



Municipality of Dysart et al Depot Study

Summer 2022 Waste Composition Study Summary Report

Prepared for

Municipality of Dysart et al

Prepared by

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EXECUTIVE SUMMARY

AET Group Inc. (AET) conducted a residential depot waste composition study in the Municipality of Dysart et al, which included a three-day sampling period of 92 households equating to 735 generation days in the summer season of 2022. The key findings of the study are as follows:

Depot Collection Results:

- Garbage Stream – an average of 1.32 bags were disposed of per household per drop-off. Of the 121 bags collected, 94.21% were disposed in clear bags, and 5.79% were disposed of in dark/opaque bags.
- Fibres Recycling Stream – an average of 0.75 recycling bags/bag equivalent were disposed of per household per drop-off. Of the 69 bags/bag equivalent collected, 63.77% were loose and 36.23% were bagged.
- Containers Recycling Stream – an average of 1.01 recycling bags/bag equivalent were disposed of per household per drop-off. Of the 92.5 bags/bag equivalent collected, 20.54% were loose and 79.46% were bagged.

Garbage Stream Composition:

- Average quantity of material disposed of in the garbage stream by a single-family household is 7.27 kg/hh/wk or 379.29 kg/hh/yr.
- Organic materials (currently accepted in the garbage stream, as there is no source-separated organics program) represented 59.47% which equals 4.33 kg/hh/wk or 225.56 kg/hh/yr. This includes items such as food waste, yard waste, and other organics.
- Recyclable materials (currently accepted in the depot's recycling program) comprised 8.55% of the garbage stream by weight at 0.62 kg/hh/wk or 32.41 kg/hh/yr.

Fibres Recycling Stream Composition:

- Average quantity of material disposed of in the fibre recycling stream by a single-family household is 1.98 kg/hh/wk or 103.36 kg/hh/yr.
- 3.59% of the fibre recycling stream is contamination.
- 3.37% of the fibre recycling stream is cross-contamination and should be placed in the containers recycling.

Containers Recycling Stream Composition:

- Average quantity of material disposed of in the containers recycling stream by a single-family household is 1.94 kg/hh/wk or 101.33 kg/hh/yr.
- 8.79% of the container's recycling stream is contamination.
- 6.59% of the container's recycling stream is cross-contamination and should be placed in the fibre recycling.

Diversion Rates & Capture Rates:

- Single-family households generate an average of 11.20 kg/hh/wk or 583.97 kg/hh/yr of waste (garbage, fibre recycling, and container recycling combined). Of that, a total of 3.70 kg/hh/wk or 192.96 kg/hh/yr is diverted from landfill, equaling a diversion rate of 33.04%.
- 85.96% of all acceptable recyclable fibre and container materials were properly captured in the recycling streams (i.e., capture rate of 85.96%).

1.0 INTRODUCTION

1.1 Definitions

Capture Rate:	The capture rate is the percentage of recyclable material collected and diverted from the total amount of that material generated.
Contamination Rate:	The percentage of misplaced material in a recycling or organics program that is not currently accepted in the program.
Diversion Rate:	The diversion rate is the percentage of the total waste generated that is diverted from disposal into the curbside recycling and organics program.
Divertible Material:	Materials that are accepted in a reduction, recycling, or organics program which can be discarded in a non-garbage collection stream. Material that does not require disposal through landfill. This material is often referred to as recyclable material or compostable material. In the context of this report, divertible material refers only to materials currently accepted in the waste diversion program.
Garbage Stream:	Material that is collected for disposal rather than diversion. It will include divertible material where the diversion programs are not operating at 100% efficiency. This material is sometimes referred to as residual waste.
Fibres Recycling Stream:	Material that is collected in the fibre stream for diversion rather than disposal.
Containers Recycling Stream:	Material that is collected in the containers stream for diversion rather than disposal
Bag Equivalents:	Ratio or value given to the amount of materials in a cart/bin/container/bag, to determine fullness. Value increases in increments of 25%, to a maximum fullness of 100% (full cart/bin/container/bag). It is based on the average size of the individual cart/bin/container/bag. For Dysart et al, auditors used a standard number of bags or equivalent rule of: 1 blue box = 1 bag; 1 garbage bin = 2 bags.

1.2 Background

Municipality of Dysart et al (Dysart) contracted AET Group Inc. (AET) to conduct a waste composition study (also referred to as a waste audit) in the Municipality of Dysart et al that focused on single-family residential waste being dropped off at their municipal drop off depot. Material from single-family residential sources was sampled over a three-day (August 23 to 26, 2022) sampling period during the summer of 2022 at the Haliburton Landfill, located at 222 Industrial Park Rd, Dysart et al. The waste audit study included collecting and sorting garbage and recycling material (both fibers and containers) and maintaining a collection log noting property type, the number of residential properties and generation days the material represents, the types and amounts of materials disposed, bag colour, disposal preference (whether the material was bagged or loose) and other diversion practices of each household.

1.3 Objectives

The objectives of the waste composition study were to:

- Collect accurate single-family residential waste composition data through the identification of types and quantities of generated waste;
- Calculate various performance measures such as generation, diversion, capture, and contamination rates;
- Identify successes and challenges of waste management and diversion programs and
- Develop a seasonal report to detail the findings and provide recommendations for improvements to waste management and diversion programs.

2.0 APPROACH AND METHODOLOGY

2.1 Waste Sampling Process

AET's team collected garbage and recycling material equating to 735 generation days from single-family residential households over a three-day sampling period during the summer of 2022. All garbage and recycling material being disposed by residents was collected at the landfill on the first collection day, August 24th, 2022. The collected material was moved to a centralized location where each waste stream was sorted separately.

2.2 Residential Drop-off Log

Residential drop-off logs were maintained during the single-family residential depot collection of each household. Specific data including the number and colour of garbage and recycling bin/bag items disposed, preference (bagged or loose), other diversion practices as well as the property type and generation days of each household was recorded on site. In addition, all material was weighed on site.

An analysis of the collection log data provided the total number of items disposed of, total full bag equivalents, total number of households and bag equivalents per household for the study period.

2.3 Material Sorting Process

All material collected during the three-day sampling period was sorted and weighed by AET at the Haliburton Landfill located at 222 Industrial Park Road, Haliburton, Ontario. All collected garbage and recycling materials were sorted and weighed separately. Samples were collected and sorted based on the material i.e., garbage, fibers, and containers.

Samples were sorted into 10 major waste groups, consisting of 130 individual sub-categories. The full list of sort categories can be found in Appendix B.

Separated/sorted waste was placed in blue boxes and totes, based on the 130 categories, and weighed individually. A digital scale, with a precision of 0.01 kg, was used to weigh the sorted waste material. Once all the waste material was classified and weighed, it was disposed of in the appropriate recycling or garbage bins provided on-site.

2.4 Assumptions & Calculations

This audit assumes that the selected households are representative of the composition of waste generated by single-family residential properties in the Municipality of Dysart et al.

The following calculations were used to calculate the overall generation of waste.

Calculations:

Household Generation Days:

Number of households × Generation Period

Weekly Waste Generation (kg/hh/wk) $\left(\frac{\text{Sample Weight (kg)}}{\text{Household Generation Days}} \right) \times (7 \text{ Days})$

Yearly Waste Generation (kg/hh/yr): $\left(\frac{\text{Sample Weight (kg)}}{\text{Household Generation Days}} \right) \times (365 \text{ Days})$

Diversion Rate:

$\left(\frac{\text{Weight of Accepted Material in Diversion Stream(s)}}{\text{Weight of all Material Generated}} \right) \times 100\%$

Capture Rate:

$\left(\frac{\text{Weight of Recyclable Material Diverted}}{\text{Weight of Recyclable Material Generated}} \right) \times 100\%$

2.5 Observations and Notes from the Summer Season

The following notes summarize some observations made during the Summer seasonal audit:

- Total household waste generation days was 735 days.
- In the containers stream, most of the residents (approximately 79%) bagged their recycling containers by using different sources of materials, such as garbage bags, grocery bags, corrugated boxes, or dog food/soil bags. However, in the fibres stream, most of the residents (approximately 64%) brought loose the recycling papers.
- Differently from the spring season, the summer season showed that most of the residents (>70%) brought their recycling streams (containers and fibres) already sorted. It was noticeable how faster the drop-off process was occurring due to the prior separation. Residents were spending less time in the dropping area, resulting in less waiting time in line as well.
- In terms of compost, most residents who made comments about the topic are interested in it. These residents either practice any kind of composting already or would like to start it. However, for the ones who need to start it, it was mentioned that the municipality should develop some incentives, such as the creation of a place at the landfill so they do not have to deal with it at home, an incentive to existing compost places to facilitate and expand the drop-off locations, donation of green bins and kitchen bins to keep their places clean and safe and distribution of explanation flyers to advise what can be put in the compost bin.
- A small portion of the residents mentioned wild animals as the biggest deterrents to any kind of compost, such as, home, community and/or landfill composting. They mentioned that this type of activity will bring animals closer not only to the houses, but also the city surroundings.
- The summer season had no evidence of fibres burning as the other seasons. The main answer was due to the warning signs put by the fire department.

3.0 RESULTS AND DISCUSSION

Results shown in this section are summarized into primary and secondary categories. Detailed audit sort results by material sub-category are available in Appendix A. Please note that for the purposes of this study, materials have been classified as 'recyclable', or 'non-divertible' based on their acceptance into the current recycling program.

For illustrative purposes, some of the results have been extrapolated to estimated generation rates of kilograms per household per week (kg/hh/wk) and kilograms per household per year (kg/hh/yr).

3.1 Depot Collection Results

A total of 92 households were sampled in the summer season, totaling 735 household waste generation days over the course of the three-day seasonal audit.

Auditors collected information on property status, garbage bag type, disposal preference and additional home waste diversion practices. Table 3.1 illustrates the results of property type among households. Of the total 92 households, 78.26% were permanent residents, 18.48% were seasonal residents and 3.26% were short-term residents.

Table 3.1 Property Type Summary for Summer

Property Type:	# of Households	%
Permanent	72	78.26%
Seasonal	17	18.48%
Short-term	3	3.26%
Total	92	100.00%

Table 3.2 summarizes the drop-off details for the waste sample collection period. In total, 96.63% of households dropping off waste at the landfill are disposing waste from a single household. The remaining 3.37% of households dropping off waste at the landfill are disposing waste from more than one household.

Table 3.2 Drop off Details for Summer

Drop Off Details	Drop-Offs	%
Single Household Drop-off	86	96.63%
Multi-Household Drop-off	3	3.37%
Total	89	100.00%

Table 3.3 summarizes the generation days per drop off. The most common waste drop-off interval is 7 days (once a week), accounting for 51.09%. A total of 7.61% of waste drop-offs represented 14 days (once every other week).

Table 3.3 Generation Days per Drop-Off for Summer

Generation Days	Number of Households Included	%
3 days	3	3.26%
4 days	11	11.96%
5 days	10	10.87%
6 days	0	0.00%
7 days	47	51.09%
14 days	7	7.61%
Greater than 14 days	6	6.52%
Between 8 and 13 days	8	8.70%
Total	92	100.00%

Table 3.4 illustrates the results of garbage bag type among households. Of the total 121 bags collected, 94.21% were clear and 5.79% were dark/opaque.

Table 3.4 Garbage Bag Type Summary for Summer

Garbage Bag Type	# of Bags	%
Clear	114	94.21%
Dark/Opaque	7	5.79%
Total	121	100.00%

Table 3.5 illustrates the results on the container disposal preference for fibres recycling. Of the 69 bags/bag equivalents collected, 36.23% was disposed of as bagged material and 63.77% was disposed as loose material.

Table 3.5 Fibres Disposal Summary for Summer

Fibres Disposal	# of Bags	%
Bagged	25	36.23%
Loose	44	63.77%
Total	69	100.00%

Table 3.6 illustrates the results on the container disposal preference for containers recycling. Of the 92.5 bags/bag equivalents collected, 79.46% was disposed of as bagged material and 20.54% was disposed as loose material.

Table 3.6 Containers Disposal Summary for Summer

Containers Disposal	# of Bags	%
Bagged	73.5	79.46%
Loose	19	20.54%
Total	92.5	100.00%

3.1.1 Disposal Rates

- Garbage Stream – an average of 1.32 bags were disposed per household per drop off.

- Fibres Recycling Stream – an average of 0.75 recycling bags/bag equivalent were disposed per household per drop off.
- Containers Recycling Stream – an average of 1.01 recycling bags/bag equivalent were disposed per household per drop off.

3.2 Overall Waste Set-Out Profile

Table 3.7 illustrates the overall generation rates for all waste streams in the Municipality of Dysart et al. This information only assesses the weights of materials disposed in that particular stream. It does not show any contamination (i.e., recyclables in the garbage, non-divertible items in the recycling, etc.) placed in each stream. By weight, a total of 7.27 kg/hh/wk of garbage is disposed, 1.98 kg/hh/wk of fibres is disposed and 1.94 kg/hh/wk of containers is disposed at the depot.

Table 3.7 Waste Set-Out Rates

Material Stream	Weight (kg/hh/wk)	Weight (kg/hh/yr)	Percent of Total Material Generated (%)
Garbage	7.27	379.29	64.95%
Fibres	1.98	103.36	17.70%
Containers	1.94	101.33	17.35%
Total	11.20	583.97	100.00%

3.3 Overall Waste Generation Profile

The overall waste generation profile for the sampled Municipality of Dysart et al single-family households are shown in Figure 3.1. This overall waste generation profile includes the sampled garbage and recycling waste combined. Displayed is the overall amount of recycled materials (properly diverted from landfill), disposed organics, disposed special waste (HHW & depot materials), disposed non-divertible materials (true garbage) and disposed recyclables generated. It should be noted that the disposed special waste includes items that may have a disposal option at the depot and/or be accepted in the household hazardous waste events hosted by the Municipality of Dysart et al.

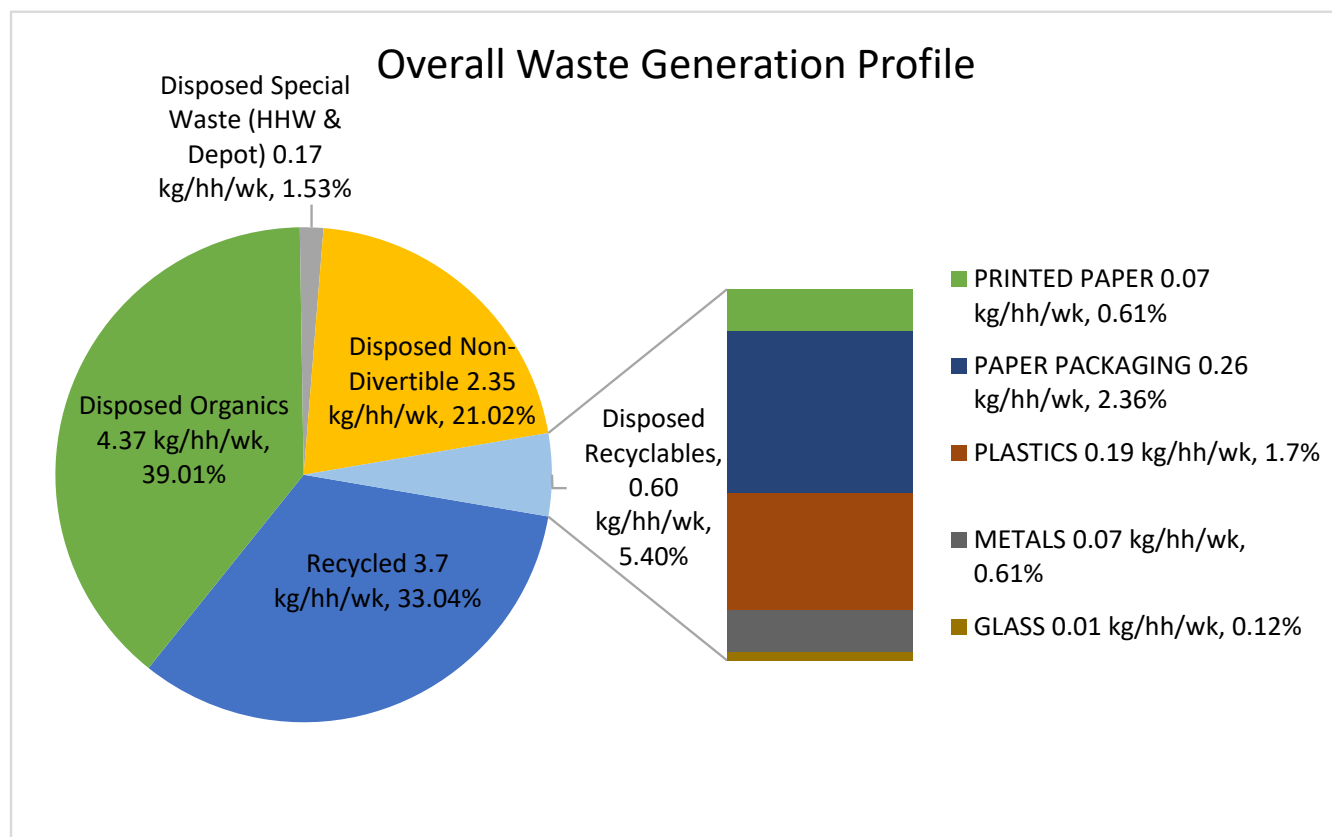


Figure 3.1 Overall Waste Generation Profile (kg/hh/wk)

As shown in Figure 3.1, an average of 21.02% of waste generated by single family households consisted of non-divertible material (true garbage), 33.04% consisted of recycled material, 39.01% consisted of disposed organics, 1.53% consisted of disposed special waste and the remaining 5.40% consisted of disposed recyclable material (recycling that could be diverted).

Municipality of Dysart et al had a residential diversion rate of 33.04% for the summer season.

3.4 Garbage Stream Composition

The garbage generated by the sampled single-family households equated to 7.27 kg/hh/wk or 379.29 kg/hh/yr. Figure 3.2 shows the material composition of the garbage stream. Organic materials accounted for 59.47% (food

waste accounted for 46.85% while yard waste and other organics accounted for 12.62%). Non-divertible materials accounted for 31.98%. The remaining 8.55% of the garbage stream consisted of recyclable materials.

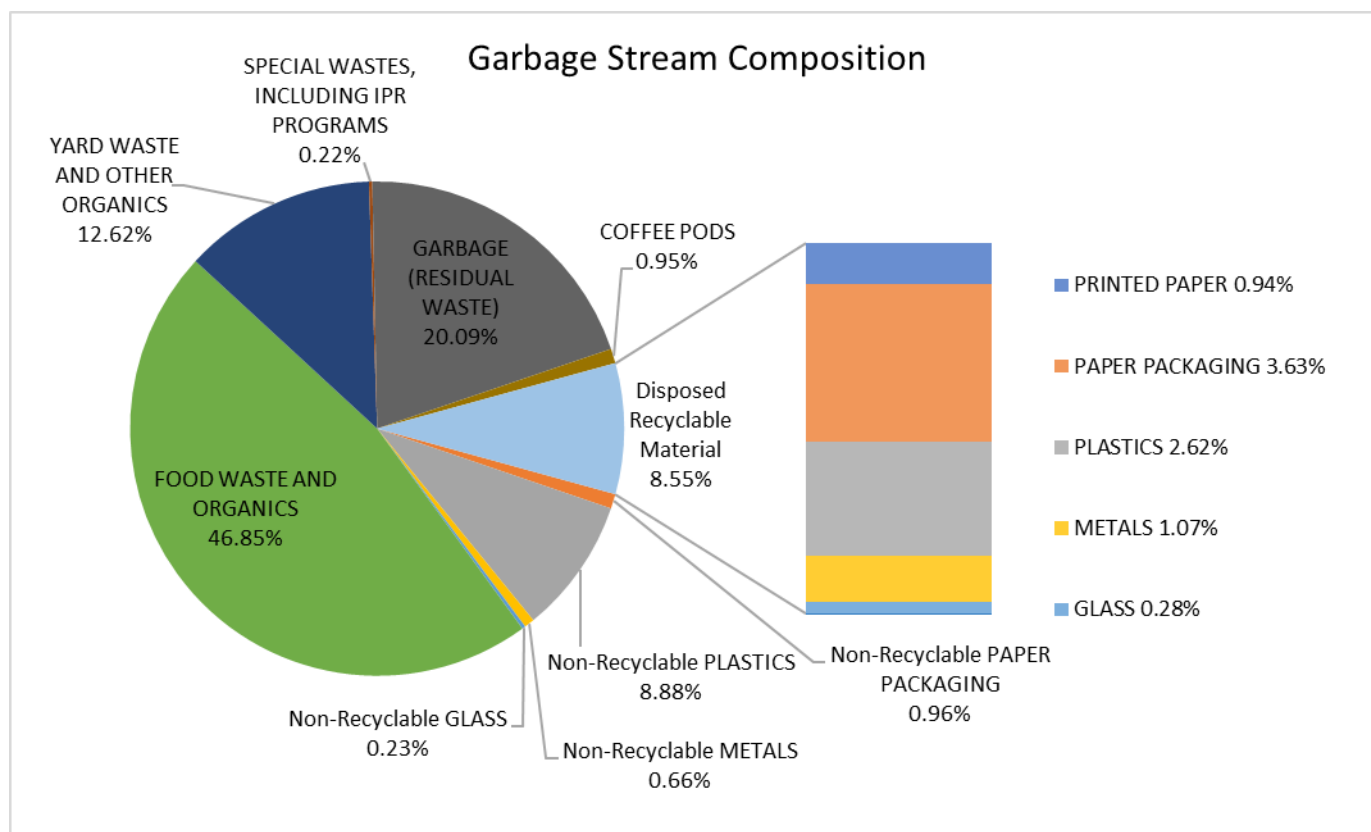


Figure 3.2 Garbage Stream Composition

Organics were the largest material category in the garbage stream, Table 3.8 provides a list of the most common organic items found in the garbage stream, the generation rates and percentage of the garbage stream.

Table 3.8 Most Common Organic Items in the Garbage

	Top 10 Organic Items in the Garbage	kg/hh/wk	kg/hh/yr	% of Stream
1	Unavoidable Fruits and Vegetables	1.47	76.51	20.17%
2	Tissue	0.87	45.22	11.92%
3	Leftover Fruits and Vegetables	0.50	26.11	6.88%
4	Unavoidable Other	0.24	12.47	3.29%
5	Leftover Other	0.22	11.34	2.99%
6	Leftover Meat and Fish	0.20	10.55	2.78%
7	Leftover Bakery	0.19	10.01	2.64%
8	Leftover Dried Food	0.18	9.21	2.43%
9	Unavoidable Meat and Fish	0.11	5.86	1.54%
10	Untouched Fruits and Vegetables	0.10	5.05	1.33%
	Total	4.07	212.33	55.98%

Table 3.9 and Table 3.10 provide a list of the most common recyclable fibre and container items found in the garbage stream, the generation rates and percentage of the garbage stream.

Table 3.9 Most Common Recyclable Fibres in the Garbage

	Top 10 Recyclable Fibres in the Garbage	kg/hh/wk	kg/hh/yr	% of Stream
1	Corrugated Cardboard	0.11	5.98	1.58%
2	Boxboard/Cores/Molded Pulp	0.10	5.25	1.39%
3	Other Printed Paper (Non-Obligated)	0.03	1.64	0.43%
4	Other Printed Paper (Obligated)	0.02	1.29	0.34%
5	Polycoat Beverage Cups	0.01	0.69	0.18%
6	Ice Cream Containers and Other Bleached Long Polycoat	0.01	0.66	0.17%
7	Other Paper Packaging (Non-Obligated)	0.01	0.51	0.13%
8	Other Newspapers/Newsprint - Other	0.01	0.35	0.09%
9	Magazines and Catalogues	0.00	0.25	0.07%
10	Newspapers - Daily and weekly	0.00	0.05	0.01%
	Total	0.32	16.66	4.39%

Table 3.10 Most Common Recyclable Containers in the Garbage

	Top 10 Recyclable Containers in the Garbage	kg/hh/wk	kg/hh/yr	% of Stream
1	#6 PS - Expanded Polystyrene	0.06	2.96	0.78%
2	Other Rigid Plastic Packaging - Non- Beverage	0.04	2.11	0.56%
3	Aluminum Foil & Foil Trays	0.04	2.10	0.55%
4	#5 Other PP Containers	0.03	1.53	0.40%
5	#1 PET Bottles - Clear - Non-Alcoholic Beverage	0.02	0.95	0.25%
6	#1 PET Thermoform - Clear	0.02	0.83	0.22%
7	Clear Glass - food and other products	0.01	0.67	0.18%
8	Steel Food Cans	0.01	0.57	0.15%
9	Aluminum Containers – Alcoholic Beverage	0.01	0.54	0.14%
10	Aluminum Containers - Non-Alcoholic Beverage	0.01	0.45	0.12%
	Total	0.24	12.69	3.35%

Figure 3.3 to Figure 3.6 provide examples of organic and recyclable materials found in the garbage stream.



Figure 3.3 Tissue in the Garbage Stream



Figure 3.4 Leftover Fruits and Vegetables in the Garbage Stream



Figure 3.5 #1 PET Bottles in the Garbage Stream



Figure 3.6 Aluminum Beverage Cans in the Garbage Stream

3.5 Fibres Stream Composition

The average generation rate for materials placed in the fibres recycling stream equated to 1.98 kg/hh/wk or 103.36 kg/hh/yr. Of this, recyclable fibres accounted for a total of 93.04%, cross-contaminating containers accounted for a total of 3.37%. The remaining 3.59% consisted of contamination (true garbage). Figure 3.7 provides a more detailed breakdown of the fibres recycling stream. Of the contamination, non-recyclable plastics (largely flexible film plastic, garbage bags and laminated films) were the largest contamination at 1.26%. Garbage (largely other waste (PPE, textiles including sandals and shoes)) was the second largest contributor at 0.95%. Other organics (entirely tissue 0.72%), non-recyclable paper packaging (0.35%), and food waste (0.32%) all made small contributions to the contamination.

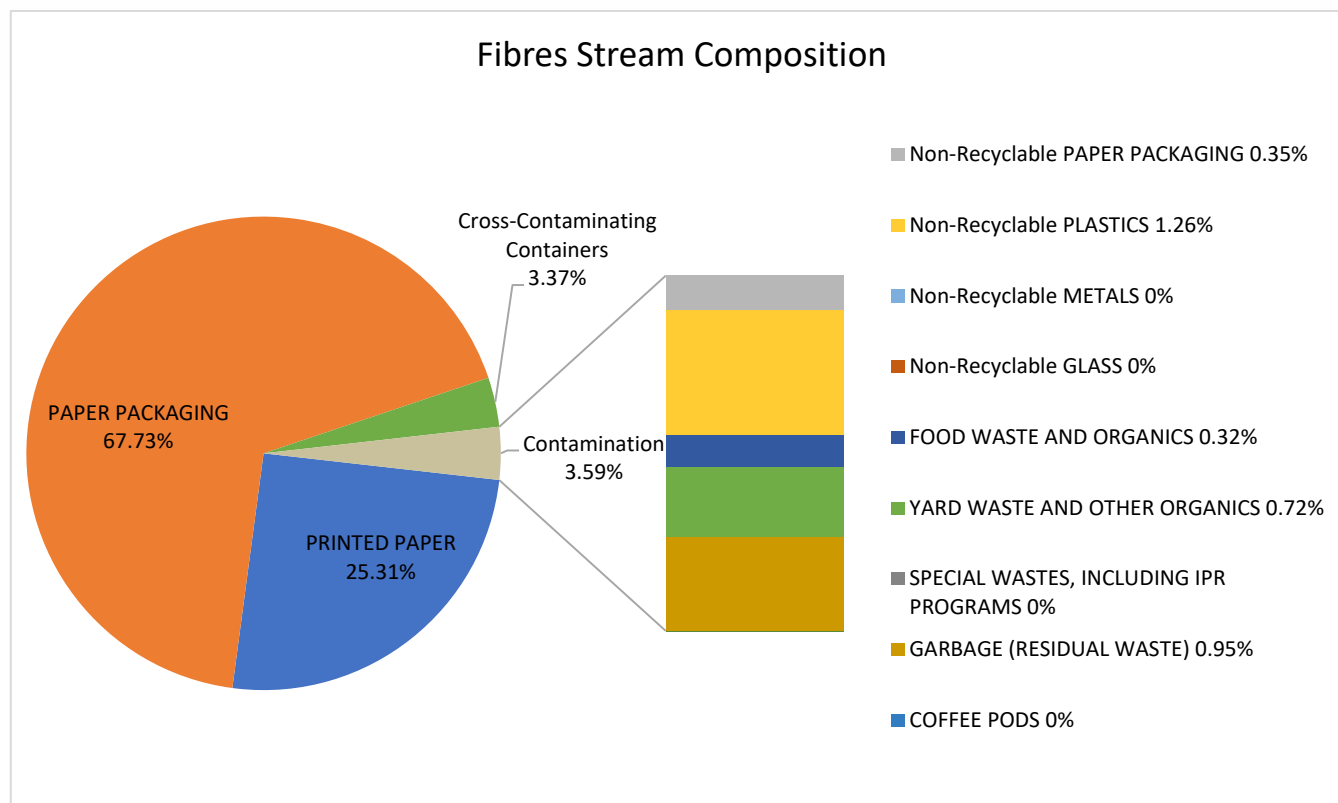


Figure 3.7 Fibres Stream Composition

Table 3.11 provides a list of the most common contaminants present in the fibres recycling stream, the generation rates and percentage of stream.

Table 3.11 Most Common Contaminants in the Fibres Recycling Stream

	Top 10 Contaminants in the Fibres Recycling Stream	kg/hh/wk	kg/hh/yr	% of Stream
1	Other Waste	0.02	0.90	0.87%
2	Tissue	0.01	0.74	0.72%
3	Flexible Film Plastic – LDPE & HDPE	0.01	0.61	0.59%
4	Paper Laminate Packaging	0.01	0.36	0.35%
5	LDPE/HDPE Film - Products (non-packaging)	0.01	0.31	0.30%
6	Plastic Laminates and Other Film Packaging	0.005	0.28	0.27%
7	Leftover Dried Food	0.004	0.19	0.19%
8	Leftover Other	0.003	0.14	0.13%
9	Other Plastics - (non-packaging/durable)	0.002	0.10	0.10%
10	Textiles	0.002	0.08	0.08%
	Total	0.07	3.71	3.59%

Figure 3.8 to Figure 3.11 provides examples of contaminating and cross-contaminating materials found in the fibres recycling stream.



Figure 3.8 LDPE/HDPE films (non-packaging) and Plastic Laminates in the Fibres Recycling Stream



Figure 3.9 Tissues/Toweling in the Fibres Recycling Stream



Figure 3.10 #6 Expanded Polystyrene in the Fibres Recycling Stream.



Figure 3.11 Flexible Film Plastic - LPDE & HDPE in the Fibres Recycling Stream

3.6 Containers Stream Composition

The average generation rate for materials placed in the containers stream equated to 1.94 kg/hh/wk or 101.33 kg/hh/yr. Of this, recyclable containers accounted for a total of 84.62%, cross-contaminating fibres accounted for a total of 6.59%. The remaining 8.79% consisted of contamination (true garbage). Figure 3.12 provides a more detailed breakdown of the containers recycling stream.

Of the contamination, non-recyclable plastics was the largest contamination (largely flexible film plastic bags, garbage bags, durable plastic products and laminated/other plastic film and bags), at 4.74%. Non-recyclable metals, at 1.04% and food waste and organics (largely leftover other food and unavoidable meat), at 1.00%, were the second and third largest contaminants. Garbage (largely other waste – PPE, cigarettes and textiles), at 0.86%, non-recyclable glass, at 0.66%, special wastes (electronics), at 0.21% and yard waste and other organics (largely tissue), at 0.16%, non-recyclable paper packaging, at 0.10%, and coffee pods, at 0.01%, also made small contributions to the contamination.

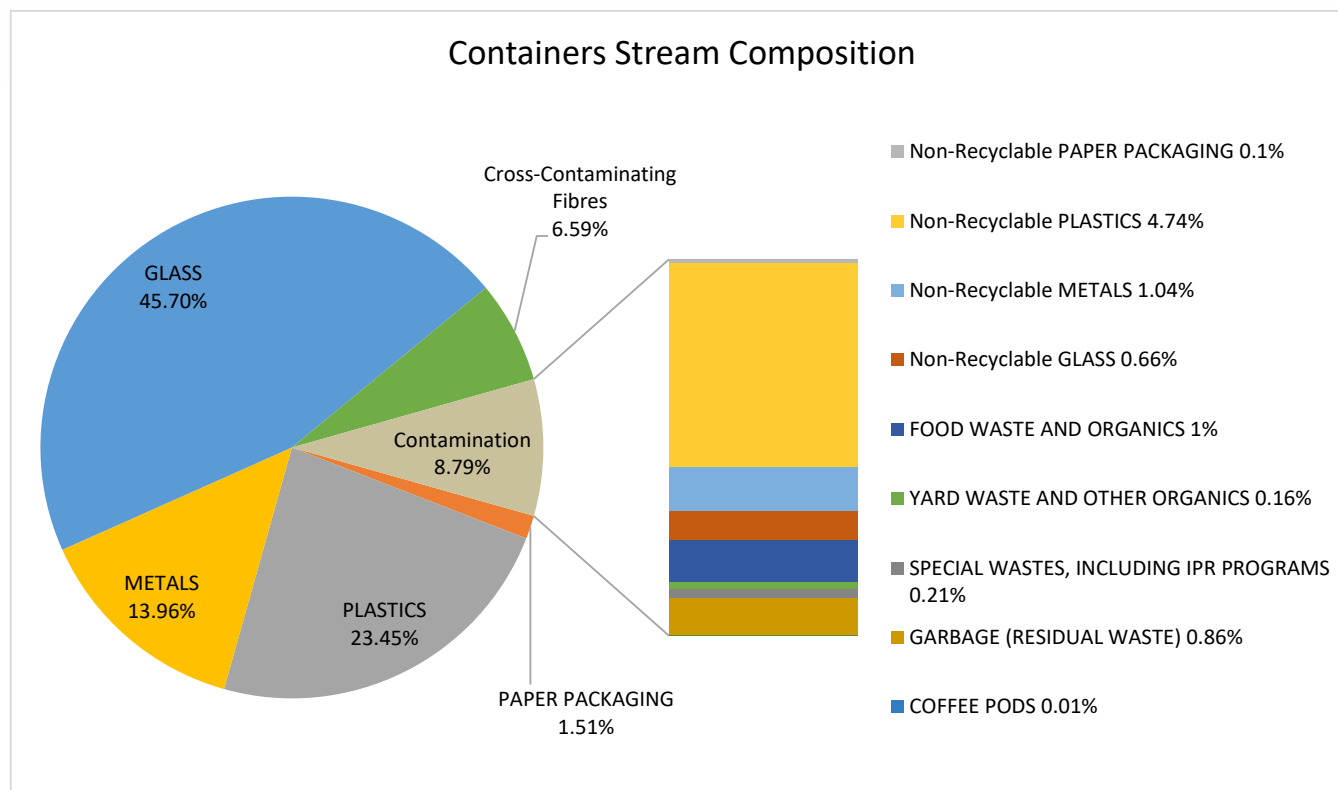


Figure 3.12 Containers Stream Composition

Table 3.12 provides a list of the most common contaminants present in the containers recycling stream, the generation rates and percentage of stream.

Table 3.12 Most Common Contaminants in the Containers Recycling Stream

	Top 10 Contaminants in the Containers Recycling Stream	kg/hh/wk	kg/hh/yr	% of Stream
1	Flexible Film Plastic – LDPE & HDPE	0.03	1.66	1.64%
2	LDPE/HDPE Film - Products (non-packaging)	0.03	1.40	1.38%
3	Other steel (non-packaging)	0.02	1.06	1.04%
4	Leftover Other	0.02	0.99	0.98%
5	Other Plastics - (non-packaging/durable)	0.02	0.98	0.97%
6	Other Waste	0.02	0.81	0.80%
7	Plastic Laminates and Other Film Packaging	0.01	0.71	0.70%
8	Other Glass - non-Blue Box	0.01	0.67	0.66%
9	Tissue	0.00	0.16	0.16%
10	Electronics	0.00	0.15	0.15%
	Total	0.16	8.59	8.47%

Figure 3.13 to Figure 3.16 provides examples of contaminating and cross-contaminating materials found in the containers recycling stream.



Figure 3.13 Other Steel mixed with Polycoat Beverage Cups in Containers Recycling Stream



Figure 3.14 LDPE/HDPE Film (non-packaging) and Plastic Laminates in the Containers Recycling Stream



Figure 3.15 Flexible Film Plastic – LDPE/HDPE in the Containers Recycling Stream



Figure 3.16 Other Waste in the Containers Recycling Stream

3.7 Capture Rates

The following section outlines Municipality of Dysart et al's capture rates for all recyclable materials included in the Municipality's recycling programs. The capture rates shown in Figure 3.17 have been determined by calculating the amount of each divertible material captured within the recycling streams compared to the overall amount of that specific material generated (disposed within the garbage and placed within the recycling streams together). The primary material with the lowest capture rate is plastics, at 71.38%. The primary material with the highest capture rate is glass, at 98.54%. The capture rate for all recyclable materials is 85.96%.

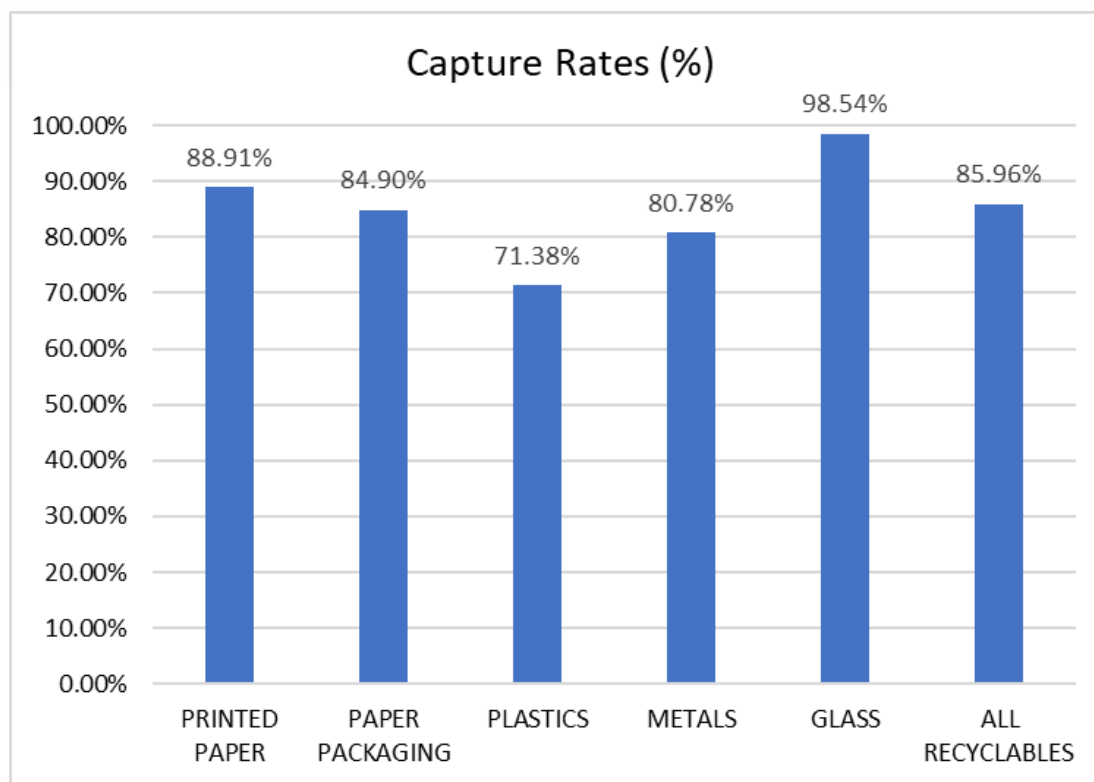


Figure 3.17 Capture Rates for Primary Material Categories

4.0 RECOMMENDATIONS

Presented are program recommendations for the Municipality of Dysart et al based on resident interaction and audit results in the summer season. The Haliburton Landfill currently offers a variety of waste diversion programs which residents use, aside from this, some residents engage in other household waste diversion efforts as seen in Table 4.1. The diversion rate for the Haliburton Landfill was 33.04%. The contribution of scrap metal, construction & demolition waste, carpet and batteries in the summer season was smaller than the other seasons showing that program to receive these items during strategic days or seasons can be a way to increase diversion.

Disposed organics accounted for 39.01% of the overall waste stream in the Summer. This was an increase from the Spring where it represented 25.70%.

Table 4.1 Other Household Diversion Efforts by Residents

Other Household Diversion Efforts	# of Households	%
Composting	17	18.48%
Terracycle	0	0.00%
Other	0	0.00%
None	75	81.52%
Total	92	100.00%

As seen above, 81.52% of all sampled households do not engage in other waste diversion practices and 18.48% participate in backyard composting or animal feeding. The amount of organic waste can be potentially reduced by:

- Providing residents with an alternative options like home composters or community composting;
- Educating residents on the benefits of avoiding food or reducing food waste and how composting can enrich soils;
- Implementing a source separated organic program or providing a place where residents can compost or dispose organic material at the landfill.

Other diversion efforts, such as burning of materials, were not mentioned on the summer season. The residents who burn their fibres mentioned that this action is not common during the hotter months of the year. There is also a recommendation from the fire department to not burn fibres in the summer.

Throughout the audit sampling period, auditors noted whether garbage was placed in clear bags or dark/opaque bags. A total of 5.79% of the garbage collected was in dark/opaque bags. It is a slight increase in percentage (5.49% in Spring season). However, it shows more compliance with the clear garbage bag requirement, as the percentage in the Winter season was 16.34%. It is recommended that the landfill staff monitor and enforce the clear bag policy. This will ensure residents are aware of the policy and pay the appropriate fees if they choose to use dark/opaque bags.

Also, the auditors noted the increase of bags in the fibres stream. A total of 36.23% of the fibres collected was in bags. It is a significant increase when compared to the spring season (1.57%). It is recommended that the landfill staff monitor and aware of the residents of unnecessary usage of plastic bags aiming the reduce material in the streams.

Enhancements to the Promotion & Education (P&E) program can assist the Municipality of Dysart et al in improving their current waste program. The overall goals should focus on the proper placement of recyclable materials, household hazardous waste disposal options, reduction in recycling stream contamination and cross-contamination and the clear bag program. Several outlets can be utilized to communicate the P&E program to residents. This can be done through social media, print advertising, site signage and a tax bill insert.

5.0 CONCLUSIONS

The following conclusions were made from the summer seasonal residential depot audit completed in the Municipality of Dysart et al:

Depot Collection Results:

- Garbage Stream – an average of 1.32 bags were disposed per household per drop off. Of the 121 bags collected, 94.21% was disposed in clear bags and 5.79% was disposed in dark/opaque bags.
- Fibres Recycling Stream – an average of 0.75 recycling bags/bag equivalent were disposed per household per drop off. Of the 69 bags/bag equivalent collected, 63.77% was loose and 36.23% was bagged.
- Containers Recycling Stream – an average of 1.01 recycling bags/bag equivalent were disposed per household per drop off. Of the 92.5 bags/bag equivalent collected, 20.54% was loose and 79.46% was bagged.

Garbage Stream Composition:

- Average quantity of material disposed in the garbage stream by a single-family household is 7.27 kg/hh/wk or 379.29 kg/hh/yr.
- Organic materials (currently accepted in the garbage stream, as there is no source separated organics program) represented 59.47% which equals 4.33 kg/hh/wk or 225.56 kg/hh/yr. This includes items such as food waste, yard waste and other organics.
- Recyclable materials (currently accepted in depot's recycling program) comprised 8.55% of the garbage stream by weight at 0.62 kg/hh/wk or 32.41 kg/hh/yr.

Fibres Recycling Stream Composition:

- Average quantity of material disposed in the fibres recycling stream by a single-family household is 1.98 kg/hh/wk or 103.36 kg/hh/yr.
- 3.59% of the fibres recycling stream is contamination.
- 3.37% of the fibres recycling stream is cross-contamination and should be placed in the containers recycling.

Containers Recycling Stream Composition:

- Average quantity of material disposed in the containers recycling stream by a single-family household is 1.94 kg/hh/wk or 101.33 kg/hh/yr.
- 8.79% of the container's recycling stream is contamination.
- 6.59% of the container's recycling stream is cross-contamination and should be placed in the fibres recycling.

Diversion Rates & Capture Rates:

- Single family households generate an average of 11.20 kg/hh/wk or 583.97 kg/hh/yr of waste (garbage, fibres recycling and containers recycling combined). Of that, a total of 3.70 kg/hh/wk or 192.96 kg/hh/yr is diverted from landfill, equaling a diversion rate of 33.04%.
- 85.96% of all acceptable recyclable fibre and containers materials were properly captured in the recycling streams (i.e., capture rate of 85.96%).

Report Prepared By:

A handwritten signature in blue ink, appearing to read 'Lucas', is enclosed in a thin black rectangular border.

Lucas Vasconcelos, B.Eng, Dip EP

Waste Sector Team Lead

Report Review By:

A handwritten signature in black ink, appearing to read 'Kerri Blair', is enclosed in a thin black rectangular border.

Kerri Blair, B.Sc., Dip.EMA, EP(Waste)

Project Manager, Waste Services

Disclaimer

AET Group Inc. makes no warranty and assumes no liability for the information contained in this report outlining the waste audit study results. These results reflect measurements made over 3 days in the summer season as described in the methodology. As such, waste generation measurements should be considered snapshots and may not reflect accurately conditions across the Municipality of Dysart et al over time. These reported generation, capture, diversion, and contamination rates more accurately reflect the quantity of each material generated over the study period and have been extrapolated to calculate weekly and yearly rates as outlined in the calculations.

APPENDIX A WASTE AUDIT RESULTS



Residential Depot Audit Results - Dysart et al Summer 2022

		Municipality:	Dysart et al	Dysart et al	Dysart et al	Total Sampled Disposed (kg)	Disposed per Household per Week (kg/hh/wk)	Percent Composition (%)	Total Sampled Recycling (kg)	Recycled per Household per Week (kg/hh/wk)	Percent Composition (%)	Total Sampled Recycling (kg)	Recycled per Household per Week (kg/hh/wk)	Percent Composition (%)
		Sample Area/Depot Location:	Haliburton	Haliburton	Haliburton									
		Waste Stream:	Garbage	Fibres	Containers									
		Date Collected (month/day/year):	08/24/2022	08/24/2022	08/24/2022									
		Household Generation Days	735	735	735									
		Audit Supervisor:	Lucas V	Lucas V	Lucas V									
Notes:														
Material Category	Accepted? F = Fibres C = Containers R = Single-Stream Recycling O = Organic W = Waste Depot = Alternate Drop-off Stream Deposit = Deposit Containers	Weight	Weight	Weight	Weight	Weight	Percentage	Weight	Weight	Percentage	Weight	Weight	Percentage	
		(kg)	(kg)	(kg)	(kg)	(kg/hh/wk)	(%)	(kg)	(kg/hh/wk)	(%)	(kg)	(kg/hh/wk)	(%)	
PRINTED PAPER														
1	Newspapers - Daily and weekly	F	0.10	13.60	0.00	0.10	0.00	0.01%	13.60	0.13	6.53%	0.00	0.00	0.00%
2	Other Newspapers/Newsprint - Other	F	0.70	11.11	0.00	0.70	0.01	0.09%	11.11	0.11	5.34%	0.00	0.00	0.00%
3	Magazines and Catalogues	F	0.51	11.89	4.85	0.51	0.00	0.07%	11.89	0.11	5.71%	4.85	0.05	2.38%
4	Directories / Telephone books	F	0.00	0.22	0.00	0.00	0.00	0.00%	0.22	0.00	0.11%	0.00	0.00	0.00%
5	Other Printed Paper (Obligated)	F	2.59	6.07	0.18	2.59	0.02	0.34%	6.07	0.06	2.92%	0.18	0.00	0.09%
6	Other Printed Paper (Non-Obligated)	F	3.30	9.78	0.00	3.30	0.03	0.43%	9.78	0.09	4.70%	0.00	0.00	0.00%
TOTAL PRINTED PAPER			7.20	52.67	5.03	7.20	0.07	0.94%	52.67	0.50	25.31%	5.03	0.05	2.47%
PAPER PACKAGING														
1	Gable Top Containers - Food and other non-beverage	C	0.36	0.62	0.28	0.36	0.00	0.05%	0.62	0.01	0.30%	0.28	0.00	0.14%
2	Gable Top Carton – Beverage non-dairy	C	0.08	0.27	0.32	0.08	0.00	0.01%	0.27	0.00	0.13%	0.32	0.00	0.16%
3	Gable Top Carton – Dairy & Substitutes	C	0.34	1.52	0.86	0.34	0.00	0.04%	1.52	0.01	0.73%	0.86	0.01	0.42%
4	Gable Top Containers - Alcoholic Beverage	Deposit	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
5	Aseptic Containers - Food and other non-beverage	C	0.00	0.28	0.11	0.00	0.00	0.00%	0.28	0.00	0.13%	0.11	0.00	0.05%
6	Aseptic Carton – Beverage non-dairy	C	0.36	0.48	0.71	0.36	0.00	0.05%	0.48	0.00	0.23%	0.71	0.01	0.35%
7	Aseptic Carton – Dairy & Substitutes	C	0.00	0.06	0.15	0.00	0.00	0.00%	0.06	0.00	0.03%	0.15	0.00	0.07%
8	Aseptic Containers - Alcoholic Beverage	Deposit	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
9	Polycoat Beverage Cups	F	1.38	0.63	0.10	1.38	0.01	0.18%	0.63	0.01	0.30%	0.10	0.00	0.05%
10	Spiral Wound Containers	C	0.26	0.32	0.65	0.26	0.00	0.03%	0.32	0.00	0.15%	0.65	0.01	0.32%
11	Ice Cream Containers and Other Bleached Long Polycoat Fibre	F	1.32	0.94	0.44	1.32	0.01	0.17%	0.94	0.01	0.45%	0.44	0.00	0.22%
12	Paper Laminate Packaging	W	7.35	0.72	0.21	7.35	0.07	0.96%	0.72	0.01	0.35%	0.21	0.00	0.10%
13	Corrugated Cardboard	F	12.04	86.59	3.05	12.04	0.11	1.58%	86.59	0.82	41.60%	3.05	0.03	1.49%
14	Boxboard/Cores/Molded Pulp	F	10.58	52.46	4.80	10.58	0.10	1.39%	52.46	0.50	25.21%	4.80	0.05	2.35%
15	Other Paper Packaging (Non-Obligated)	F	1.02	0.35	0.03	1.02	0.01	0.13%	0.35	0.00	0.17%	0.03	0.00	0.01%
TOTAL PAPER PACKAGING			35.09	145.24	11.71	35.09	0.33	4.59%	145.24	1.38	69.78%	11.71	0.11	5.74%
PLASTICS														
1	#1 PET Bottles and Jars - Clear - Non- Beverage	C	0.36	0.15	5.66	0.36	0.00	0.05%	0.15	0.00	0.07%	5.66	0.05	2.77%
2	#1 PET Bottles and Jars - Coloured - Non-Beverage	C	0.20	0.00	0.00	0.20	0.00	0.03%	0.00	0.00	0.00%	0.00	0.00	0.00%
3	#1 PET Bottles and Jars - Black - Non- Beverage	C	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
4	#1 PET Bottles - Clear - Non-Alcoholic Beverage	C	1.91	0.19	15.20	1.91	0.02	0.25%	0.19	0.00	0.09%	15.20	0.14	7.45%
5	#1 PET Bottles - Coloured & Black- Non- Alcoholic Beverage	C	0.08	0.00	0.02	0.08	0.00	0.01%	0.00	0.00	0.00%	0.02	0.00	0.01%
6	#1 PET Bottles - Clear – Alcoholic Beverage	Deposit	0.00	0.00	0.51	0.00	0.00	0.00%	0.00	0.00	0.00%	0.51	0.00	0.25%
7	#1 PET Bottles - Coloured & Black- Alcoholic Beverage	Deposit	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
8	#1 PET Bottles and Jars ≥ 5 L - All	C	0.00	0.00	0.96	0.00	0.00	0.00%	0.00	0.00	0.00%	0.96	0.01	0.47%
9	#1 PET Thermoform - Clear	C	1.68	0.25	8.97	1.68	0.02	0.22%	0.25	0.00	0.12%	8.97	0.09	4.40%
10	#1 PET Thermoform - Coloured	C	0.19	0.00	0.45	0.19	0.00	0.02%	0.00	0.00	0.00%	0.45	0.00	0.22%
11	#1 PET Thermoform - Black	C	0.26	0.00	0.27	0.26	0.00	0.03%	0.00	0.00	0.00%	0.27	0.00	0.13%
12	#2 HDPE Bottles and Jugs (Natural) - Non-Beverage	C	0.12	0.00	1.04	0.12	0.00	0.02%	0.00	0.00	0.00%	1.04	0.01	0.51%
13	#2 HDPE Bottles and Jugs (Coloured) - Non-Beverage	C	0.74	0.26	4.34	0.74	0.01	0.10%	0.26	0.00	0.12%	4.34	0.04	2.13%
14	#2 HDPE Bottles and Jugs (Black) - Non- Beverage	C	0.10	0.00	0.00	0.10	0.00	0.01%	0.00	0.00	0.00%	0.00	0.00	0.00%
15	#2 HDPE Bottles (Natural) - Non- Alcoholic Beverage - Non-dairy	C	0.08	0.00	0.00	0.08	0.00	0.01%	0.00	0.00	0.00%	0.00	0.00	0.00%
16	#2 HDPE Bottles (Natural) - Non- Alcoholic Beverage - Dairy and Dairy Substitutes	C	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
17	#2 HDPE Bottles (Coloured & Black) - Non-Alcoholic Beverage - Non-dairy	C	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
18	#2 HDPE Bottles (Coloured and Black) - Non-Alcoholic Beverage - Dairy and Dairy Substitutes	C	0.06	0.00	0.56	0.06	0.00	0.01%	0.00	0.00	0.00%	0.56	0.01	0.27%
19	#2 HDPE Bottles (Natural) - Alcoholic Beverage	Deposit	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
20	#2 HDPE Bottles (Coloured & Black) - Alcoholic Beverage	Deposit	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
21	#2 HDPE Bottles and Jugs ≥ 5 L - All	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
22	#2 Other HDPE Containers	C	0.00	0.00	0.22	0.00	0.00	0.00%	0.00	0.00	0.00%	0.22	0.00	0.11%
23	Flexible Film Plastic – LDPE & HDPE	W	25.42	1.22	3.35	25.42	0.24	3.33%	1.22	0.01	0.59%	3.35	0.03	1.64%
24	LDPE/HDPE Film - Products (non-packaging)	W	16.78	0.62	2.81	16.78	0.16	2.20%	0.62	0.01	0.30%	2.81	0.03	1.38%
25	#5 PP Bottles - Non-Beverage	C	0.07	0.06	0.53	0.07	0.00	0.01%	0.06	0.00	0.03%	0.53	0.01	0.26%
26	#5 PP Bottles - Non-Alcoholic Beverage	C	0.00	0.00	0.07	0.00	0.00	0.00%	0.00	0.00	0.00%	0.07	0.00	0.03%
27	#5 PP Bottles - Alcoholic Beverage	Deposit	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%
28	#5 Other PP Containers	C	3.08	0.06	4.49	3.08	0.03	0.40%	0.06	0.00	0.03%	4.49	0.04	2.20%
29	#5 Other PP Containers (Black)	C	0.20	0.01	0.52	0.20	0.00	0.03%	0.01	0.00	0.00%	0.52	0.00	0.25%
30	#6 PS - Expanded Pol													

Municipality: Sample Area/Depot Location: Waste Stream: Date Collected (month/day/year): Household Generation Days Audit Supervisor: Notes:			Dysart et al	Dysart et al	Dysart et al	Total Sampled Disposed (kg)	Disposed per Household per Week (kg/hh/wk)	Percent Composition (%)	Total Sampled Recycling (kg)	Recycled per Household per Week (kg/hh/wk)	Percent Composition (%)	Total Sampled Recycling (kg)	Recycled per Household per Week (kg/hh/wk)	Percent Composition (%)	
			Haliburton	Haliburton	Haliburton										
			Garbage	Fibres	Containers	Garbage	Garbage	Garbage	Fibres	Fibres	Fibres	Containers	Containers	Containers	
			08/24/2022	08/24/2022	08/24/2022										
			735	735	735	735			735			735			
			Lucas V	Lucas V	Lucas V										
Material Category		Accepted? F = Fibres C = Containers R = Single-Stream Recycling O = Organic W = Waste Depot = Alternate Drop-off Stream Deposit = Deposit Containers	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg/hh/wk)	Percentage (%)	Weight (kg)	Weight (kg/hh/wk)	Percentage (%)	Weight (kg)	Weight (kg/hh/wk)	Percentage (%)	
10	Untouched Dried Food	W	2.62	0.00	0.00	2.62	0.02	0.34%	0.00	0.00	0.00%	0.00	0.00	0.00%	
11	Untouched Fruits and Vegetables	W	10.16	0.00	0.00	10.16	0.10	1.33%	0.00	0.00	0.00%	0.00	0.00	0.00%	
12	Untouched Other	W	3.24	0.00	0.00	3.24	0.03	0.42%	0.00	0.00	0.00%	0.00	0.00	0.00%	
13	Unavoidable Bakery	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
14	Unavoidable Meat and Fish	W	11.80	0.00	0.04	11.80	0.11	1.54%	0.00	0.00	0.00%	0.04	0.00	0.02%	
15	Unavoidable Dairy	W	1.88	0.00	0.00	1.88	0.02	0.25%	0.00	0.00	0.00%	0.00	0.00	0.00%	
16	Unavoidable Dried Food	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
17	Unavoidable Fruits and Vegetables	W	154.07	0.00	0.00	154.07	1.47	20.17%	0.00	0.00	0.00%	0.00	0.00	0.00%	
18	Unavoidable Other	W	25.11	0.00	0.00	25.11	0.24	3.29%	0.00	0.00	0.00%	0.00	0.00	0.00%	
	TOTAL FOOD WASTE AND ORGANICS		357.85	0.67	2.04	357.85	3.41	46.85%	0.67	0.01	0.32%	2.04	0.02	1.00%	
	YARD WASTE AND OTHER ORGANICS														
1	Yard Waste	W	4.10	0.00	0.00	4.10	0.04	0.54%	0.00	0.00	0.00%	0.00	0.00	0.00%	
2	Grass clippings	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
3	Compostable Certified Bags	W	1.21	0.00	0.00	1.21	0.01	0.16%	0.00	0.00	0.00%	0.00	0.00	0.00%	
4	Tissue	W	91.05	1.49	0.32	91.05	0.87	11.92%	1.49	0.01	0.72%	0.32	0.00	0.16%	
	TOTAL YARD WASTE AND OTHER ORGANICS		96.36	1.49	0.32	96.36	0.92	12.62%	1.49	0.01	0.72%	0.32	0.00	0.16%	
	SPECIAL WASTES, INCLUDING IPR PROGRAMS														
1	Household batteries (single-use and rechargeable)	Depot	0.34	0.00	0.12	0.34	0.00	0.04%	0.00	0.00	0.00%	0.12	0.00	0.06%	
2	Hazardous & Special Products	Depot	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
3	Electronics	Depot	1.28	0.00	0.31	1.28	0.01	0.17%	0.00	0.00	0.00%	0.31	0.00	0.15%	
4	Tires	Depot	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
5	Medications and Sharps	Depot	0.04	0.00	0.00	0.04	0.00	0.01%	0.00	0.00	0.00%	0.00	0.00	0.00%	
6	Biohazardous/Medical Waste	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
	TOTAL SPECIAL WASTES, INCLUDING IPR PROGRAMS		1.66	0.00	0.43	1.66	0.02	0.22%	0.00	0.00	0.00%	0.43	0.00	0.21%	
	GARBAGE (RESIDUAL WASTE)														
1	Carpet	Depot	3.68	0.00	0.00	3.68	0.04	0.48%	0.00	0.00	0.00%	0.00	0.00	0.00%	
2	Construction & Demolition Waste	Depot	4.94	0.00	0.00	4.94	0.05	0.65%	0.00	0.00	0.00%	0.00	0.00	0.00%	
3	Ceramics	W	2.56	0.00	0.00	2.56	0.02	0.34%	0.00	0.00	0.00%	0.00	0.00	0.00%	
4	Diapers	W	18.48	0.00	0.00	18.48	0.18	2.42%	0.00	0.00	0.00%	0.00	0.00	0.00%	
5	Other Electrical devices	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
6	Other Metal	Depot	0.10	0.00	0.00	0.10	0.00	0.01%	0.00	0.00	0.00%	0.00	0.00	0.00%	
7	Other Waste	W	51.35	1.81	1.63	51.35	0.49	6.72%	1.81	0.02	0.87%	1.63	0.02	0.80%	
8	Pet Waste	W	43.86	0.00	0.00	43.86	0.42	5.74%	0.00	0.00	0.00%	0.00	0.00	0.00%	
9	Sanitary Products	W	1.99	0.00	0.00	1.99	0.02	0.26%	0.00	0.00	0.00%	0.00	0.00	0.00%	
10	Textiles	W	26.48	0.16	0.13	26.48	0.25	3.47%	0.16	0.00	0.08%	0.13	0.00	0.06%	
	TOTAL GARBAGE (RESIDUAL WASTE)		153.44	1.97	1.76	153.44	1.46	20.09%	1.97	0.02	0.95%	1.76	0.02	0.86%	
	COFFEE PODS														
1	Plastic #5 PP - Full	W	5.62	0.00	0.02	5.62	0.05	0.74%	0.00	0.00	0.00%	0.02	0.00	0.01%	
2	Plastic #5 PP - Empty	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
3	Plastic #6 PS - Full	W	0.08	0.00	0.00	0.08	0.00	0.01%	0.00	0.00	0.00%	0.00	0.00	0.00%	
4	Plastic #6 PS - Empty	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
5	Unmarked Plastics - Full	W	0.01	0.00	0.00	0.01	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
6	Unmarked Plastics - Empty	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
7	Aluminium - Full	W	0.97	0.00	0.00	0.97	0.01	0.13%	0.00	0.00	0.00%	0.00	0.00	0.00%	
8	Aluminium - Empty	W	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	
9	Compostable	W	0.58	0.00	0.00	0.58	0.01	0.08%	0.00	0.00	0.00%	0.00	0.00	0.00%	
	TOTAL COFFEE PODS		7.26	0.00	0.02	7.26	0.07	0.95%	0.00	0.00	0.00%	0.02	0.00	0.01%	
	Total Recyclable Fibre Material		33.54	193.64	13.45	33.54	0.32	4.39%	193.64	1.84	93.04%	13.45	0.13	6.59%	
	Total Recyclable Container Material		29.93	7.01	105.00	29.93	0.29	3.92%	7.01	0.07	3.37%	105.00	1.00	51.46%	
	Total Depot Material		15.41	0.00	2.56	15.41	0.15	2.02%	0.00	0.00	0.00%	2.56	0.02	1.25%	
	Total Deposit Return Material		1.80	0.00	67.66	1.80	0.02	0.24%	0.00	0.00	0.00%	67.66	0.64	33.16%	
	Total Non-Divertible Material		683.09	7.48	15.37	683.09	6.51	89.44%	7.48	0.07	3.59%	15.37	0.15	7.53%	
	Total		763.77	208.13	204.04	763.77	7.27	100.00%	208.13	1.98	100.00%	204.04	1.94	100.00%	

APPENDIX B

WASTE AUDIT CATEGORIES GUIDE



Dysart et al Waste Audit Categories Guide

Material Category	Accepted Stream:	Description / Examples
PRINTED PAPER		
Newspapers - Daily and weekly	F	Daily and weekly newspapers published by the Canadian Newspaper Association (CNA) and the Ontario Community Newspapers Association (OCNA); Haliburton Echo, Minden Times, County Life, The Highlander No inserts, flyers and magazines from newspapers.
Other Newspapers/Newsprint - Other	F	Non OCNA/CNA publications (e.g. TV guides, Auto Trader, Real Estate News) plus inserts and flyers from OCNA/CNA newspapers made of newsprint. Consult Stewardship Ontario's list of OCNA/CNA publications.
Magazines and Catalogues	F	Glossy magazines, catalogues, calendars, annual reports and product manuals (must be bound, i.e. stapled or glued).
Directories / Telephone books	F	Telephone books and other directories such as the Yellow Pages
Other Printed Paper (Obligated)	F	Mixed fine paper, bills and statements, ad mail, etc. Includes non- newsprint flyers and advertising, promotional calendars. Includes shredded paper as high probability it was obligated paper (bills and statements).
Other Printed Paper (Non-Obligated)	F	Writing paper, office paper , soft or hard covered books, paper envelopes (blank), gift cards, purchased calendars, gift wrap, construction paper, photographs
PAPER PACKAGING		
Gable Top Containers - Food and other non-beverage	C	Polycoat containers with a gable shaped top for foods, sugar, molasses etc.
Gable Top Carton – Beverage non-dairy	C	Non-alcoholic non-dairy beverage polycoat cartons e.g. gable-top cartons that contained juices
Gable Top Carton – Dairy & Substitutes	C	Milk and milk substitutes in gable-top polycoat cartons e.g. Milk and soy milk, coconut milk, almond milk, etc.
Gable Top Containers - Alcoholic Beverage	Deposit	Polycoat containers with a gable shaped top for alcoholic beverages
Aseptic Containers - Food and other non-beverage	C	Polycoat fibre and foil containers (e.g. Tetra Pak) for soup, sauces etc.
Aseptic Carton – Beverage non-dairy	C	Non-alcoholic non-dairy beverage aseptic cartons e.g. gable-top cartons that contained juices
Aseptic Carton – Dairy & Substitutes	C	Milk and milk substitutes in aseptic cartons e.g. Milk and soy milk, coconut milk, almond milk, etc.
Aseptic Containers - Alcoholic Beverage	Deposit	Polycoat fibre and foil containers (e.g. Tetra Pak) for wine and other spirits
Polycoat Beverage Cups	F	Hot beverage/food containers, with polycoat on inside only, including coffee cups, soup cups/bowls, chili cups etc. Cold beverage/food containers with polycoat on both sides including fountain drinks, take-out ice cream cups.
Spiral Wound Containers	C	Polycoat or paper containers with steel bottoms include chip containers, frozen concentrate juices, pre-packaged cookie dough, etc. May also have foil and/or plastic on ends.
Ice Cream Containers and Other Bleached Long Polycoat Fibre	F	Polycoated paper ice cream containers, typically with a lid, excluding boxboard folded ice cream boxes. Food containers with white fibre and a rolled or folded rim, includes Michelina's frozen food, KFC tubs.
Paper Laminate Packaging	W	Paper with aluminum foil, paper with plastic, multi-layered paper - Includes microwave popcorn bags, some cookie bags, dog food bags, paper granola bar wrappers, laminated paper carry out bags, etc.
Corrugated Cardboard	F	Includes micro-flute corrugated containers, pizza boxes, waxed corrugated containers, electronic product boxes such as television and computer boxes, boxes used to direct mail for residential consumers. Kraft paper bags and wrap, grocery or retail bags, potato bags, some pet food bags, includes brown, white, and coloured Kraft paper and bags. No bags with bonded plastic or foil liners/layers/coatings.
Boxboard/Cores/Molded Pulp	F	Boxboard, paperboard, cereal box, shoe box, frozen food box, cores from toilet paper/ toweling/gift wrap, etc. Includes wet-strength boxboard, fast food, ice cream boxes, cartons such as fry/onion ring boxes and paper plates. Molded pulp packaging such as egg cartons, drink trays, other trays, molded pulp flower pots/trays, etc.
Other Paper Packaging (Non-Obligated)	F	Corrugated moving boxes that can be clearly identified as branded products, paper compost & leaf and yard bags

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Material Category	Accepted Stream:	Description / Examples
PLASTICS		
#1 PET Bottles and Jars - Clear - Non- Beverage	C	Clear and translucent #1 plastic bottles and jars for foods and other consumer products such as cooking oil, honey, dish soap, shampoos, etc.
#1 PET Bottles and Jars - Coloured - Non-Beverage	C	Solid colour #1 plastic bottles and jars for foods and other consumer products such as cooking oil, honey, dish soap, shampoos, etc. Does not include black PET.
#1 PET Bottles and Jars - Black - Non- Beverage	C	Black #1 plastic bottles and jars for foods and other consumer products such as cooking oil, honey, dish soap, shampoos, etc.
#1 PET Bottles - Clear - Non-Alcoholic Beverage	C	Clear and translucent #1 plastic bottles for non-alcoholic beverages such as pop and juice
#1 PET Bottles - Coloured & Black- Non- Alcoholic Beverage	C	Solid colour and black #1 plastic bottles for non-alcoholic beverages such as pop and juice.
#1 PET Bottles - Clear – Alcoholic Beverage	Deposit	Clear and translucent #1 plastic bottles alcoholic beverages
#1 PET Bottles - Coloured & Black- Alcoholic Beverage	Deposit	Solid colour and black #1 plastic bottles for alcoholic beverages such as vodka or other spirits
#1 PET Bottles and Jars ≥ 5 L - All	C	#1 plastic bottles and jars ≥ 5 L
#1 PET Thermoform - Clear	C	#1 clamshells, #1 egg cartons, #1 trays, #1 blister packaging, #1 drink cups, etc.
#1 PET Thermoform - Coloured	C	#1 coloured PET microwaveable trays, etc. Does not include black PET.
#1 PET Thermoform - Black	C	#1 black PET microwaveable trays, etc.
#2 HDPE Bottles and Jugs (Natural) - Non-Beverage	C	Natural #2 plastic bottles and jugs for laundry soap, shampoo, windshield washer fluid, etc.
#2 HDPE Bottles and Jugs (Coloured) - Non-Beverage	C	Coloured #2 plastic bottles and jugs for laundry soap, shampoo, windshield washer fluid, etc. Does not include black HDPE.
#2 HDPE Bottles and Jugs (Black) - Non- Beverage	C	Black #2 plastic bottles and jugs for laundry soap, shampoo, windshield washer fluid, etc.
#2 HDPE Bottles (Natural) - Non- Alcoholic Beverage - Non-dairy	C	Natural #2 plastic bottles and jugs for non-alcoholic beverages such as juice
#2 HDPE Bottles (Natural) - Non- Alcoholic Beverage - Dairy and Dairy Substitutes	C	Natural #2 plastic bottles and jugs for non-alcoholic beverages such as milk and milk substitutes (almond and soy milk)
#2 HDPE Bottles (Coloured & Black) - Non-Alcoholic Beverage - Non-dairy	C	Coloured and Black #2 plastic bottles and jugs for non-alcoholic non- dairy beverages such as juice, etc.
#2 HDPE Bottles (Coloured and Black) - Non- Alcoholic Beverage - Dairy and Dairy Substitutes	C	Coloured and Black #2 plastic bottles and jugs for non-alcoholic beverages such as milk and milk substitutes (almond and soy milk)
#2 HDPE Bottles (Natural) - Alcoholic Beverage	Deposit	Natural #2 plastic bottles and jugs for alcoholic beverages such as wine, beer or spirits.
#2 HDPE Bottles (Coloured & Black) - Alcoholic Beverage	Deposit	Coloured and Black #2 plastic bottles and jugs for alcoholic beverages such as wine, beer or spirits.
#2 HDPE Bottles and Jugs ≥ 5 L - All	W	#2 plastic bottles and jugs equal to or greater than 5 L
#2 Other HDPE Containers	C	Other #2 containers such as margarine and yogurt containers made from HDPE
Flexible Film Plastic – LDPE & HDPE	W	HDPE & LDPE film, dry cleaning bags, bread bags, frozen food bags, milk bags, toilet paper and paper towel over-wrap, lawn seed bags, grocery and retail carry-out bags Non-packaging HDPE & LDPE film (e.g. kitchen catchers, sandwich and freezer bags, etc.) goes in LDPE/HDPE Film - Products (non- packaging)
LDPE/HDPE Film - Products (non-packaging)	W	garbage bags, kitchen catchers, zip lock bags, leaf bags
#5 PP Bottles - Non-Beverage	C	# 5 plastic bottles for food and consumer products such as shampoos, sauces, etc.
#5 PP Bottles - Non-Alcoholic Beverage	C	# 5 plastic bottles for non-alcoholic beverages
#5 PP Bottles - Alcoholic Beverage	Deposit	# 5 plastic bottles for alcoholic beverages
#5 Other PP Containers	C	# 5 containers such as margarine and yogurt containers and other containers made from PP, including tubs and lids with resin codes #5 PP
#5 Other PP Containers (Black)	C	Black # 5 containers made from PP, including tubs and lids with resin codes #5 PP
#6 PS - Expanded Polystyrene	C	# 6 Foam take-out containers such as drink cups, large, white or coloured packaging foam, meat trays, etc.
#6 PS - Expanded Polystyrene (Black)	W	Black # 6 Foam take-out containers such as drink cups, large, black packaging foam, meat trays, etc.

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Material Category	Accepted Stream:	Description / Examples
#6 PS - Non-expanded Polystyrene - Non-beverage	C	#6 Polystyrene clear clamshell containers such as berry and muffin containers, opaque clamshell containers such as food take-out containers, yogurt containers, rigid trays, small milk or cream containers for hot beverages, cold drink cups.
#6 PS Non-expanded Polystyrene Bottles - Non-Alcoholic Beverage - Non- Dairy	C	#6 Non-expanded Polystyrene bottles for Non-alcoholic non- dairy beverages. Note, there will likely be minimal containers found in this category. This includes #PS containers for beverages like orange juice and water and typically have an aluminum foil lid.
#6 PS Non-expanded Polystyrene Bottles - Non-Alcoholic Beverage - Dairy and Dairy Substitutes	C	#6 Non-expanded Polystyrene bottles for Non-alcoholic dairy and dairy substitute beverages. Note, there will likely be minimal containers found in this category.
#6 PS Non-expanded Polystyrene Bottles - Alcoholic Beverage	Deposit	#6 Non-expanded Polystyrene bottles for Alcoholic beverages. Note, there will likely be minimal containers found in this material category.
#6 PS - Non-expanded Polystyrene (Black)	C	#6 Polystyrene black rigid trays or any other black containers.
Plastic Laminates and Other Film Packaging	W	Laminated plastic film and bags that are at least 85% plastic (by weight). Includes chip bags, vacuum sealed bags, cereal liners, candy wraps, pasta bags, boil in a bag, plastic based food pouches, etc.
Other Rigid Plastic Packaging - Non- Beverage	C	Other rigid containers (#3, #4 & #7), non-PET blister packaging, unmarked/coded packaging, plant pots and trays, pails etc.
Other Rigid Plastic Packaging - Non- Beverage (Black)	C	Other black rigid containers (#3, #4 & #7), non-PET blister packaging, unmarked/coded packaging, plant pots and trays, pails etc.
Other Rigid Plastic Packaging - Non-Alcoholic Beverage Bottles	C	#3, #4, #7 & unmarked/coded plastic bottles for Non-alcoholic beverages
Other Rigid Plastic Packaging - Alcoholic Beverage Bottles	Deposit	#3, #4, #7 & unmarked/coded plastic bottles for Alcoholic beverages
Large HDPE & PP Pails & Lids	W	Equal to or greater than 5 litres and less than 25 litres
Other Plastics - (non-packaging/durable)	W	Rubbermaid tubs, toys etc.
METALS		
Aluminum- Food Containers	C	Pet food cans, food cans (e.g., sardine cans)
Aluminum Containers - Non-Alcoholic Beverage	C	Beverage cans for non-alcoholic drinks such as pop and water, etc.
Aluminum Containers – Alcoholic Beverage	Deposit	Beverage cans for alcoholic drinks such as beer, ciders, coolers, etc.
Aluminum Foil & Foil Trays	C	Aluminum foil wrap, pie plates, baking trays, etc.
Aluminum Aerosols	C	Aluminum aerosol containers, hair products, etc.
Other Aluminum (non-packaging)	Depot	Aluminum siding, baking trays etc.
Steel Food Cans	C	Soup, beans, peaches cans, etc.
Steel - Non-Alcoholic Beverage	C	Apple juice and other non-alcoholic beverages
Steel - Alcoholic Beverage	Deposit	Steel Alcoholic beverage cans (Sapporo)
Steel Paint Cans	C	Empty paint cans
Steel Aerosol Container	C	Empty spray paint cans, cooking oil, whipped cream, etc.
Other steel (non-packaging)	Depot	Non-packaging steel products including baking trays, frying pans etc.
GLASS		
Clear Glass - food and other products	C	Food containers such as pickle jars, salsa jars and dairy tubs, cosmetic containers for creams
Clear Glass - Non-Alcoholic Beverage	C	Bottles for pop, water, juice and other non-alcoholic beverages
Clear Glass - Alcoholic Beverage	Deposit	Wine bottles, spirit bottles, single-serve cooler bottles, beer bottles
Coloured Glass - food and other products	C	Food containers such as pickle jars, salsa jars and dairy tubs, cosmetic containers for creams
Coloured Glass - Non-Alcoholic Beverage	C	Bottles for pop, water, juice and other non-alcoholic beverages
Coloured Glass - Alcoholic Beverage	Deposit	Wine bottles, spirit bottles, single-serve cooler bottles, beer bottles
Other Glass - non-Blue Box	W	Dishes, ceramics, window glass
FOOD WASTE AND ORGANICS		
Leftover Bakery	W	Bread, cookies, muffins, pies, rolls, etc.
Leftover Meat and Fish	W	Lunch meat, etc.
Leftover Dairy	W	Eggs, milk, cheese, etc.
Leftover Dried Food	W	Breakfast cereal, rice, etc.
Leftover Fruits and Vegetables	W	Partially eaten apple, carrot, etc.
Leftover Other	W	
Untouched Bakery	W	Bread still in bags, etc.
Untouched Meat and Fish	W	Meat still in packaging, etc.
Untouched Dairy	W	Yogurt still in cup, etc.
Untouched Dried Food	W	Breakfast cereal, etc.
Untouched Fruits and Vegetables	W	Grapes, lettuce, etc.
Untouched Other	W	

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Material Category	Accepted Stream:	Description / Examples
Unavoidable Bakery	W	Bread crusts
Unavoidable Meat and Fish	W	Bones, skin
Unavoidable Dairy	W	Cheese rinds
Unavoidable Dried Food	W	
Unavoidable Fruits and Vegetables	W	Apple cores, banana skins, carrot peels, etc.
Unavoidable Other	W	
YARD WASTE AND OTHER ORGANICS		
Yard Waste	W	Brush, branches, wood chips, house plants, leaves, cool ashes
Grass clippings	W	Grass clippings
Compostable Certified Bags	W	BPI Certified Compostable bags
Tissue	W	Tissue/towelling including paper towels, napkins, tissue.
SPECIAL WASTES, INCLUDING IPR PROGRAMS		
Household batteries (single-use and rechargeable)	Depot	Materials designated under O. Reg. 30/20 Batteries
Hazardous & Special Products	Depot	Materials designated under O. Reg. 387/16 Municipal Hazardous or Special Waste, and/or O. Reg. 449/21 Hazardous and Special Products
Electronics	Depot	ITT/AV materials designated under Phase 1 of O. Reg. 522/30 Electrical and Electronic Equipment
Tires	Depot	Materials designated under O. Reg. 225/18 Tires
Medications and Sharps	Depot	Prescription drugs, over-the-counter medications, natural health products, sharps (needles, syringes, lancets)
Biohazardous/Medical Waste	W	Medical waste
GARBAGE (RESIDUAL WASTE)		
Carpet	Depot	Carpeting, underlay, mats
Construction & Demolition Waste	Depot	Lumber, cut wood, drywall, ceramic tiles, plaster, etc.
Ceramics	W	Ceramic plates, cups, plant pots, etc.
Diapers	W	Diapers, children and adult
Other Electrical devices	W	Microwaves, vacuums, small household appliances, coffee makers, can openers, etc., sewing machine, air conditioners, curling irons, hot plates, fan, hair dryer, iron, kettle, electrical tools, etc.
Other Metal	Depot	Scrap metal, copper pipes, hardware, BBQ parts, etc.
Other Waste	W	Materials not classified elsewhere, vacuum bags, candles, furnace filters, etc.
Pet Waste	W	animal feces, bedding, litter
Sanitary Products	W	Sanitary products, hygiene products, etc.
Textiles	W	Clothing, shoes, mats, drapery, sheets, etc.
COFFEE PODS		
Plastic #5 PP - Full	W	#5 PP full coffee pods
Plastic #5 PP - Empty	W	#5 PP empty coffee pods
Plastic #6 PS - Full	W	#6 PS full coffee pods
Plastic #6 PS - Empty	W	#6 PS empty coffee pods
Unmarked Plastics - Full	W	Unmarked Plastics full coffee pods
Unmarked Plastics - Empty	W	Unmarked Plastics empty coffee pods
Aluminium - Full	W	Aluminum full coffee pods
Aluminium - Empty	W	Aluminum empty coffee pods
Compostable	W	Compostable coffee pods