material group and category, and divertibility classification.

Table 4-2 Detailed Residential Disposed MSW Composition

Material Category	Mean	MOE	Tons	Material Category	Mean	MOE	Tons
Paper	**22.9%**	**1.0%**	**9,123**	**Glass**	**2.2%**	**0.3%**	**858**
Corrugated Cardboard/Kraft Paper	4.2%	0.4%	1,675	Clear Glass Containers	1.2%	0.3%	470
Newsprint	0.1%	0.0%	48	Brown Glass Containers	0.2%	0.1%	97
Magazines	0.4%	0.2%	169	Green Glass Containers	0.5%	0.2%	183
High Grade Office Paper	0.4%	0.2%	140	Remainder/Composite Glass	0.3%	0.1%	108
Mixed Recyclable Paper	5.5%	0.3%	2,167	**Organics**	**33.4%**	**1.6%**	**13,296**
Aseptic Containers/Gable Top Cartons	0.3%	0.0%	103	Food Waste	26.9%	1.2%	10,715
Compostable Paper	7.4%	0.5%	2,958	Yard Waste	0.3%	0.2%	134
Remainder/Composite Paper	4.7%	0.5%	1,863	Remainder/Composite Organic	6.2%	1.0%	2,447
Plastic	**13.6%**	**0.5%**	**5,404**	**E-Waste/HHW**	**1.6%**	**0.1%**	**640**
PET (#1) Bottles/Jars	1.3%	0.1%	518	Electronic Waste	0.9%	0.3%	345
PET (#1) Non-Bottle Containers	0.6%	0.1%	230	HHW	0.7%	0.3%	294
HDPE (#2) Natural Containers	0.3%	0.1%	126	**C&D/Bulky**	**9.3%**	**1.7%**	**3,717**
HDPE (#2) Colored Containers	0.6%	0.1%	223	Wood - Clean/Untreated	0.2%	0.2%	89
Clean Retail Film Bags	0.0%	0.0%	17	Wood - Painted/Stained/Treated	0.7%	0.3%	277
Clean Industrial/Commercial Film	0.0%	0.1%	19	Drywall/Gypsum Board	0.2%	0.2%	77
Contaminated Film/Other Film	5.6%	0.3%	2,224	Asphalt, Brick, Concrete & Rocks	0.0%	Not Found	0
Plastic Containers #3 thru #7	1.4%	0.1%	569	Carpet & Carpet Padding	2.1%	0.9%	837
Expanded Polystyrene	0.3%	0.1%	105	Other Construction & Demolition	0.6%	0.3%	228
Bulky Durable Plastic Products	1.9%	0.5%	764	Bulky Items	3.8%	0.8%	1,492
Remainder/Composite Plastic	1.5%	0.2%	610	Furniture	1.4%	0.8%	575
Metals	**3.1%**	**0.3%**	**1,249**	Mattresses/Box Springs	0.2%	0.3%	97
Aluminum Cans & Containers	0.6%	0.1%	246	Tires	0.1%	0.1%	45
Other Aluminum	0.5%	0.1%	203	**Other Waste**	**13.8%**	**3.5%**	**5,477**
Tin/Steel Containers	0.8%	0.2%	334	Textiles - Clothing	1.7%	0.3%	694
Other Ferrous	0.6%	0.3%	254	Textiles - Non-Clothing	2.1%	0.4%	821
Other Non-Ferrous	0.5%	0.2%	210	Shoes/Belts/Leather	0.5%	0.2%	204
Oil Filters	0.0%	0.0%	2	Diapers & Sanitary Products	5.2%	0.7%	2,056
				Other/Not Classified	2.1%	0.3%	844
				Fines	2.2%	0.2%	858
				Total	**100.0%**		**39,763**
				Sample Count	*33*		

Key: *Targeted Recyclable* *Compostable Organics* *Special Collection* *Not Readily Recoverable*

The composition results for Residential Private Hauler, Residential Municipal Hauler and Residential Convenience Center are shown in Table 4-3. Statistical results are not included due to the limited number of samples obtained from the Residential Municipal Hauler and Residential Convenience Center hauler types.

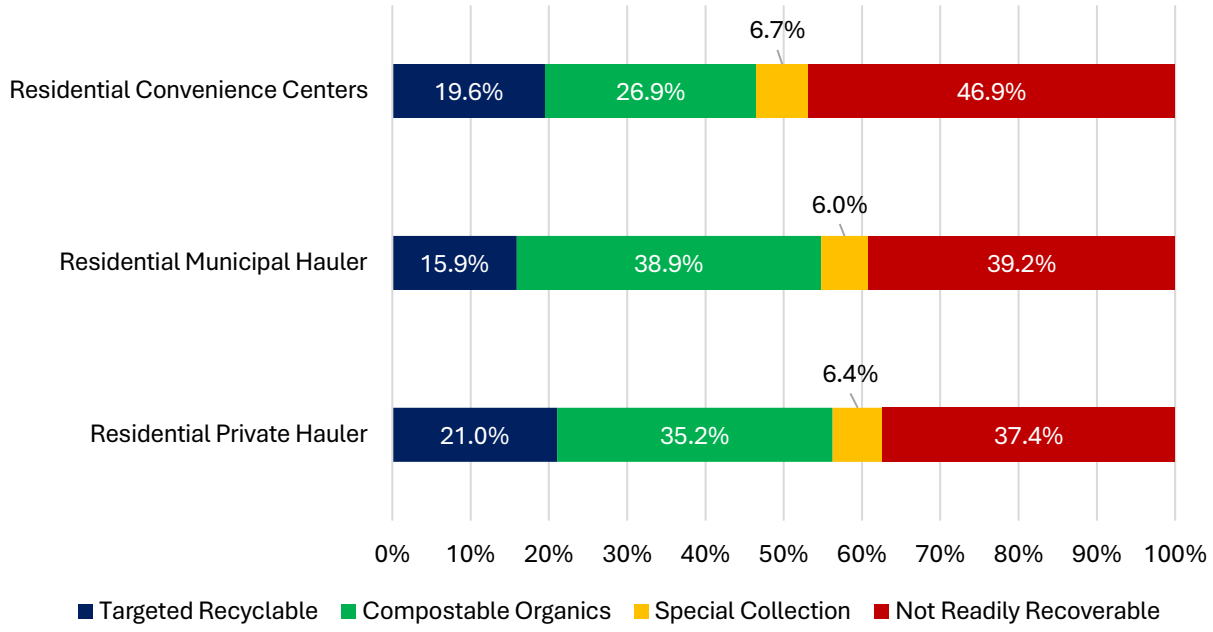
Table 4-3 Residential MSW Composition by Hauler Type

Material Category	Residential Private Hauler	Residential Municipal Hauler	Residential Convenience Centers	Material Category	Residential Private Hauler	Residential Municipal Hauler	Residential Convenience Centers
Paper	**23.9%**	**20.9%**	**22.5%**	**Glass**	**2.5%**	**1.3%**	**2.2%**
Corrugated Cardboard/Kraft Paper	4.8%	1.9%	5.7%	Clear Glass Containers	1.3%	1.0%	1.1%
Newsprint	0.1%	0.1%	0.1%	Brown Glass Containers	0.3%	0.1%	0.2%
Magazines	0.4%	0.3%	0.8%	Green Glass Containers	0.7%	0.2%	0.2%
High Grade Office Paper	0.1%	0.8%	0.4%	Remainder/Composite Glass	0.2%	0.1%	0.8%
Mixed Recyclable Paper	5.8%	5.0%	5.0%	**Organics**	**33.1%**	**38.2%**	**27.6%**
Aseptic Containers/Gable Top Cartons	0.2%	0.4%	0.2%	Food Waste	27.3%	30.3%	20.7%
Compostable Paper	7.6%	8.2%	5.7%	Yard Waste	0.3%	0.3%	0.5%
Remainder/Composite Paper	4.9%	4.2%	4.6%	Remainder/Composite Organic	5.5%	7.5%	6.4%
Plastic	**13.5%**	**13.6%**	**13.8%**	**E-Waste/HHW**	**1.6%**	**0.7%**	**2.8%**
PET (#1) Bottles/Jars	1.4%	1.1%	1.2%	Electronic Waste	1.1%	0.5%	0.5%
PET (#1) Non-Bottle Containers	0.6%	0.5%	0.6%	HHW	0.5%	0.2%	2.3%
HDPE (#2) Natural Containers	0.3%	0.3%	0.2%	**C&D/Bulky**	**7.9%**	**8.1%**	**15.9%**
HDPE (#2) Colored Containers	0.5%	0.6%	0.7%	Wood - Clean/Untreated	0.3%	0.0%	0.4%
Clean Retail Film Bags	0.0%	0.0%	0.0%	Wood - Painted/Stained/Treated	0.6%	0.5%	1.5%
Clean Industrial/Commercial Film	0.1%	0.0%	0.0%	Drywall/Gypsum Board	0.2%	0.0%	0.3%
Contaminated Film/Other Film	5.6%	6.0%	4.9%	Asphalt, Brick, Concrete & Rocks	0.0%	0.0%	0.0%
Plastic Containers #3 thru #7	1.4%	1.5%	1.5%	Carpet & Carpet Padding	1.6%	2.2%	3.8%
Expanded Polystyrene	0.3%	0.2%	0.2%	Other Construction & Demolition	0.6%	0.4%	0.7%
Bulky Durable Plastic Products	1.7%	2.1%	2.4%	Bulky Items	3.6%	4.6%	3.0%
Remainder/Composite Plastic	1.5%	1.3%	2.1%	Furniture	0.7%	0.0%	6.2%
Metals	**3.7%**	**2.5%**	**2.3%**	Mattresses/Box Springs	0.4%	0.0%	0.0%
Aluminum Cans & Containers	0.7%	0.5%	0.4%	Tires	0.0%	0.4%	0.0%
Other Aluminum	0.5%	0.6%	0.3%	**Other Waste**	**13.6%**	**14.7%**	**12.9%**
Tin/Steel Containers	1.0%	0.7%	0.4%	Textiles - Clothing	1.5%	2.2%	1.9%
Other Ferrous	0.7%	0.4%	0.7%	Textiles - Non-Clothing	2.2%	2.1%	1.5%
Other Non-Ferrous	0.6%	0.4%	0.5%	Shoes/Belts/Leather	0.6%	0.4%	0.4%
Oil Filters	0.0%	0.0%	0.0%	Diapers & Sanitary Products	5.2%	5.4%	4.9%
				Other/Not Classified	2.0%	2.3%	2.3%
				Fines	2.2%	2.2%	1.9%
				Sample Count	**100%**	**100%**	**100%**
					22	**6**	**5**

Key: *Targeted Recyclable* *Compostable Organics* *Special Collection* *Not Readily Recoverable*

Figure 4-6 compares the divertibility of residential MSW by hauler type. The potential to recover Targeted Recyclables from the residential sector is relatively the same across all three hauler types, with the Residential Municipal Hauler sector disposing of the lowest quantity of Targeted Recyclables in 2025.

Figure 4-6 Divertibility of Residential MSW by Hauler Type



4.3 ICI MSW COMPOSITION

Figure 4-7 shows the composition of the ICI MSW by material group, with C&D/Bulky, Paper, Plastics and Organics as the top four contributors.

Figure 4-7 Disposed ICI MSW Composition by Material Group

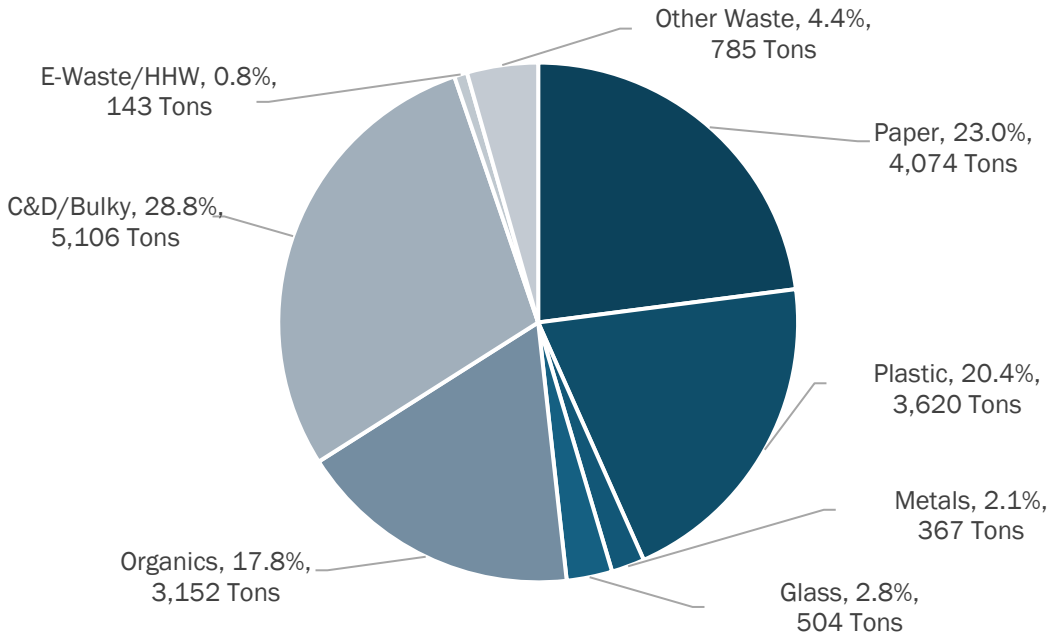


Figure 4-8 highlights that the largest portion of disposed ICI waste, at almost 58 percent, is Not Readily Recoverable. However, Targeted Recyclables make up just over 17 percent of the ICI MSW, with 7 percent of this material being divertible cardboard.

Figure 4-8 Disposed ICI MSW Composition by Divertibility

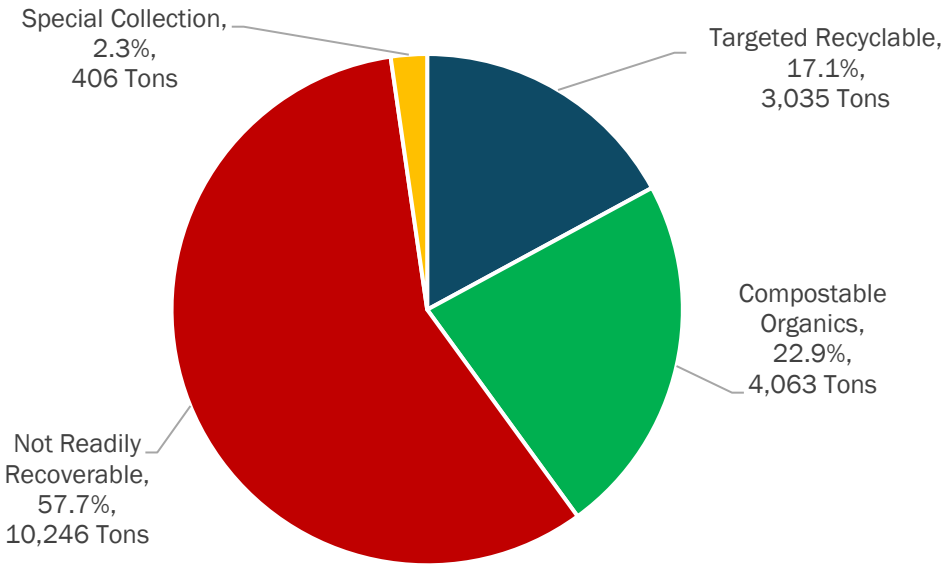


Table 4-4 presents the detailed ICI waste composition results and divertibility classifications for each material category.

Table 4-4 Detailed ICI Disposed MSW Composition

Material Category	Mean	+/-	Tons	Material Category	Mean	+/-	Tons
Paper	**23.0%**	**5.0%**	**4,074**	**Glass**	**2.8%**	**2.7%**	**504**
Corrugated Cardboard/Kraft Paper	7.3%	1.2%	1,291	Clear Glass Containers	0.4%	0.3%	64
Newsprint	0.2%	0.1%	30	Brown Glass Containers	0.1%	0.1%	13
Magazines	0.1%	0.1%	24	Green Glass Containers	0.6%	0.4%	109
High Grade Office Paper	0.5%	0.4%	88	Remainder/Composite Glass	1.8%	2.6%	317
Mixed Recyclable Paper	3.3%	1.1%	584	**Organics**	**17.8%**	**5.7%**	**3,152**
Aseptic Containers/Gable Top Cartons	0.5%	0.3%	96	Food Waste	16.2%	5.1%	2,880
Compostable Paper	6.5%	2.3%	1,147	Yard Waste	0.2%	0.3%	36
Remainder/Composite Paper	4.6%	1.6%	813	Remainder/Composite Organic	1.3%	1.1%	236
Plastic	**20.4%**	**4.2%**	**3,620**	**E-Waste/HHW**	**0.8%**	**0.7%**	**143**
PET (#1) Bottles/Jars	0.8%	0.3%	137	Electronic Waste	0.5%	0.6%	93
PET (#1) Non-Bottle Containers	0.2%	0.1%	39	HHW	0.3%	0.3%	50
HDPE (#2) Natural Containers	0.3%	0.2%	56	**C&D/Bulky**	**28.8%**	**10.9%**	**5,106**
HDPE (#2) Colored Containers	0.2%	0.1%	36	Wood - Clean/Untreated	11.9%	5.9%	2,106
Clean Retail Film Bags	0.1%	0.2%	21	Wood - Painted/Stained/Treated	2.3%	1.6%	406
Clean Industrial/Commercial Film	1.6%	0.7%	281	Drywall/Gypsum Board	1.4%	1.7%	240
Contaminated Film/Other Film	6.3%	2.1%	1,125	Asphalt, Brick, Concrete & Rocks	0.0%	0.0%	0
Plastic Containers #3 thru #7	1.0%	0.4%	181	Carpet & Carpet Padding	1.5%	1.4%	264
Expanded Polystyrene	0.1%	0.1%	23	Other Construction & Demolition	2.9%	2.3%	516
Bulky Durable Plastic Products	6.4%	3.3%	1,141	Bulky Items	6.1%	2.5%	1,086
Remainder/Composite Plastic	3.3%	1.4%	581	Furniture	2.3%	2.2%	401
Metals	**2.1%**	**0.7%**	**367**	Mattresses/Box Springs	0.0%	0.0%	0
Aluminum Cans & Containers	0.3%	0.1%	56	Tires	0.5%	0.6%	86
Other Aluminum	0.1%	0.1%	21	**Other Waste**	**4.4%**	**1.5%**	**785**
Tin/Steel Containers	0.8%	0.5%	146	Textiles - Clothing	0.2%	0.2%	38
Other Ferrous	0.4%	0.3%	65	Textiles - Non-Clothing	0.7%	0.5%	117
Other Non-Ferrous	0.4%	0.3%	80	Shoes/Belts/Leather	0.0%	0.0%	2
Oil Filters	0.0%	0.0%	0	Diapers & Sanitary Products	0.7%	0.5%	117
				Other/Not Classified	1.3%	0.8%	230
				Fines	1.6%	0.9%	281
				Total	**100.0%**		**17,750**
				Sample Count	*19*		

Key: *Targeted Recyclable* *Compostable Organics* *Special Collection* *Not Readily Recoverable*

4.4 HISTORICAL COMPARISON OF MSW COMPOSITION

Several time series comparisons are provided in this section between 2022 and 2025 because of the similar methodology used for both studies. Note that the ability to compare results is somewhat limited because the 2022 WCS did not undertake a detailed scale transaction analysis to validate the contribution of underlying residential and ICI hauler types to the overall disposed MSW stream. Additionally, the sample targets for the Residential Municipal and Residential Convenience Center generator sectors were intentionally lower in 2022 and 2025, which limits the ability to run statistical analysis. As a result, the comparisons between the 2022 and 2025 WCS only include the Residential Private Hauler and ICI generator sectors.

Figure 4-9 shows a comparison of Residential Private Hauler waste composition between the 2022 and 2025 studies, by material group. The results are largely similar between studies, with increases in disposed Organics, Metals, and E-Waste/HHW in 2025. It is encouraging that Paper, Plastics and Glass decreased, suggesting improvements may have been made to the recovery of Targeted Recyclables in recycling collection programs. However, it is also possible that there are slight seasonal differences in the waste composition studies, which could influence this comparison because the field work was completed in different seasons.

Figure 4-9 Residential Private Hauler MSW Comparison by Material Group

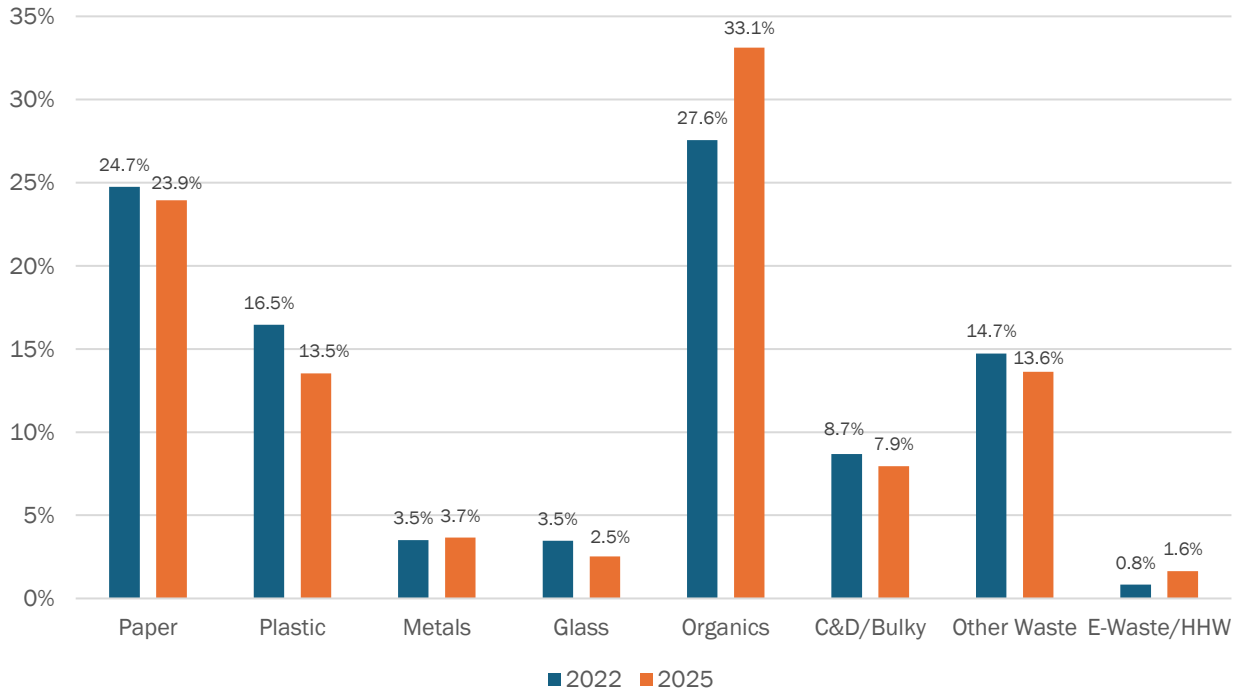


Figure 4-10 shows that divertibility potential of Residential Private Hauler waste in 2025 was similar to the prior study.

Figure 4-10 Residential Private Hauler MSW Comparison by Divertibility

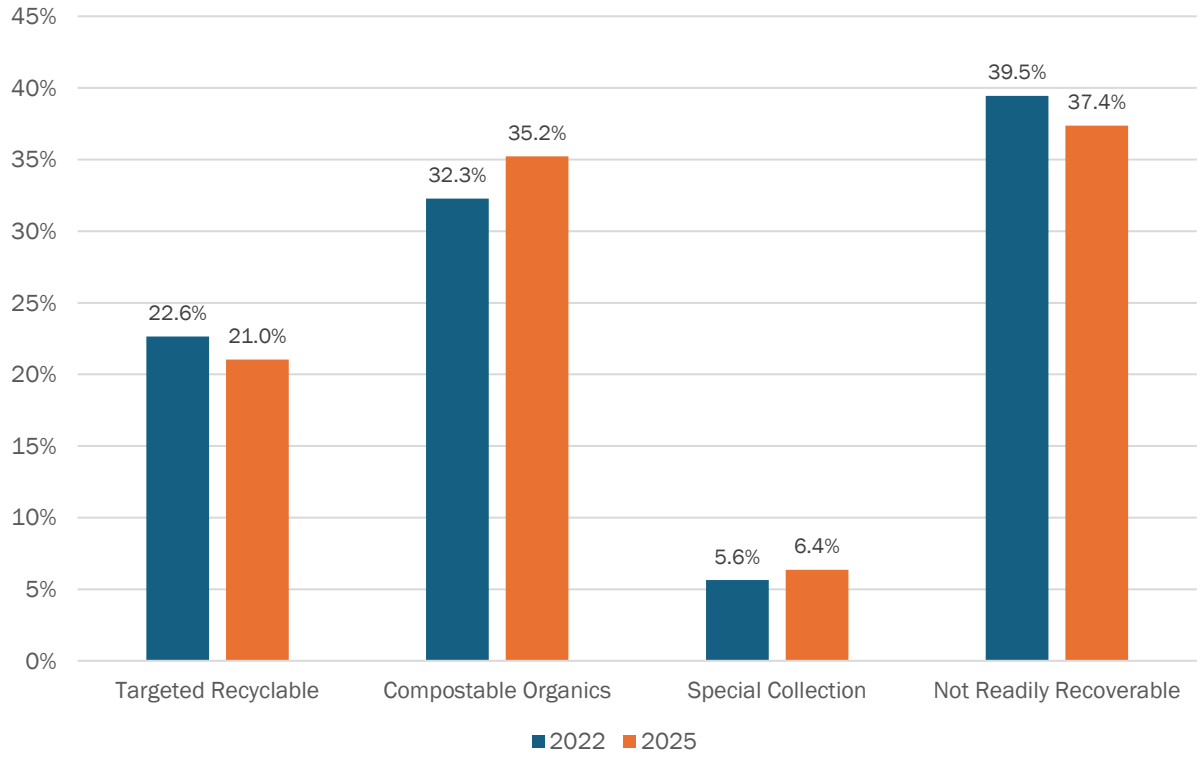


Figure 4-11 compares the results of disposed ICI MSW by material group between the 2022 and 2025 WCS. There appears to have been a decrease in Paper and Organics since 2022, although this could also be influenced by seasonality.

Figure 4-11 ICI MSW Comparison by Material Group (2022 vs 2025)

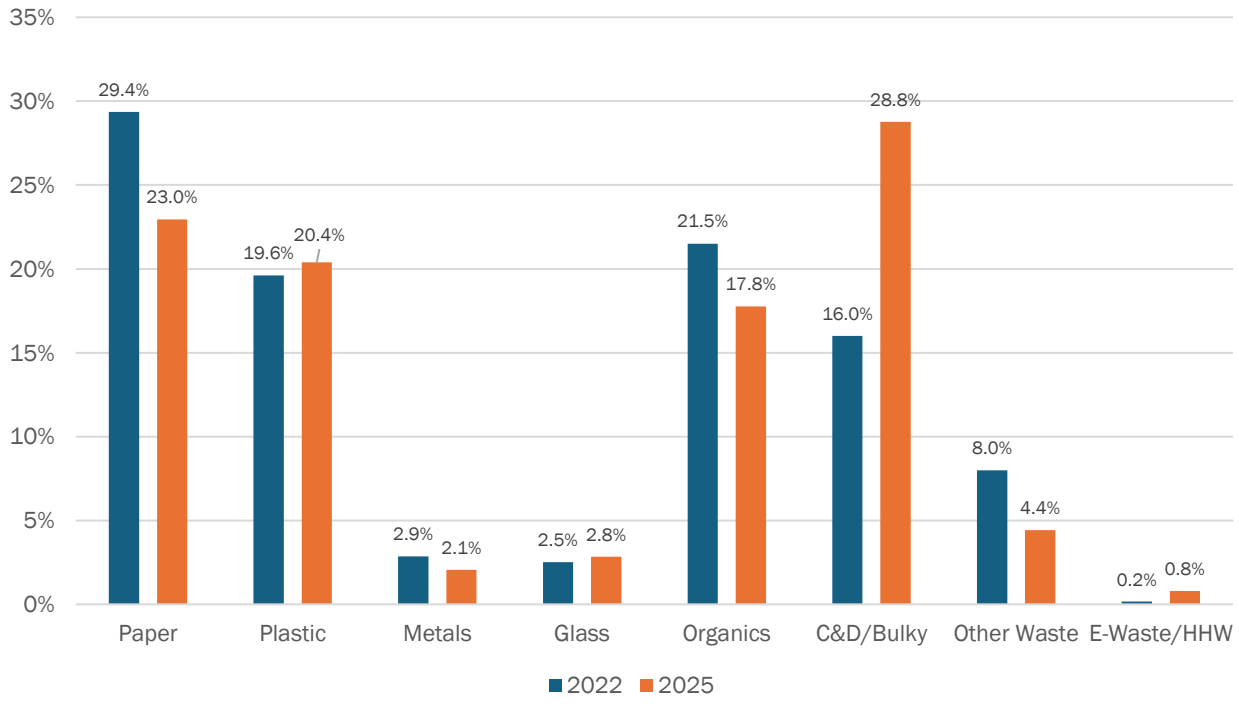
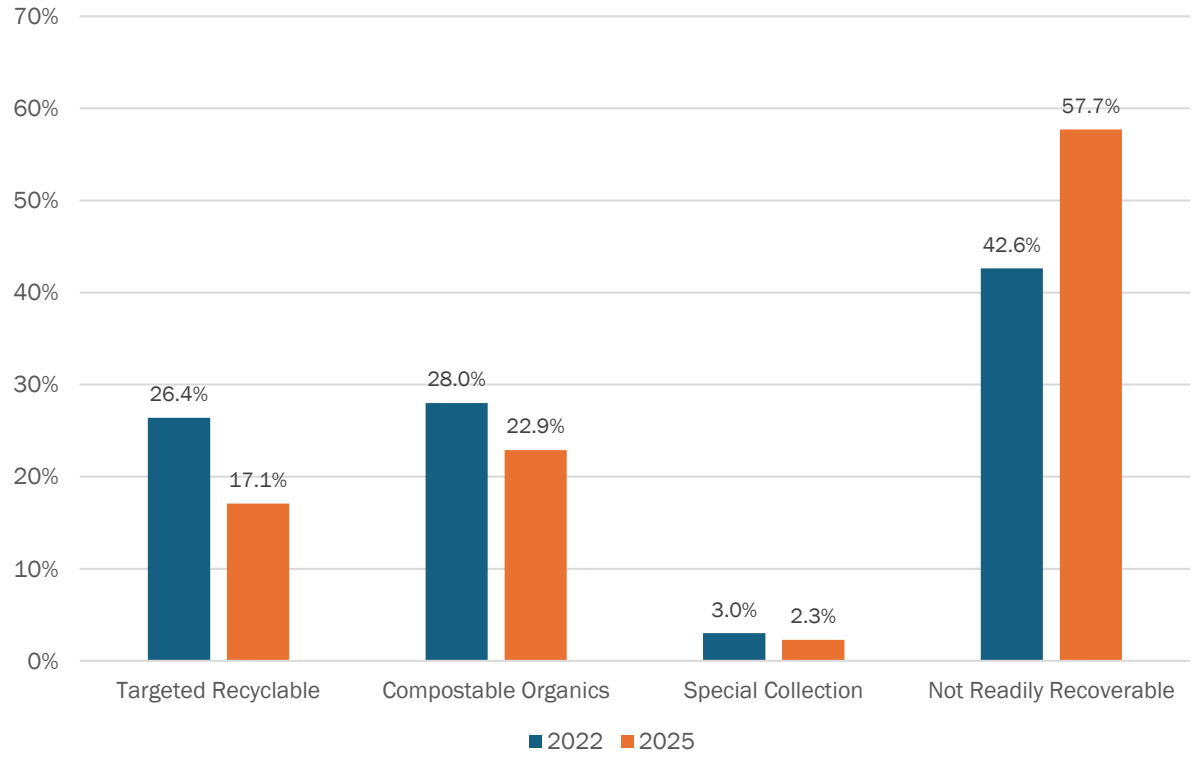


Figure 4-12 compares the divertibility of ICI waste in 2022 and 2025. The decrease in Targeted Recyclables and Organics could suggest improvements to collection programs and diversion efforts but may also be related to seasonality.

Figure 4-12 ICI MSW Comparison by Divertibility Class



5. RECYCLING COMPOSITION RESULTS

This section presents the composition of recycling at the Ontario County MRF for both the residential and ICI generator sectors. Table 5-1 shows the aggregate composition of inbound mixed recyclables, which included 25 residential samples and five ICI samples, further detailed in Table 3-3.[3] Fewer ICI samples were targeted because these tend to be primarily corrugated cardboard "no sort" loads that have less variability in commodities and were therefore not prioritized for sampling by the County.

[3] Recycling composition results were reviewed by the MRF operator who provided the comment that "mixed paper (MP) and glass seem light in percentages and plastics and metal seem a little high." There are two reasons that the MRF operator's assessment would be expected to differ from an inbound sort composition. First, it should be noted that the MRF processed over 44,878 tons of inbound recyclables in 2024, some of which arrived on transfer trailers from out-of-county generators. This study only focused on the 7,070 tons of Ontario County recyclables received in 2024, which come from a mix of curbside and drop-off sources. This locally generated material does not undergo as much degradation compared to the imported recyclables. Second, the MRF operator can only report percentages based on the recovery rates achieved by the mechanical and optical sorting configuration within the MRF. Mechanical and optical sorting equipment allows slight losses of targeted materials, and in the experience of MSW Consultants, the MRF operator's comments are consistent with the differences in measuring recycling composition based on manual versus mechanical/optical sorting. (On a related note, this is why larger generators of recyclable materials should demand inbound composition audits on their recyclables rather than rely on reported recovery percentages. The inbound mix is demonstrably more accurate and more valuable compared to the post-processed mix reported by most processors.)

Table 5-1 Detailed Mixed Recycling Composition

Material Category	Mean	MOE	Tons	Material Category	Mean	MOE	Tons
Paper	**60.9%**	**4.9%**	**4,306**	**Glass**	**15.9%**	**2.8%**	**1,126**
Corrugated Cardboard/Kraft Paper (Unc	35.5%	7.0%	2,513	Clear Glass Containers	7.3%	1.4%	518
Newsprint	1.5%	0.5%	104	Brown Glass Containers	1.8%	0.5%	128
Magazines	3.3%	0.8%	231	Green Glass Containers	3.9%	1.0%	277
High Grade Office Paper	2.1%	1.7%	152	Remainder/Composite Glass	0.9%	0.4%	63
Mixed Recyclable Paper	15.9%	2.0%	1,126	Cullet	2.0%	1.0%	140
Aseptic Containers/Gable Top Cartons	0.4%	0.1%	31	**Organics**	**0.9%**	**0.5%**	**63**
Compostable Paper	0.7%	0.1%	47	Food Waste	0.8%	0.5%	56
Remainder/Composite Paper	1.5%	0.3%	103	Yard Waste	0.0%	Not Found	0
				Remainder/Composite Organic	0.1%	0.1%	8
Plastic	**11.3%**	**1.8%**	**800**	**E-Waste/HHW**	**0.2%**	**0.1%**	**13**
PET (#1) Bottles/Jars	2.5%	0.4%	179	Electronic Waste	0.1%	0.1%	10
PET (#1) Non-Bottle Containers	0.9%	0.2%	67	HHW	0.0%	0.0%	3
HDPE (#2) Natural Containers	1.9%	0.7%	136	**C&D/Bulky**	**0.3%**	**0.3%**	**18**
HDPE (#2) Colored Containers	1.7%	0.3%	117	Wood - Clean/Untreated	0.0%	0.0%	1
Clean Retail Film Bags	0.0%	0.0%	0	Wood - Painted/Stained/Treated	0.0%	0.0%	2
Clean Industrial/Commercial Film (Non-	0.0%	Not Found	0	Drywall/Gypsum Board	0.0%	Not Found	0
Contaminated Film/Other Film	0.6%	0.1%	39	Asphalt, Brick, Concrete & Rocks	0.0%	Not Found	0
Plastic Containers #3 thru #7	2.0%	0.6%	144	Carpet & Carpet Padding	0.0%	Not Found	0
Expanded Polystyrene	0.2%	0.1%	12	Other Construction & Demolition	0.0%	0.1%	2
Bulky Durable Plastic Products	0.9%	0.5%	61	Bulky Items	0.2%	0.3%	14
Remainder/Composite Plastic	0.6%	0.1%	44	Furniture	0.0%	Not Found	0
				Mattresses/Box Springs	0.0%	Not Found	0
Metals	**4.5%**	**0.7%**	**317**	Tires	0.0%	Not Found	0
Aluminum Cans & Containers	0.9%	0.2%	64	**Other Waste**	**6.0%**	**4.0%**	**426**
Other Aluminum	0.1%	0.0%	7	Textiles - Clothing	0.0%	0.0%	4
Tin/Steel Containers	2.9%	0.5%	203	Textiles - Non-Clothing	0.0%	0.0%	2
Other Ferrous	0.5%	0.3%	35	Shoes/Belts/Leather	0.0%	0.0%	0
Other Non-Ferrous	0.1%	0.1%	9	Diapers & Sanitary Products	0.2%	0.1%	11
Oil Filters	0.0%	Not Found	0	Other/Not Classified	0.3%	0.2%	22
				Fines	1.3%	0.4%	93
				Opaque Bagged Material	4.2%	1.3%	295
				Total	**100%**		**7,070**
				Sample Count	*30*		

Key: *Targeted Fiber* *Targeted Plastic* *Targeted Metal* *Targeted Glass* *Contaminant*

Figure 5-1 displays the current recoverability of inbound mixed recyclables. The County's recyclables were found to contain only 13 percent contamination, which is quite clean by single stream recycling standards. However, the small sample sizes for each generator sector and hauler type limit the ability to differentiate recycling composition by generator.

Figure 5-1 Recoverability of Inbound Mixed Recyclables

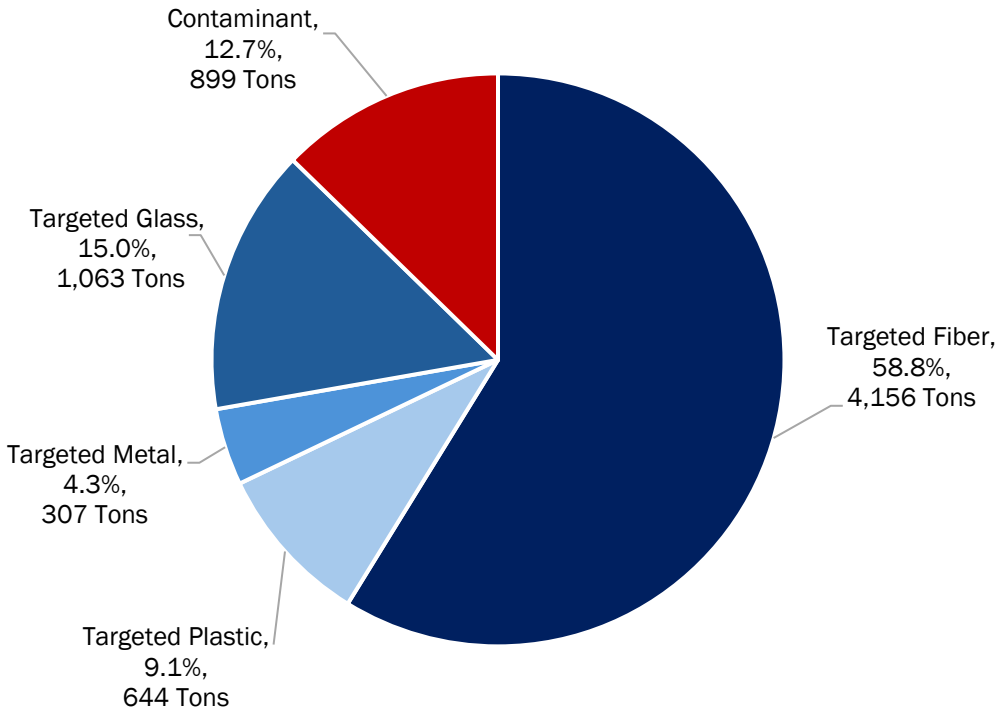


Figure 5-2 shows the level of contamination observed from each generator sector, although it must be noted that these results are not statistically rigorous. Residential Private Hauler routes were found to have the highest level of contamination, which may be expected for this sector due to collection method and educational outreach; however, it may also be attributed to the higher sample size for this hauler type.

Figure 5-2 Contaminants in Recycling by Generator Sector

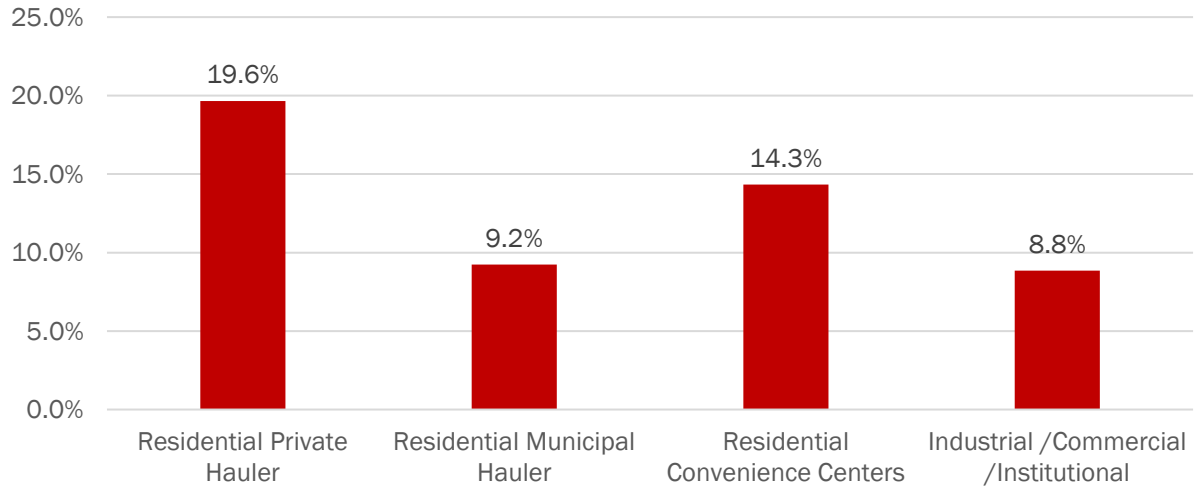


Figure 5-3 compares the recoverability potential of residential versus ICI recycling. As stated above, only five samples of ICI recycling were targeted; however, the loads observed were deemed to be representative of typical inbound ICI recycling at the County MRF.

Figure 5-3 Recoverability of Residential vs ICI Recycling

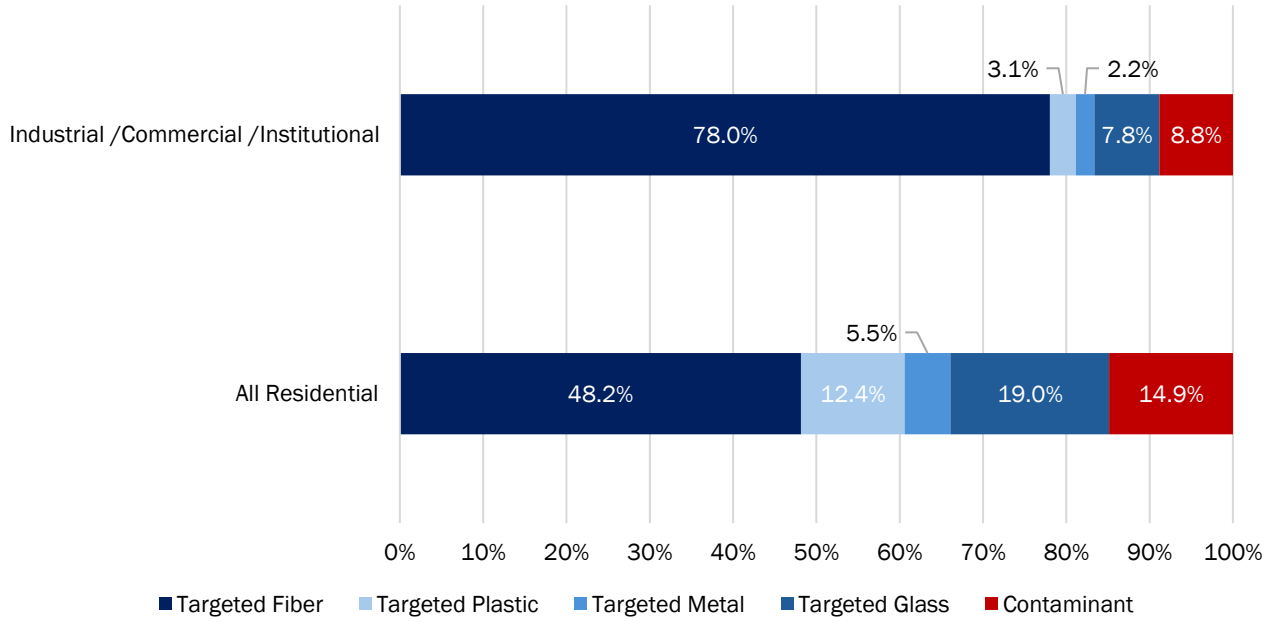
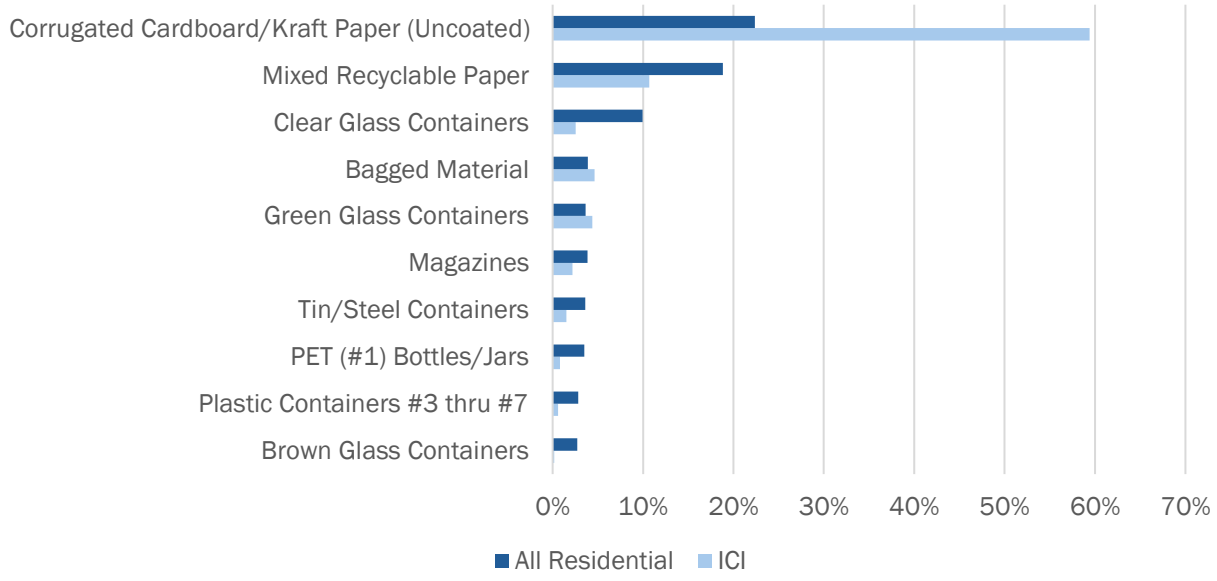


Figure 5-4 shows the top ten material categories in the aggregate residential and ICI recycling, with only one contaminant, Bagged Material, present.

Figure 5-4 Mixed Recycling Top 10 Material Categories



6. CONCLUSIONS AND RECOMMENDATIONS

MSW Consultants provides the following conclusions and recommendations to highlight the 2025 WCS findings and steps toward future studies.

6.1 CONCLUSIONS

- The 2025 WCS provides a valuable dataset for Ontario County Sustainability and Solid Waste Management Department staff responsible for implementing the LSWMP and other programs related to waste diversion and improved recycling.
- The study found that over 18% of the aggregate disposed waste stream is comprised of Targeted Recyclables that could have been potentially captured in the County's existing curbside or drop-off recycling programs.
- Despite inclement weather delays, the 2025 WCS was successful in capturing representative samples across generator sectors and hauler types at both the landfill and the MRF.
- The 2025 WCS was successful in updating the baseline 2022 WCS. Comparison results were largely similar between studies showing only moderate fluctuations in material groups between years.
- The opposing seasons in the 2022 and 2025 WCS (summer, winter) provided a snapshot of seasonal differences. Future studies should be performed as a two-season study, or in identical seasons over multiple years (avoiding winter).
- When the 2022 WCS was conducted, the study did not analyze underlying data to aggregate the residential stream and therefore the results were presented by hauler type only. There were not enough samples to combine the residential results based on the sampling plan targets, nor to combine residential and ICI results into an aggregate countywide MSW composition. As a result, the comparisons for the 2025 WCS results with 2022 are limited.
- The recycling characterization data for the 2025 WCS with an aggregate contamination rate under 13 percent suggests the County's recycling programs are performing well compared to similar municipalities.

6.2 RECOMMENDATIONS

- A waste characterization study should be repeated by Ontario County prior to the 2028 landfill closure to add to the County's dataset and analyze waste diversion efforts prior to a reduction in local landfill disposal.
- Following the closure of the Ontario County landfill, the County should consider replicating waste characterization studies at future disposal sites, including possible partnerships with adjacent counties utilizing the same site(s).
- The Ontario County landfill receives a large volume of construction and demolition (C&D) debris and bulky wastes. Future County characterization studies at the current landfill (or new disposal sites) should include volumetric visual surveys of these loads to characterize these waste streams for potential diversion opportunities.
- While the County's recycling scale data differentiates between ICI and residential inbound tonnage, the refuse scale data does not, impairing the development of a robust sampling plan targeting each generator sector and hauler type proportionally. MSW Consultants recommends:
    - The landfill scale data system be updated to allow inbound ICI versus residential waste to be recorded, similar to the MRF scale, or

  - Conduct several days or even one week of gate surveys prior to the next waste characterization study to provide better clarity on the inbound tonnage by generator sector, hauler and truck type.
- The incidence of Targeted Recyclables in the disposed MSW stream suggests that education and outreach to residents and businesses is needed on an ongoing basis for all hauler types.
- The significant quantities of organics (food waste, compostable paper, yard waste) in the waste stream present an opportunity for an organics collection program as a benefit to the County's future diversion efforts.

APPENDIX A

Material Categories and Definitions

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Appendix A – Material Categories & Definitions

PAPER

1 CORRUGATED CARDBOARD/KRAFT PAPER (UNCOATED): Corrugated boxes or paper bags made from Kraft paper. Wavy center layer sandwiched between two outer layers without wax coating on the inside or outside. Examples include cardboard shipping containers and moving boxes, computer packaging cartons, and sheets and pieces of boxes and cartons. Does not include chipboard. Examples of Kraft paper include paper grocery bags, un-soiled fast-food bags, department store bags, and heavyweight sheets of Kraft packing paper. Relatively unsoiled pizza boxes acceptable.

2 NEWSPRINT: Paper used in newspapers and all items made from newsprint. Examples include newspapers and glossy inserts found in newspapers, and items such as free advertising guides, election guides, plain news packing paper, stapled college class schedules, and tax instruction booklets.

3 MAGAZINES: Multi-page bound paper items (glued or stapled) made of glossy coated paper. This paper is usually slick, smooth to the touch, and reflects light. Examples include glossy magazines, catalogs, brochures, and pamphlets. Does not include newspaper inserts.

4 HIGH GRADE OFFICE PAPER: Paper that is free of ground wood fibers; usually sulfite or sulphate paper; includes office printing and writing papers such as white ledger, color ledger, envelopes, and computer printout paper, bond, rag, or stationary grade paper. This subtype does not include fluorescent-dyed paper or deep-tone dyed paper such as goldenrod colored paper.

5 MIXED RECYCLABLE PAPER: Recyclable paper other than the paper types mentioned above. Examples include chipboard/paperboard, junk mail, manila folders, manila envelopes, phone books, index cards, white envelopes, white window envelopes, notebook paper, carbonless forms, groundwood paper, softcover books, and deep-toned or fluorescent dyed paper.

6 ASEPTIC CONTAINERS & GABLE TOP CARTONS: Aseptic containers (multi-layered packaging that contains shelf-stable food products such as apple juice, soup, soy/rice milk, etc.) and "gable top" cartons (non-refrigerated items such as granola and crackers; refrigerated items such as milk, juice, egg substitutes, etc.). Rigid food and beverage cartons are usually paper based, may be any shape, and may include a plastic pour spout as part of the carton.

7 COMPOSTABLE PAPER: Low-grade, biodegradable paper that cannot be recycled, as well as food contaminated paper. Examples include paper towels, napkins, paper plates, waxed papers and waxed cardboard, tissues, and unlined paper cups.

8 REMAINDER/COMPOSITE PAPER: Paper products made mostly of paper but combined with large amounts of other materials such as plastic, metal, glues, foil, and moisture. Examples include corrugated cardboard coated with plastic, cellulose insulation, blueprints, sepia, onion skin, foiled lined fast-food wrappers, frozen juice containers, carbon paper, self-adhesive notes, hardcover books, and photographs.

PLASTIC

9 PET (#1) BOTTLES/JARS: Clear or colored PET bottles or jars. The plastic resin number "1" is visible in the center of the triangular recycling symbol and may also bear the letters "PETE" or "PET". A PET container usually has a small dot left from the manufacturing process, not a seam. It does not turn white when bent.

10 PET (#1) NON-BOTTLE CONTAINERS: Non-bottle containers such as rectangular PET clamshell or tray containers used for produce; etc. The plastic resin number "1" is visible in the center of the triangular recycling symbol and may also bear the letters "PETE" or "PET". The color is usually transparent, green, or clear. This category only includes PET non-bottle containers that did not previously contain hazardous materials.

11 HDPE (#2) NATURAL CONTAINERS: Natural colored HDPE bottles. This plastic is usually cloudy white, allowing light to pass through it (natural). When marked for identification, it bears the number "2" in the triangular recycling symbol and may also bear the letters "HDPE. Also includes natural buckets, pails or paint cans made of HDPE and designed to hold 5 gallons or less of material. This category only includes colored HDPE containers that did not previously contain hazardous materials.

12 HDPE (#2) COLORED CONTAINERS: Colored HDPE bottles. In contrast with natural HDPE, the colored HDPE is usually a solid color and opaque. When marked for identification, it bears the number "2" in the triangular recycling symbol and may also bear the letters "HDPE. Also includes colored buckets, pails or paint cans made of HDPE and designed to hold 5 gallons or less of material. This category only includes colored HDPE containers that did not previously contain hazardous materials.

13 CLEAN RETAIL FILM BAGS: Plastic retail bags used to contain merchandise to transport from the place of purchase, given out by the store with the purchase. Retail Film Bags sorted into this category will largely be clean: free of excessive debris or moisture.

14 CLEAN INDUSTRIAL/CONSUMER FILM (NON-BAG): Film plastic used to wrap merchandise to transport to the consumer. Includes dry-cleaning plastic bags, newspaper sleeves intended for one-time use, and non-bag commercial and industrial packaging film used for large-scale packaging or transport packaging. Examples include shrink-wrap, mattress bags, furniture wrap, and film bubble wrap. Commercial/Consumer Film products sorted into this category will largely be clean: free of excessive debris or moisture.

15 CONTAMINATED FILM/OTHER FILM: Plastic film or bags that are non-recyclable. Examples include garbage bags, and other types of plastic bags (sandwich bags, zip (re-closeable) bags, produce bags, frozen vegetable bags), juice pouches, painting tarps, food wrappers such as candy-bar wrappers.

16 PLASTIC CONTAINERS #3 THRU #7: Bottles, jars, containers, lids, and other packaging that are made of types of plastic other than PET (1) or HDPE (2). Items may be made of vinyl, LDPE, PVC, PP, PS, or other plastic. They may bear the number 3, 4, 5, 6, or 7 in the triangular recycling symbol, or may bear no recycling symbol. Examples include clamshells, trays, tray lids, cups, bowls, plates, hardware and fastener packaging, detergent and cleaning products bottles, squeezable bottles, frozen food containers, microwave food trays, vitamin bottles,

cookie trays found in cookie packages, small (less than 1 gallon) brittle (single-use) plant containers such as nursery pots and plant six-packs.

17 EXPANDED POLYSTYRENE: Food and Non-food EPS foam packaging. Includes clamshell food containers, as well as cups, plates, and bowls. Includes finished products made of expanded polystyrene such as block Styrofoam padding and packing peanuts.

18 BULKY DURABLE PLASTIC PRODUCTS: Plastic items other than containers or film plastic, which are made to last for more than one use. These items may bear the numbers 1 through 7 in the triangular recycling symbol. Examples include crates, buckets (including 5-gallon buckets), baskets, totes, large plastic garbage cans, large tubs, large storage tubs/bins (usually with lids), flexible (non-brittle) and durable flowerpots of 1 gallon size or larger, lawn furniture, large plastic toys, toolboxes, first aid boxes, and some sporting goods, CDs and their cases, plastic housewares such as durable (not single-use) dishes, cups, and cutlery.

19 REMAINDER/COMPOSITE PLASTIC: Plastic that cannot be put in any other type or subtype. Includes items made mostly of plastic but combined with other materials. Examples include auto parts made of plastic attached to metal, plastic drinking straws, produce trays, foam packing blocks (not including expanded polystyrene blocks), plastic strapping, handles and knobs, plastic cup lids, some kitchenware, plastic toys, plastic string (as used for hay bales), and plastic rigid bubble/foil packaging (as for medications).

METAL

20 ALUMINUM CANS & CONTAINERS: Aluminum containers for food or beverage. Also includes aluminum cat food containers.

21 OTHER ALUMINUM: Non-container aluminum products such as aluminum foil or aluminum food trays. Does not include items significantly contaminated with food or other material.

22 TIN/STEEL CONTAINERS: Steel or tin food or other containers. Includes aerosol containers. If significant food or other product remains in the container (greater than the weight of the container), it shall instead be sorted in that product material category.

23 OTHER FERROUS: Any iron or steel that is magnetic or any stainless-steel item. This type does not include tin/steel cans. Examples include structural steel beams, metal clothes hangers, metal pipes, stainless steel cookware, security bars, and scrap ferrous items. Also includes composite material that is mostly ferrous metal by weight.

24 OTHER NON-FERROUS: Any metal item, other than aluminum cans, foils, or trays, that is not stainless steel and that is not magnetic. These items may be made of aluminum, copper, brass, bronze, lead, zinc, or other metals. Examples include copper wire, shell casings, and brass pipe. Also includes composite material that is mostly non-ferrous metal by weight.

25 OIL FILTERS: Predominantly metal filters, most commonly used in motor vehicles, which are designed to remove contaminants from engine oil, transmission oil, lubricating oil, or hydraulic oil.

GLASS

26 CLEAR GLASS CONTAINERS: Includes all clear glass bottles, jars, and containers. Examples include beer, wine and soft drink bottles, and jars for food or other materials. If significant food or other product remains in the container (greater than the weight of the container), it shall instead be sorted in that product material category.

27 BROWN GLASS CONTAINERS: Includes all brown glass bottles, jars, and containers. Examples include beer bottles and jars for food or other materials. If significant food or other product remains in the container (greater than the weight of the container), it shall instead be sorted in that product material category.

28 GREEN GLASS CONTAINERS: Includes all green glass bottles, jars, and containers. Examples include beer, wine and soft drink bottles, and jars for food or other materials. If significant food or other product remains in the container (greater than the weight of the container), it shall instead be sorted in that product material category.

29 REMAINDER/COMPOSITE GLASS: Non-container glass. This category includes items made mostly of glass but combined with other materials. Examples include Pyrex, Corningware, crystal and other glass tableware, mirrors, non-fluorescent light bulbs, auto windshields, laminated glass, or any curved glass. Uncoated plate glass - includes window and door glass, tabletops, and some auto glass (side windows).

30 CULLET (RECYCLING CATEGORY ONLY): Mixed 2" minus cullet from beverage bottles, jars, and containers. Any color.

ORGANICS

31 FOOD WASTE: Food wastes and scraps, including meat, bone, dairy, grains, rinds, teabags, coffee grounds with filters, etc. Excludes the weight of food containers, except when container weight is not appreciable compared to the food inside.

32 YARD WASTE: Plant material, including woody material, from any public or private landscapes. Examples include leaves, grass clippings, plants, brush, and branch prunings and trimmings.

33 REMAINDER/COMPOSITE ORGANICS: Organic material that is not food or yard waste. Includes cork, popsicle sticks, hair, animal waste, cigarette butts, chopsticks, woven baskets, and small non-construction related wood products.

E-WASTE/HHW

34 ELECTRONIC WASTE: Includes all electronic items with a circuit board, including CRTs or other video displays, plasma and LCD monitors, cell phones, personal computers, laptop computers, notebook computers, processors, keyboards, etc. Includes stereos, VCRs, DVD players, etc. This category does not include automated typewriters or typesetters.

35 HHW: Includes paints, solvents, batteries (lithium, alkaline, lead-acid), vehicle fluids, medical waste, pesticides/fertilizers, cleaners, CFLs, fluorescent tubes, etc.

C&D/BULKY ITEMS

36 WOOD – CLEAN/UNTREATED: Any wood which does not contain an adhesive, paint, stain, fire retardant, pesticide, or preservative; includes such items as bulky wood waste or scraps from newly built wood products. Does not including land clearing debris or yard waste prunings and trimmings. The presences of nails or screws are acceptable.

37 WOOD – PAINTED/STAINED/TREATED: Wood that contains an adhesive, paint, stain, fire retardant, pesticide, or preservative. Does not include wood furniture.

38 DRYWALL/GYPSUM BOARD: Interior wall covering made of a sheet of gypsum sandwiched between paper layers. Examples include used or unused, broken, or whole sheets of sheetrock, drywall, gypsum board, plasterboard, gypsum board, gyproc, and wallboard.

39 ASPHALT, BRICK, CONCRETE & ROCKS: Includes asphalt paving/roofing materials, set, or unset, and all types of fire-clay bricks. Includes Portland cement mixtures (set or unset), with or without aggregate materials (gravel, etc.). Includes rock gravel larger than 2'' in diameter.

40 CARPET & CARPET PADDING: Flooring applications consisting of various natural or synthetic fibers bonded to some type of backing material. Carpet padding may include plastic, foam, felt, or other material used under the carpet to provide insulation and padding.

41 OTHER CONSTRUCTION & DEMOLITION: Construction and demolition material that cannot be put in any other type or subtype. This type may include items from different types combined, which would be very hard to separate. Also includes fiberglass insulation, ceramic fixtures, and other miscellaneous C&D Materials not mentioned above.

42 BULKY MATERIALS: Large, hard-to-handle items that are not defined separately. Examples include all sizes and types of furniture, mattresses, box springs, and base components.

43 FURNITURE: Large furniture pieces such as couches, tables, chairs made of predominately mixed materials.

44 MATTRESSES/BOX SPRINGS: Mattresses and box springs.

45 TIRES: Vehicle, equipment, and small tires.

OTHER WASTE

46 TEXTILES - CLOTHING: Fabric products used for clothing (socks, pants, shirts, outwear, undergarments, etc.)

47 TEXTILES - NON-CLOTHING: Fabric products such as blankets, towels, curtains, and stuffed animals.

48 SHOES/BELTS/LEATHER: Shoes, belts, and leather products such as handbags, purses, and wallets.

49 DISPOSABLE DIAPERS & SANITARY PRODUCTS: Adult and baby disposable diapers, and feminine hygiene products.

50 OTHER/NOT CLASSIFIED: Any other type of waste material not listed in any other sort category. Includes full cosmetics, shampoos, lotions, etc.

51 FINES: Small mixed fragments 2'' and smaller that cannot be readily sorted.

52 OPAQUE BAGGED MATERIAL (RECYCLING CATEGORY ONLY): Inbound bags that are opaque in color that MRF staff cannot discern the contents. These bags were weighed and not opened if encountered during the recycling sort, as is MRF procedure.

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