

Sault Ste. Marie Single-Family Residential Curbside Audit & Inbound Recycling Audit

Summary Report

Prepared for

Continuous Improvement Fund

Prepared by

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Background	1
1.2	Objectives.....	1
2.0	APPROACH AND METHODOLOGY	1
2.1	Sample Size	1
2.2	Sample Collection Procedure	2
2.3	Sample Sorting Procedure.....	2
3.0	SUMMARY OF SINGLE-FAMILY RESIDENTIAL CURBSIDE AUDIT RESULTS.....	4
3.1	Curbside Participation Results	4
3.1.1	Curbside Observations.....	4
3.2	Overall Waste Generation Profile	5
3.3	Garbage Stream Composition	6
3.4	Recyclable Fibres Stream Composition.....	7
3.5	Recyclable Containers Stream Composition	8
4.0	SUMMARY OF INBOUND TIP FLOOR RECYCLING AUDIT	9
5.0	COMPARISON BETWEEN CURBSIDE RESULTS AND INBOUND TIP FLOOR RESULTS	11

LIST OF TABLES

Table 3.1	Curbside Participation Summary	4
Table 5.1	Comparison Between Curbside Results and Inbound Results.....	11

LIST OF FIGURES

Figure 3.1	Waste Generation Profile (all streams)	5
Figure 3.2	Garbage Stream Composition	6
Figure 3.3	Fibres Stream Composition	7
Figure 3.4	Containers Stream Composition.....	8
Figure 4.1	Inbound Fibres Stream Composition.....	9
Figure 4.2	Inbound Containers Stream Composition	10

APPENDICES

Appendix A.	Waste Audit Categories Guide
Appendix B.	Single-Family Residential Curbside Audit Results
Appendix C.	Inbound Tip Floor Recycling Audit Results

1.0 INTRODUCTION

1.1 Background

Continuous Improvement Fund contracted AET Group Inc. (AET) to conduct single family residential curbside audit and an inbound tip floor recycling audit in Sault Ste. Marie over a one-week (5-day) period in April 2018. This report summarizes the data collected and analyzed for the following days:

- April 9-13, 2018

1.2 Objectives

The waste composition audit is intended to accomplish the following objectives:

- Collect, categorize, and assess the waste material composition by individual stream (garbage, fibres, and containers) from the curbside of select Sault Ste. Marie single family households;
- Collect and record data with respect to the material streams set out at the curbside of each individually selected household such as number of items set out and fullness equivalents;
- Calculate participation and set out rates, the amount and composition of material generated in each waste stream, and contamination rates.
- Provide composition results on six samples of MRF inbound tip floor residential recycling material (3 fibres, 3 containers).

2.0 APPROACH AND METHODOLOGY

2.1 Sample Size

Over the course of a one-week (Monday-Friday) sampling period, 100 single family households were sampled from. All material set out at the curbside in the garbage and recycling (Fibre and Container) streams was eligible for collection and auditing if it met the City's curbside set-out requirements. Garbage had a bag/container limit of 2 items and recycling was to be placed in a divided 95 Gallon cart. The 100 households sampled were split into 10 groups of 10 households, with 2 groups collected each day of the week (Monday-Friday), ensuring that areas across the whole City were represented.

A total of 6 samples (3 Fibers stream and 3 Containers stream) of approximately 100 kg each were extracted from three random recycling trucks over the course of three days.

2.2 Sample Collection Procedure

AET collected all garbage, fibre, and container materials from each of the sample households on their regularly scheduled collection day. Collected material was brought back to the centralized location (GFL Environmental) where each stream and sample area was sorted and weighed separately.

Collection logs were maintained during the curbside collection of each of the 100 single family households. Specific data including the number of items set out and fullness equivalents was recorded at the curbside. AET made a 2nd pass of each sample area to ensure any late set-outs were collected. If a household did not have any material set out, not substitute household was added.



Figure 2.1 Photo of Sault Ste. Marie’s Split Recycling Cart

Representative samples were collected for inbound recycling tip floor with the assistance of GFL Environmental staff using a front-end loader.

2.3 Sample Sorting Procedure

All of the material collected during the one-week sampling period was sorted and weighed by AET at the GFL Environmental Facility.

Samples were sorted into 7 major waste groups, consisting of 58 individual categories. The full list of sort categories can be found in Appendix A.

Separated/sorted waste was placed in blue boxes and totes, based on the 58 categories, and weighed individually. A digital scale, with precision to 0.01 kg, was used to weigh the sorted waste material. Once all the waste material was classified and weighed, non-divertible material was placed in an area of the facility and disposed of by facility staff. Likewise, recyclable materials were placed in a separate pile and transferred back to the recycling tipping floor.

3.0 SUMMARY OF SINGLE-FAMILY RESIDENTIAL CURBSIDE AUDIT RESULTS

The following section provides a summary of the audit results from the Single-Family residential curbside audit. Results are presented in average kilograms per household per week (kg/hh/wk) as well as percentages, by weight. The detailed audit sort results can be found in Appendix B. It should be noted that the term “non-divertible material” in the context of this report is referring to materials not accepted in Sault Ste. Marie’s current curbside recycling program.

3.1 Curbside Participation Results

Table 3.1 outlines the curbside collection results. Since Sault Ste. Marie utilizes split recycling carts, the fullness of both fibres and containers were based on the capacity of that half of the cart.

Table 3.1 Curbside Participation Summary

One Week of Sampling	Fibres Recycling	Containers Recycling	Garbage
Total number of households sampled	100	100	100
Total number of household set-outs	59	58	83
Total number of items	59	58	98
Total number of full container equivalents	41	24	78
Average number of items/hh/wk ¹	0.59	0.58	0.98
Average number of full container equivalents/hh/wk ¹	0.41	0.24	0.78
Average number of full container equivalents/set out ²	0.69	0.42	0.94
Participation Rate	59.00%	58.00%	83.00%

¹ Averaged across all sampled households (including those with no setouts). This does not represent the average per household with a setout.

² Averaged across just the subset of households that had something set out (i.e. avg. # of full container equivalents per household with something set out).

3.1.1 Curbside Observations

The following anecdotal observations were made during curbside audit sample collection:

- The audit team had interactions with approximately 7-10 residents during collection.
- Noticing that it was not the regular truck doing collections, the residents were curious about what was going on. Audit team told them that they were working on a waste/recycling study to gather data on how well the recycling program is working.
- Residents generally liked idea of carts but did not like the split within the cart.
- Primary complaint with the split cart was the size & shape of fibres side (inconvenient to have to fold/break down everything to fit in)

- Although residents are allowed to set bundled cardboard out beside the cart, the audit team did not observe this within the group of sample households.
- When emptying the carts, the auditors would often have to pull materials out of the fibres side (i.e. material didn't just fall out when tipped like the containers side). It's worth noting that this also happens sometimes in single stream carts, but to a lesser extent.

3.2 Overall Waste Generation Profile

Overall, single family households in Sault Ste. Marie set out an average of 10.90 kg/hh/wk of material (garbage and recycling combined). Of that material, 67.99% was non-divertible materials (not accepted in Sault Ste. Marie's existing curbside recycling program), 10.51% was recycled containers, 16.21% was recycled fibres and the remaining 5.29% was disposed recyclable material. The curbside recycling diversion rate is 26.72%. The overall capture rate for all recyclable material currently accepted in Sault Ste. Marie's curbside recycling program is 83.48%. It must be noted that the diversion rate and capture rate calculations include cross-contamination (i.e. fibres material in the containers stream and containers material in the fibres stream) as being diverted. Figure 3.1 illustrates the overall waste generation profile.

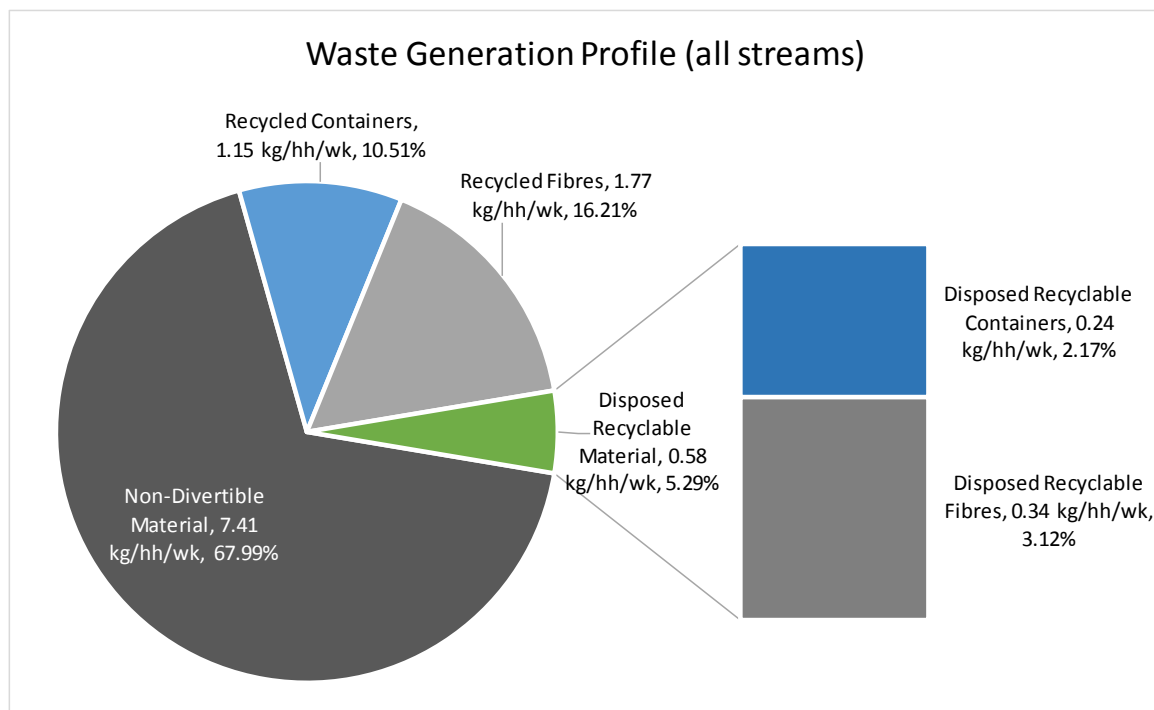


Figure 3.1 Waste Generation Profile (all streams)

3.3 Garbage Stream Composition

An average of 7.59 kg/hh/wk of material is generated in the garbage stream by single-family households in Sault Ste. Marie. Figure 3.2 illustrates the composition of the garbage stream. The garbage stream contained approximately 7.59% recyclable material (3.11% containers and 4.48% fibres). The remaining consisted of materials not currently accepted in the City’s curbside recycling program (92.41%).

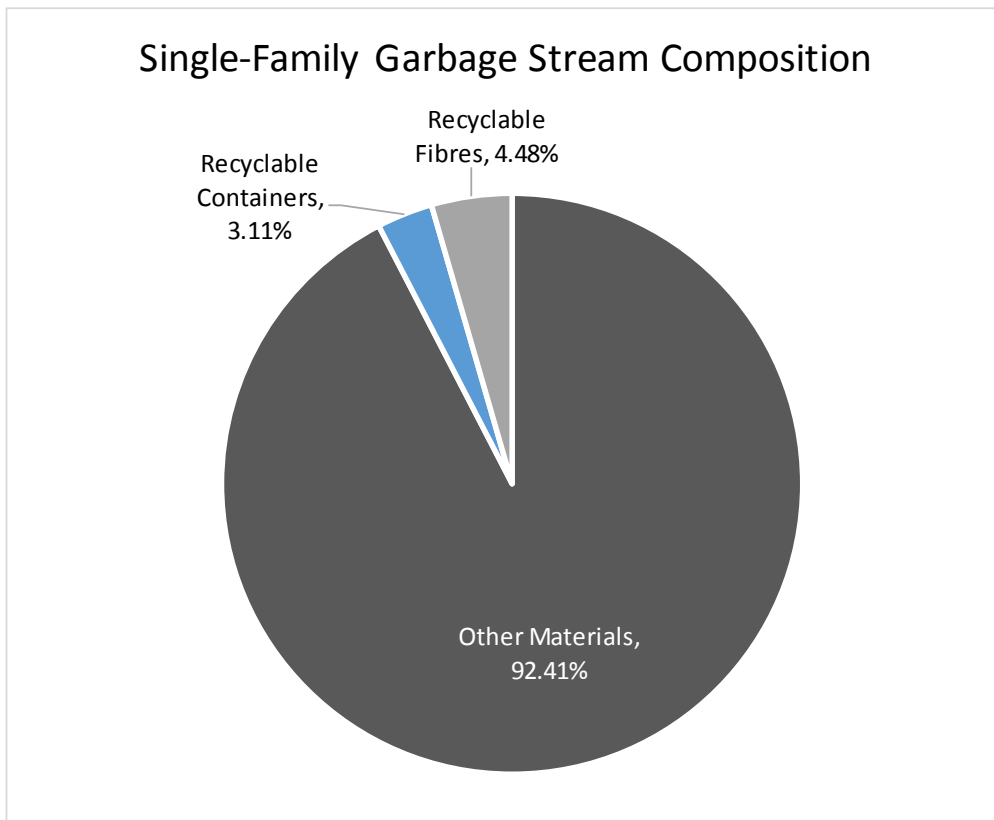


Figure 3.2 Garbage Stream Composition

3.4 Recyclable Fibres Stream Composition

An average of 1.83 kg/hh/wk of material is generated in the fibres stream by single-family households in Sault Ste. Marie. Figure 3.3 illustrates the composition of the fibres stream. The overall contamination of the fibres stream is 3.95%. Contaminating material included items such as polycoat beverage cups, paper laminate packaging, tissue/towelling, food waste, filters, sanitary waste, and textiles. It should be noted that approximately 0.18% of the fibres stream consisted of recyclable containers stream material (i.e. cross-contamination).

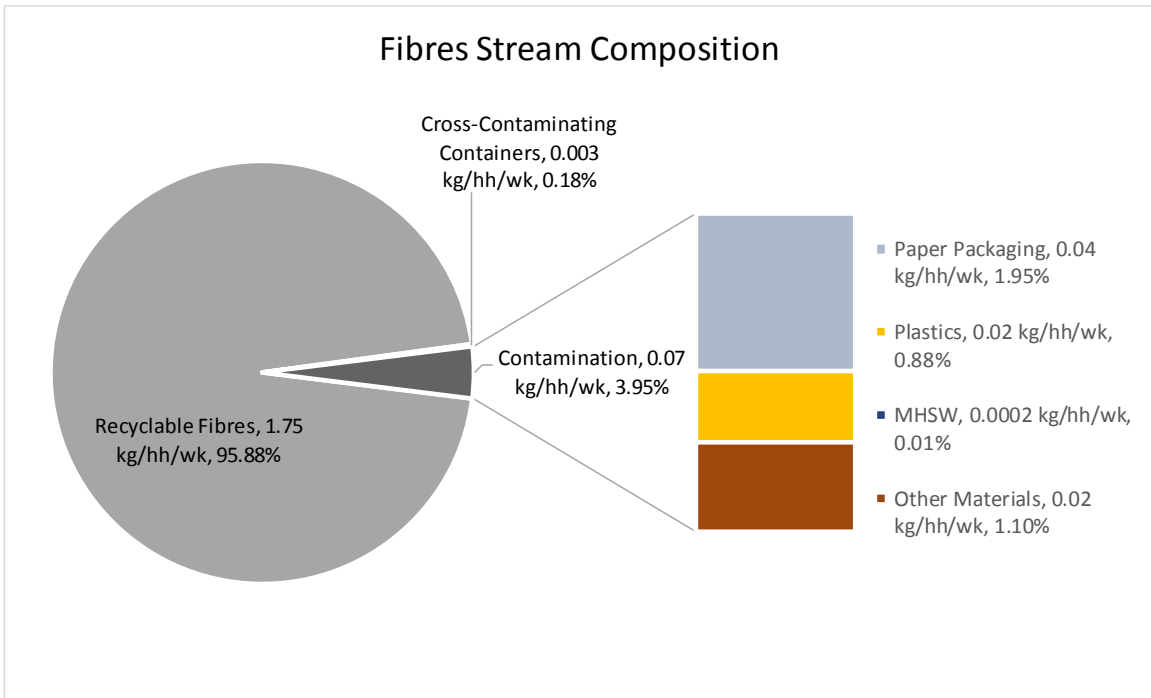


Figure 3.3 Fibres Stream Composition

3.5 Recyclable Containers Stream Composition

An average of 1.48 kg/hh/wk of material is generated in the containers stream by single-family households in Sault Ste. Marie. Figure 3.4 illustrates the composition of the containers stream. The overall contamination of the containers stream is 21.97%. Contaminating materials included non-accepted plastics, spiral wound containers, non-recyclable metal such as baking trays and tools, food and liquid waste, tissue, wooden crates and carpet. Approximately 1.03% of the containers stream consisted of cross-contaminating recyclable fibres stream material. It should be noted that the only plastics accepted in Sault Ste. Marie’s current recycling program are #1 (PET) bottles and #2 (HDPE) bottles. Any other plastic items are considered contamination, which was a significant contributor to this stream’s overall contamination rate.

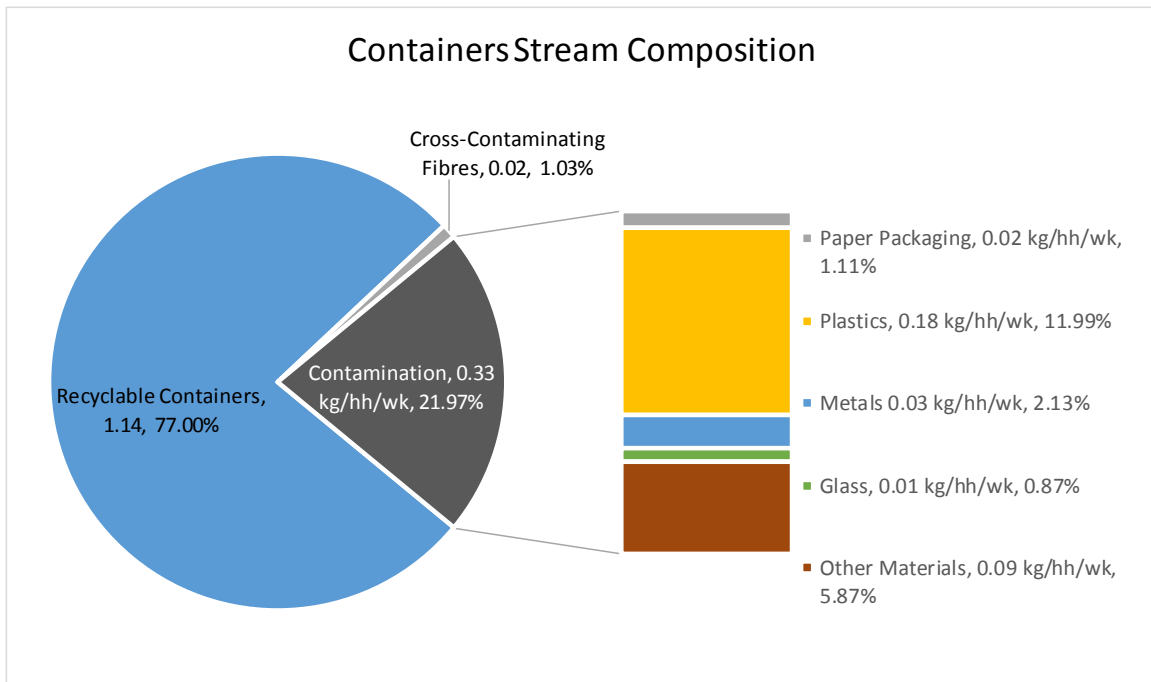


Figure 3.4 Containers Stream Composition

4.0 SUMMARY OF INBOUND TIP FLOOR RECYCLING AUDIT

The following figures illustrate the overall composition of the fibres and containers streams sampled from inbound recycling trucks. Detailed audit results can be found in Appendix C.

The overall contamination rate in the fibres stream was 3.98%. In addition, 1.77% of the fibres stream was comprised of cross-contaminating containers. The contamination in the containers stream was 22.85% and the cross-contaminating fibres amounted to 4.19%.

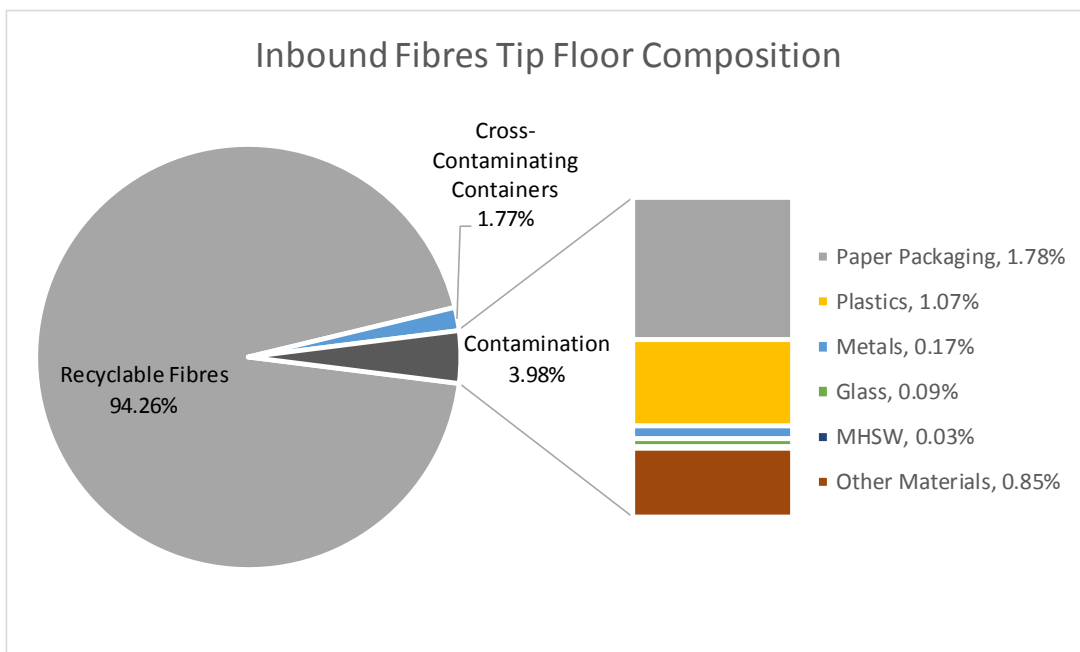


Figure 4.1 Inbound Fibres Stream Composition

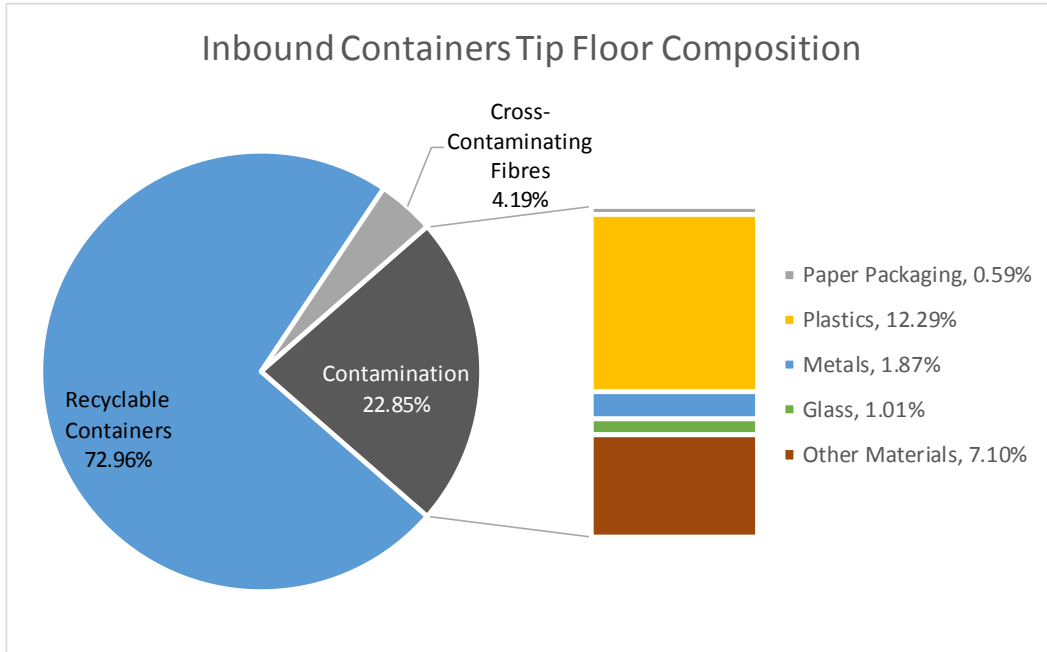


Figure 4.2 Inbound Containers Stream Composition

5.0 COMPARISON BETWEEN CURBSIDE RESULTS AND INBOUND TIP FLOOR RESULTS

Table 5.1 illustrates the overall composition of the containers and fibres recycling streams in both the single-family curbside results and the inbound tip floor audit results. In both streams, the level of cross-contamination was observed to be higher in the tip floor samples compared to the curbside samples. This would suggest that some materials might end up in the wrong truck compartment through tipping action of the carts and/or while being transported and tipped from the trucks.

Table 5.1 Comparison Between Curbside Results and Inbound Results

	Containers Stream		Fibres Stream	
	Single-Family Curbside	Inbound Tip Floor	Single-Family Curbside	Inbound Tip Floor
Other Materials	21.97%	22.85%	3.95%	3.98%
Accepted Containers	77.00%	72.96%	0.18%	1.77%
Accepted Fibres	1.03%	4.19%	95.88%	94.26%
	100.00%	100.00%	100.00%	100.00%

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Disclaimer

AET Group Inc. makes no warranty and assumes no liability for the information contained in this report outlining the waste audit results. Waste generation measurements should be considered snapshots in time and may not reflect conditions across Sault Ste. Marie over time.

Sault Ste. Marie Category Descriptions

Material Category	Allowed Stream F - Fibers, C - Containers, G - Garbage	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); Globe and Mail, Toronto Star, Hamilton Spectator, community newspapers. Consult Stewardship Ontario's list of OCNA/CNA publications. 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
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	F	Polycoat containers with a gable shaped top, milk and milk substitutes like soy, almond and rice milk, juices, some foods, sugar, molasses etc.
Aseptic Containers (excluding alcoholic beverages)	F	Polycoat fibre and foil containers (e.g. Tetra Pak) for soy, almond and rice milk, juice boxes, water, soup, sauces etc.
Aseptic Containers - alcoholic beverages	F	Polycoat fibre and foil containers (e.g. Tetra Pak) for wine and other spirits
Polycoat Beverage Cups	G	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	G	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	G	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	G	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/ towel/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
PLASTICS		
#1 PET Bottles and Jars (excluding alcoholic beverages)	C	Clear and translucent #1 plastic bottles and jars including pop, juice, cooking oil, honey, dish soap, etc.
#1 PET Bottles and Jars -Coloured (excluding alcoholic beverages)	C	Solid colour #1 plastic bottles and jars for foods and personal products such as shampoos
#1 PET Bottles and Jars ≥ 5 L (excluding alcoholic beverages)	C	#1 plastic bottles and jars including pop, juice, cooking oil, honey, dish soap, etc.
#1 PET Bottles (alcoholic beverages)	C	#1 plastic bottles used to contain alcoholic beverages
#1 PET Thermoform - Clear	G	#1 clamshells, #1 egg cartons, #1 trays, #1 blister packaging, etc.
#1 PET Thermoform - Coloured	G	#1 coloured PET microwaveable trays, etc.
#2 HDPE Bottles and Jugs (Natural) (excluding alcoholic beverages)	C	Natural #2 plastic bottles and jugs, juice, milk, laundry soap, shampoo, windshield washer fluid, etc.
#2 HDPE Bottles and Jugs (Coloured) (excluding alcoholic beverages)	C	Coloured #2 plastic bottles and jugs, juice, milk, laundry soap, shampoo, windshield washer fluid, etc.
#2 HDPE Bottles and Jugs ≥ 5 L (excluding alcoholic beverage)	C	#2 plastic bottles and jugs equal to or greater than 5 L
#2 HDPE Bottles (alcoholic beverage containers)	C	#2 plastic bottles used to contain alcoholic beverages
#2 Other HDPE Containers	G	Other #2 containers such as margarine and yogurt containers made from HDPE

Stewardship Ontario Waste Composition Studies 2017-18 - Material Categories Pg 2 of 2

Material Category		Description / Examples
Flexible Film Plastic – LDPE & HDPE	G	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)	G	garbage bags, kitchen catchers, zip lock bags, leaf bags
#5 PP Bottles	G	# 5 plastic bottles includes nutritional supplement drinks, shampoos, etc.
#5 Other PP Containers	G	# 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)	G	Black # 5 containers made from PP, including tubs and lids with resin codes #5 PP
#6 PS - Expanded Polystyrene	G	# 6 Foam take-out containers such as drink cups, large, white or coloured packaging foam, meat trays, etc.
#6 PS - Expanded Polystyrene (Black)	G	Black # 6 Foam take-out containers such as drink cups, large, black packaging foam, meat trays, etc.
#6 PS - Non-expanded Polystyrene	G	#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 (Black)	G	#6 Polystyrene black rigid trays or any other black containers.
Plastic Laminates and Other Film Packaging	G	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	G	Other rigid containers (#3, #4 & #7), non-PET blister packaging, unmarked/coded packaging, plant pots and trays, pails etc.
Other Rigid Plastic Packaging (Black)	G	Other black rigid containers (#3, #4 & #7), non-PET blister packaging, unmarked/coded packaging, plant pots and trays, pails etc.
Large HDPE & PP Pails & Lids	G	Equal to or greater than 5 litres and less than 25 litres
Other Plastics - (non-packaging/durable)	G	Rubbermaid tubs, toys etc.
METALS		
Aluminum- food and beverage Containers (excluding alcoholic beverage containers)	C	Single-serve juice/soft drink cans, pet food cans, food cans (e.g., sardine cans)
Aluminum (alcoholic beverage containers)	C	Aluminum cans and bottles used to contain alcoholic beverages
Aluminum Foil & Foil Trays	C	Aluminum foil wrap, pie plates, baking trays, etc.
Aluminum Aerosols	G	Aluminum aerosol containers, hair products, etc.
Other Aluminum (non-packaging)	G	Aluminum siding, baking trays etc.
Steel Food and Beverage Cans	C	Apple juice, soup beans, peaches cans, etc.
Steel Paint Cans	G	Empty paint cans
Steel Aerosol Container	G	Empty spray paint cans, cooking oil, whipped cream, etc.
Other steel (non-packaging)	G	Non-packaging steel products including baking trays, frying pans etc.
GLASS		
Clear Glass - food and beverage (excluding alcoholic beverage containers)	C	Food containers such as pickle jars, salsa jars and dairy tubs, cosmetic containers for creams, beverage bottles
Clear Glass - alcoholic beverage containers	C	Wine bottles, spirit bottles, single-serve cooler bottles, beer bottles
Coloured Glass - food and beverage (excluding alcoholic beverage containers)	C	Olive oil bottles, balsamic vinegar
Coloured Glass - alcoholic beverage containers	C	Wine bottles, spirit bottles, single-serve cooler bottles, beer bottles
Other Glass - non-Blue Box	G	Dishes, ceramics, window glass
MUNICIPAL HAZARDOUS OR SPECIAL WASTE		
Pressurized Containers	G	All pressurized cylinders used for compresses gases including propane, helium, welding/brazing gases, etc.
Batteries (Consumer-Type Portable)	G	All batteries (primary and secondary)
OTHER MATERIALS		
Other Waste	G	All other materials not classified elsewhere, wooden fruit basket, vacuum bags, wax candles, furnace filters, tissue and paper towels, organics, etc.

Sault Ste. Marie Waste Composition Study 2018 - Waste Sort Results for Single-Family

Municipality:	Sault Ste. Marie																				TOTAL		TOTAL		TOTAL													
	Sample Area:	Indiana Drive	Pentagon Boulevard	Ashgrove Avenue	Centennial Avenue	Henry Street	Morrison Avenue	Millicreek Drive	Southwood Drive	Estelle Street	Sunset Drive, Sunset Court	Indiana Drive	Pentagon Boulevard	Ashgrove Avenue	Centennial Avenue	Henry Street	Morrison Avenue	Millicreek Drive	Southwood Drive	Estelle Street	Sunset Drive, Sunset Court	Indiana Drive	Pentagon Boulevard	Ashgrove Avenue	Centennial Avenue	Henry Street	Morrison Avenue	Millicreek Drive	Southwood Drive	Estelle Street	Sunset Drive, Sunset Court	TOTAL	TOTAL	TOTAL	TOTAL			
Waste Stream:	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage	Garbage	Fibres	Fibres	Fibres	Fibres	Fibres	Fibres	Fibres	Fibres	Fibres	Fibres	Fibres	Containers	Containers	Containers	Containers	Containers	Containers	Containers	Containers	Containers	Containers	Containers	Containers	Containers	Containers	Garbage	Fibres	Containers
Date Collected (month/day/year):	4/9/2018	4/9/2018	4/10/2018	4/10/2018	4/11/2018	4/11/2018	4/12/2018	4/12/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/9/2018	4/9/2018	4/10/2018	4/10/2018	4/11/2018	4/11/2018	4/12/2018	4/12/2018	4/13/2018	4/13/2018	7	7	7	7			
Waste Generation Period (number of days):	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
Sample Size (number of households):	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	100	100	100	100		
Audit Supervisor:	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	Nicole	
Notes:																																						
Material Category	Accepted? ("X" if accepted in recycling or organics program)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	Weight (kg)	
1. PRINTED PAPER																																						
Newspapers - Daily and weekly	F	0.05	0.00	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.95	3.11	0.89	1.42	1.24	0.69	0.10	0.30	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Other Newspapers/Newsprint - Other	F	0.41	0.07	1.16	0.00	0.82	0.03	0.13	0.00	0.10	0.00	5.67	8.63	4.60	4.46	3.66	5.07	4.14	3.16	8.65	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Magazines and Catalogues	F	0.18	0.40	0.00	0.00	0.17	0.00	0.11	0.00	0.00	0.00	1.20	3.10	0.36	0.54	0.87	0.89	2.81	0.62	0.87	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Directories / Telephone books	F	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Other Printed Paper (Obligated)	F	0.76	0.26	0.43	0.09	0.77	0.42	0.32	0.12	0.98	0.32	0.35	1.08	0.51	0.72	0.35	0.98	0.32	2.41	0.25	0.12	0.00	0.01	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Other Printed Paper (Non-Obligated)	F	0.65	0.00	0.67	0.38	0.77	0.49	1.02	0.28	0.52	0.33	0.18	1.70	2.31	0.51	2.27	0.65	1.45	6.51	1.02	0.30	0.00	0.00	0.04	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 Paper		2.05	2.31	2.29	0.47	2.57	0.94	1.58	0.40	1.60	2.65	8.35	17.97	8.67	7.65	8.39	9.33	8.82	13.00	12.36	1.29	0.00	0.01	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2. PAPER PACKAGING																																						
Gable Top Containers	F	0.00	0.10	0.10	0.01	0.10	0.00	0.02	0.22	0.01	0.18	0.31	1.02	0.55	0.66	0.84	0.19	0.15	0.24	0.50	0.46	0.08	0.16	0.00	0.00	0.16	0.00	0.00	0.09	0.00	0.07	0.74	0.01	0.10%	4.92	0.05		
Asseptic Containers (excluding alcoholic beverages)	F	0.06	0.09	0.15	0.04	0.13	0.06	0.09	0.07	0.14	0.59	0.05	0.14	0.06	0.13	0.18	0.05	0.48	0.03	0.13	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Asseptic Containers - alcoholic beverages	F	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Polycoat Beverage Cups	G	0.13	0.01	0.14	0.03	0.44	0.23	0.17	0.30	0.32	0.12	0.28	0.11	0.15	0.44	0.02	0.13	0.07	0.57	0.32	0.10	0.07	0.02	0.06	0.02	0.00	0.03	0.00	0.00	0.00	0.00	1.89	0.02	2.19	0.02	1.29%		
Spiral Wound Containers	G	0.00	0.00	0.11	0.04	0.00	0.05	0.13	0.05	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.56	0.04	0.00	0.21	0.15	0.10	0.00	0.19	0.00	0.54	0.01	0.07%				
Ice Cream Containers and Other Bleached Long Polycoat	G	0.00	0.05	0.00	0.07	0.00	0.03	0.14	0.00	0.08	0.10	0.00	0.09	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Paper Laminate Packaging	G	0.31	0.34	0.38	0.57	0.86	0.12	0.44	0.41	0.56	0.63	0.05	0.14	0.19	0.00	0.47	0.05	0.00	0.40	0.03	0.07	0.00	0.01	0.01	0.03	0.00	0.00	0.00	0.00	0.01	0.00	4.62	0.05	0.61%				
Corrugated Cardboard	F	0.38	0.27	0.13	0.13	0.40	0.21	0.22	0.47	1.10	0.65	2.86	3.07	4.24	1.61	3.24	2.32	2.16	0.74	2.91	4.09	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.96	0.04	5.2%				
Boxboard/Cores/Molded Pulp	F	1.01	0.87	1.41	0.60	1.37	1.09	1.10	0.20	1.27	2.12	3.33	5.96	5.22	3.81	3.91	3.36	6.85	2.37	0.04	0.03	0.25	0.00	0.00	0.00	0.00	0.01	0.00	0.00	11.04	0.11	1.45%						
Other Paper Packaging (Non-Obligated)	F	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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 Paper Packaging		1.89	1.73	2.42	1.49	3.30	1.79	2.31	1.72	3.56	4.47	7.05	10.53	10.36	8.73	9.52	6.97	6.82	4.94	10.74	7.21	0.37	0.87	0.36	0.06	0.43	0.15	0.13	0.09	0.21	0.07	24.68	0.25	3.25%				
3. PLASTICS																																						
#1 PET Bottles and Jars	C	0.63	0.06	0.72	0.24	1.03	0.54	0.33	0.00	0.37	0.78	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
#1 PET Bottles and Jars - Coloured	C	0.00	0.00	0.12	0.01	0.06	0.04	0.03	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
#1 PET Bottles and Jars > 5 L	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
#1 PET Bottles (alcoholic beverages)	C	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
#1 PET Thermofom - Clear	C	0.06	0.01	0.32	0.17	0.54	0.18	0.42	0.34	0.47	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.60	0.23	0.54	0.86	0.55	0.77	0.32	0.39	0.36	2.84	0.03	0.37%				
#1 PET Thermofom - Coloured	G	0.01	0.05	0.01	0.05	0.06	0.12	0.00	0.02	0.03	0.17	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.17	0.20	0.13	0.02	0.04	0.41	0.02	0.00	0.52	0.01	0.07%				
#2 HDPE Bottles and Jugs (Natural)	C	0.00	0.06	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.07	0.68	0.23	0.05	0.29	0.50	0.00	0.56	0.00	0.24	0.00	0.03%				
#2 HDPE Bottles and Jugs (Coloured)	C	0.09	0.00																																			

Sault Ste. Marie Waste Composition Study 2018 - Waste Sort Results for Inbound

Municipality:	Sault Ste. Marie		Sault Ste. Marie			Sault Ste. Marie		Sault Ste. Marie			Sault Ste. Marie			Sault Ste. Marie			Fibres Totals		Containers Totals				
	Truck Number:	8110	8110			8109		8110			8110			8109									
	Waste Stream:	Fibres		Fibres			Fibres		Containers			Containers			Containers								
	Date Collected (month/day/year):	4/9/2018		4/10/2018			4/11/2018		4/9/2018			4/10/2018			4/11/2018								
Waste Generation Period (number of days):	7		7			7		7			7			7									
Sample Size (kg):	85	1320	136	1470	92	770	104	850	99	970	106	620											
Audit Supervisor:	Nicole		Nicole			Nicole		Nicole			Nicole			Nicole									
Notes:						10.64 kg of ice not included in sample																	
Material Category	Accepted? ("X" if accepted in recycling or organics program)	Weight (kg)	Percentage (%)	Inbound Truck Weight (kg)	Weight (kg)	Percentage (%)	Inbound Truck Weight (kg)	Weight (kg)	Percentage (%)	Inbound Truck Weight (kg)	Weight (kg)	Percentage (%)	Inbound Truck Weight (kg)	Weight (kg)	Percentage (%)	Inbound Truck Weight (kg)	Weight of 3 inbound trucks	Percentage (%)	Weight of 3 inbound trucks	Percentage (%)			
1. PRINTED PAPER																							
Newspapers - Daily and weekly	F	5.75	6.73%	88.79	4.83	3.56%	52.29	3.57	3.87%	29.80	0.05	0.05%	0.41	0.00	0.00%	0.00	0.40	0.38%	2.34	170.88	4.80%	2.75	0.11%
Other Newspapers/Newsprint - Other	F	20.87	24.42%	322.28	39.29	28.93%	425.34	22.31	24.19%	186.24	0.96	0.93%	7.88	0.11	0.11%	1.08	1.83	1.73%	10.70	933.85	26.23%	19.66	0.81%
Magazines and Catalogues	F	5.23	6.12%	80.76	4.68	3.45%	50.66	6.37	6.91%	53.18	0.05	0.05%	0.41	0.00	0.00%	0.00	0.11	0.10%	0.64	184.60	5.19%	1.05	0.04%
Directories / Telephone books	F	1.49	1.74%	23.01	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	23.01	0.65%	0.00	0.00%
Other Printed Paper (Obligated)	F	4.01	4.69%	61.92	7.42	5.46%	80.33	2.74	2.97%	22.87	0.02	0.02%	0.16	0.10	0.10%	0.98	0.23	0.22%	1.34	165.12	4.64%	2.49	0.10%
Other Printed Paper (Non-Obligated)	F	7.85	9.18%	121.22	13.54	9.97%	146.58	6.87	7.45%	57.35	0.00	0.00%	0.00	0.18	0.18%	1.77	0.88	0.83%	5.14	325.15	9.13%	6.91	0.28%
Total Paper		45.20	52.88%	697.99	69.76	51.37%	755.19	41.86	45.38%	349.44	1.08	1.04%	8.87	0.39	0.39%	3.83	3.45	3.25%	20.17	1802.62	50.64%	32.86	1.35%
2. PAPER PACKAGING																							
Gable Top Containers	F	2.00	2.34%	30.88	3.42	2.52%	37.02	1.15	1.25%	9.60	0.16	0.15%	1.31	0.13	0.13%	1.28	0.56	0.53%	3.27	77.51	2.18%	5.86	0.24%
Aseptic Containers (excluding alcoholic beverages)	F	0.44	0.51%	6.79	0.85	0.63%	9.20	0.22	0.24%	1.84	0.19	0.18%	1.56	0.13	0.13%	1.28	0.06	0.06%	0.35	17.83	0.50%	3.19	0.13%
Aseptic Containers - alcoholic beverages	F	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00%
Polycoat Beverage Cups	G	1.09	1.28%	16.83	1.03	0.76%	11.15	1.52	1.65%	12.69	0.14	0.14%	1.15	0.05	0.05%	0.49	0.25	0.24%	1.46	40.67	1.14%	3.10	0.13%
Spiral Wound Containers	G	0.05	0.06%	0.77	0.61	0.45%	6.60	0.30	0.33%	2.50	0.53	0.51%	4.35	0.22	0.22%	2.16	0.79	0.74%	4.62	9.88	0.28%	11.13	0.46%
Ice Cream Containers and Other Bleached Long Polycoat	G	0.10	0.12%	1.54	0.48	0.35%	5.20	0.09	0.10%	0.75	0.01	0.01%	0.08	0.00	0.00%	0.00	0.00	0.00%	0.00	7.49	0.21%	0.08	0.00%
Paper Laminate Packaging	G	0.05	0.06%	0.77	0.17	0.13%	1.84	0.31	0.34%	2.59	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	5.20	0.15%	0.00	0.00%
Corrugated Cardboard	F	14.38	16.82%	222.06	25.81	19.01%	279.41	18.93	20.52%	158.02	0.36	0.35%	2.96	0.52	0.53%	5.10	2.07	1.95%	12.10	659.49	18.52%	20.16	0.83%
Board/Cores/Molded Pulp	F	16.90	22.11%	291.86	28.90	21.28%	312.86	23.16	25.11%	193.33	0.91	0.88%	7.47	1.01	1.02%	9.91	3.92	3.70%	22.91	798.05	22.42%	40.29	1.65%
Other Paper Packaging (Non-Obligated)	F	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	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 Paper Packaging		37.01	43.30%	571.52	61.27	45.12%	663.28	45.68	49.52%	381.33	2.30	2.22%	18.88	2.06	2.08%	20.21	7.65	7.21%	44.72	1616.12	45.40%	83.81	3.43%
3. PLASTICS																							
#1 PET Bottles and Jars	C	0.29	0.34%	4.48	0.64	0.47%	6.93	0.55	0.60%	4.59	21.15	20.43%	173.63	18.93	19.15%	185.72	13.97	13.17%	81.66	16.00	0.45%	441.01	18.07%
#1 PET Bottles and Jars - Coloured	C	0.00	0.00%	0.00	0.01	0.01%	0.11	0.00	0.00%	0.00	0.46	0.44%	3.78	0.27	0.27%	2.65	0.53	0.50%	3.10	0.11	0.00%	9.52	0.39%
#1 PET Bottles and Jars ≥ 5 L	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	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00%
#1 PET Bottles (alcoholic beverages)	C	0.02	0.02%	0.31	0.00	0.00%	0.00	0.00	0.00%	0.00	0.19	0.18%	1.56	0.13	0.13%	1.28	0.08	0.08%	0.47	0.31	0.01%	3.30	0.14%
#1 PET Thermofilm - Clear	G	0.13	0.15%	2.01	0.30	0.22%	3.25	0.13	0.14%	1.09	3.22	3.11%	26.43	4.29	4.34%	42.09	2.05	1.93%	11.98	6.34	0.18%	80.51	3.30%
#1 PET Thermofilm - Coloured	G	0.02	0.02%	0.31	0.00	0.00%	0.00	0.03	0.03%	0.25	0.30	0.29%	2.46	0.34	0.34%	3.34	0.20	0.19%	1.17	0.56	0.02%	6.97	0.29%
#2 HDPE Bottles and Jugs (Natural)	C	0.00	0.00%	0.00	0.09	0.07%	0.97	0.00	0.00%	0.00	2.06	1.99%	16.91	1.33	1.35%	13.05	1.35	1.27%	7.89	0.97	0.03%	37.85	1.53%
#2 HDPE Bottles and Jugs (Coloured)	C	0.00	0.00%	0.00	0.16	0.12%	1.73	0.52	0.56%	4.34	8.15	7.87%	66.91	4.51	4.56%	44.25	4.49	4.23%	26.24	6.07	0.17%	137.40	5.63%
#2 HDPE Bottles and Jugs ≥ 5 L	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	0.73	0.74%	7.16	0.98	0.92%	5.73	0.00	0.00%	12.89	0.53%
#2 HDPE Bottles (alcoholic beverage containers)	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	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00%
#2 Other HDPE Containers	G	0.00	0.00%	0.00	0.01	0.01%	0.11	0.00	0.00%	0.00	0.30	0.29%	2.46	1.29	1.30%	12.66	0.82	0.77%	4.79	0.11	0.00%	19.91	0.82%
Flexible Film Plastic - LDPE & HDPE	G	0.12	0.14%	1.85	0.23	0.17%	2.49	0.25	0.27%	2.09	1.07	1.03%	8.78	0.65	0.66%	6.38	0.94	0.89%	5.49	6.43	0.18%	20.66	0.85%
LDPE/HDPE Film - Products (non-packaging)	G	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.14	0.14%	1.37	0.16	0.15%	0.94	0.00	0.00%	2.31	0.09%
#5 PP Bottles	G	0.02	0.02%	0.31	0.01	0.01%	0.11	0.00	0.00%	0.00	0.68	0.66%	5.58	0.90	0.91%	8.83	0.61	0.58%	3.57	0.42	0.01%	17.98	0.74%
#5 Other PP Containers	G	0.09	0.11%	1.39	0.01	0.01%	0.11	0.06	0.07%	0.50	2.74	2.65%	22.49	2.60	2.63%	25.51	1.12	1.06%	6.55	2.00	0.06%	54.55	2.24%
#5 Other PP Containers (Black)	G	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.19	0.19%	1.86	0.09	0.08%	0.53	0.00	0.00%	2.39	0.10%
#6 PS - Expanded Polystyrene	G	0.04	0.05%	0.62	0.12	0.09%	1.30	0.01	0.01%	0.08	0.07	0.07%	0.57	0.04	0.04%	0.39	0.02	0.02%	0.12	2.00	0.06%	1.08	0.04%
#6 PS - Expanded Polystyrene (Black)	G	0.00	0.00%	0.00	0.02	0.01%	0.22	0.00	0.00%	0.00	0.01	0.01%	0.08	0.02	0.02%	0.20	0.00	0.00%	0.00	0.22	0.01%	0.28	0.01%
#6 PS - Non-expanded Polystyrene	G	0.08	0.09%	1.24	0.04	0.03%	0.43	0.11	0.12%	0.92	0.21	0.20%	1.72	0.57	0.58%	5.59	0.33	0.31%	1.93	2.59	0.07%	9.25	0.38%
#6 PS - Non-expanded Polystyrene (Black)	G	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.04	0.04%	0.33	0.09	0.09%	0.88	0.01	0.01%	0.06	0.00	0.00%	1.27	0.05%
Plastic Laminates and Other Film Packaging	G	0.15	0.18%	2.32	0.14	0.10%	1.52	0.17	0.18%	1.42	0.15	0.14%	1.23	0.34	0.34%	3.34	0.79	0.74%	4.62	5.25	0.15%	9.18	0.38%
Other Rigid Plastic Packaging	G	0.30	0.35%	4.63	0.43	0.32%	4.65	0.23	0.25%	1.92	1.15	1.11%	9.44	0.88	0.89%	8.63	1.79	1.69%	10.46	11.21	0.31%	28.54	1.17%
Other Rigid Plastic Packaging (Black)	G	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.02	0.02%	0.20	0.00	0.00%	0.00	0.00	0.00%	0.20	0.01%
Large HDPE & PP Pails & Lids	G	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	0.00	0.26	0.25%	2.13	0.00	0.00%	0.00	0.00	0.00%	0.00	0.00	0.00%	2.13	0.09%
Other Plastics - (non-packaging/durable)	G	0.01	0.01%	0.15	0.04	0.03%	0.43	0.04	0.04%	0.33	0.83	0.80%	6.81	1.77	1.79%	17.37	3.16	2.98%	18.47	0.92	0.03%	42.65	1.75%
Total Plastics		1.27	1.49%	19.61	2.25	1.66%	24.36	2.10	2.28%	17.53	43.04	41.57%	353.33	40.03									