



waste reduction

Working together to reduce waste

**Humber College
2023 Solid Non-Hazardous Waste Audit**

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Executive Summary

Humber College retained the services of Waste Reduction Group Inc to conduct a solid non-hazardous waste audit at its two campuses (North Campus & Lakeshore Campus) located in Toronto, Ontario. Twenty-four hour samples of garbage and recyclables were collected from various functional areas at the two campuses, including Food Areas, Common Areas and Residence Common Areas. The total sample consisted of approximately 225 kg of waste materials (i.e. garbage and recyclables). The samples were audited on February 1 and 2, 2023. The following tables summarize the overall garbage and recyclable compositions determined from the audit:

Garbage Stream Composition

Material	North Campus	Lakeshore Campus	Overall Combined
Mixed Containers	20.6%	14.7%	20.2%
Mixed Papers	13.1%	14.1%	13.2%
Cardboard	3.9%	--	3.6%
Paper Towels	13.9%	12.9%	13.9%
Coffee Cups	8.0%	19.0%	8.8%
Organics	21.9%	31.8%	22.6%
LDPE Plastic Films	2.9%	2.5%	2.8%
Styrofoam	1.9%	0.2%	1.8%
Scrap Wood	0.2%	--	0.1%
PPE	0.7%	1.0%	0.7%
Textiles	1.2%	--	1.1%
Single Use Plastics	5.5%	0.1%	5.1%
Non-Recyclable	6.2%	3.8%	6.0%

Recycling Stream Composition

Material	North Campus	Lakeshore Campus	Overall Combined
Mixed Containers	59.7%	59.7%	59.7%
Paper Towels	13.3%	4.4%	13.0%
Organics	10.1%	25.5%	10.7%
Styrofoam	0.7%	--	0.7%
PPE	0.5%	--	0.5%
LDPE Plastic Films	2.3%	6.7%	2.5%
Coffee Cups	0.5%	--	0.5%
Single Use Plastics	5.6%	--	5.4%
Textiles	--	0.3%	0.0%
Non-recyclable	7.3%	3.4%	7.1%
Contamination Rate	24.7%	29.2%	24.9%

Paper Stream Composition

Material	North Campus	Lakeshore Campus	Overall Combined
Mixed Containers	1.1%	--	0.9%
Mixed Papers	59.1%	34.0%	55.6%
Cardboard	14.1%	36.0%	17.1%
Coffee Cups	25.6%	30.0%	26.2%
Single Use Plastics	0.1%	--	0.1%
Contamination Rate	26.8%	30.0%	27.3%

Waste diversion programs implemented on campus include cardboard, mixed papers, comingled recycling, confidential papers, organics, scrap metals, scrap woods/pallets, electronics, bulbs, batteries, printer toners, used furniture, oil and grease, yard wastes, carpet and construction & demolition materials, as well as waste reduction programs including water bottle refill stations, double sided printing, refillable coffee mug programs and other reusable container programs. Through discussions with Humber College personnel, estimates of the annual amounts of solid non-hazardous waste materials disposed, reduced, reused, recycled and composted were determined. The following table summarizes the estimated annual quantities of waste materials generated, reduced, reused, recycled, composted and disposed.

Annual Quantities of Materials Diverted & Disposed

Material	North Campus	Lakeshore Campus	Total Annual Amount	
	Metric Tonnes	Metric Tonnes	Metric Tonnes	Percent
Disposed to Landfill	312.41	165.37	477.78	42.7%
Materials Diverted	510.09	130.21	640.30	57.3%
Total Waste Generated	822.50	295.58	1118.08	100.0%

Based on the total annual amount of waste generated and materials reduced, reused, recycled and composted, the overall waste diversion rate at Humber College was determined to be approximately 57%. The provincial objective is 60% waste diversion. Humber College's management team are committed to maintaining a high waste diversion rate.

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1 Introduction

Humber College retained the services of Waste Reduction Group Inc to conduct a solid non-hazardous waste audit at its two (2) campuses (North Campus & Lakeshore Campus) located in Toronto, Ontario. The waste audit examined representative samples of waste materials from various functional areas on campus in February, 2023. The goal of the waste audit was to gain an understanding of the quantities and composition of solid non-hazardous wastes generated on campus.

Humber College is a multi-building community that has approximately 23,962 students Full-Time Equivalent (FTE) students that generate waste and divertible materials. Humber College conducted the solid non-hazardous waste audit to comply with the requirements of O.Reg. 102/94, to confirm compliance with O.Reg.103/94 and to further improve upon their present waste reduction, reuse and recycling programs.

1.1 Purpose

The purpose of the solid non-hazardous waste audit was to:

- Comply with Part X of O.Reg. 102/94 'Waste Audits and Waste Reduction Work Plans', which requires the operator of an educational institution with more than 350 students enrolled per year, to conduct an annual waste audit and prepare and implement a waste reduction work plan (Refer to Appendix A for a partial excerpt of O.Reg.102/94);
- Confirm compliance with Section 14 of O.Reg.103/94 'Industrial, Commercial and Institutional Source Separation Programs' and Part X 'Educational Institutions' of the Schedule attached to the Regulation (Refer to Appendix A for a partial excerpt of O.Reg.103/94).
- Determine the annual waste diversion rate for Humber College resulting from existing waste reduction, reuse, and recycling programs;
- Identify point of generation and quantify composition of wastes at Humber College;
- Identify any additional opportunities for waste reduction and diversion that may exist at Humber College;
- Address any specific concerns or opportunities identified during the study.

1.2 Scope of Work

To satisfy the purpose of the waste audit, the following scope of work was completed:

- Collected data pertaining to waste composition from North Campus on February 1, 2023 and Lakeshore Campus on February 2, 2023.
- Determined the total quantity of waste materials diverted from landfill by Humber College through current reduction, reuse, and recycling programs;

- Completed a Waste Audit Report (per MECP protocol) that addressed the amount, nature and composition of the waste, the manner by which the waste was generated, including management decisions and policies that relate to the production of waste, and the way in which the waste is managed on campus; and
- Completed a Waste Reduction Work Plan (per MECP protocol) regarding plans to reduce, reuse and recycle waste on campus. The report set out who will implement each part of the plan, when each part will be implemented and what the expected results shall be.

2 Methodology

Discussions were held with Humber College personnel to review existing waste management and recycling programs implemented on campus. Based on previous waste audit experience and information gathered by Humber College, a waste audit schedule was developed. The waste audit was performed in February 2023, as summarized in Table 1:

Table 1: Waste Audit Sample Schedule

Date	Campus	Stream	Functional Areas
Feb. 1, 2023	North	Garbage	Common Areas, Food Areas, Residence Areas
		Recycling	Common Areas, Food Areas, Residence Areas
		Paper	Common Areas, Food Areas, Residence Areas
Feb. 2, 2023	Lakeshore	Garbage	Common Areas, Food Areas, Residence Areas
		Recycling	Common Areas, Food Areas, Residence Areas
		Paper	Common Areas, Food Areas, Residence Areas

In coordination with the Humber College staff, twenty-four hour samples of waste (i.e. garbage and recyclables) were collected from each campus per the waste audit schedule. Bags of waste were collected and colour coded describing the functional area within the building that generated the waste material. The collected bags were disposed into a temporary bin and transported off-site to a local waste transfer facility. The weights of waste materials from each campus and functional area were recorded. Refer to Appendix A for a copy of the Scale Calibration Certificate.

Waste materials were then unloaded, sorted into individual waste categories, weighted and disposed of in the appropriate garbage or recycling bins. Waste samples were sorted by a qualified team from Waste Reduction Group. Additional materials source separated by Humber College for recycling were not collected and categorized during the audit however annual quantities of all diverted materials were reviewed and included in the audit results.

Waste material categories were established prior to the audit based on O.Reg.103/94 requirements for source separation at educational institutions, including:

- Aluminum food or beverage cans (including cans made primarily of aluminum);
- Cardboard (corrugated);
- Fine paper;
- Glass bottles and jars for food or beverages;

- Newsprint; and
- Steel food or beverage cans (including cans made primarily of steel).

In addition to these standard categories other important waste streams such as other mixed containers (PET, HDPE, polypropylene, aseptic), organic wastes, paper towels, mixed plastics, Styrofoam, yard waste, electronic waste, scrap wood, scrap metal and special wastes (i.e. batteries, bulbs and ballasts) were included depending on what auditors found in the samples.

3 Waste Audit Results

3.1 Sample Quantities & Distribution

A key aspect of O. Reg. 102/94 is for waste generators to gain a good understanding of the areas of their operation that generate the most waste, how it is generated, as well as the waste composition. One can use this information to focus their recycling and waste reduction efforts efficiently and effectively.

Table 2 summarizes the quantity and distribution of waste materials collected for the waste audit.

Table 2: Quantity & Distribution of Waste Audit Sample

Campus	Garbage Sample		Recycle Sample		Paper Sample		Total Waste Audit Sample	
	kg	%	kg	%	kg	%	kg	%
North	124.15	92.5%	70.10	95.9%	15.62	86.2%	209.87	93.1%
Lakeshore	10.09	7.5%	2.98	4.1%	2.50	13.8%	15.57	6.9%
Total	134.24	100.0%	73.08	100.0%	18.12	100.0%	225.44	100.0%

Therefore, North Campus generated more garbage, recycling and paper than Lakeshore Campus, representing approximately 93% of the overall waste audit sample. According to Humber personnel, the sample should be divided 2/3 North campus and 1/3 lakeshore campus. Future audits should attempt to collect a larger Lakeshore Campus sample.

In addition, a review of Humber College’s activities identified the following functional areas within campus buildings:

- Common Areas
- Food Areas
- Residence Areas

Table 3 ranks the quantity of garbage generated per functional area based on the waste audit results.

Table 3: Garbage Generated per Functional Area

Functional Area	North Campus		Lakeshore Campus		Combined	
	kg	%	kg	%	kg	%
Common Areas	32.44	26.1%	3.47	34.4%	35.91	26.8%
Food Areas	44.21	35.6%	3.11	30.8%	47.32	35.3%
Residence Areas	47.50	38.3%	3.51	34.8%	51.01	38.0%
Total	124.15	100.0%	10.09	100.0%	134.24	100.0%

Overall, Residence and Food Areas generated the most garbage. Residence Areas generated 38.0% of the garbage sample, and Food Areas generated 35.3% of the sample. Common areas generated the remaining 26.8% of the garbage stream.

Table 4 ranks the quantity of recycling generated per functional area based on the waste audit results.

Table 4: Recycling Generated per Functional Area

Functional Area	North Campus		Lakeshore Campus		Combined	
	kg	%	kg	%	kg	%
Common Areas	18.96	27.0%	1.39	46.6%	20.35	27.8%
Food Areas	22.49	32.1%	1.36	45.6%	23.85	32.6%
Residence Areas	28.65	40.9%	0.23	7.7%	28.88	39.5%
Total	70.10	100.0%	2.98	100.0%	73.08	100.0%

Residence and Food Areas generated the most recycling with an overall combined value of 72.1%. Residence and Food Areas generated the most recycling on the North Campus. Common and Food Areas generated the most recycling on the Lakeshore Campus.

Table 5 ranks the quantity of paper generated per functional area based on the waste audit results.

Table 5: Paper Generated per Functional Area

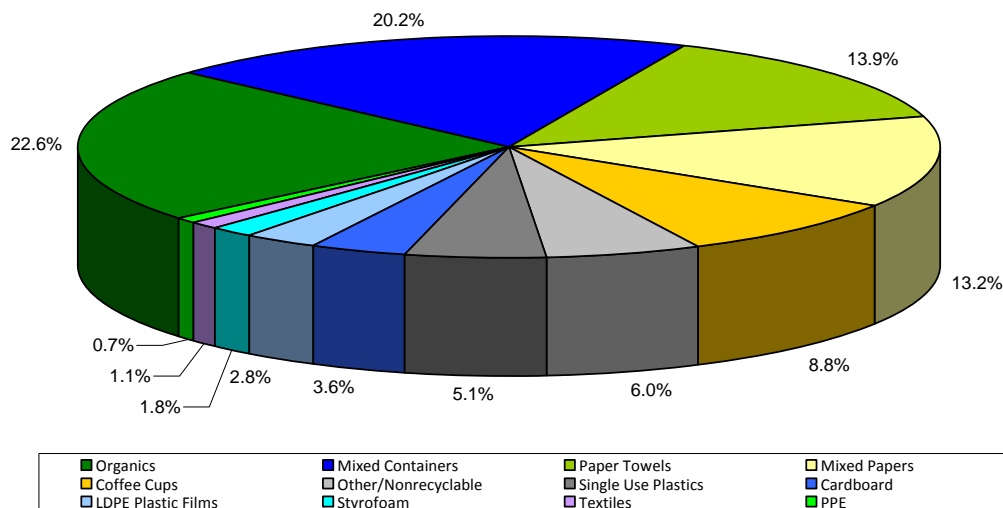
Functional Area	North Campus		Lakeshore Campus		Combined	
	kg	%	kg	%	kg	%
Common Areas	4.30	27.5%	1.52	60.8%	5.82	32.1%
Food Areas	4.67	29.9%	0.65	26.0%	5.32	29.4%
Residence Areas	6.65	42.6%	0.33	13.2%	6.98	38.5%
Total	15.62	100.0%	2.50	100.0%	18.12	100.0%

Residence and Common Areas generated the most paper with an overall combined value of 70.6%. Residence and Food Areas generated the most paper on the North Campus. Common and Food Areas generated the most paper on the Lakeshore Campus.

3.2 Garbage Composition

The total weight of garbage collected and sorted for the audit was approximately 134.24 kg. Figure 1 summarizes the overall combined garbage composition from the waste audit.

Figure 1: Overall Garbage Composition



Refer to Appendix A for a photo summary of typical materials found in the garbage samples. Summary tables for each campus per waste generation functional area, are included in Appendix B. Table 6 summarizes the largest primary categories (i.e. >5%) of waste materials per functional area based on the total amount of garbage sorted for the waste audit:

Table 6: Primary Material Categories per Functional Area in Garbage Stream

Functional Area	Percent of Sample (By Weight)	Organics	Mixed Containers	Paper Towels	Mixed Papers	Coffee Cups	Non-recyclable	Single Use Plastics
Common Areas	26.8%	24.2%	14.1%	16.4%	11.5%	10.4%	6.0%	9.1%
Food Areas	35.3%	22.3%	19.2%	13.3%	14.4%	11.0%		
Residence Areas	38.0%	21.8%	25.4%	12.5%	13.3%	5.7%	7.1%	
Total	100.0%	22.6%	20.2%	13.9%	13.2%	8.8%	6.0%	5.1%

Note: Shaded values < 5%

Organic food wastes were found in high quantities in all areas on both campuses of the College that were audited. Based on the waste audit results, it was estimated that approximately 22.6% (or 108 tonnes) of solid waste disposed to landfill consisted of organic materials (i.e. food wastes). An organics program is implemented in some areas on campus. Organics are not a mandatory recyclable material according to O.Reg.103/94. However, according to Ontario’s Food and Organic Waste Policy Statement, it is proposed that ICI Sectors will have to reduce and/or recover food and organic wastes between 50%-70% by 2025.

High quantities of mixed containers and mixed papers were found in the garbage stream from most areas of the campuses. Based on the waste audit results, it was estimated that approximately 20.2% (or 96 tonnes) of solid waste disposed to landfill consisted of mixed containers (aluminum cans, glass jars, plastic bottles, tetra packs, milk cartons, etc). Additionally, it was estimated that approximately 13.2% (or 63 tonnes) of solid waste disposed to landfill consisted of mixed papers (fine papers, newsprint, boxboard, etc). Humber College has implemented recycling programs for mixed containers and mixed papers. Results suggest that better collection systems, improved labels, program promotion and/or improved student/employee/cleaner education may be required to capture more of these materials. Fine papers, newsprint, aluminum cans, steel cans and glass beverage containers are mandatory recyclable materials per O.Reg.103/94 for educational institutions.

Paper towels were found in high quantities in all areas that were audited. Based on the waste audit results, it was estimated that approximately 13.9% (or 66 tonnes) of solid waste disposed to landfill consisted of paper towels. Humber College may wish to investigate the feasibility of adding a paper towels 3Rs program to divert this material from landfill. Paper towels are not a mandatory recyclable material according to O.Reg.103/94 for educational institutions.

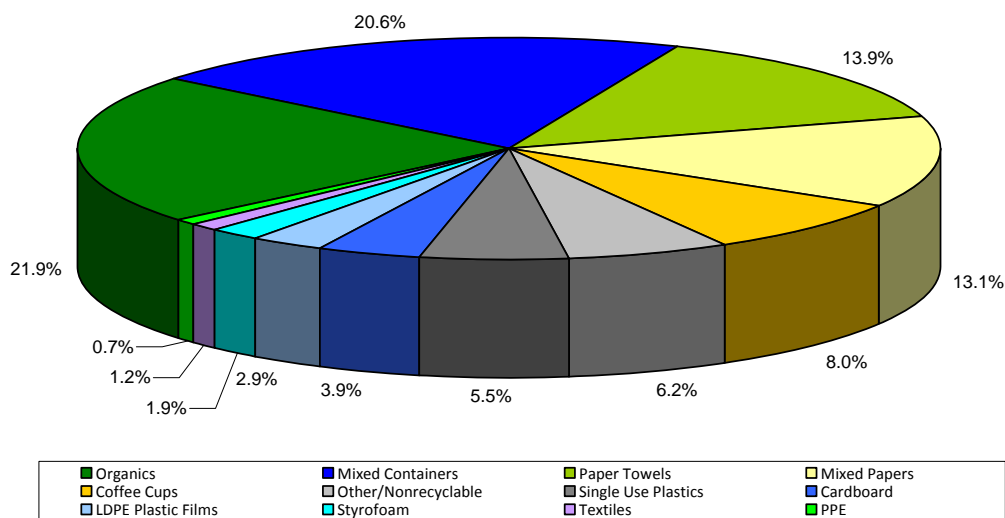
3.3 Garbage Composition per Audit Location

The garbage composition determined for each campus based on 24-hour sample results is presented below.

3.3.1 North Campus

The total weight of garbage collected and sorted for the North Campus audit was approximately 124.15 kg. Figure 2 summarizes the overall garbage composition determined at North Campus.

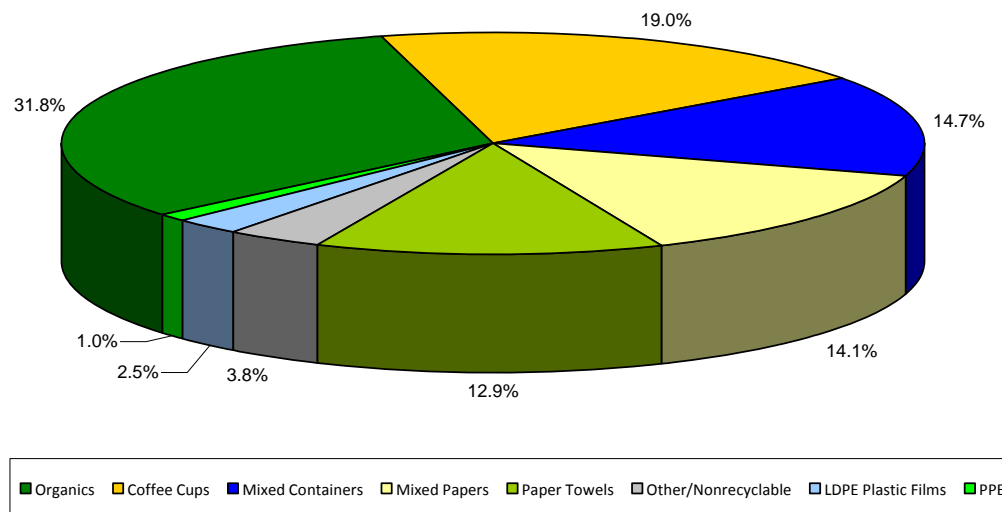
Figure 2: North Campus Garbage Composition



3.3.2 Lakeshore Campus

The total weight of garbage collected and sorted for the Lakeshore Campus audit was approximately 10.09 kg. Figure 3 summarizes the overall garbage composition determined at Lakeshore Campus.

Figure 3: Lakeshore Campus Garbage Composition



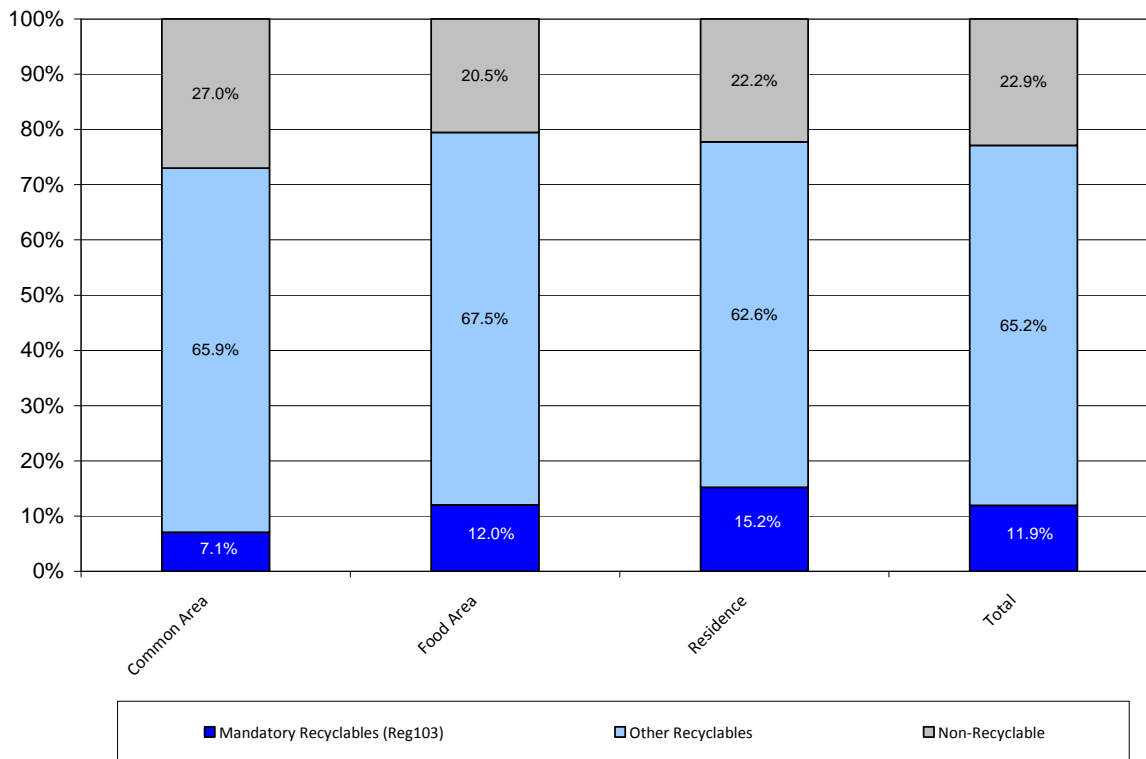
3.4 Percentage of Recyclables in Garbage

O.Reg. 103/94 requires that 'educational institutions' source separate the following materials (at a minimum):

- Aluminum food or beverage cans (including cans made primarily of aluminum);
- Cardboard (corrugated);
- Fine paper;
- Glass bottles and jars for food or beverages;
- Newsprint; and
- Steel food or beverage cans (including cans made primarily of steel).

Figure 4 summarizes the quantity of these 'mandatory recyclable' materials found in the waste audit garbage samples compared to 'other recyclable' materials (i.e. organics, paper towels, etc) and 'non-recyclable' materials.

Figure 4: Percent Recyclables in Overall Combined Garbage Stream

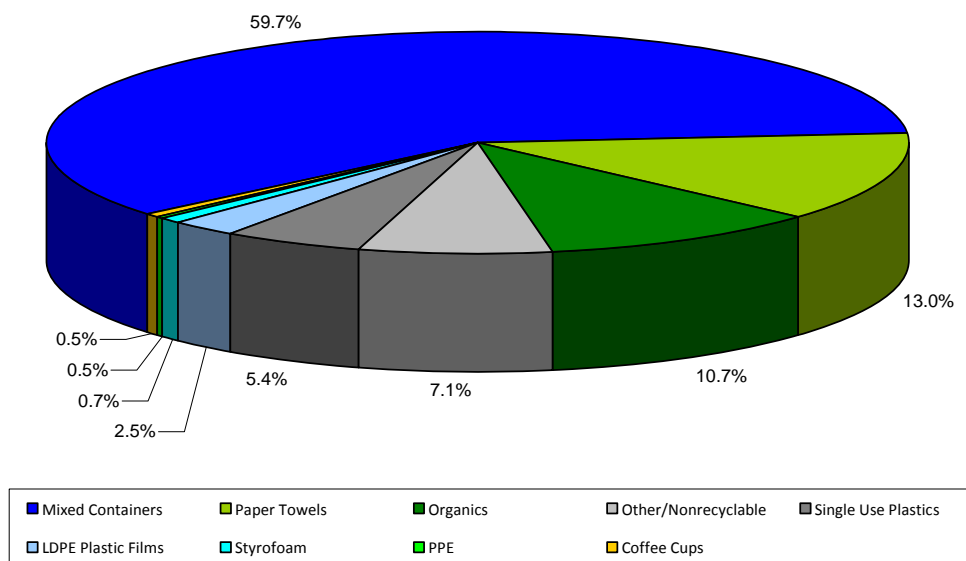


The data suggests that Humber College has a 'mandatory' recyclable content of 11.9% in the combined garbage of the College. The main 'mandatory' recyclable materials were fine paper and cardboard. 'Other Recyclables' represented 65.2% of the sample and consisted mainly of organics and paper towels. Non-recyclables represented approximately 22.9% of the sample.

3.5 Recycling Composition

The total weight of recycling materials collected and sorted for the audit was approximately 73.08 kg. Figure 5 summarizes the overall recycling stream composition determined from the waste audit.

Figure 5: Overall Recycling Composition



The overall recycling sample was determined to have a contamination rate of 24.9%. Materials contributing to the recycle stream contamination included organics, non-recyclable materials, single use plastics, Styrofoam, PPE and coffee cups. Summary tables for each campus per waste generation functional area are included in Appendix B.

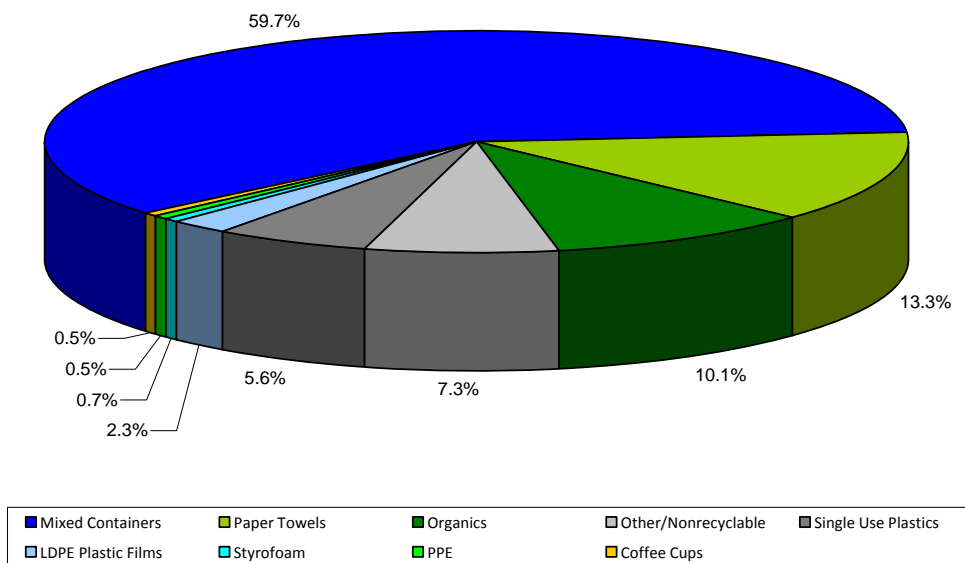
3.6 Recycling Composition per Audit Location

The recycling stream composition determined for each campus based on 24-hour sample results is presented below.

3.6.1 North Campus

The total weight of recycling materials collected and sorted for the North Campus audit was approximately 70.10 kg. Figure 6 summarizes the overall recycling composition determined at North Campus.

Figure 6: North Campus Recycling Composition

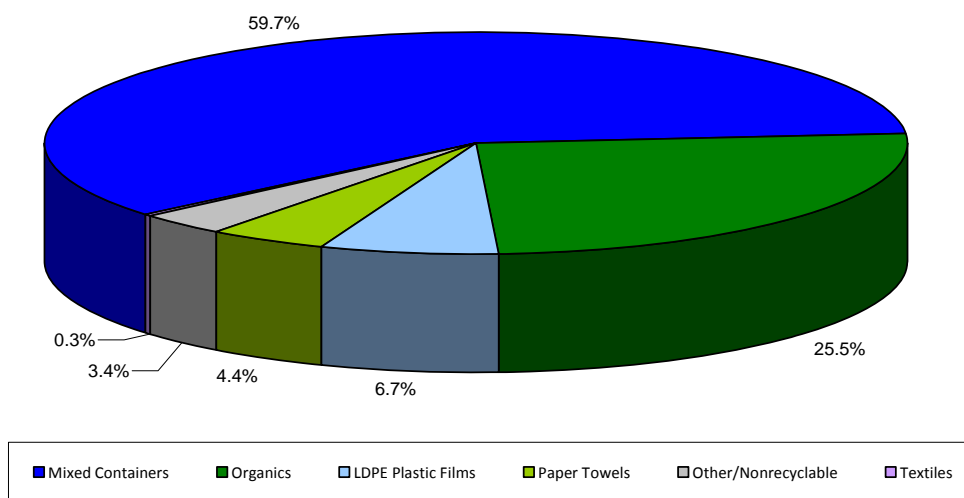


The North Campus recycling sample was determined to have a contamination rate of 24.7%. Materials contributing to the North Campus recycle stream contamination included organics, non-recyclables, single use plastics, Styrofoam, PPE and coffee cups.

3.6.2 Lakeshore Campus

The total weight of recycling materials collected and sorted for the Lakeshore Campus audit was approximately 2.98 kg. Figure 7 summarizes the overall recycling material composition determined at Lakeshore Campus.

Figure 7: Lakeshore Campus Recycling Composition

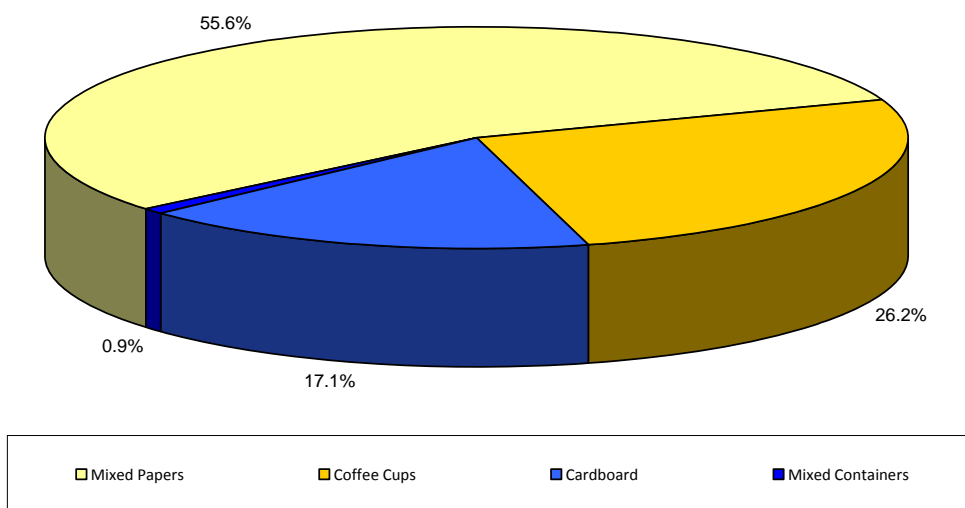


The Lakeshore Campus recycling sample was determined to have a contamination rate of 29.2%. Materials contributing to the Lakeshore Campus recycle stream contamination included organics, non-recyclables and textiles.

3.7 Paper Composition

The total weight of paper materials collected and sorted for the audit was approximately 18.12 kg. Figure 8 summarizes the overall paper stream composition determined from the waste audit.

Figure 8: Overall Paper Composition



The overall paper sample was determined to have a contamination rate of 27.3%. Materials contributing to the paper stream contamination included coffee cups and mixed containers. Summary tables for each campus per waste generation functional area are included in Appendix B.

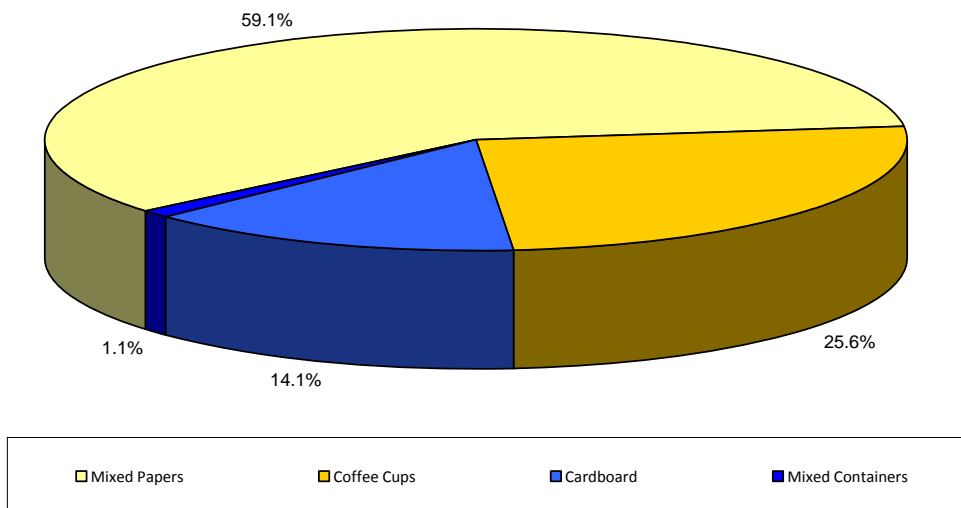
3.8 Paper Composition per Audit Location

The paper stream composition determined for each campus based on 24-hour sample results is presented below.

3.8.1 North Campus

The total weight of paper materials collected and sorted for the North Campus audit was approximately 15.62 kg. Figure 9 summarizes the overall paper composition determined at North Campus.

Figure 9: North Campus Paper Composition

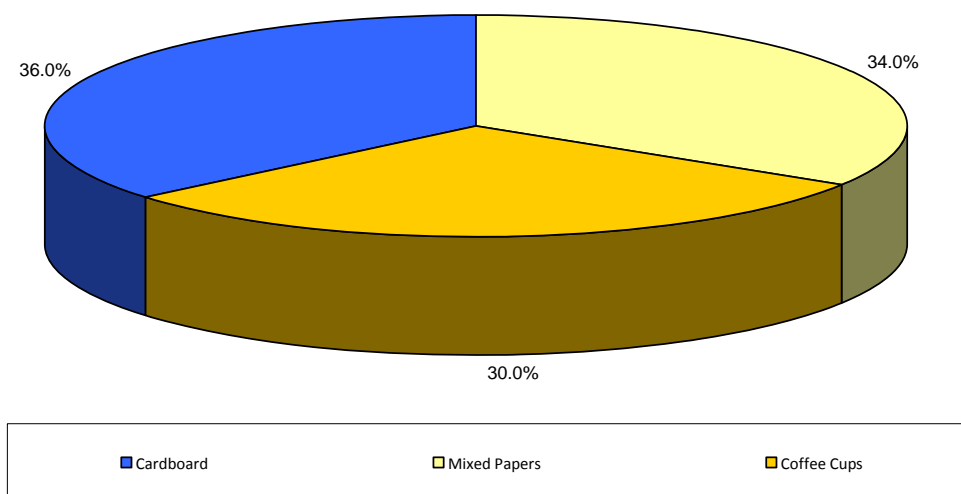


The North Campus paper sample was determined to have a contamination rate of 26.8%. Materials contributing to the North Campus paper stream contamination included coffee cups and mixed containers.

3.8.2 Lakeshore Campus

The total weight of paper materials collected and sorted for the Lakeshore Campus audit was approximately 2.50 kg. Figure 10 summarizes the overall paper material composition determined at Lakeshore Campus.

Figure 10: Lakeshore Campus Paper Composition



The Lakeshore Campus paper sample was determined to have a contamination rate of 30.0%. Materials contributing to the Lakeshore Campus paper stream contamination included coffee cups.

4 Diversion Programs & Waste Systems

4.1 Waste Diversion Programs

Waste diversion programs have been implemented at Humber College to reduce/reuse/recycle/compost a wide range of materials as described below.

Cardboard: Cardboard recycling is provided across campus. Cardboard boxes are flattened and placed in dedicated bins. Compactor/Roll-off bins are used at North Campus and Front End bins are located at Lakeshore Campus. Cardboard bins are serviced by Canada Fibres as required.

Mixed Containers: Mixed containers include assorted plastics food and beverage containers (PET, HDPE, LDPE, PP, and PS), aluminum and metal cans, glass food and beverage containers, gable top containers and aseptic containers (i.e. tetra paks, etc). Additional items collected in the mixed container stream includes LDPE (#4) plastic films and coffee cups. Mixed containers are collected throughout campus in dedicated recycle depots, primarily concentrated in high waste generating areas. Collected materials are disposed into compactor/roll-off or front end bins. Bins are serviced by Canada Fibres as required.

Mixed Papers: Mixed papers include a range of items such items as (but not limited to) newspapers, fine papers, envelopes, magazines, brochures, boxboard, packing paper, shipping/receiving supplies, paper bags and other clean food paper products. Mixed papers are collected throughout campus in dedicated recycle depots, primarily concentrated in high waste generating areas. Collected materials are disposed into dedicated bins. Bins are serviced by Canada Fibres as required.

Confidential Papers: Confidential papers are collected mainly in office/administrative areas in secure consoles or totes. All shredded materials were recycled via Blue Pencil.

Organics: Organic based food waste is collected on both campuses in pre- and post-consumer areas for composting. Bins are serviced by Canada Fibres as required.

Scrap Metals: Recyclable ferrous metals are collected by Humber College staff. Scrap metal recycling service is provided by Canada Fibres or Recycler Canada as required.

Scrap Woods/Pallets: Scrap woods are collected by Humber College staff. Scrap woods recycling service is provided by Canada Fibres as required.

Electronics Wastes: Electronic wastes are collected across campus and stored in dedicated locations. Service was provided as required.

Bulbs & Ballasts: Fluorescent bulbs and ballasts are collected across campus and stored in dedicated totes. Service is provided by Relamping as required.

Batteries: Various batteries are collected in small dedicated containers across campus. Collected batteries are stored in dedicated totes. Service is provided by Raw Materials Company Inc as required.

Printer Toner Cartridges: Humber College returns all empty toner bottles and printer toner cartridges to suppliers for recycling, reuse and/or energy-from-waste as required.

Oil & Grease: Oil & grease is collected from food service areas across campus, and stored in dedicated containers. Service is provided by Rothsay as required.

Used Furniture: Used furniture is collected from all areas across campus for recycling, donation and/or energy-from-waste. Service is provided by CSR as required.

Yard Wastes: Yard Wastes are collected from all areas across campus for diversion Canada Fibres as required.

Construction & Demolition: CD materials are collected across campus for recycling. Service is provided by CSR and Canada Fibres as required.

Carpet: Carpet materials are collected across campus for recycling. Service is provided by Viking Recycling as required.

Waste Reduction Initiatives: Various waste reduction initiatives have been implemented on-campus including water bottle refilling stations, a double sided printing policy, a refillable coffee mug program and other reusable container programs.

Table 7 summarizes the estimated annual amount of waste materials diverted from landfills due to waste diversion programs implemented at Humber College. The total amount of waste material diverted from landfill was approximately 640.30 metric tonnes. Evidence of annual quantity data obtained from Humber College and/or service providers is provided in Appendix B. Waste diversion programs implemented on campus exceed the minimum requirements of O.Reg.103/94 for educational institutions.

4.2 Waste Disposal Systems

Regular solid non-hazardous waste is collected across campus by Humber College staff and placed in either front-end bins or compactors located at designated waste handling areas. The total quantity of solid non-hazardous waste disposed to landfill was estimated to be approximately 477.78 metric tonnes, as summarized in Table 7.

Table 7: Waste Disposal & Diversion Summary

Waste Material	2019			2022			
	North Campus	Lakeshore Campus	Total	North Campus	Lakeshore Campus	Total	Percent
Waste/Garbage	252.22	947.78	252.22	305.51	164.41	469.92	98.4%
Airfilters ⁽¹⁾	0.18	0.68	0.18	0.00	0.30	0.30	0.1%
Printer Toners ⁽¹⁾	0.0	0.0	0.0	0.00	0.00	0.00	0.0%
Used Furniture ⁽¹⁾	0.82	3.02	0.82	6.90	0.66	7.56	1.6%
Disposal Total	253.21	951.48	253.21	312.41	165.37	477.78	100.0%
3R Programs							
Organics - Food Wastes	410.99	134.47	545.46	71.63	12.48	84.11	13.1%
Mixed Papers (office, news, etc)	267.90	93.89	361.79	18.88	1.68	20.56	3.2%
Comingled - Front End / Compactor	46.04	35.53	81.57	70.83	31.87	102.70	16.0%
Confidential Papers	123.23	45.58	168.81	39.91	54.65	94.56	14.8%
Electronic Wastes	22.70	7.36	30.06	25.24	0.00	25.24	3.9%
Used Furniture/Equipment (Recycled)	29.82	11.03	40.85	43.70	5.14	48.84	7.6%
Scrap Wood/Pallets	138.71	0.00	138.71	70.78	0.00	70.78	11.1%
Used Furniture donated for reuse	45.17	16.70	61.87	19.99	1.33	21.32	3.3%
Scrap Metals	57.15	0.00	57.15	23.39	0.00	23.39	3.7%
Cardboard	77.44	118.18	195.62	19.48	22.39	41.87	6.5%
Construction & Demolition	55.20	0.00	55.20	0.00	0.00	0.00	0.0%
Bulbs & Ballasts	0.33	0.14	0.48	0.23	0.09	0.32	0.1%
Batteries	0.21	0.15	0.36	0.12	0.00	0.12	0.0%
Printer Toners (Recycled)	0.69	0.26	0.95	0.13	0.00	0.13	0.0%
Printer Toners (Reused)	0.82	0.31	1.13	0.00	0.00	0.00	0.0%
Oil & Grease	3.32	1.14	4.46	0.71	0.58	1.29	0.2%
Carpet	3.42	1.26	4.68	2.90	0.00	2.90	0.5%
PPE & Gloves	0.00	0.00	0.00	0.10	0.00	0.10	0.0%
Yard Wastes	233.60	86.40	320.00	102.07	0.00	102.07	15.9%
3Rs Total	1516.74	552.40	2069.2	510.09	130.21	640.30	100.0%
Grand Total	2215.00	805.62	3020.6	822.50	295.58	1118.08	--
Waste Diversion Rate	68.5%	68.6%	68.5%	62.0%	44.1%	57.3%	--

Note 1: Material diverted via Energy-from-Waste.

Note 2: Not Calculated.

5 Performance Indicators

5.1 Waste Diversion Rate

Waste Diversion Rate is the percentage of waste materials that a facility diverts from landfill due to reduce, reuse and recycling (i.e. 3Rs) programs versus the total amount of waste generated (i.e. 3Rs plus disposed). According to the Ministry of the Environment, Conservation & Parks (MECP), Waste Diversion Rate is calculated as follows:

$$\text{Waste Diversion Rate} = \frac{\text{Total Waste Diverted (3Rs)}}{\text{Total Waste Generated}} * 100\%$$

Based on the total annual amount of waste generated and materials reduced, reused and recycled in 2022 the waste diversion rate was determined to be approximately 57%. If 60% of all divertible materials found in the garbage stream were successfully captured and diverted, the overall facility could achieve a waste diversion rate of approximately 77%.

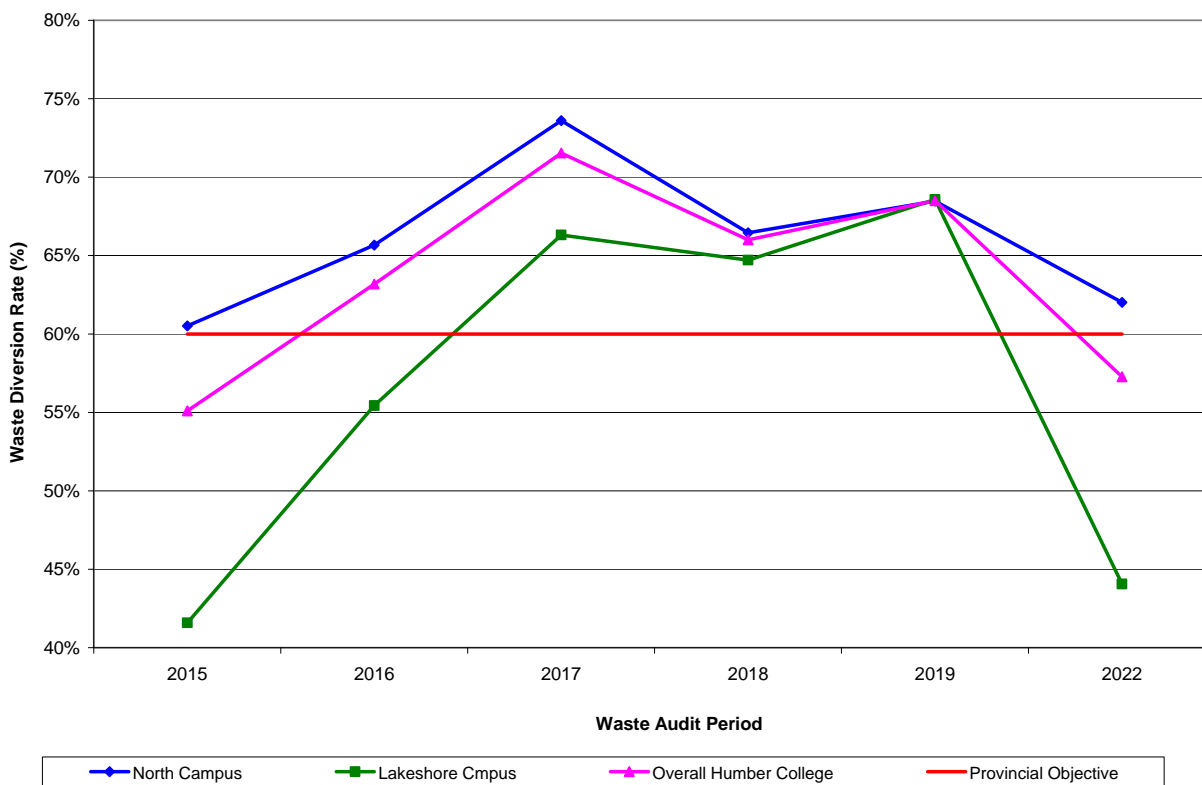
Table 8 summarizes the quantities of wastes diverted, disposed and waste diversion rates between 2015 and 2022. The MECP provincial objective is 60% waste diversion.

Table 8: Quantities of Materials Diverted & Disposed

Audit Period	Campus	Waste Disposed to Landfill	Waste Materials Diverted	Total Waste Generated	Waste Diversion Rate
		MT	MT	MT	%
2015	North	514.7	788.8	1303.5	60.5%
	Lakeshore	305.5	217.5	523.0	41.6%
	Total	820.2	1006.3	1826.5	55.1%
2016	North	506.3	968.4	1474.7	65.7%
	Lakeshore	211.0	262.4	473.4	55.4%
	Total	717.3	1230.8	1948.1	63.2%
2017	North	398.5	1110.9	1509.4	73.6%
	Lakeshore	200.7	394.9	595.6	66.3%
	Total	599.1	1505.8	2105.0	71.5%
2018	North	582.5	1153.5	1736.0	66.4%
	Lakeshore	210.8	386.6	597.4	64.7%
	Total	793.3	1540.1	2333.4	66.0%
2019	North	698.26	1516.74	2215.00	68.5%
	Lakeshore	253.21	552.40	805.62	68.6%
	Total	951.48	2069.15	3020.62	68.5%
2022	North	312.41	510.09	822.50	62.0%
	Lakeshore	165.37	130.21	295.58	44.1%
	Total	477.78	640.30	1118.08	57.3%

Figure 11 summarizes the change in waste diversion rate between 2015 and 2022.

Figure 11: Waste Diversion Rate between 2015 and 2022



Waste diversion rate does not always demonstrate how effective a site’s 3R programs are operating. This is due to the continual change of many important factors involved in waste and recyclable material generation on campus, such as number of students enrolled, floor area of buildings, etc. As student numbers change or more buildings are added to the campus, quantities of waste and recyclables change making it difficult to have a direct comparison of data between years.

5.2 Capture Rate

Capture rate is the proportion of divertible waste materials which are successfully diverted from disposal compared to the total amount of the divertible waste materials generated. According to the Recycling Council of Ontario, Capture Rate is calculated as follows:

$$\text{Capture Rate} = \frac{\text{Total Divertible Material Captured (3Rs)}}{\text{Total Divertible Material Generated}} * 100\%$$

Thus, capture rate assists in determining the effectiveness of recycling programs. Table 9 summarizes the capture rate for the main divertible materials at Humber College.

Table 9: Capture Rate Summary

Divertible Material	Annual Material Generated Metric Tonnes	Annual 3Rs Quantity Captured Metric Tonnes	Capture Rate Percent
Cardboard	62.46	45.39	72.7%
Mixed Papers	86.67	23.78	27.4%
Comingled	157.57	61.29	38.9%
Confidential Papers	82.22	82.22	100.0%
Organics	192.20	84.11	43.8%
Scrap Metals	23.39	23.39	100.0%
Scrap Wood	71.46	70.78	99.1%
Bulbs & Ballasts	0.32	0.32	100.0%
Batteries	0.12	0.12	100.0%
Printer Toners	0.13	0.13	100.0%
Oil & Grease	1.29	1.29	100.0%
Yard Wastes	68.18	68.18	100.0%
Construction & Demolition	28.87	28.87	100.0%
Used Furniture/Equipment	70.16	70.16	100.0%
Overall Facility	845.03	560.02	66.3%

Capture rates of most materials are very high ranging from approximately 70% to 100%. The only materials with capture rates less than approximately 70% were mixed papers, comingled recycling and organics. The overall capture rate of all recyclable materials on campus was determined to be 66.3%.

5.3 Year over Year Changes

Waste diversion rate and capture rate do not always demonstrate how effective a site's 3R programs are operating. This is due to the continual change of many important factors involved in waste and recyclable material generation on campus, such as number of students enrolled, floor area of buildings, etc. As student numbers change or more buildings are added to the campus, quantities of waste and recyclables change making it difficult to have a direct comparison of data between years. It is recommended that Humber College continue tracking 'Year over Year' changes in the amount of wastes disposed and/or materials recycled per standard unit. This allows direct comparison of data from year to year, thus assisting the College in gaining an understanding of the effectiveness of their waste diversion programs. For Humber College, the most applicable standard unit is Full-time equivalent students, or FTE.

5.3.1 Year-over-Year Change in Waste Generation

The 'Year-over-Year Change in Waste Generator' is the indicator of the total amount of materials generated on-site including materials diverted and disposed per FTE compared to previous data. Table 10 summarizes the change in the amount of waste materials generated between 2017 and 2022.

Table 10: Yr-over-Yr Change in Waste Generated

Period	Total Materials Generated (MT)	FTE	Annual Generated Quantity (kg/FTE)	Yr-over-Yr Change in Generated Quantity (kg)
2017	2105.0	26577	79.20	--
2018	2333.4	26784	87.12	+7.92
2019	3020.6	27146	111.27	+24.15
2022	1118.08	23962	46.66	-64.61

5.3.2 Year-over-Year Change in Diverted Quantities

The 'Year-over-Year Change in Diverted Quantities' is the indicator of the amount of materials diverted from disposal through reduce, reuse and/or recycle activities per FTE compared to previous data. A positive year-over-year change indicates waste diversion programs are improving over time. Table 11 summarizes the change in diverted quantities between 2017 and 2022.

Table 11: Yr-over-Yr Change in Waste Diversion Quantities

Period	Total Materials Diverted (MT)	FTE	Annual Diverted Quantity (kg/FTE)	Yr-over-Yr Change in Diverted Quantity (kg)
2017	1505.8	26577	56.66	--
2018	1540.1	26784	57.50	+0.84
2019	2069.15	27146	76.22	+18.72
2022	640.30	23962	26.72	-49.50

5.3.3 Year-over-Year Change in Garbage Disposed

The 'Year over Year Change in Garbage Disposed' is the indicator of the amount of reduction in waste materials disposed to landfill due to waste diversion activities on campus. A reduction in the year over year value will indicate the college is continually reducing wastes disposed to landfill. Table 12 summarizes the change in disposed quantities between 2017 and 2022.

Table 12: Yr-over-Yr Change in Waste Disposed Quantities

Period	Total Materials Disposed (MT)	FTE	Annual Disposed Quantity (kg/FTE)	Yr-over-Yr Change in Disposed Quantity (kg)
2017	599.1	26577	22.54	--
2018	793.3	26784	29.62	+7.08
2019	951.48	27146	35.05	+5.43
2022	477.78	23962	19.94	-15.11

6 Waste Audit Summary & Waste Reduction Work Plan

Refer to Appendix C and Appendix D for the Waste Audit Summary and the Waste Reduction Work Plan respectively. The last page of each set of forms in the appendices need to be signed by an authorized person at the College.

According to O.Reg. 102/94, the Waste Reduction Work Plan (Appendix D) or a summary of the plan must be posted at the College in a place where staff/students can review it. If a summary is posted, the entire Work Plan should also be made available for review by any staff/student upon request.

7 Conclusions & Recommendations

Based on the results of the solid non-hazardous waste audit conducted for Humber College, the following conclusions can be made. Recommendations presented below are intended to assist Humber College in maximizing their waste diversion potential.

- In 2022, it was estimated that Humber College disposed of approximately 477.78 tonnes of solid waste in landfills. Approximately 640.30 tonnes of waste materials were diverted through existing waste diversion programs. This represents a waste diversion rate of approximately 57.3%. The provincial objective is 60% waste diversion.
- Humber College maintains waste diversion programs for cardboard, mixed papers, comingled recycling, confidential papers, organics, scrap metals, scrap woods/pallets, electronics, bulbs, batteries, printer toners, used furniture, oil and grease, yard wastes, construction & demolition and carpet, as well as waste reduction programs including water bottle refill stations, double sided printing, refillable coffee mug program and other reusable container programs. These programs exceed the minimum requirements of O.Reg.103/94 for educational institutions.
- Based on the waste audit results, North Campus generated more garbage, recycling and paper materials than Lakeshore Campus, representing approximately 93% of the overall waste audit sample. According to Humber personnel, the sample should be divided 2/3 North campus and 1/3 lakeshore campus. Future audits should attempt to collect a larger Lakeshore Campus sample.
- Residence and Food Areas generated the most garbage. Residence Areas generated 38.0% of the garbage sample, and Food Areas generated 35.3% of the sample. Common areas generated the remaining 26.8% of the garbage stream.
- Residence and Food Areas generated the most recycling with an overall combined value of 72.1%. Residence and Food Areas generated the most recycling on the North Campus. Common and Food Areas generated the most recycling on the Lakeshore Campus.
- Residence and Common Areas generated the most paper with an overall combined value of 70.6%. Residence and Food Areas generated the most paper on the North Campus. Common and Food Areas generated the most paper on the Lakeshore Campus.
- Humber College has a 'mandatory' recyclable material content of 11.9% in the combined garbage of the College. The main 'mandatory' recyclable materials were fine paper and

cardboard. 'Other Recyclables' represented 65.2% of the sample and consisted mainly of organics and paper towels. Non-recyclables represented approximately 22.9% of the sample.

- Capture rates of most materials are very high ranging from approximately 70% to 100%. The only materials with capture rates less than approximately 70% were mixed papers, comingled recycling and organics. The overall capture rate of all recyclable materials on campus was determined to be 66.3%.
- Based on the waste audit results, it was estimated that approximately 22.6% (or 108 tonnes) of solid waste disposed to landfill consisted of organic materials (i.e. food wastes). An organics program is implemented in some areas on campus. Results suggest that Humber College may benefit from expanding the existing organics program in order to capture more organic materials. Organics are not a mandatory recyclable material according to O.Reg.103/94. However, according to Ontario's Food and Organic Waste Policy Statement, it is proposed that ICI Sectors will have to reduce and/or recover food and organic wastes between 50%-70% by 2025.
- High quantities of mixed containers and mixed papers were found in the garbage stream from most areas of the campuses. Based on the waste audit results, it was estimated that approximately 20.2% (or 96 tonnes) of solid waste disposed to landfill consisted of mixed containers. It was also estimated that approximately 13.2% (or 63 tonnes) of solid waste disposed to landfill consisted of mixed papers. Humber College has implemented recycling programs for mixed containers and mixed papers. Results suggest that better collection systems, improved labels, program promotion and/or improved student/employee/cleaner education may be required to capture more of these materials. Fine papers, newsprint, aluminum cans, steel cans and glass beverage containers are mandatory recyclable materials per O.Reg.103/94 for educational institutions.
- Paper towels were found in high quantities in all areas that were audited. Based on the waste audit results, it was estimated that approximately 13.9% (or 66 tonnes) of solid waste disposed to landfill consisted of paper towels. Humber College may wish to investigate the feasibility of adding a paper towels 3Rs program to divert this material from landfill. Paper towels are not a mandatory recyclable material according to O.Reg.103/94 for educational institutions.
- The total weight of recycling materials collected and sorted for the audit was approximately 73.08 kg. The overall recycling sample was determined to have a contamination rate of 24.9%, down from 31.2% in 2019. Materials contributing to the recycle stream contamination included organics, non-recyclable materials, single use plastics, Styrofoam, PPE and coffee cups.
- The total weight of paper materials collected and sorted for the audit was approximately 18.12 kg. The overall recycling sample was determined to have a contamination rate of 27.3%. Materials contributing to the paper stream contamination included coffee cups and mixed containers.
- It is recommended that Humber College conduct studies to add reduction weights to the College's waste diversion rate. For example, waste reduction credits can be calculated for a double-sided printing policy, refillable mug programs and/or refillable water bottle stations.

- Continue to make use of multi-compartment containers (i.e. recycling depots) for waste collection and recycling as much as possible. Remove all solitary waste bins on campus. We recommend only having waste bins that are attached to or close to multi-compartment recycling containers.
- It is recommended that Humber continually review signage on all garbage and recycling bins to assist students/staff in sorting wastes easily and correctly. Humber's bin signage includes pictograms, and they are easily visible and instructive. Signs are a very effective method of increasing participation, reducing contamination and increasing capture rate.
- Humber College's Environmental Policy is clearly visible in common areas throughout campus, and has committed to their environmental stewardship in newsletters, brochures, annual reports and contracts. Regular newsletters promoting the school's waste reduction programs, goals and concerns assists with increased student/staff cooperation.
- Continue to increase awareness of current recycling programs through staff and student education programs. Such programs can include brief training programs as well as placement of posters in strategic locations around campus, and posting information regarding campus goals and recycling, reuse, and reduction rates at the school. Humber's Sustainability Office is centrally located they participate in orientation and other student events.
- It is important that all staff and students at Humber College be made aware of all available recycling programs. Humber College staff should provide easy access to contact information for questions and/or help regarding the various recycling programs. The recycling programs should have as much consistency as possible across campus.
- Support and encourage the purchase and use of environmentally friendly, reusable or recyclable materials and packaging, and/or those that contain recycled content.
- In order to be successful, the waste diversion program must have the full support of Humber College's management team.
- According to O.Reg. 102/94, the Waste Reduction Work Plan (Appendix D) or a summary of the plan must be posted at the facility in a place where it can be viewed. If a summary of the work plan is posted, the full Work Plan must be made available for review upon request by any of the college's staff or students.
- The waste audit report and waste reduction work plan must be retained on file for a minimum of five years.
- A waste audit report and waste reduction work plan must be conducted and updated annually.

Appendix A

Supporting Documentation

HC by Age Group

Breakdown by Age Group

Headcount Full-Time Fall		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Humber College	0 - 17	380	411	410	438	469	574	480	492	454	410
	18 - 19	5,983	6,530	6,641	7,013	7,224	7,547	7,501	7,345	6,595	5,676
	20 - 24	11,654	11,859	11,649	11,960	12,130	12,641	12,790	12,753	11,622	11,017
	25 - 29	2,842	2,936	2,997	3,166	3,054	3,463	3,560	3,763	3,685	3,880
	30 - 34	944	954	911	957	914	1,069	1,089	1,190	1,232	1,314
	35 - 39	547	492	504	484	464	587	613	689	727	739
	40 - 44	387	340	333	296	310	319	336	446	423	481
	45 - 49	222	211	198	205	174	211	215	232	257	254
	50 - 54	100	122	108	118	77	90	96	106	108	112
	55 - 59	45	51	48	44	48	45	47	52	56	49
	60+	29	32	24	28	35	31	22	28	29	30
	Humber College	23,133	23,938	23,823	24,709	24,899	26,577	26,749	27,096	25,188	23,962

**Environmental Protection Act
Loi sur la protection de l'environnement**

Partial copy of
O.Reg.102/94

ONTARIO REGULATION 102/94

WASTE AUDITS AND WASTE REDUCTION WORK PLANS

Consolidation Period: From March 3, 1994 to the [e-Laws currency date](#).

No amendments.

This Regulation is made in English only.

**PART I
GENERAL**

1. In this Regulation,

“waste” means municipal waste as defined in Regulation 347 of the Revised Regulations of Ontario, 1990;

“waste audit” means a study relating to waste;

“waste reduction work plan” means a plan to reduce, reuse and recycle waste. O. Reg. 102/94, s. 1.

2. A waste audit required under this Regulation shall address,

(a) the amount, nature and composition of the waste;

(b) the manner by which the waste gets produced, including management decisions and policies that relate to the production of waste; and

(c) the way in which the waste is managed. O. Reg. 102/94, s. 2.

3. (1) A waste reduction work plan required under this Regulation shall include, to the extent that is reasonable, plans to reduce, reuse and recycle waste and shall set out who will implement each part of the plan, when each part will be implemented and what the expected results are.

(2) In developing the work plan, regard shall be had to the following principles:

1. Reduction is the first objective.

2. If reduction is not possible, then reuse is the next objective.

3. If reduction and reuse are not possible, then recycling is the final objective. O. Reg. 102/94, s. 3.

4. A person who is required under this Regulation to prepare a report of a waste audit or a waste reduction work plan shall prepare it on a form provided by the Ministry or in the same format as such a form. O. Reg. 102/94, s. 4.

5. (1) A person who is required under this Regulation to prepare a report of a waste audit or a waste reduction work plan shall retain a copy of the report or plan for at least five years after it was prepared.

(2) A person who is required under this Regulation to prepare a report of a waste audit or a waste reduction work plan shall submit to the Director, on request, the required report or plan, within seven days of the Director requesting them. O. Reg. 102/94, s. 5.

6. (1) A person who becomes subject to an obligation under this Regulation to prepare a report of a waste audit or a waste reduction work plan shall do so within six months of becoming subject to the obligation.

(2) This section does not apply with respect to updated reports or plans.

(3) This section does not apply with respect to obligations of a builder under Part IV or a demolisher under Part V. O. Reg. 102/94, s. 6.

7. (1) A new owner or operator to whom this Regulation applies is not required to conduct a new waste audit or prepare a new waste reduction work plan if an audit or work plan was conducted or prepared by a previous owner or operator and the new owner or operator updates the audit and work plan as required under this Regulation.

(2) This section does not apply with respect to a builder under Part IV or a demolisher under Part V. O. Reg. 102/94, s. 7.

8. (1) A person who has an obligation to conduct a waste audit and prepare a report under Part II, III, VI, VII, VIII, IX, X or XI in respect of more than one retail shopping establishment, retail shopping complex, building, restaurant, hotel or motel, hospital, location or campus of an educational institution, or site of a manufacturing establishment, may conduct a single

50. The waste reduction work plan shall include measures for communicating the plan to the operator’s employees who work at the hospital and, as a minimum, those measures shall require,

- (a) that the plan or a summary be posted in places where most employees will see it; and
- (b) if a summary is posted, that any employee who requests to look at the plan be allowed to do so. O. Reg. 102/94, s. 50.

PART X
EDUCATIONAL INSTITUTIONS

51. (1) This Part applies to the operator of an educational institution in respect of a location or campus of the institution if, at the location or campus, at any time during the calendar year, more than 350 persons are enrolled.

(2) This Part continues to apply in respect of a location or campus for the two calendar years following the last year in which more than 350 persons were enrolled at the location or campus. O. Reg. 102/94, s. 51.

52. (1) The operator shall conduct a waste audit covering the waste generated by the operation of the institution at the location or campus. The audit shall also address the extent to which materials or products used consist of recycled or reused materials or products.

(2) After conducting the waste audit, the operator shall prepare a written report of the audit.

(3) In every year following the initial waste audit, the operator shall update the audit and prepare an updated written report. O. Reg. 102/94, s. 52.

53. (1) The operator shall prepare a written waste reduction work plan, based on the waste audit, to reduce, reuse and recycle waste generated by the operation of the institution at the location or campus.

(2) In every year following the preparation of the initial waste reduction work plan, the operator shall prepare an updated written plan. O. Reg. 102/94, s. 53.

54. The operator shall implement the waste reduction work plan as updated. O. Reg. 102/94, s. 54.

55. The waste reduction work plan shall include measures for communicating the plan to the operator’s employees who work at the location or campus and, as a minimum, those measures shall require,

- (a) that the plan or a summary be posted in places where most employees will see it; and
- (b) if a summary is posted, that any employee who requests to look at the plan be allowed to do so. O. Reg. 102/94, s. 55.

PART XI
LARGE MANUFACTURING ESTABLISHMENTS

56. (1) This Part applies to the owner or operator of a site that is a manufacturing establishment.

(2) This Part does not apply to an owner of a site in a particular calendar year if,

- (a) during the two preceding calendar years there was no calendar month in which the hours worked by the persons employed at the site exceeded 16,000 hours; and
- (b) the owner is able to demonstrate this fact, within seven days of a request from the Director, through evidence satisfactory to the Director.

(3) Copies of the records related to hours of employment maintained under section 11 of the *Employment Standards Act* shall be deemed to be sufficient evidence of hours worked at a site if the copies are certified by the owner or the owner’s representative as to the accuracy of the records.

(4) In this Part,

“owner” includes the operator of a manufacturing establishment but does not include a landlord;

“site” means one property and includes nearby properties owned or leased by the same person where passage from one property to another involves crossing, but not travelling along, a public highway. O. Reg. 102/94, s. 56.

57. (1) The owner shall conduct a waste audit covering the waste generated by the operation of the establishment at the site. The audit shall also address the extent to which materials or products used or sold consist of recycled or reused materials or products.

(2) After conducting the waste audit, the owner shall prepare a written report of the audit.

(3) In every year following the initial waste audit, the owner shall update the audit and prepare an updated written report. O. Reg. 102/94, s. 57.

58. (1) The owner shall prepare a written waste reduction work plan, based on the waste audit, to reduce, reuse and recycle waste generated by the operation of the establishment.

(2) In every year following the preparation of the initial waste reduction work plan, the owner shall prepare an updated written plan. O. Reg. 102/94, s. 58.

**Environmental Protection Act
Loi sur la protection de l'environnement**

Partial copy of
O.Reg.103/94

ONTARIO REGULATION 103/94

**INDUSTRIAL, COMMERCIAL AND INSTITUTIONAL SOURCE SEPARATION
PROGRAMS**

Consolidation Period: From March 3, 1994 to the [e-Laws currency date](#).

No amendments.

This Regulation is made in English only.

SOURCE SEPARATION PROGRAMS

1. In this Regulation,

“Northern Ontario” means the territorial districts of Algoma, Cochrane, Kenora, Manitoulin, Nipissing, Parry Sound, Rainy River, Sudbury, Thunder Bay and Timiskaming and The Regional Municipality of Sudbury;

“source separation program” means a program to facilitate the source separation of waste for reuse or recycling. O. Reg. 103/94, s. 1.

2. (1) A source separation program required under this Regulation must include,

- (a) the provision of facilities for the collection, handling and storage of source separated wastes described in subsection (2) adequate for the quantities of anticipated wastes;
- (b) measures to ensure that the source separated wastes that are collected are removed;
- (c) the provision of information to users and potential users of the program,
 - (i) describing the performance of the program,
 - (ii) encouraging effective source separation of waste and full use of the program;
- (d) reasonable efforts to ensure that full use is made of the program and that the separated waste is reused or recycled.

(2) The source separated waste referred to in clause (1) (a) is waste that has been source separated from other kinds of waste and that consists solely of waste from one or more of the following categories:

- 1. The categories of waste set out in the part of the Schedule applicable to the person required to implement the source separation program.
- 2. The categories of waste set out in Schedule 1, 2 or 3 of Ontario Regulation 101/94 that the source separation program accepts.

(3) A source separation program required under this Regulation must provide for all the categories of waste set out in the part of the Schedule applicable to the person required to implement the program except for categories of waste that cannot be reasonably anticipated. O. Reg. 103/94, s. 2.

3. Source separation programs required by this Regulation are exempt from sections 27, 40 and 41 of the Act. O. Reg. 103/94, s. 3.

4. (1) A source separation program that is not required by this Regulation is exempt from sections 27, 40 and 41 of the Act if,

- (a) the program is restricted to waste generated at a single site;
- (b) the program only accepts waste that has been source separated from other kinds of waste and that consists solely of waste from one or more of the categories of waste set out in Schedule 1, 2 or 3 of Ontario Regulation 101/94;
- (c) the program includes everything set out in subsection 2 (1).

(2) For the purposes of clause (1) (c), the reference to source separated waste in clause 2 (1) (a) shall be deemed to be a reference to the waste described in clause (1) (b). O. Reg. 103/94, s. 4.

RETAIL SHOPPING ESTABLISHMENTS

5. (1) This section applies to the owner of an establishment that sells goods or services at retail to persons who come to the establishment if,

- (a) the establishment occupies premises with a floor area of at least 10,000 square metres; or
- (b) the establishment occupies premises in a complex in respect of which section 6 applies and the owner of the establishment is solely responsible for the establishment's waste management.

(2) The owner shall implement a source separation program for the wastes generated by the establishment or shall ensure that such a program is implemented.

(3) This section applies only in respect of an establishment located within a local municipality that has a population of at least 5,000.

(4) This section takes effect with respect to an establishment in Northern Ontario on July 1, 1996. O. Reg. 103/94, s. 5.

RETAIL SHOPPING COMPLEXES

6. (1) This section applies to the owner of a complex that contains premises occupied by establishments that sell goods or services at retail to persons who come to the establishments if the total floor area of such premises is at least 10,000 square metres.

(2) The owner shall implement a source separation program for the wastes generated at the complex or shall ensure that such a program is implemented.

(3) The source separation program need not provide for the waste generated in the operation of an establishment in the complex if section 5 applies to the owner of the establishment.

(4) This section applies only in respect of a complex located in a local municipality that has a population of at least 5,000.

(5) This section takes effect with respect to a complex in Northern Ontario on July 1, 1996. O. Reg. 103/94, s. 6.

- (c) a building in respect of which section 9 applies;
- (d) a hotel or motel in respect of which section 12 applies;
- (e) a hospital in respect of which section 13 applies;
- (f) a location or campus of an educational institution in respect of which section 14 applies.

- (4) This section does not apply to an owner of a restaurant in a particular calendar year if,
- (a) during the two preceding calendar years there was no year in which the gross sales for all restaurants operated by the owner in Ontario equalled or exceeded \$3,000,000; and
 - (b) the owner is able to demonstrate this fact, within seven days of a request from the Director, through evidence satisfactory to the Director.

(5) Copies of the records related to purchase and sale maintained under subsection 5 (1) of Regulation 1013 of the Revised Regulations of Ontario, 1990 shall be deemed to be sufficient evidence of the gross sales of a restaurant if the copies are certified by the owner or the owner's representative as to the accuracy of the records.

(6) This section applies only in respect of a restaurant located within a local municipality that has a population of at least 5,000.

(7) This section takes effect with respect to a restaurant in Northern Ontario on July 1, 1996. O. Reg. 103/94, s. 11.

HOTELS AND MOTELS

12. (1) The owner of a hotel or motel that has more than seventy-five units shall implement a source separation program for the wastes generated by the operation of the hotel or motel or shall ensure that such a program is implemented.

(2) This section applies only in respect of a hotel or motel located within a local municipality that has a population of at least 5,000.

(3) This section takes effect with respect to a hotel or motel in Northern Ontario on July 1, 1996. O. Reg. 103/94, s. 12.

HOSPITALS

13. (1) The operator of a public hospital classified as a class A, B or F hospital in Regulation 964 of the Revised Regulations of Ontario, 1990 shall implement a source separation program for the wastes generated by the operation of the hospital or shall ensure that such a program is implemented.

(2) This section applies only in respect of a public hospital located within a local municipality that has a population of at least 5,000.

(3) This section takes effect with respect to a public hospital in Northern Ontario on July 1, 1996. O.Reg. 103/94, s. 13.

EDUCATIONAL INSTITUTIONS

14. (1) This section applies to the operator of an educational institution in respect of a location or campus of the institution if, at the location or campus, at any time during the

calendar year, more than 350 persons are enrolled.

(2) The operator shall implement a source separation program for the waste generated by the operation of the institution at the location or campus or shall ensure that such a program is implemented.

(3) This section continues to apply in respect of a location or campus for the two calendar years following the last year in which more than 350 persons were enrolled at the location or campus.

(4) This section applies only in respect of a location or campus located within a local municipality that has a population of at least 5,000.

(5) This section takes effect with respect to a location or campus in Northern Ontario on July 1, 1996. O. Reg. 103/94, s. 14.

LARGE MANUFACTURING ESTABLISHMENTS

~~15. (1) This section applies to the owner or operator of a site that is a manufacturing establishment.~~

~~(2) The owner shall implement a source separation program for the waste generated by the operation of the establishment at the site or shall ensure that such a program is implemented.~~

~~(3) This section does not apply to an owner of a site in a particular calendar year if,~~

~~(a) during the two preceding calendar years there was no calendar month in which the hours worked by the persons employed at the site exceeded 16,000 hours; and~~

~~(b) the owner is able to demonstrate this fact, within seven days of a request from the Director, through evidence satisfactory to the Director.~~

~~(4) Copies of the records related to hours of employment maintained under section 11 of the *Employment Standards Act* shall be deemed to be sufficient evidence of hours worked at a site if the copies are certified by the owner or the owner's representative as to the accuracy of the records.~~

~~(5) In this section,~~

~~“owner” includes the operator of a manufacturing establishment but does not include a landlord;~~

~~“site” means one property and includes nearby properties owned or leased by the same person where passage from one property to another involves crossing, but not travelling along a public highway. O. Reg. 103/94, s. 15.~~

TRANSITION

16. Except as otherwise provided, a person who, upon the coming into force of this Regulation, or at any time within twelve months after the coming into force of this Regulation, becomes subject to an obligation with respect to the implementation of a source separation program shall fulfil the obligation within twelve months after the coming into force of this Regulation. O.Reg. 103/94, s. 16.

SCHEDULE

WASTES TO BE PROVIDED FOR IN SOURCE SEPARATION PROGRAMS

2. Cardboard (corrugated).
3. Fine paper.
4. Glass bottles and jars for food or beverages.
5. Newsprint.
6. Polyethylene terephthalate bottles for food or beverages (including bottles made primarily of polyethylene terephthalate).
7. Steel food or beverage cans (including cans made primarily of steel).

**PART IX
HOSPITALS**

(referred to in section 13)

1. Aluminum food or beverage cans (including cans made primarily of aluminum).
2. Cardboard (corrugated).
3. Fine paper.
4. Glass bottles and jars for food or beverages.
5. Newsprint.
6. Steel food or beverage cans (including cans made primarily of steel).

**PART X
EDUCATIONAL INSTITUTIONS**

(referred to in section 14)

1. Aluminum food or beverage cans (including cans made primarily of aluminum).
2. Cardboard (corrugated).
3. Fine paper.
4. Glass bottles and jars for food or beverages.
5. Newsprint.
6. Steel food or beverage cans (including cans made primarily of steel).

**PART XI
LARGE MANUFACTURING ESTABLISHMENTS**

(referred to in section 15)

1. Aluminum.
2. Cardboard (corrugated).
3. Fine paper.
4. Glass.
5. Newsprint.



CALIBRATION CERTIFICATE

DATE: Jan 25 2023

SR # 51086

CUSTOMER:

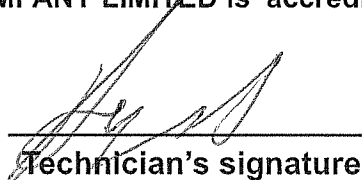
Waste Reduction Group
214 Merton St. Unit 101
Toronto ON

REMARKS

This is to certify that the following scale has been tested and verified in relation to the Standards maintained by **CANADIAN SCALE COMPANY LIMITED**, with test weights traceable to the Legal Metrology Laboratories of, Industry Canada and National Research Council, Canada.

Western bench scale model - EWA 150
Capacity 150 kg
S/N - 202104196

CANADIAN SCALE COMPANY LIMITED is accredited with Measurement Canada



Technician's signature

Ryan Lal



CANADIAN SCALE COMPANY LIMITED

305 Horner Avenue, Toronto, ON M8W 1Z4
1-800-461-0634 www.canscale.com

Appendix B

Waste Audit Data

Waste Audit Report
 Hunter College
 Waste Reduction Group Project P1377

Table B1: Garbage Sample Summary - By Campus

Sample #	Location	Waste Audit Date	Garbage Sample		Recycling Sample		Paper Sample		Total Sample	
			kg	%	kg	%	kg	%	kg	%
1	North Campus	Feb. 1, 2023	124.15	92.5%	70.10	95.9%	15.62	86.2%	209.87	93.1%
2	Lakeshore Campus	Feb. 2, 2023	10.09	7.5%	2.98	4.1%	2.50	13.8%	15.57	6.9%
Total			134.24	100.0%	73.08	100.0%	18.12	100.0%	225.44	100.0%

Table B2: North Campus Garbage Sample Summary - By Functional Area

Waste Generating Area	Common Area		Food Area		Residence		Total		
	kg	%	kg	%	kg	%	kg	%	
Sample Size	32.44		44.21		47.50		124.15		
Percent of Sample Size	26.1%		35.6%		38.3%		100.0%		
Mixed Containers	PET (#1)	2.50	7.7%	3.36	7.6%	3.95	8.3%	9.81	7.9%
	HDPE (#2)	0.00	0.0%	0.00	0.0%	0.76	1.6%	0.76	0.6%
	PP (#5)	0.55	1.7%	0.90	2.0%	1.25	2.6%	2.70	2.2%
	PS (#6)	0.70	2.2%	1.40	3.2%	1.10	2.3%	3.20	2.6%
	Glass	0.00	0.0%	0.40	0.9%	0.47	1.0%	0.87	0.7%
	Aluminum	0.50	1.5%	0.61	1.4%	1.25	2.6%	2.36	1.9%
	Steel	0.00	0.0%	0.00	0.0%	1.50	3.2%	1.50	1.2%
	Gable Top	0.04	0.1%	0.90	2.0%	1.50	3.2%	2.44	2.0%
	Aseptic	0.35	1.1%	1.20	2.7%	0.40	0.8%	1.95	1.6%
Mixed Papers	Fine Paper	1.30	4.0%	0.70	1.6%	3.30	6.9%	5.30	4.3%
	Newspaper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Boxboard	1.80	5.3%	2.50	5.7%	2.56	5.4%	6.86	5.5%
	Other Fibres	0.90	2.5%	2.80	6.3%	0.50	1.1%	4.10	3.3%
Cardboard		0.50	1.5%	3.60	8.1%	0.70	1.5%	4.80	3.9%
Paper Towels		5.40	16.6%	5.90	13.3%	6.00	12.6%	17.30	13.9%
Coffee Cups		3.20	9.9%	4.56	10.3%	2.20	4.6%	9.96	8.0%
Organics		7.50	23.1%	9.78	22.1%	9.90	20.8%	27.18	21.9%
LDPE Plastic Films		1.10	3.4%	0.95	2.1%	1.50	3.2%	3.55	2.9%
Styrofoam		0.50	1.5%	0.53	1.2%	1.30	2.7%	2.33	1.9%
Plastic Strapping		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Wood		0.05	0.2%	0.08	0.2%	0.06	0.1%	0.19	0.2%
Scrap Metal		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Electronic Waste		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Bulbs		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Batteries		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Printer Toners		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PPE		0.60	1.8%	0.05	0.1%	0.24	0.5%	0.89	0.7%
Textiles		0.00	0.0%	0.00	0.0%	1.51	3.2%	1.51	1.2%
Single Use Plastics		3.25	10.0%	1.65	3.7%	1.95	4.1%	6.85	5.5%
Other/Nonrecyclable		1.80	5.3%	2.34	5.3%	3.60	7.6%	7.74	6.2%
QA/QC Check		32.44	100.0%	44.21	100.0%	47.50	100.0%	124.15	100.0%
Mixed Containers		4.64	14.3%	8.77	19.8%	12.18	25.6%	25.59	20.6%
Mixed Papers		3.90	12.0%	6.00	13.6%	6.36	13.4%	16.26	13.1%
Mandatory Recyclables (Reg103)		2.30	7.1%	5.31	12.0%	7.22	15.2%	14.83	11.9%
Other Recyclables		21.39	65.9%	29.82	67.5%	29.72	62.6%	80.93	65.2%
Non-Recyclable		8.75	27.0%	9.08	20.5%	10.56	22.2%	28.39	22.9%
QA/QC Check		TRUE	100.0%	TRUE	100.0%	TRUE	100.0%	TRUE	100.0%

Table B3: North Campus Recycle Sample Summary - By Functional Area

Waste Generating Area	Common Area		Food Area		Residence		Total		
	kg	%	kg	%	kg	%	kg	%	
Sample Size	18.96		22.49		28.65		70.10		
Percent of Sample Size	27.0%		32.1%		40.9%		100.0%		
Mixed Containers	PET (#1)	6.70	35.3%	5.70	25.3%	4.00	14.0%	16.40	23.4%
	HDPE (#2)	0.02	0.1%	0.00	0.0%	1.70	5.9%	1.72	2.5%
	PP (#5)	0.30	1.6%	0.90	4.0%	5.85	20.4%	7.05	10.1%
	PS (#6)	0.40	2.1%	1.20	5.3%	0.40	1.4%	2.00	2.9%
	Glass	0.00	0.0%	0.00	0.0%	2.60	9.1%	2.60	3.7%
	Aluminum	0.90	4.7%	0.97	4.3%	0.42	1.5%	2.29	3.3%
	Steel	0.00	0.0%	0.00	0.0%	4.60	16.1%	4.60	6.6%
	Gable Top	0.90	4.7%	0.67	3.0%	1.40	4.9%	2.97	4.2%
	Aseptic	0.70	3.7%	0.70	3.1%	0.80	2.8%	2.20	3.1%
Mixed Papers	Fine Paper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Newspaper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Boxboard	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Other Fibres	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Cardboard		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Paper Towels		1.95	10.3%	4.30	19.1%	3.10	10.8%	9.35	13.3%
Coffee Cups		0.14	0.7%	0.19	0.8%	0.01	0.0%	0.34	0.5%
Organics		3.40	17.9%	3.30	14.7%	0.37	1.3%	7.07	10.1%
LDPE Plastic Films		0.50	2.6%	0.70	3.1%	0.40	1.4%	1.60	2.3%
Styrofoam		0.00	0.0%	0.50	2.2%	0.00	0.0%	0.50	0.7%
Plastic Strapping		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Wood		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Metal		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Electronic Waste		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Bulbs		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Batteries		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Printer Toners		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PPE		0.20	1.1%	0.16	0.7%	0.00	0.0%	0.36	0.5%
Textiles		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Single Use Plastics		1.76	9.3%	1.30	5.8%	0.90	3.1%	3.96	5.6%
Other/Nonrecyclable		1.09	5.7%	1.90	8.4%	2.10	7.3%	5.09	7.3%
QA/QC Check		18.96	100.0%	22.49	100.0%	28.65	100.0%	70.10	100.0%
Mixed Containers		9.92	52.3%	10.14	45.1%	21.77	76.0%	41.83	59.7%
Mixed Papers		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%

Table B4: North Campus Paper Sample Summary - By Functional Area

Waste Generating Area	Common Area		Food Area		Residence		Total		
	kg	%	kg	%	kg	%	kg	%	
Sample Size	4.30		4.67		6.65		15.62		
Percent of Sample Size	6.1%		6.7%		9.5%		22.3%		
Mixed Containers	PET (#1)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	HDPE (#2)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	PP (#5)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	PS (#6)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Glass	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Aluminum	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Steel	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Gable Top	0.06	1.4%	0.00	0.0%	0.01	0.2%	0.07	0.4%
	Aseptic	0.04	0.9%	0.00	0.0%	0.06	0.9%	0.10	0.6%
Mixed Papers	Fine Paper	0.40	9.3%	0.80	17.1%	1.15	17.3%	2.35	15.0%
	Newspaper	0.00	0.0%	0.00	0.0%	0.80	12.0%	0.80	5.1%
	Boxboard	1.10	25.6%	1.10	23.6%	2.90	43.6%	5.10	32.7%
	Other Fibres	0.50	11.6%	0.45	9.6%	0.03	0.5%	0.98	6.3%
Cardboard		0.80	18.6%	1.40	30.0%	0.00	0.0%	2.20	14.1%
Paper Towels		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Coffee Cups		1.40	32.6%	0.90	19.3%	1.70	25.6%	4.00	25.6%
Organics		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
LDPE Plastic Films		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Styrofoam		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Plastic Strapping		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Wood		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Metal		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Electronic Waste		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Bulbs		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Batteries		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Printer Toners		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PPE		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Textiles		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Single Use Plastics		0.00	0.0%	0.02	0.4%	0.00	0.0%	0.02	0.1%
Other/Nonrecyclable		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
QA/QC Check		4.30	100.0%	4.67	100.0%	6.65	100.0%	15.62	100.0%
Mixed Containers		0.10	2.3%	0.00	0.0%	0.07	1.1%	0.17	1.1%
Mixed Papers		2.00	46.5%	2.35	50.3%	4.88	73.4%	9.23	59.1%

Table B5: Lakeshore Campus Garbage Sample Summary - By Functional Area

Waste Generating Area	Common Area		Food Area		Residence		Total	
Sample Size	3.47		3.11		3.51		10.09	
Percent of Sample Size	34.4%		30.8%		34.8%		100.0%	
	kg	%	kg	%	kg	%	kg	%
Mixed Containers								
PET (#1)	0.20	5.8%	0.30	9.6%	0.30	8.5%	0.80	7.9%
HDPE (#2)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PP (#5)	0.10	2.9%	0.00	0.0%	0.13	3.7%	0.23	2.3%
PS (#6)	0.00	0.0%	0.00	0.0%	0.10	2.8%	0.10	1.0%
Glass	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Aluminum	0.01	0.3%	0.01	0.3%	0.23	6.6%	0.25	2.5%
Steel	0.10	2.9%	0.00	0.0%	0.00	0.0%	0.10	1.0%
Gable Top	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Aseptic	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Mixed Papers								
Fine Paper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Newspaper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Boxboard	0.02	0.6%	0.50	16.1%	0.40	11.4%	0.92	9.1%
Other Fibres	0.20	5.8%	0.30	9.6%	0.00	0.0%	0.50	5.0%
Cardboard	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Paper Towels	0.50	14.4%	0.40	12.9%	0.40	11.4%	1.30	12.9%
Coffee Cups	0.55	15.9%	0.65	20.9%	0.72	20.5%	1.92	19.0%
Organics	1.20	34.6%	0.78	25.1%	1.23	35.0%	3.21	31.8%
LDPE Plastic Films	0.10	2.9%	0.15	4.8%	0.00	0.0%	0.25	2.5%
Styrofoam	0.02	0.6%	0.00	0.0%	0.00	0.0%	0.02	0.2%
Plastic Strapping	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Wood	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Metal	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Electronic Waste	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Bulbs	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Batteries	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Printer Toners	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PPE	0.10	2.9%	0.00	0.0%	0.00	0.0%	0.10	1.0%
Textiles	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Single Use Plastics	0.01	0.3%	0.00	0.0%	0.00	0.0%	0.01	0.1%
Other/Nonrecyclable	0.36	10.4%	0.02	0.6%	0.00	0.0%	0.38	3.8%
QA/QC Check	3.47	100.0%	3.11	100.0%	3.51	100.0%	10.09	100.0%
Mixed Containers	0.41	11.8%	0.31	10.0%	0.76	21.7%	1.48	14.7%
Mixed Papers	0.22	6.3%	0.80	25.7%	0.40	11.4%	1.42	14.1%
Mandatory Recyclables (Reg103)	0.11	3.2%	0.01	0.3%	0.23	6.6%	0.35	3.5%
Other Recyclables	2.42	69.7%	2.43	78.1%	2.56	72.9%	7.41	73.4%
Non-Recyclable	0.94	27.1%	0.67	21.5%	0.72	20.5%	2.33	23.1%
QA/QC Check	TRUE	100.0%	TRUE	100.0%	TRUE	100.0%	TRUE	100.0%

Table B6: Lakeshore Campus Recycle Sample Summary - By Functional Area

Waste Generating Area	Common Area		Food Area		Residence		Total	
Sample Size	1.39		1.36		0.23		2.98	
Percent of Sample Size	46.6%		45.6%		7.7%		100.0%	
	kg	%	kg	%	kg	%	kg	%
Mixed Containers								
PET (#1)	0.70	50.4%	0.30	22.1%	0.21	91.3%	1.21	40.6%
HDPE (#2)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PP (#5)	0.06	4.3%	0.25	18.4%	0.00	0.0%	0.31	10.4%
PS (#6)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Glass	0.02	1.4%	0.00	0.0%	0.00	0.0%	0.02	0.7%
Aluminum	0.10	7.2%	0.10	7.4%	0.00	0.0%	0.20	6.7%
Steel	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Gable Top	0.01	0.7%	0.00	0.0%	0.02	8.7%	0.03	1.0%
Aseptic	0.01	0.7%	0.00	0.0%	0.00	0.0%	0.01	0.3%
Mixed Papers								
Fine Paper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Newspaper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Boxboard	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Other Fibres	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Cardboard	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Paper Towels	0.03	2.2%	0.10	7.4%	0.00	0.0%	0.13	4.4%
Coffee Cups	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Organics	0.25	18.0%	0.51	37.5%	0.00	0.0%	0.76	25.5%
LDPE Plastic Films	0.10	7.2%	0.10	7.4%	0.00	0.0%	0.20	6.7%
Styrofoam	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Plastic Strapping	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Wood	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Metal	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Electronic Waste	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Bulbs	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Batteries	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Printer Toners	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PPE	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Textiles	0.01	0.7%	0.00	0.0%	0.00	0.0%	0.01	0.3%
Single Use Plastics	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Other/Nonrecyclable	0.10	7.2%	0.00	0.0%	0.00	0.0%	0.10	3.4%
QA/QC Check	1.39	100.0%	1.36	100.0%	0.23	100.0%	2.98	100.0%
Mixed Containers	0.90	64.7%	0.65	47.8%	0.23	100.0%	1.78	59.7%
Mixed Papers	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%

Table B7: Lakeshore Campus Paper Sample Summary - By Functional Area

Waste Generating Area	Common Area		Food Area		Residence		Total	
Sample Size	1.52		0.65		0.33		2.50	
Percent of Sample Size	51.0%		21.8%		11.1%		83.9%	
	kg	%	kg	%	kg	%	kg	%
Mixed Containers								
PET (#1)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
HDPE (#2)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PP (#5)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PS (#6)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Glass	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Aluminum	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Steel	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Gable Top	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Aseptic	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Mixed Papers								
Fine Paper	0.01	0.7%	0.00	0.0%	0.00	0.0%	0.01	0.4%
Newspaper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Boxboard	0.00	0.0%	0.10	15.4%	0.33	100.0%	0.43	17.2%
Other Fibres	0.01	0.7%	0.40	61.5%	0.00	0.0%	0.41	16.4%
Cardboard	0.90	59.2%	0.00	0.0%	0.00	0.0%	0.90	36.0%
Paper Towels	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Coffee Cups	0.60	39.5%	0.15	23.1%	0.00	0.0%	0.75	30.0%
Organics	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
LDPE Plastic Films	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Styrofoam	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Plastic Strapping	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Wood	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Metal	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Electronic Waste	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Bulbs	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Batteries	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Printer Toners	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PPE	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Textiles	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Single Use Plastics	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Other/Nonrecyclable	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
QA/QC Check	1.52	100.0%	0.65	100.0%	0.33	100.0%	2.50	100.0%
Mixed Containers	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Mixed Papers	0.02	1.3%	0.50	76.9%	0.33	100.0%	0.85	34.0%

Table B8: Humber College Combined Garbage Sample Summary - By Functional Area

Waste Generating Area		Common Area		Food Area		Residence		Total	
Sample Size	35.91	47.32		51.01		134.24			
Percent of Sample Size	26.8%	35.3%		38.0%		100.0%			
	kg	%	kg	%	kg	%	kg	%	
Mixed Containers	PET (#1)	2.70	7.5%	3.66	7.7%	4.25	8.3%	10.61	7.9%
	HDPE (#2)	0.00	0.0%	0.00	0.0%	0.76	1.5%	0.76	0.6%
	PP (#5)	0.65	1.8%	0.90	1.9%	1.38	2.7%	2.93	2.2%
	PS (#6)	0.70	1.9%	1.40	3.0%	1.20	2.4%	3.30	2.5%
	Glass	0.00	0.0%	0.40	0.8%	0.47	0.9%	0.87	0.6%
	Aluminum	0.51	1.4%	0.62	1.3%	1.48	2.9%	2.61	1.9%
	Steel	0.10	0.3%	0.00	0.0%	1.50	2.9%	1.60	1.2%
	Gable Top	0.04	0.1%	0.90	1.9%	1.50	2.9%	2.44	1.8%
	Aseptic	0.35	1.0%	1.20	2.5%	0.40	0.8%	1.95	1.5%
Mixed Papers	Fine Paper	1.30	3.6%	0.70	1.5%	3.30	6.5%	5.30	3.9%
	Newspaper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Boxboard	1.82	5.1%	3.00	6.3%	2.96	5.8%	7.78	5.8%
	Other Fibres	1.00	2.8%	3.10	6.6%	0.50	1.0%	4.60	3.4%
Cardboard		0.50	1.4%	3.60	7.6%	0.70	1.4%	4.80	3.6%
Paper Towels		5.90	16.4%	6.30	13.3%	6.40	12.5%	18.60	13.9%
Coffee Cups		3.75	10.4%	5.21	11.0%	2.92	5.7%	11.88	8.8%
Organics		8.70	24.2%	10.56	22.3%	11.13	21.8%	30.39	22.6%
LDPE Plastic Films		1.20	3.3%	1.10	2.3%	1.50	2.9%	3.80	2.8%
Styrofoam		0.52	1.4%	0.53	1.1%	1.30	2.5%	2.35	1.8%
Plastic Strapping		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Wood		0.05	0.1%	0.08	0.2%	0.06	0.1%	0.19	0.1%
Scrap Metal		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Electronic Waste		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Bulbs		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Batteries		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Printer Toners		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PPE		0.70	1.9%	0.05	0.1%	0.24	0.5%	0.99	0.7%
Textiles		0.00	0.0%	0.00	0.0%	1.51	3.0%	1.51	1.1%
Single Use Plastics		3.26	9.1%	1.65	3.5%	1.95	3.8%	6.86	5.1%
Other/Nonrecyclable		2.16	6.0%	2.36	5.0%	3.60	7.1%	8.12	6.0%
QA/QC Check		35.91	100.0%	47.32	100.0%	51.01	100.0%	134.24	100.0%
Mixed Containers		5.05	14.1%	9.08	19.2%	12.94	25.4%	27.07	20.2%
Mixed Papers		4.12	11.5%	6.80	14.4%	6.76	13.3%	17.68	13.2%
Mandatory Recyclables (Reg103)		2.41	6.7%	5.32	11.2%	7.45	14.6%	15.18	11.3%
Other Recyclables		23.81	66.3%	32.25	68.2%	32.28	63.3%	88.34	65.8%
Non-Recyclable		9.69	27.0%	9.75	20.6%	11.28	22.1%	30.72	22.9%
QA/QC Check		TRUE	100.0%	TRUE	100.0%	TRUE	100.0%	TRUE	100.0%

Note 1: Highlighted cells are those materials >=5% as summarized in Table 5 of report.

Table B9: Humber College Combined Recycle Sample Summary - By Functional Area

Waste Generating Area		Common Area		Food Area		Residence		Total	
Sample Size	20.35	23.85		28.88		73.08			
Percent of Sample Size	27.8%	32.6%		39.5%		100.0%			
	kg	%	kg	%	kg	%	kg	%	
Mixed Containers	PET (#1)	7.40	36.4%	6.00	25.2%	4.21	14.6%	17.61	24.1%
	HDPE (#2)	0.02	0.1%	0.00	0.0%	1.70	5.9%	1.72	2.4%
	PP (#5)	0.36	1.8%	1.15	4.8%	5.85	20.3%	7.36	10.1%
	PS (#6)	0.40	2.0%	1.20	5.0%	0.40	1.4%	2.00	2.7%
	Glass	0.02	0.1%	0.00	0.0%	2.60	9.0%	2.62	3.6%
	Aluminum	1.00	4.9%	1.07	4.5%	0.42	1.5%	2.49	3.4%
	Steel	0.00	0.0%	0.00	0.0%	4.60	15.9%	4.60	6.3%
	Gable Top	0.91	4.5%	0.67	2.8%	1.42	4.9%	3.00	4.1%
	Aseptic	0.71	3.5%	0.70	2.9%	0.80	2.8%	2.21	3.0%
Mixed Papers	Fine Paper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Newspaper	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Boxboard	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Other Fibres	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Cardboard		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Paper Towels		1.98	9.7%	4.40	18.4%	3.10	10.7%	9.48	13.0%
Coffee Cups		0.14	0.7%	0.19	0.8%	0.01	0.0%	0.34	0.5%
Organics		3.65	17.9%	3.81	16.0%	0.37	1.3%	7.83	10.7%
LDPE Plastic Films		0.60	2.9%	0.80	3.4%	0.40	1.4%	1.80	2.5%
Styrofoam		0.00	0.0%	0.50	2.1%	0.00	0.0%	0.50	0.7%
Plastic Strapping		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Wood		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Metal		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Electronic Waste		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Bulbs		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Batteries		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Printer Toners		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PPE		0.20	1.0%	0.16	0.7%	0.00	0.0%	0.36	0.5%
Textiles		0.01	0.0%	0.00	0.0%	0.00	0.0%	0.01	0.0%
Single Use Plastics		1.76	8.6%	1.30	5.5%	0.90	3.1%	3.96	5.4%
Other/Nonrecyclable		1.19	5.8%	1.90	8.0%	2.10	7.3%	5.19	7.1%
QA/QC Check		20.35	100.0%	23.85	100.0%	28.88	100.0%	73.08	100.0%
Mixed Containers		10.82	53.2%	10.79	45.2%	22.00	76.2%	43.61	59.7%
Mixed Papers		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%

Table B10: Humber College Combined Paper Sample Summary - By Functional Area

Waste Generating Area		Common Area		Food Area		Residence		Total	
Sample Size	5.82	5.32		6.98		18.12			
Percent of Sample Size	8.0%	7.3%		9.6%		24.8%			
	kg	%	kg	%	kg	%	kg	%	
Mixed Containers	PET (#1)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	HDPE (#2)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	PP (#5)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	PS (#6)	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Glass	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Aluminum	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Steel	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
	Gable Top	0.06	1.0%	0.00	0.0%	0.01	0.1%	0.07	0.4%
	Aseptic	0.04	0.7%	0.00	0.0%	0.06	0.9%	0.10	0.6%
Mixed Papers	Fine Paper	0.41	7.0%	0.80	15.0%	1.15	16.5%	2.36	13.0%
	Newspaper	0.00	0.0%	0.00	0.0%	0.80	11.5%	0.80	4.4%
	Boxboard	1.10	18.9%	1.20	22.6%	3.23	46.3%	5.53	30.5%
	Other Fibres	0.51	8.8%	0.85	16.0%	0.03	0.4%	1.39	7.7%
Cardboard		1.70	29.2%	1.40	26.3%	0.00	0.0%	3.10	17.3%
Paper Towels		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Coffee Cups		2.00	34.4%	1.05	19.7%	1.70	24.4%	4.75	26.2%
Organics		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
LDPE Plastic Films		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Styrofoam		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Plastic Strapping		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Wood		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Scrap Metal		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Electronic Waste		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Bulbs		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Batteries		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Printer Toners		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
PPE		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Textiles		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
Single Use Plastics		0.00	0.0%	0.02	0.4%	0.00	0.0%	0.02	0.1%
Other/Nonrecyclable		0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%
QA/QC Check		5.82	100.0%	5.32	100.0%	6.98	100.0%	18.12	100.0%
Mixed Containers		0.10	1.7%	0.00	0.0%	0.07	1.0%	0.17	0.9%
Mixed Papers		2.02	34.7%	2.85	53.6%	5.21	74.6%	10.08	55.6%

Table B11: North Campus Garbage Composition (Ranked)

Table with 6 columns: Waste Composition, %, Annual, MT, Divert?, Est. Amount. Rows include Organics (21.9%), Mixed Containers (20.6%), Paper Towels (13.9%), Mixed Papers (13.1%), Coffee Cups (8.0%), Other/Nonrecyclable (6.2%), Single Use Plastics (5.5%), Cardboard (3.9%), LDPE Plastic Films (2.9%), Styrofoam (1.9%), Textiles (1.2%), PPE (0.7%), Scrap Wood (0.2%), and QAQC Check (100.0%).

1. Assumed 60% capture rate of materials in garbage stream.

Table B12: Lakeshore Campus Garbage Composition (Ranked)

Table with 6 columns: Waste Composition, %, Annual, MT, Divert?, Est. Amount. Rows include Organics (31.8%), Coffee Cups (19.0%), Mixed Containers (14.7%), Mixed Papers (14.1%), Paper Towels (12.9%), Other/Nonrecyclable (3.8%), LDPE Plastic Films (2.5%), PPE (1.0%), Styrofoam (0.2%), Single Use Plastics (0.1%), and QAQC Check (100.0%).

1. Assumed 60% capture rate of materials in garbage stream.

Table B13: Combined Campuses Garbage Composition (Ranked)

Table with 6 columns: Waste Composition, %, Annual, MT, Divert?, Est. Amount. Rows include Organics (22.6%), Mixed Containers (20.2%), Paper Towels (13.9%), Mixed Papers (13.2%), Coffee Cups (8.8%), Other/Nonrecyclable (6.0%), Single Use Plastics (5.1%), Cardboard (3.6%), LDPE Plastic Films (2.8%), Styrofoam (1.8%), Textiles (1.1%), PPE (0.7%), Scrap Wood (0.1%), and QAQC Check (100.0%).

1. Assumed 60% capture rate of materials in garbage stream.

Table B14: North Campus Recycling Composition (Ranked)

Table with 6 columns: Waste Composition, %, Annual, MT, Contam?, Contam Amount. Rows include Mixed Containers (59.7%), Paper Towels (13.3%), Organics (10.1%), Other/Nonrecyclable (7.3%), Single Use Plastics (5.6%), LDPE Plastic Films (2.3%), Styrofoam (0.7%), PPE (0.5%), Coffee Cups (0.5%), and QAQC Check (100.0%). Contamination Rate: 24.7%.

Table B15: Lakeshore Campus Recycling Composition (Ranked)

Table with 6 columns: Waste Composition, %, Annual, MT, Contam?, Contam Amount. Rows include Mixed Containers (59.7%), Organics (25.5%), LDPE Plastic Films (6.7%), Paper Towels (4.4%), Other/Nonrecyclable (3.4%), Textiles (0.3%), and QAQC Check (100.0%). Contamination Rate: 29.2%.

Table B16: Combined Campuses Recycling Composition (Ranked)

Table with 6 columns: Waste Composition, %, Annual, MT, Contam?, Contam Amount. Rows include Mixed Containers (59.7%), Paper Towels (13.0%), Organics (10.7%), Other/Nonrecyclable (7.1%), Single Use Plastics (5.4%), LDPE Plastic Films (2.5%), Styrofoam (0.7%), PPE (0.5%), Coffee Cups (0.5%), Textiles (0.01%), and QAQC Check (100.0%). Contamination Rate: 24.9%.

Table B17: North Campus Paper Composition (Ranked)

Table with 6 columns: Waste Composition, %, Annual, MT, Contam?, Contam Amount. Rows include Mixed Papers (59.1%), Coffee Cups (25.6%), Cardboard (14.1%), Mixed Containers (1.1%), Single Use Plastics (0.1%), and QAQC Check (100.0%). Contamination Rate: 26.8%.

Table B18: Lakeshore Campus Paper Composition (Ranked)

Table with 6 columns: Waste Composition, %, Annual, MT, Contam?, Contam Amount. Rows include Cardboard (36.0%), Mixed Papers (34.0%), Coffee Cups (30.0%), and QAQC Check (100.0%). Contamination Rate: 30.0%.

Table B19: Combined Campuses Paper Composition (Ranked)

Table with 6 columns: Waste Composition, %, Annual, MT, Contam?, Contam Amount. Rows include Mixed Papers (55.6%), Coffee Cups (26.2%), Cardboard (17.1%), Mixed Containers (0.9%), Single Use Plastics (0.1%), and QAQC Check (100.0%). Contamination Rate: 27.3%.

Table B20: N Campus Mixed Container Summary

Table with 7 columns: Material, Disposed kg, Disposed %, Disposed MT, Recycled kg, Recycled %, Recycled MT. Rows include PET (#1), HDPE (#2), PP (#5), PS (#6), Glass, Aluminum, Steel, Gable Top, Aseptic, and Total.

Table B21: Lakeshore Campus Mixed Container Summary

Table with 7 columns: Material, Disposed kg, Disposed %, Disposed MT, Recycled kg, Recycled %, Recycled MT. Rows include PET (#1), HDPE (#2), PP (#5), PS (#6), Glass, Aluminum, Steel, Gable Top, Aseptic, and Total.

Table B22: Combined Campuses Mixed Container Summary

Table with 7 columns: Material, Disposed kg, Disposed %, Disposed MT, Recycled kg, Recycled %, Recycled MT. Rows include PET (#1), HDPE (#2), PP (#5), PS (#6), Glass, Aluminum, Steel, Gable Top, Aseptic, and Total.

Table B23: N Campus Mixed Paper Summary

Table with 7 columns: Material, Disposed kg, Disposed %, Disposed MT, Recycled kg, Recycled %, Recycled MT. Rows include Fine, Newsprint, BoxBoard, Other, and Total.

Table B24: Lakeshore Campus Mixed Paper Summary

Table with 7 columns: Material, Disposed kg, Disposed %, Disposed MT, Recycled kg, Recycled %, Recycled MT. Rows include Fine, Newsprint, BoxBoard, Other, and Total.

Table B25: Combined Campuses Mixed Paper Summary

Table with 7 columns: Material, Disposed kg, Disposed %, Disposed MT, Recycled kg, Recycled %, Recycled MT. Rows include Fine, Newsprint, BoxBoard, Other, and Total.

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Table B26: Annual Waste Management & Diversion Summary

Material Stream	3Rs or Disposed	2019 Weight			2019 Total			2022 Weight										2022 Total			
		North Campus	Res (North)	Lakeshore Campus				N Central Receiving	N Residence	N-110 Carrier Dr	N-30 Carrier Dr	Lake Receiving	3120 Lakeshore	2 Colonel Dr	3170 Lakeshore	300 Birm	3180 Lakeshore	3199 Lakeshore			
		MT	MT	MT	kg	MT	%	MT	MT	MT	MT	MT	MT	MT	MT	MT	MT	MT	kg	MT	%
Waste/Garbage	Disposed	576.54	113.76	250.27	940.57	98.9%	166.30	75.05	61.12	3.04	18.52	7.06	6.80	6.01	8.30	62.91	54.81		469.92	98.4%	
Airfilters	EFW	0.49		0.18	0.68	0.1%					0.30								0.30	0.1%	
Printer Toners	EFW					0.0%													0.00	0.0%	
Used Furniture	Disposed	5.26		1.95	7.21	0.8%	6.90				0.66								7.56	1.6%	
Used Furniture	EFW	2.20		0.82	3.02	0.3%													0.00	0.0%	
Sub-Total		584.50	113.76	253.21	951.48	31.5%	173.20	75.05	61.12	3.04	19.48	7.06	6.80	6.01	8.30	62.91	54.81		477.78	42.7%	
Organics - Food Wastes	Composted	365.93	45.06	134.47	545.46	26.4%	61.86	9.54		0.23	3.38		0.18		0.41	0.14	8.37		84.11	13.1%	
Mixed Papers (office, news, etc)	Recycled	262.28	5.62	93.89	361.79	17.5%	16.14		2.44	0.30							1.68		20.56	3.2%	
Comingled - Front End / Compactor	Recycled	43.63	2.41	35.53	81.57	3.9%	37.29	19.18	13.39	0.97	7.40	2.69	2.66		0.70		18.42		102.70	16.0%	
Confidential Papers	Recycled	123.23		45.58	168.81	8.2%	31.31	1.72	6.88		24.12		8.16	5.16	3.44		13.77		94.56	14.8%	
Electronic Wastes	Recycled	22.70		7.36	30.06	1.5%	18.32		6.92										25.24	3.9%	
Used Furniture	Recycled	29.82		11.03	40.85	2.0%													0.00	0.0%	
Scrap Wood	Recycled	138.71			138.71	6.7%	17.10		53.68										70.78	11.1%	
Used Furniture Donations	Reused	45.17		16.70	61.87	3.0%	63.69				6.47								70.16	11.0%	
Scrap Metals	Recycled	57.15			57.15	2.8%	10.17		13.22										23.39	3.7%	
Cardboard	Recycled	69.40	8.04	118.18	195.62	9.5%	19.48				6.16			3.75		12.48			41.87	6.5%	
Construction & demolition	Recycled	55.20			55.20	2.7%													0.00	0.0%	
Bulbs & Ballasts	Recycled	0.33		0.14	0.48	0.023%	0.23				0.09								0.32	0.051%	
Batteries	Recycled	0.21		0.15	0.36	0.02%	0.12												0.12	0.02%	
Printer Toners	Recycled	0.69		0.26	0.95	0.05%	0.13												0.13	0.02%	
Printer Toners	Reused	0.82		0.31	1.13	0.1%													0.00	0.0%	
Oil & Grease	Recycled	2.18	1.14	1.14	4.46	0.2%	0.51		0.19									0.58	1.29	0.2%	
Carpet	Recycled	3.42		1.26	4.68	0.2%	2.90												2.90	0.5%	
PPE & Gloves	Recycled						0.10												0.10	0.0%	
Yard Wastes	Composted	233.60		86.40	320.00	15.5%	102.07												102.07	15.9%	
Sub-Total		1454.47	62.27	552.40	2069.15	68.5%	381.42	30.44	96.72	1.50	47.62	2.69	11.00	8.91	4.55	12.62	42.82		640.30	100.0%	
Total Generated		2038.97	176.03	805.62	3020.62	100.0%	554.62	105.49	157.84	4.54	67.11	9.75	17.80	14.92	12.85	75.53	97.63		1118.08	100.0%	
Total Diverted (3Rs)		1454.47	62.27	552.40	2069.15	68.5%	381.42	30.44	96.72	1.50	47.62	2.69	11.00	8.91	4.55	12.62	42.82		640.30	57.3%	
Total Disposed		584.50	113.76	253.21	951.48	31.5%	173.20	75.05	61.12	3.04	19.48	7.06	6.80	6.01	8.30	62.91	54.81		477.78	42.7%	
Achieved Waste Diversion Rate		71.3%	35.4%	68.6%	68.5%		68.8%	28.9%	61.3%	33.0%	71.0%	27.6%	61.8%	59.7%	35.4%	16.7%	43.9%		57.3%		
					Potential Waste Diversion Rate		78.3%												Potential Waste Diversion Rate	77.0%	

Appendix C

Waste Audit Summary

Ministry of the Environment Waste Form

Report of a Waste Audit

Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

- *This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.*
- *For large construction and demolition projects, please refer to the forms included with "A Guide to Waste Audits and Waste Reduction Work Plans for Construction and Demolition Projects as Required Under Ontario Regulation 102/94" (revised July 2008)*

I. GENERAL INFORMATION

Name of Owner and/or Operator of Entity(ies) and Company Name: Humber College			
Name of Contact Person: Lindsay Walker		Telephone #: 416-675-6622	Email address:
Street Address(es) of Entity(ies): North Campus: 205 Humber College Boulevard Lakeshore Campus: 3199 Lakeshore Blvd West			
Municipality: North Campus: Toronto, Ontario Lakeshore Campus: Toronto, Ontario			
Type of Entity (check one)			
Retail Shopping Establishments	<input type="checkbox"/>	Hotels and Motels	<input type="checkbox"/>
Retail Shopping Complexes	<input type="checkbox"/>	Hospitals	<input type="checkbox"/>
Office Buildings	<input type="checkbox"/>	Educational Institutions	<input checked="" type="checkbox"/>
Restaurants	<input type="checkbox"/>	Large Manufacturing Establishments	<input type="checkbox"/>

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

II. DESCRIPTION OF ENTITY

Provide a brief overview of the entity(ties): Humber College is an educational institution with approximately 27,146 FTE students which satisfies Part X of Ontario Regulation 102/94 & 103/94. O.Reg. 102/94 requires operators of educational institutions with more than 350 full- or part-time students enrolled during the calendar year to conduct an annual waste audit and implement a waste reduction work plan. O.Reg. 103/94 requires that source separation programs be implemented and maintained for fine papers, newsprint, aluminum cans, steel cans, glass beverage containers and corrugated cardboard. Humber College undertook this audit in order to assist them in reducing wastes generated on campus and/or disposed to landfill, while being in compliance with the required Regulations.

III. HOW WASTE IS PRODUCED AND DECISIONS AFFECTING THE PRODUCTION OF WASTE

For each category of waste that is produced at the entity(ies), explain how the waste will be produced and how management decisions and policies will affect the production of waste.

Categories of Waste	How Is the Waste Produced and What Management Decisions/Policies Affect Its Production?
PET (#1) plastic food and beverage bottles	<i>Brought onto campus or generated on campus by staff/students.</i>
HDPE (#2) Containers	<i>Brought onto campus/generated on campus by staff/students.</i>
Polypropylene (#5) Containers	<i>Brought onto campus or generated on campus by staff/students.</i>
Polystyrene (#6) Containers	<i>Brought onto campus/generated on campus by staff/students.</i>
Glass food and beverage bottles/jars	<i>Brought onto campus or generated on campus by staff/students.</i>
Aluminum food and beverage cans	<i>Brought onto campus or generated on campus by staff/students.</i>
Steel food and beverage cans	<i>Brought onto campus or generated on campus by staff/students.</i>
Gable Top Containers	<i>Brought onto campus or generated on campus by staff/students.</i>
Aseptic Containers	<i>Brought onto campus or generated on campus by staff/students.</i>
Fine paper	<i>Brought onto campus or generated on campus by staff/students.</i>
Newsprint	<i>Brought onto campus or generated on campus by staff/students.</i>
Boxboard shoe boxes, cereal boxes, etc.	<i>Brought onto campus or generated on campus by staff/students.</i>
Glossy magazines, catalogues, flyers	<i>Brought onto campus or generated on campus by staff/students.</i>
Cardboard	<i>Brought onto campus, shipping/generated on campus by staff/students.</i>
Paper towels	<i>Generated by staff/students on campus</i>
Coffee cups	<i>Brought onto campus/generated on campus by staff/students.</i>
Organics / Food Waste	<i>Brought onto campus/generated on campus by staff/students.</i>
LDPE (#4) plastic film	<i>Brought onto campus/generated on campus by staff/students.</i>
Styrofoam	<i>Brought onto campus/generated on campus by staff/students.</i>
Plastics Strapping	<i>Brought onto campus/generated on campus by staff/students.</i>
Scrap Woods/Pallets	<i>Generated by operations on campus</i>
Scrap Metals	<i>Generated by operations on campus</i>
Electronic Wastes	<i>Generated by staff/students on campus</i>
Bulbs & Ballasts	<i>Generated by staff/students on campus</i>
Batteries	<i>Generated by staff/students on campus</i>
Printer Toners	<i>Generated by operations on campus</i>
Oil & Grease	<i>Generated by operations on campus</i>
Yard Wastes	<i>Generated by operations on campus</i>
Used Furniture Donations	<i>Generated by operations on campus</i>
Air Filters	<i>Generated by operations on campus</i>
Construction & Demolition	<i>Generated by operations on campus</i>
Carpet	<i>Generated by operations on campus</i>
Other / Non-Recyclable	<i>Generated by staff/students on campus</i>

Note: When completing this form, write “n/a” in the columns where the entity will not produce any waste for a category of waste.

IV. MANAGEMENT OF WASTE

For each category of waste listed below, indicate which waste items will be disposed or reused/recycled and how each item will be managed at the entity(ies).

Category	Waste to be Disposed	Reused or Recycled Waste
PET (#1) plastic food and beverage bottles	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
HDPE (#2) Containers	Staff/students may place in garbage	Staff/Students may place in recycling containers.
Polypropylene (#5) Containers	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Polystyrene (#6) Containers	Staff/students may place in garbage	Staff/Students may place in recycling containers.
Glass food and beverage bottles/jars	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Aluminum food and beverage cans	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Steel food and beverage cans	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Gable Top Containers	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Aseptic Containers	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Fine paper	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Newsprint	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Boxboard shoe boxes, cereal boxes, etc.	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Glossy magazines, catalogues, flyers	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Cardboard	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Paper towels	Staff/Students may place in garbage	Staff/Students may place in organics containers where available.
Coffee cups	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Organics / Food Waste	Staff/Students may place in garbage	Staff/Students may place in organics containers.
LDPE (#4) Plastic Film	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Styrofoam (#6)	Staff/Students place in garbage	No recycling program implemented.
Plastic Strapping	Staff/Students place in garbage	No recycling program implemented.
Scrap Woods/Pallets	Staff/students may place in garbage	Staff may place in recycling containers.
Scrap Metals	Staff/students may place in garbage	Staff may place in recycling containers.
Electronic Wastes	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Bulbs & Ballasts	Staff/Students may place in garbage	Staff may place in recycling containers.
Batteries	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Printer Toners	Staff/Students may place in garbage	Staff/Students may place in recycling containers.
Oil & Grease	Staff may place in garbage	Staff may place in recycling containers.
Yard Wastes	Staff may place in garbage	Staff may place in recycling containers.
Used Furniture Donations	Staff may place in garbage	Staff may place in recycling containers.
Air Filters	Staff place in garbage	No recycling program implemented.
Construction & Demolition	Staff may place in garbage	Staff may place in recycling containers.
Carpet	Staff may place in garbage	Staff may place in recycling containers.
Other / Non-Recyclable	Staff/students place in garbage	Not applicable.

Note: When completing this form, write "n/a" in the columns where the entity will not produce any waste for a category of waste.

V. ESTIMATED QUANTITY OF WASTE PRODUCED

Categories of Waste	Estimated Amount of Waste											
	Generated			Reduced/Reused			Recycled			Disposed/EFW		
	"A" Base Year	"B" Current Year	"C" * Change (A - B)	"A" Base Year	"B" Current Year	"C" * Change (A - B)	"A" Base Year	"B" Current Year	"C" * Change (A - B)	"A" Base Year	"B" Current Year	"C" * Change (A - B)
	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes
PET (#1) plastic food and beverage bottles	81.00	62.51	18.49	0.00	0.00	0.00	41.40	24.75	16.65	39.60	37.76	1.84
HDPE (#2) Containers	4.30	5.12	-0.82	0.00	0.00	0.00	0.00	2.42	-2.42	4.30	2.70	1.60
Polypropylene (#5) Containers	0.00	20.77	-20.77	0.00	0.00	0.00	0.00	10.34	-10.34	0.00	10.43	-10.43
Polystyrene (#6) Containers	0.00	14.56	-14.56	0.00	0.00	0.00	0.00	2.81	-2.81	0.00	11.75	-11.75
Glass food and beverage bottles/jars	50.90	6.78	44.12	0.00	0.00	0.00	41.40	3.68	37.72	9.50	3.10	6.40
Aluminum food and beverage cans	54.40	12.79	41.61	0.00	0.00	0.00	41.40	3.50	37.90	13.00	9.29	3.71
Steel food and beverage cans	0.30	12.16	-11.86	0.00	0.00	0.00	0.00	6.46	-6.46	0.30	5.69	-5.39
Gable Top/Milk Containers	0.00	12.90	-12.90	0.00	0.00	0.00	0.00	4.22	-4.22	0.00	8.68	-8.68
Aseptic Containers	0.00	10.05	-10.05	0.00	0.00	0.00	0.00	3.11	-3.11	0.00	6.94	-6.94
Fine paper	178.40	116.10	62.30	0.00	0.00	0.00	136.10	97.24	38.86	42.30	18.86	23.44
Newsprint	10.90	0.91	9.99	0.00	0.00	0.00	0.00	0.91	-0.91	10.90	0.00	10.90
Boxboard shoe boxes, cereal boxes, etc.	0.00	33.97	-33.97	0.00	0.00	0.00	0.00	6.27	-6.27	0.00	27.69	-27.69
Glossy magazines, catalogues, flyers	202.70	17.95	184.75	0.00	0.00	0.00	0.00	1.58	-1.58	202.70	16.37	186.33
Corrugated Cardboard	135.80	62.47	73.33	0.00	0.00	0.00	114.10	45.39	68.71	21.70	17.08	4.62
Paper Towels	95.30	79.52	15.78	0.00	0.00	0.00	0.00	13.32	-13.32	95.30	66.20	29.10
Coffee Cups	56.60	42.28	14.32	0.00	0.00	0.00	0.00	0.00	0.00	56.60	42.28	14.32
Organics	829.50	192.27	637.23	0.00	0.00	0.00	344.50	84.11	260.39	485.00	108.16	376.84
LDPE (#4) Plastic Films	32.30	16.05	16.25	0.00	0.00	0.00	0.00	2.53	-2.53	32.30	13.52	18.78
Styrofoam (#6) Plastic	5.20	8.36	-3.16	0.00	0.00	0.00	0.00	0.00	0.00	5.20	8.36	-3.16
Plastic Strapping	115.60	0.00	115.60	0.00	0.00	0.00	0.00	0.00	0.00	115.60	0.00	115.60
Scrap Wood/Pallets	52.00	71.46	-19.46	0.00	0.00	0.00	52.00	70.78	-18.78	0.00	0.68	-0.68
Scrap Metal	0.00	23.39	-23.39	0.00	0.00	0.00	0.00	23.39	-23.39	0.00	0.00	0.00
Electronic Wastes	0.00	25.24	-25.24	0.00	0.00	0.00	0.00	25.24	-25.24	0.00	0.00	0.00
Fluorescent Bulbs	0.00	0.32	-0.32	0.00	0.00	0.00	0.00	0.32	-0.32	0.00	0.00	0.00
Batteries	0.00	0.12	-0.12	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
Printer Toners	0.00	0.13	-0.13	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
Oil & Grease	0.00	1.29	-1.29	0.00	0.00	0.00	0.00	1.29	-1.29	0.00	0.00	0.00
Yard Wastes	0.00	102.07	-102.07	0.00	0.00	0.00	0.00	102.07	-102.07	0.00	0.00	0.00
Used Furniture	0.00	77.72	-77.72	0.00	70.16	-70.16	0.00	0.00	0.00	0.00	7.56	-7.56
Air Filters	0.00	0.30	-0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	-0.30
Carpet	0.00	2.90	-2.90	0.00	0.00	0.00	0.00	2.90	-2.90	0.00	0.00	0.00
C&D Materials	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PPE & Gloves	0.00	3.63	-3.63	0.00	0.00	0.00	0.00	0.10	-0.10	0.00	3.52	-3.52
Other/Nonrecyclable	193.70	81.99	111.71	69.10	0.00	69.10	72.20	31.17	41.03	52.40	50.83	1.57
Total	2098.90	1118.08	980.82	69.10	70.16	-1.06	843.10	570.14	273.21	1186.70	477.78	708.92
Percent Change (C ÷A x 100)			46.7%			-1.5%			32.4%			59.7%

Note: When completing this form, write "n/a" in the "Estimated Amount of Waste Produced" column where the entity will not produce any waste for a category of waste.

* Fill out these columns each year following the initial waste audit or baseline year to determine the progress that is being made by your waste reduction program.

Base year taken as 2016

VI. EXTENT TO WHICH MATERIALS OR PRODUCTS USED OR SOLD BY THE ENTITY CONSIST OF RECYCLED OR REUSED MATERIALS OR PRODUCTS

Please answer the following questions:

1. Do you have a management policy in place that promotes the purchasing and/or use of materials or products that consist of recycled and/or reused materials or products? If yes, please describe.

No formal “green” purchasing policy is in place at Humber College. However, the different purchasing departments at the College do consider environmental impacts of their purchases whenever options are available and feasible.

2. Do you have plans to increase the extent to which materials or products used or sold* consist of recycled or reused materials or products? If yes, please describe.

Not applicable.

* Information regarding materials or products “sold” that consist of recycled or reused materials or products is only required from owner(s) of retail shopping establishments and the owner(s) or operator(s) of large manufacturing establishments.

Please attach any additional page(s) as required to answer the above questions.

I hereby certify that the information provided in this Report of Waste Audit is complete and correct.		
Signature of authorized official:	Title:	Date:

Appendix D

Waste Reduction Work Plan

Ministry of the Environment Waste Form

Report of a Waste Reduction Work Plan

Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.

I. GENERAL INFORMATION

Name of Owner and/or Operator of Entity(ies) and Company Name: Humber College			
Name of Contact Person: Lindsay Walker		Telephone #: 416-675-6622	Email address:
Street Address(es) of Entity(ies): North Campus: 205 Humber College Boulevard Lakeshore Campus: 3199 Lakeshore Blvd West			
Municipality: North Campus: Toronto, Ontario Lakeshore Campus: Toronto, Ontario			
Type of Entity (check one)			
Retail Shopping Establishments	<input type="checkbox"/>	Hotels and Motels	<input type="checkbox"/>
Retail Shopping Complexes	<input type="checkbox"/>	Hospitals	<input type="checkbox"/>
Office Buildings	<input type="checkbox"/>	Educational Institutions	<input checked="" type="checkbox"/>
Restaurants	<input type="checkbox"/>	Large Manufacturing Establishments	<input type="checkbox"/>

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

II. DESCRIPTION OF THE ENTITY

Provide a brief overview of the entity(ties):
Humber College is an educational institution with approximately 27,146 FTE students which satisfies Part X of Ontario Regulation 102/94 & 103/94. O.Reg. 102/94 requires operators of educational institutions with more than 350 full- or part-time students enrolled during the calendar year to conduct an annual waste audit and implement a waste reduction work plan. O.Reg. 103/94 requires that source separation programs be implemented and maintained for fine papers, newsprint, aluminum cans, steel cans, glass beverage containers and corrugated cardboard. Humber College undertook this audit in order to assist them in reducing wastes generated on campus and/or disposed to landfill, while being in compliance with the required Regulations.

III. PLANS TO REDUCE, REUSE AND RECYCLE WASTE

<p>For each category of waste described in Part V of “Report of a Waste Audit” (on which this plan is based), explain what your plans are to Reduce, Reuse and Recycle the waste, including: 1) how the waste will be source separated at the establishment, and 2) the programs to reduce, reuse and recycle all source separated waste.</p>	
Waste Category (as stated in Part V of your “Report of a Waste Audit”)	Source Separation and 3Rs Program
<p>Mixed Containers (PET, HDPE, LDPE, PP, PS, Aluminum, Steel, Glass, Aseptic)</p>	<p><u>“Comingled 3Rs Program”</u> <u>Reduce:</u> Staff/Students will be encouraged to bring reusable containers food/beverage containers for lunch and breaks. Humber College will encourage suppliers to reduce the amount of polystyrene used to transport supplies. Humber College will encourage suppliers to reduce the amount of plastic film and wrapping materials used to transport supplies. <u>Reuse:</u> Staff/Students will be encouraged to reuse plastic crates and totes wherever possible. <u>Recycle:</u> Staff/Students will be provided with recycling bins in high waste generating areas and food service areas for mixed containers/plastics. Staff/Students will be encouraged to place mixed containers/plastics in appropriate recycling bins with appropriate signage affixed to the receptacle. Receptacles will be emptied on a regular basis before they become full into large roll away bins for collection as required.</p>
<p>Mixed Papers (Fine Paper, newsprint, boxboard, magazines, molded papers, kraft, catalogues, flyers, etc)</p>	<p><u>“Mixed Paper 3Rs Program”</u> <u>Reduce:</u> Staff/Students will be encouraged to print on both sides of each piece of paper as well as not print when it is unnecessary. Staff/Students will be encouraged to take reading materials home with them after they are finished with them. Staff and students will be sent, via email, news sources that are available online opposed to purchasing paper copies of news. <u>Reuse:</u> Discarded paper with print only on one side will be used for note pads/scrap paper. Staff/Students will be encouraged to leave newspapers they are finished reading in common areas for others to read. <u>Recycle:</u> Staff/Students will be provided with instructions via email. Receptacles will be provided in each office, classroom and high waste generating areas. Staff/Students will be encouraged to place newsprint, fine paper, boxboard, magazines, molded papers, etc in appropriate recycling receptacles. Staff/Students will empty receptacles into centralized containers. Custodial Staff/Students will empty centralized containers into bulk container in designated area for collection as required.</p>
<p>Confidential Papers</p>	<p><u>“Confidential Paper 3Rs Program”</u> <u>Reduce:</u> None. <u>Reuse:</u> None. <u>Recycle:</u> Staff/Students will be reminded of the existing program. Receptacles will be provided in each designated office area as required. Staff/Students will be encouraged to place all confidential paper in the designated consoles. Contactor will empty consoles appropriately for shredding and recycling as required.</p>
<p>Cardboard</p>	<p><u>“Cardboard 3Rs Program”</u> <u>Reduce:</u> Suppliers will be encouraged to make use of reusable containers for the shipment of supplies to Humber College. <u>Reuse:</u> Cardboard boxes will be reused for shipments when appropriate. <u>Recycle:</u> Staff/Students will be reminded of the existing program. Cleaners will be trained on where to dispose of waste correctly.</p>
<p>Paper Towels</p>	<p><u>“Organics 3Rs Program”</u> <u>Reduce:</u> None. <u>Reuse:</u> None. <u>Recycle:</u> Staff/Students will be reminded that paper towels can be placed in organics bins where available.</p>
<p>Organics</p>	<p><u>“Organics 3Rs Program”</u> <u>Reduce:</u> Students will be encouraged to bring uneaten food items home after lunch breaks or uneaten. Non-perishable food items can be donated to a local food drive. <u>Reuse:</u> Staff/Students provided with reusable china in some food service areas. <u>Recycle:</u> Staff/Students will be continually reminded of the existing program. Kitchen staff & cleaners trained on where to dispose of waste correctly. Additional bins added to the university</p>

	<i>food service areas to capture organic materials. Signs improved relating to organics program to assist staff/students in sorting organic stream correctly. Selling of disposable food containers discouraged on campus, and if sold, containers should be compostable. Updated organics handouts for staff/student education/training program. Training of food service staff regarding improvements to organics program.</i>
Coffee Cups, LDPE (#4) films, Plastic Strapping	<i><u>"Comingled 3Rs Program"</u> – Refer above for description</i>
Styrofoam	<i>No 3Rs Program</i>
Wood Pallets/Scrap Woods	<i><u>"Wood Pallets 3Rs Program"</u> <u>Reduce:</u> Staff to monitor use of Pallet to eliminate/reduce broken pallets. <u>Reuse:</u> Staff will be reminded of the existing program. Staff/Students will be encouraged to use scrap wood before new wood is purchased for use at the College. <u>Recycle:</u> Staff will be reminded of scrap wood recycling program.</i>
Scrap Metals	<i><u>"Scrap Metals 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> None. <u>Recycle:</u> Staff will be reminded of the existing program.</i>
Electronic Wastes	<i><u>"Electronic Wastes 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> Staff/students will be encouraged to reuse/donate electronic wastes if possible. . <u>Recycle:</u> Staff/Students will be reminded of the existing program, continue collecting for proper recycling of waste materials.</i>
Bulbs & Ballasts	<i><u>"Bulbs & Ballasts 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> None. <u>Recycle:</u> Staff/Students will be reminded of the existing program.</i>
Batteries	<i><u>"Batteries 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> None. <u>Recycle:</u> Staff/Students will be reminded of the existing program.</i>
Printer Toners	<i><u>"Electronic Wastes 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> Staff/students will be encouraged to reuse/donate electronic wastes if possible. . <u>Recycle:</u> Staff/Students will be reminded of the existing program, continue collecting for proper recycling of waste materials.</i>
Oil & Grease	<i><u>"Oil & Grease 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> None. <u>Recycle:</u> Staff/Students will be reminded of the existing program.</i>
Yard Wastes	<i><u>"Yard Wastes 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> None. <u>Recycle:</u> Staff/Students will be reminded of the existing program.</i>
Used Furniture	<i><u>"Used Furniture 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> Staff/Students will be reminded of the existing program. <u>Recycle:</u> Staff/Students will be reminded of the existing program.</i>
Air Filters	<i>No 3Rs Program</i>
Construction & Demolition	<i><u>"Construction & Demolition 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> None. <u>Recycle:</u> Staff/Students will be reminded of the existing program.</i>
Carpet	<i><u>"Carpet 3Rs Program"</u> <u>Reduce:</u> None. <u>Reuse:</u> None. <u>Recycle:</u> Staff/Students will be reminded of the existing program.</i>

IV. RESPONSIBILITY FOR IMPLEMENTING THE WASTE REDUCTION WORK PLAN

Identify who is responsible for implementing the Waste Reduction Work Plan at your entity(ies). If more than one person is responsible for implementation, identify each person who is responsible and indicate the part of the Waste Reduction Work Plan that each person is responsible for implementing.		
Name of Person	Responsibility	Telephone #
Jonny Handler	Waste/Garbage, Cardboard, Mixed Containers, Mixed Papers, Organics, Scrap Metals, Scrap Woods, Construction & Demolition	647-212-0646
Kevin Viflanzoff	Confidential papers/Shredding, Printer Toners	416-675-6622
Serge Faria	Electronic Wastes	416-675-6622
Scott Skrinar, Chris Nanos	Fluorescent Bulbs & Ballasts	416-675-6622
Lindsay Walker	Batteries	416-675-6622
Rebecca Muyal	Used Furniture	416-675-6622
Walter/Don	Oil & Grease	416-675-6622
Mark Palenchar and Robert Gray	Yard Wastes	416-675-6622

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V. TIMETABLE FOR IMPLEMENTING WASTE REDUCTION WORK PLAN

Provide a timetable indicating when each Source Separation and 3Rs program of the Waste Reduction Work Plan will be implemented.	
Source Separation and 3Rs Program	Schedule for Completion
Mixed Containers	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Mixed Papers	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Confidential Papers	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Cardboard	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Organics	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Scrap Wood/ Wood Pallets	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Scrap Metals	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Electronic Waste	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Bulbs & Ballasts	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Batteries	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Printer Toners	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Oil & Grease	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Yard Wastes	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>

	<i>promotional campaigns to be considered.</i>
Used Furniture	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Construction & Demolition	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>
Carpet	<i>3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.</i>

VI. COMMUNICATION TO STAFF, CUSTOMERS, GUESTS AND VISITORS

Explain how the Waste Reduction Work Plan will be communicated to employees, customers, tenants, guests/visitors and students:

Explain how the Waste Reduction Work Plan will be communicated to employees, customers, tenants, guests/visitors and students. Sustainability committee will review and develop a work plan to be posted on campus for staff and students. Additional promotional campaigns will also be considered to target specific audiences for specific programs. Continue to improve educational materials (hand-outs, flyers) and signage across campus as required.

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VII. ESTIMATED WASTE PRODUCED BY MATERIAL TYPE AND THE PROJECTED AMOUNT

Material Categories (as stated in Part III)	Estimated Annual Waste Produced * (tonnes)	Name of Proposed 3Rs Program (as stated in Part III)	Projections to Reduce, Reuse or Recycle Waste (tonnes)			Estimated Annual Amount to be Diverted ** (%)
			Reduce	Reuse	Recycle	
PET (#1) plastic food and beverage bottles	62.51	Comingled 3Rs Program			53.13	85%
HDPE (#2) Containers	5.12	Comingled 3Rs Program			4.35	85%
Polypropylene (#5) Containers	20.77	Comingled 3Rs Program			17.66	85%
Polystyrene (#6) Containers	14.56	Comingled 3Rs Program			12.37	85%
Glass food and beverage bottles/jars	6.78	Comingled 3Rs Program			5.76	85%
Aluminum food and beverage cans	12.79	Comingled 3Rs Program			10.87	85%
Steel food and beverage cans	12.16	Comingled 3Rs Program			10.34	85%
Gable Top Containers	12.90	Comingled 3Rs Program			10.97	85%
Aseptic Containers	10.05	Comingled 3Rs Program			8.54	85%
Fine paper	116.10	Mixed Papers & Confidential Paper 3Rs Program			98.69	85%
Newsprint	0.91	Mixed Papers 3Rs Program			0.77	85%
Boxboard shoe boxes, cereal boxes, etc.	33.97	Mixed Papers 3Rs Program			28.87	85%
Glossy magazines, catalogues, flyers	17.95	Mixed Papers 3Rs Program			15.26	85%
Cardboard	62.47	Cardboard 3Rs Program			56.22	90%
Paper towels	79.52	Organics 3Rs Program				NA
Coffee cups	42.28	Comingled 3Rs Program			21.14	50%
Organics / Food	192.27	Organics 3Rs Program			144.21	75%

Waste						
LDPE (#4) Plastic Film	16.05	Comingled 3Rs Program			8.03	50%
Styrofoam (#6)	8.36	No 3Rs Program				NA
Plastic Strapping	0.00	Comingled 3Rs Program			0.00	50%
Scrap Woods/Pallets	71.46	Scrap Woods/Pallets 3Rs Program			67.88	95%
Scrap Metals	23.39	Scrap Metals 3Rs Program			22.92	98%
Electronic Wastes	25.24	Electronic Wastes 3Rs Program			23.98	95%
Bulbs & Ballasts	0.32	Bulbs & Ballasts 3Rs Program			0.32	100%
Batteries	0.12	Batteries 3Rs Program			0.12	100%
Printer Toners	0.13	Printer Toners 3Rs Program		0.00	0.13	100%
Oil & Grease	1.29	Oil & Grease 3Rs Program			1.29	100%
Yard Wastes	102.07	Yard Wastes 3Rs Program			102.07	100%
Used Furniture	77.72	Used Furniture 3Rs Program		70.16	0.00	100%
Air Filters	0.30	No 3Rs Program			0.30	100%
Carpet	2.90	Carpet 3Rs Program			2.90	100%
C&D Materials	0.00	C&D 3Rs Program			0.00	100%
PPE & Gloves	3.63	PPE & Gloves 3Rs Program			0.91	25%
Other / Non-Recyclable	81.99	No 3Rs Program				NA

* Estimated Waste Produced = Waste Diverted (3Rs) + Waste Disposed

** Estimated Waste Diversion Rate = Amount of Waste Diverted (3Rs) ÷ Estimated Waste Produced x 100%

I hereby certify that the information provided in this Waste Reduction Work Plan is complete and correct.		
Signature of authorized official:	Title:	Date: