Waste Management | Sustainability Services

Waste to Resource Assessment

Prepared for:

ST. MICHAEL'S
UNITY HEALTH TORONTO

Unity Health - St. Michael's Hospital
30 Bond St, Toronto, ON
May 1, 2024

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This assessment is designed to exceed the minimum guidelines for performing waste assessments as set forth by the US EPA and Canadian provincial regulatory authorities. This report has been prepared for the specific purpose(s) contained herein. To the extent that statements and information provided by the client, its representatives, or partners have been used in the preparation of this report, Sustainability Services and Waste Management of Canada Corporation relied upon the same to be accurate, and for which no assurances are intended, and no representations or warranties are made. Sustainability Services and Waste Management of Canada Corporation make no certification and gives no assurances except as explicitly set forth in this report. This report and the information contained herein, is produced for the expressed use of Unity Health - St. Michael's Hospital, Toronto, ON. Sustainability Services and Waste Management of Canada Corporation specifically prohibit redistribution of this report and the material contained herein in whole or part without expressed written permission of Sustainability Services and Waste Management of Canada Corporation.

Executive Summary

On May 1, 2024, Sustainability Services conducted a Waste to Resource™ assessment for Unity Health - St. Michael's Hospital located at 30 Bond St in Toronto, ON. A few goals of the assessment were as follows:

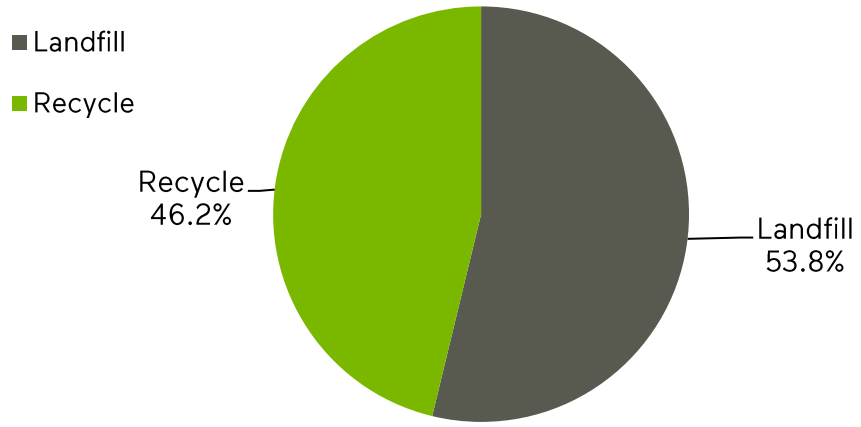
- **Update inventories for waste generation at Unity Health - St. Michael's Hospital**
- **To identify and quantify waste composition and commodity**
- **To determine the recovery performance of existing programs**
- **Identify opportunities to further increase diversion and reduce cost**
- **Develop strategies that could be implemented throughout the facility**

Our goal is to provide Unity Health - St. Michael's Hospital with strategies that will maximize the efficiency of your waste diversion system. During the waste assessment conducted by Sustainability Services, visual inspections of waste generation points throughout the facility resulted in the discovery of additional diversion opportunities. The assessment identified three primary opportunities that should occur to improve your overall waste diversion rate. The following are our recommendations:

- **Increase Awareness of Current Diversion Programs**
- **Employee, Contractor and Visitor Education and Engagement**
- **Continual Improvement and Additional Recommendations**

The facility generated a combined 1,863.49 tonnes of waste and diverted materials in the last year. The current diversion rate for your facility is 46.2%.

Figure 1– Current Diversion Rate at Unity Health - St. Michael's Hospital



A team of sustainability consultants performed an assessment that involved a walkthrough of the facility and a targeted sort and weigh analysis of the waste stream. The following is a summary of key findings identified during the assessment:

- **The current diversion rate is 46.2%**
- **Annually, it is estimated that 1,002.15 tonnes of waste and 861.34 tonnes of diverted materials will be generated from your facility**
- **Of all the material generated on site, up to 60.2% potentially could have been diverted through currently available diversion programs**
- **Plastics account for 27.6% of the waste sent to landfill**
- **Papers account for 24.8% of the waste sent to landfill**
- **Organics account for 5.1% of the waste sent to landfill**

Photographs 1 to 2 – Waste Sample Collected for Assessment Period

Assessment Findings and Goals Alignment

Facility Information

Table 1 – Facility Information

Item	Comments
Facility Name:	Unity Health - St. Michael's Hospital
Description:	St. Michael's Hospital is a leading teaching hospital and research centre based in downtown Toronto. The facility is 245,000 sq.ft. with approximately 460 patient beds.
Address:	30 Bond St, Toronto, ON
Contact Name:	Justin Carrozza
Contact Number:	416-360-4000

Table 2 – Assessment Summary

Item	Comments
Performed By:	Kirthan Sathananthan
Performed On:	May 1, 2024
Report Written:	Kirthan Sathananthan
Report Reviewed:	Christopher Doyle
Assessment Type:	Waste to Resource Assessment – Waste Audit
Assessment Level:	☑ Basic Material Characterization ☐ Detailed Material Characterization ☑ Basic Options Analysis ☑ Detailed Option Analysis ☐ Carbon Analysis ☐ Material Process Mapping ☑ Implementation Feasibility Analysis ☑ Action Plan
Account Manager:	Keira Toscan

Goals, Objectives, and Other Factors

The following is a list of company goals, objectives, or other factors considered during this assessment.

- **Apply findings from the waste audit to reduce waste, maximize collection of recycling materials and optimize waste management efficiencies**
- **Set goals, monitor waste generation, and track recovery levels on a regular basis**
- **Streamline and standardize handling routines of materials throughout the facility**
- **Reduce waste spend and disposal costs**
- **Provide ongoing and improved employee training and education avenues**
- **Identify areas of new or enhanced diversion opportunity**
- **Increase capture rate of divertible materials and reduce overall generation of non-recyclable materials**

Regulatory Requirements

The facility took initiative to conduct a solid nonhazardous waste audit in effort to adhere to Ministry of the Environment, Conservation and Parks Regulations 102/94 and 103/94. Under O.Reg. 102/94, all waste audits must address:

- Identify the amount, nature and composition of the waste generated in designated functional areas of the facility;
- How the waste is produced, including relevant management decisions and policies;
- How the waste is managed; and
- The extent to which materials or products used or sold consist of recycled or reused materials or products.

According to O.Reg. 102/94, the Waste Reduction Work Plans 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 employee.

- 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.

Please see Appendix 6 – Ontario's 3Rs Regulations for more details or https://www.ontario.ca/laws/regulation/940103 and https://www.ontario.ca/laws/regulation/940102 for the full regulations. Excerpt below:

PART IX
HOSPITALS

46. This Part applies to 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. O. Reg. 102/94, s. 46.

47. (1) The operator shall conduct a waste audit covering the waste generated by the operation of the hospital. 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. 47.

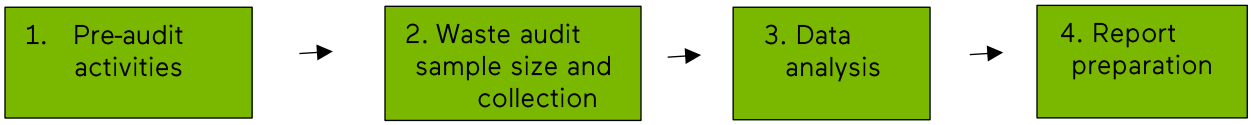
Options Overview

Three options were identified during the assessment. The table below lists key options that represent the most significant opportunities.

Table 3 – Options Summary Table

Option	Description	Benefit	Rationale
Increase Awareness of Current Diversion Programs	Stakeholders need to receive consistent messages about current diversion programs.	✓ Increase diversion and capture rates ✓ Reduced waste spend	Majority of the materials generated throughout the facility can be diverted from landfill though current diversion programs.
Employee, Contractor and Visitor Education and Engagement	All stakeholders need to receive consistent messages about current diversion programs available to them.	✓ Increase awareness on environmental programs and issues ✓ Increased efficiencies ✓ Ensure effective education is offered	All stakeholders need to be encouraged and re-educated regarding waste and recycling procedures within the facility. Dedicated and knowledgeable staff will create the opportunity for the facility to achieve superior capture rates and manage an effective program.
Continual Improvement and Additional Recommendations	Continually improve the waste diversion program on site. Monitor and effectively manage all programs and methods in place at the facility.	✓ Expand programs available ✓ Ensure the tools and infrastructure are in place to support diversion goals	Control decision-making and input regarding materials brought into the facility. Determine how best to capture non-traditional materials for recycling or reuse.

Sampling Methodology



1. **Pre-audit activities** - Collecting background information (such as identifying occupancy rate, changes in collection services), historical data, diversion reports, receptacle service information, etc. Establishing the plan for the assessment. Conducting a site tour of the facility to review procedures and current infrastructure.

2. **Waste audit and sample size** - To characterize the material stream, visual observations, and waste samples (non-hazardous solid waste) were obtained from various collection areas throughout the facility. These collection areas were identified from labels placed on the waste bags or collection receptacle. For the purposes of this assessment, a sample **generation area** is a combination of a specific collection area or department and/or waste generating process. The sample material was collected in a safe, designated location separate from other waste collection areas for the assessment.

   During this assessment, samples were collected from 4 unique generation areas throughout the facility over a 24-hour period. For the purposes of this project is it assumed that the sample period chosen is a fair representation of typical activities and waste generation at the site, although daily variances are possible. The materials were sorted and divided into up to 10 waste categories and weights of each material sub-category (up to 90) were recorded.

3. **Data analysis** – Analysis of on and off-site data provided by WM and the client. Calculation of diversion and capture rate for the site. Annual projection calculations were determined using the weights of the samples provided projected against the facility's operational days.

4. **Report preparation -** Full report prepared including site specific recommendations and Ministry of the Environment, Conservation and Parks - Audit and Workplan forms.

Limitations

Hazardous, Industrial, and Liquid Industrial Wastes were not included within the scope of this assessment. These materials are not typically included in MOE Reg. 102/94 solid waste audits and specialized processes are required to handle these materials due to the health and safety concerns associated.

Staff may occasionally dispose bulk materials (e.g., wood crates, air filters) in landfill. Some of these materials were identified in the landfill. Sample weights were adjusted to ensure these materials do not skew annual totals.

A portion of the sample bags included diapers and medical fluids, auditors conducted limited or simple sorting of these sample bags.

Material Composition Breakdown

Landfill Waste Material Comparison by Category

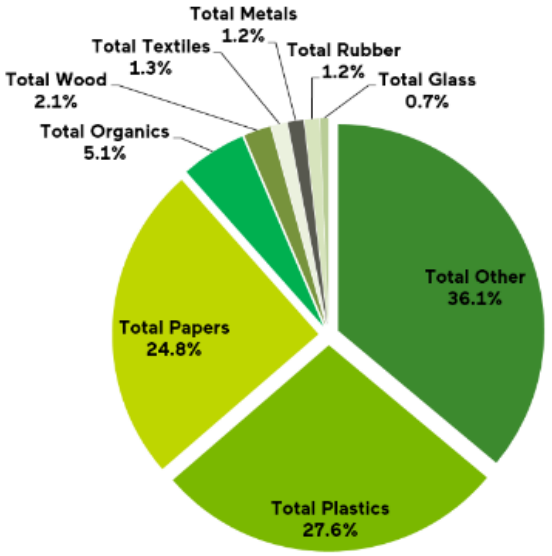
This section displays a breakdown of general material categories by weight and volume. The largest category by weight was Other materials representing 36.1% of the landfill waste stream.

Table 4 – Landfill Waste Material Comparison

Waste Category	Total Audited Waste Material (kg)	Material Composition (%)	Annual Projected Volume Generated (kg)
Total Other	150.09	36.1%	361,569
Total Plastics	114.76	27.6%	276,458
Total Papers	103.12	24.8%	248,418
Total Organics	21.27	5.1%	51,240
Total Wood	8.81	2.1%	21,223
Total Textiles	5.20	1.3%	12,527
Total Metals	5.12	1.2%	12,334
Total Rubber	4.87	1.2%	11,732
Total Glass	2.76	0.7%	6,649
Total	**416.00**	**100.0%**	**1,002,150**

Figure 2 below represents the generation areas at the facility.

Figure 2 – Landfill Waste Material by Category



Audited Waste Material Composition by Sample Collection Area

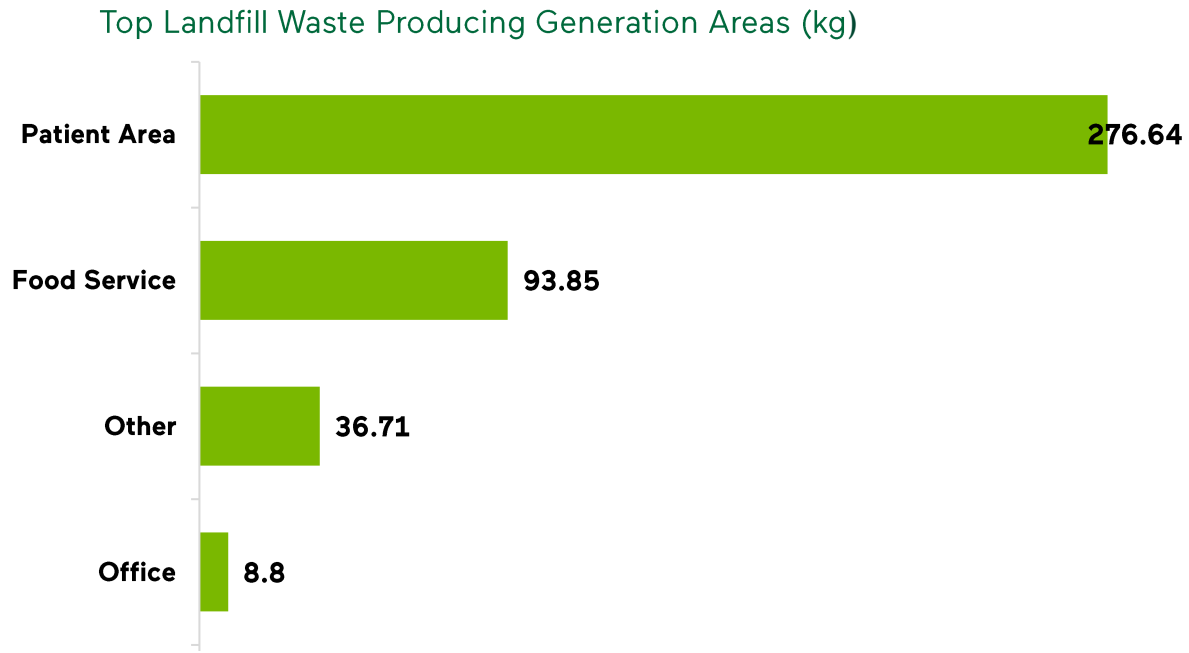
The following table displays a breakdown of the waste sources/ generation areas identified during the assessment. For further in-depth analysis of the generation areas identified, consult Appendices and (if requested) Supplementary Data. The largest generation source/ area identified was the Patient Area generation area representing 66.5% of the audited sample.

Table 5 – Audited Waste Sources

Generation Area	Total Audited Waste (kg)	Generation Composition (%)	Annual Projected Volume (kg)
Patient Area	276.64	66.5%	666,430
Food Service	93.85	22.6%	226,086
Other	36.71	8.8%	88,435
Office	8.80	2.1%	21,199
Grand Total	**416.00**	**100.0%**	**1,002,150**

Figure 3 below represents the top four generation areas identified at the facility and some smaller areas are not specifically noted.

Figure 3 – Waste Generation by Collection Area



Diversion Opportunities

Increased diversion opportunities represent the largest potential cost savings and landfill diversion opportunity for Unity Health - St. Michael's Hospital. While diversion programs are currently in operation, the audit shows that they are not working at their optimal efficiency.

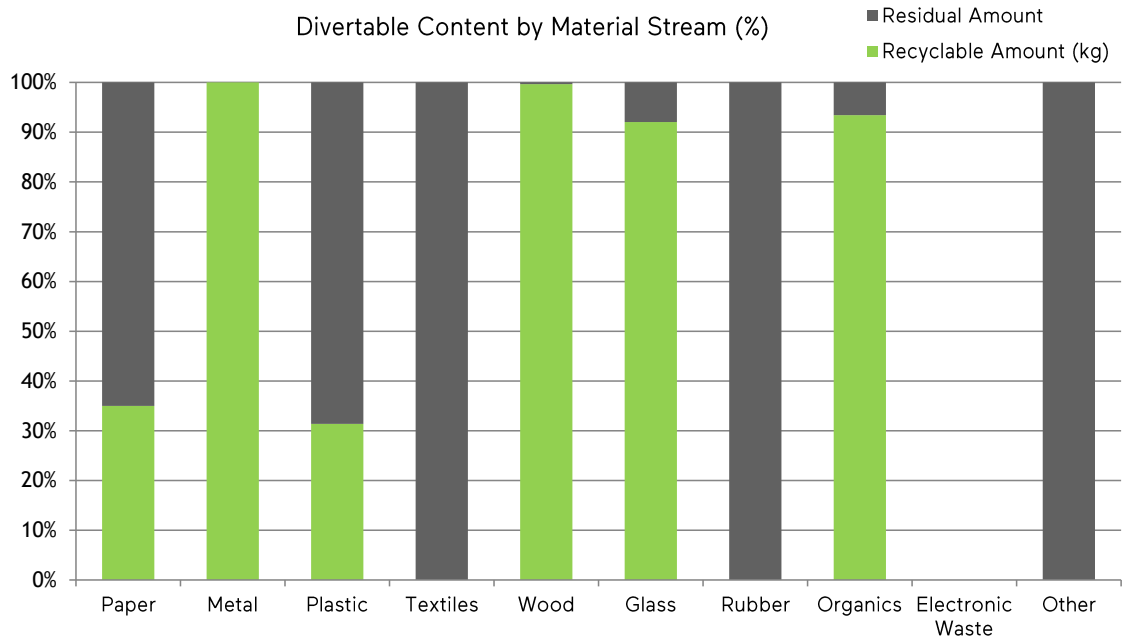
Diversion rate is calculated as follows:

$$\textbf{Diversion Rate} = \frac{\text{Weight of recovered material}}{\text{Total weight of material generated on-site}} \times 100\%$$

The current diversion rate at the facility is 46.2%. Based on the diversion program currently in place 60.2% of the material generated at the facility is recyclable or divertible. Therefore, there is room for improvement within the diversion program where most employees in the

Figure 4 outlines the material in each category which could potentially be diverted.

Figure 4 - Diversion Opportunity by Material Category



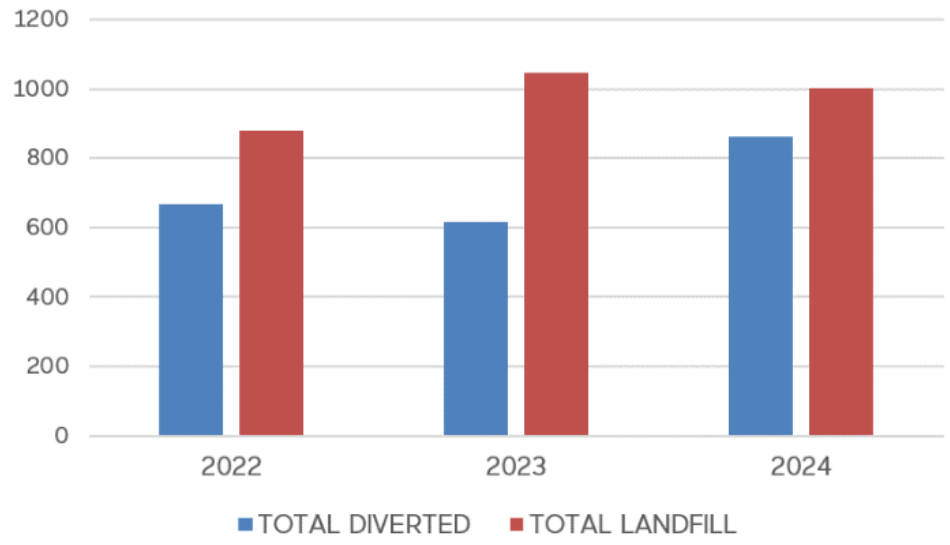
Year Over Year Audit Comparison

An assessment was completed at the facility on an annual basis. It was determined that the diversion rate has improved from 37.0% in 2023 to 46.2% in 2024.

The facility generated 1047.7 MT of landfill waste in 2023, compared to the current 1002.2 MT.

The facility captured 861.34 MT of material for diversion, recycling or reuse in the current assessment compared to 616.29 MT in 2023.

Figure 5 – Comparison of 2022 to 2024 results (MT)



Diverted Material Comparison by Category

This following table displays a breakdown of assessed diverted, recycled, reused, and composted materials. The facility currently has programs in place to capture the following waste streams:

Table 6 – Facility Service Information

Diversion Program	Service Provider/s	Container Type
Cardboard	WM	14-yard bin
Mixed Paper and Beverage Containers	WM	96-gallon totes
Confidential Paper Shredding	Shred-It	Shredding consoles, totes
Organics	Urban Street	32-gallon totes
E-Waste	G.B. Scrap Metal	Not identified
Scrap Metal	G.B. Scrap Metal	Not identified
Skids	Happy Pallets Inc	Not identified

Landfill at the facility was collected in a 35-yard compactor, 20-yard open top bin and 40-yard open top bin.

Table 7 – Diverted Material Comparison

Diverted Material	Annual Projected Volume (kg)	Percentage of all Diverted Materials (%)
Confidential Paper Shredding	334,833	38.9%
Organics	301,730	35.0%
Cardboard	143,900	16.7%
Skids	61,235	7.1%
Metal	13,608	1.6%
E-Waste, Batteries	4,536	0.5%
Mixed Paper and Beverage Containers	1,500	0.2%
Total	**861,341**	**100.0%**

Capture Rate

The **capture rate** indicates the percentage of a material (i.e., office paper, organics) that is being disposed of via one of the sites recovery programs (i.e., single stream, mixed recycling, organics). A 100% capture rate indicates that all recoverable materials being produced on-site has been placed in the correct receptacle and the landfill garbage contains no recoverable materials.

$$\text{Capture Rate} = \frac{\text{Recovered material (e.g. paper in mixed recycling)}}{\text{Recovered material (e.g. paper in mixed recycling)} + \text{Waste material (e.g. paper in garbage)}} \times 100\%$$

Based on the assessment findings, of the 1,863,491 kg of material generated at the facility in the last 12 months, 1,122,527 kg of that material is potentially divertible in the available diversion programs. As 861,341 kg of material was captured for diversion, the facility wide capture rate was determined to be 76.7%. Table 8 below outlines the capture rate per material.

Table 8 – Capture Rate Calculations by Material

Diverted Material	Total Generated (kg)	Captured for Diversion (kg)	Landfilled (kg)	Capture Rate (%)
Aluminum food and beverage cans	6,173	150	6,023	2.4%
Cardboard	163,509	143,900	19,609	88.0%
Fine paper	341,397	334,893	6,504	98.1%
Glass food and beverage bottles/jars	6,709	60	6,649	0.9%
Newsprint	445	60	385	13.5%
Steel food and beverage cans	1,903	120	1,783	6.3%
PET (#1) plastic	11,213	180	11,033	1.6%
HDPE (#2)	14,327	210	14,117	1.5%
LDPE (#4) plastic film	74,679	-	74,679	0.0%
PP (#5) plastic containers	18,706	60	18,646	0.3%
Polystyrene (#6)	43,007	30	42,977	0.1%
Organics	352,970	301,730	51,240	85.5%
Boxboard	42,819	300	42,519	0.7%
Glossy magazines, catalogues, flyers	897	30	867	3.3%
Wood	21,223	-	21,223	0.0%
Steel	18,137	13,608	4,529	75.0%
Drywall	-	-	-	
Skids	61,235	61,235	-	100.0%
Paper towels	76,872	-	76,872	0.0%
Printer cartridges	-	-	-	
IT equipment/audio-visual equipment	4,536	4,536	-	100.0%
Furniture	-	-	-	
Building/renovation material	7,347	-	7,347	0.0%
Disposable food packaging (incl. polycoat)	40,808	240	40,568	0.6%
Diapers	108,068	-	108,068	0.0%
Clothing/textiles	12,527	-	12,527	0.0%
Mixed medical materials, misc.	433,984	-	433,984	0.0%

Recommendations Overview

Three options have been identified that can help Unity Health - St. Michael's Hospital make its operations more sustainable. Each option should be carefully reviewed for operational, financial, social, and strategic fit.

- **Increase Awareness of Current Diversion Programs**
- **Employee, Contractor and Visitor Education and Engagement**
- **Continual Improvement and Additional Recommendations**

Landfill Sample Material Category Breakdown

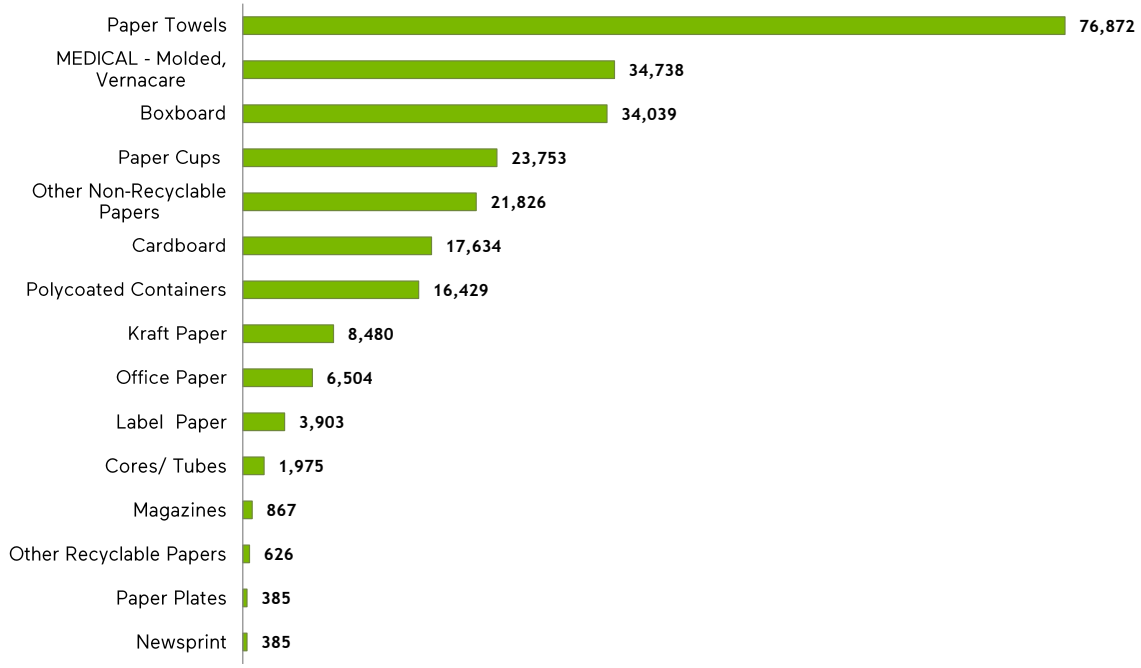
Increase Awareness of Current Diversion Programs:

Below is a breakdown of the composition of the audited landfill material generated on site based on the analysis of the audited sample. As well as recommendations for selected sub-category material types.

Papers

Paper materials sent to landfill accounted for 24.8% of your total waste; nearly 248,418 kg of paper will be sent to landfill annually. The facility currently has programs in place to capture confidential paper shredding, cardboard, and mixed paper collection for recycling.

Figure 6 - Annual Papers Disposed in Landfill (in kg)



Paper towel represented 7.7% of the landfill waste sample. This subcategory includes hand towels, facial tissue, and similar materials. These materials were generated throughout the facility.

Paper towel is typically accepted in organic collection programs and could be included in the program already in place at the facility in certain areas. The facility offers both hand towels and hand dryers in most washroom areas. The facility should consider reducing the hand towel dispensers and focusing on providing hand dryers to reduce these materials where generated.

Medical – Molded, Vernacare (e.g., molded bed pans) accounted for 3.5% of all landfilled materials. Some of these materials may be collected separately and sent for special handling.

Boxboard (e.g., tissue or nitrile glove boxes) accounted for 3.4% of the landfill sample. These materials are accepted in the existing mixed recycling program. Examples should be included on educational signage to increase awareness.

Paper cups (e.g., coffee cups, soft drink cups) accounted for 2.4% of all landfilled materials. These materials are not accepted in the facility's diversion programs.

Other non-recyclable papers include wax paper and soiled food packaging. This material subcategory accounted for 2.2% of the disposal weight.

Cardboard accounted for 1.8% of the landfill sample. The facility should encourage staff to separate these materials throughout their workday and collect then place for collection.

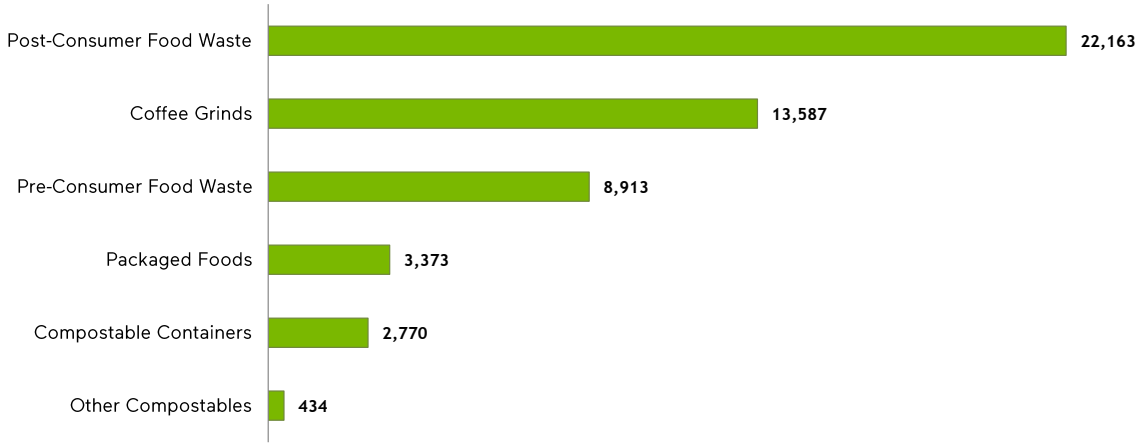
Polycoated containers included 1.6% of the landfill sample. This included milk cartons and tetra pak containers. Education and signage should include these materials to increase awareness that they are recyclable. These items were primarily generated in meal prep areas, by food vendors and coffee shops. Employees should be re-educated in these areas to separate at the source.

Photographs 3 to 5 – Paper Material Examples in Landfill Sample (Paper Towel, Boxboard, Moulded Bed Pan)

Organics

Organics materials sent to landfill accounted for 5.1% of your total waste; nearly 51,240 kg of Organics will be sent to landfill annually. A program currently exists at the facility to capture organic materials for compost, most receptacles are found in the kitchen and food service area.

Figure 7 - Annual Organics Disposed in Landfill (in kg)



Organic material identified in the audited sample includes **post-consumer food waste** (2.2%) and **coffee grinds** (1.4%).

Pre-consumer food waste included pre-purchased food and prep waste accounted for 0.9% of the audited sample.

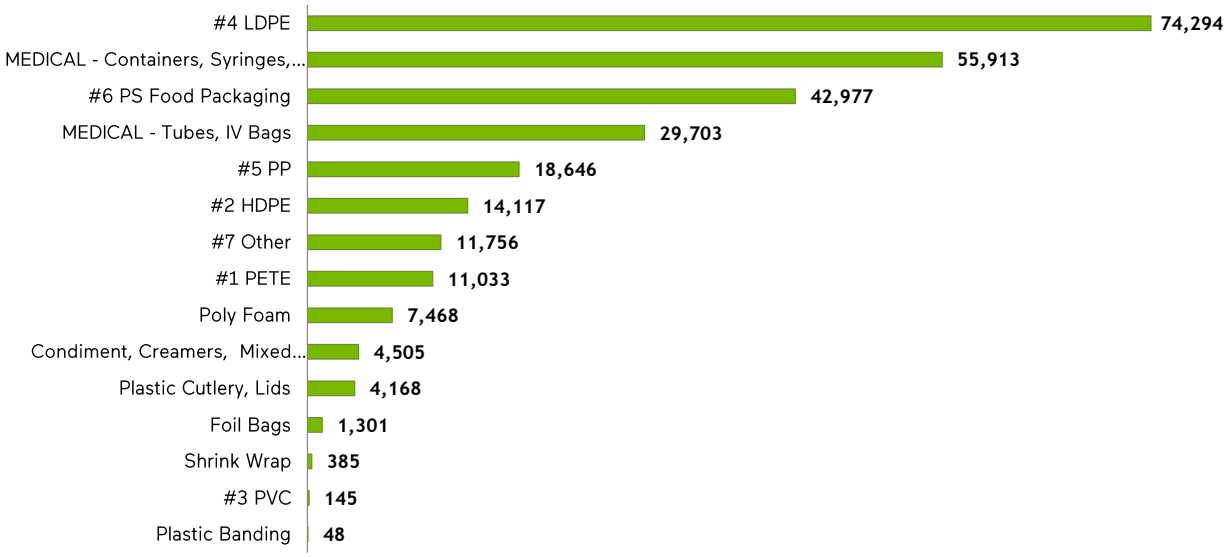
These materials are accepted in the facility's organics compost program. The facility should review opportunities to expand the program to capture more material.

Photograph 6 – Organic Material Examples in Landfill Sample (Food Waste)

Plastics

Plastic materials account for 27.6% of your waste stream composition; 276,458 kg of plastic materials will be sent to landfill this year from your facility The facility currently has programs in place to capture bottles and containers plastics #1-7. Plastic is generally not a heavy material, therefore the weight generated indicates a significant volume of material. Utilizing current recycling programs will ensure this material is diverted.

Figure 8 - Annual Plastics Disposed in Landfill (in kg)



#4 LDPE film bags & packaging accounted for 7.4% of landfilled materials. At this time, LDPE materials are not accepted in mixed recycling programs.

Medical Plastics – Containers, Syringes represented 5.6% of the audited sample, while **Medical Plastics – Tubes, IV Bags** accounted for 3.0% of all landfilled materials. Due to health and safety issues most, medical plastics are single use plastics that are not accepted in the facility's diversion programs. These materials were identified in Patient Areas.

PS#6 representing 4.3% overall, this most often included food packaging, take out containers, beverage lids (excluding Styrofoam). If clean, these are often accepted as part of the existing diversion program. Food vendors should be encouraged to provide recyclable or compostable options for the products they bring onto on facility.

PP #5 accounted for 1.9% of the landfill sample. Fast food beverage, yogurt, food containers are the most common sources of #5. Users should be aware that these products are recyclable, examples of these materials should be included in educational signage.

HDPE#2 represented 1.4% of the landfill waste stream. Cleaning containers, food containers are the most common sources of #2 HDPE. These are commonly accepted in mixed recycling programs. HDPE #2 examples should be included in educational signage.

Other #7 represented 1.2% of the audited sample. This included hard scrap plastics and plastic containers. Each of these materials should be reviewed on an individual basis regarding their recyclability.

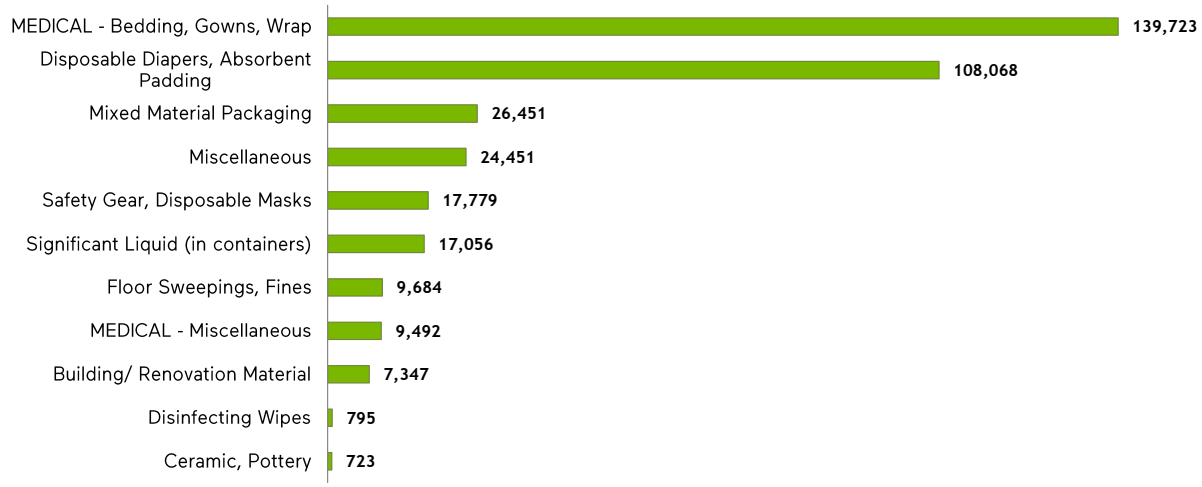
PETE#1 plastic materials represented 1.1% of the landfill sample. Water, juice, and beverage containers are the most common sources of #1 PETE, and most users are aware that these types of products are recyclable, but these items are being found in the waste stream. Examples of these materials should be included in educational signage.

Photographs 7 to 11 – Plastic Material Examples in Landfill Sample (#4 LDPE, Medical Container, #6 PS, Medical Tubing, #2 HDPE)

Other Materials

Other materials sent to landfill accounted for 36.1% of your total waste; nearly 361,569 kg of this category of material will be sent to landfill annually. Currently there are no programs in place to capture most of these materials from landfill, programs may be available for construction & demolition on an as needed basis.

Figure 9 - Annual Other Disposed in Landfill (in kg)



Medical bedding, gowns and wrap accounted for 13.9% of the disposal weight. These materials are not accepted facility's diversion programs due to the material involved and contact with patients.

Disposable diapers, absorbent pads represented 10.8% of the landfill sample. Currently, no programs are available to divert this material.

Mixed material packaging identified in the audited sample include pharmaceutical packaging, composite cans, and bubble mailer packaging. This material subcategory accounted for 2.6% of all landfilled materials.

The **miscellaneous category** represented 2.4% of the audited sample and included air filters, mixed parts, gifts, and decorations. These items are not accepted in mixed recycling programs but there may be specialized programs available for some items.

Safety gear and disposable masks accounted for 1.8% of the landfill sample. These materials are not accepted in the current program. Specialty recyclers such as Terracycle and Go Zero can offer programs for unique materials not typically recycled.

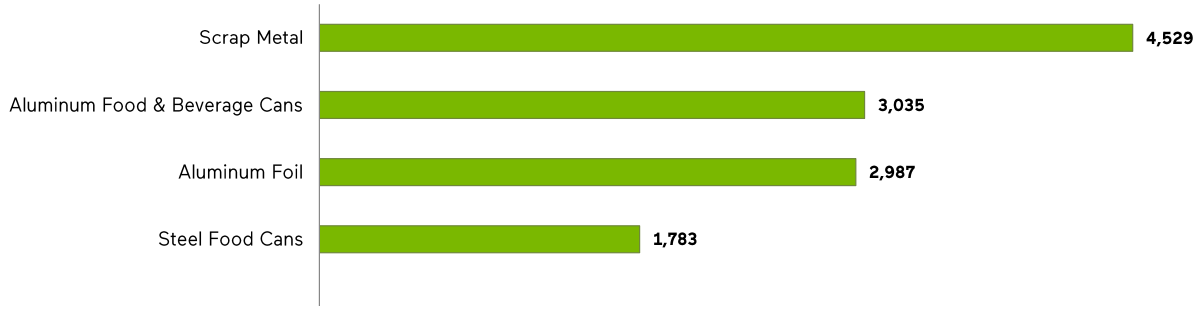
Significant liquids represented 1.7% of the facility's disposal weight. Commonly this category includes soaps, water and coffee and other beverages most often unfinished in the original containers.

Photographs 12 to 15 – Other Material Examples in Landfill Sample (Medical Bedding, Diapers, Air Filters, Pharmaceutical Packaging)

Metals

Metal materials sent to landfill accounted for 1.2% of your total waste; nearly 12,334 kg of Metals will be sent to landfill annually. The facility has programs in place to capture scrap metal and most metal food and beverage containers in the mixed recycling program.

Figure 10 - Annual Metals Disposed in Landfill (in kg)



Aluminum food and beverage cans and **steel food cans** were identified in minimal amounts. These are recyclable materials and could be accepted in mixed recycling programs.

Glass

Glass materials sent to landfill accounted for 0.7% of your total waste; nearly 6,649 kg of Glass will be sent to landfill annually. The facility has programs in place to capture most glass food and beverage containers in the mixed recycling program.

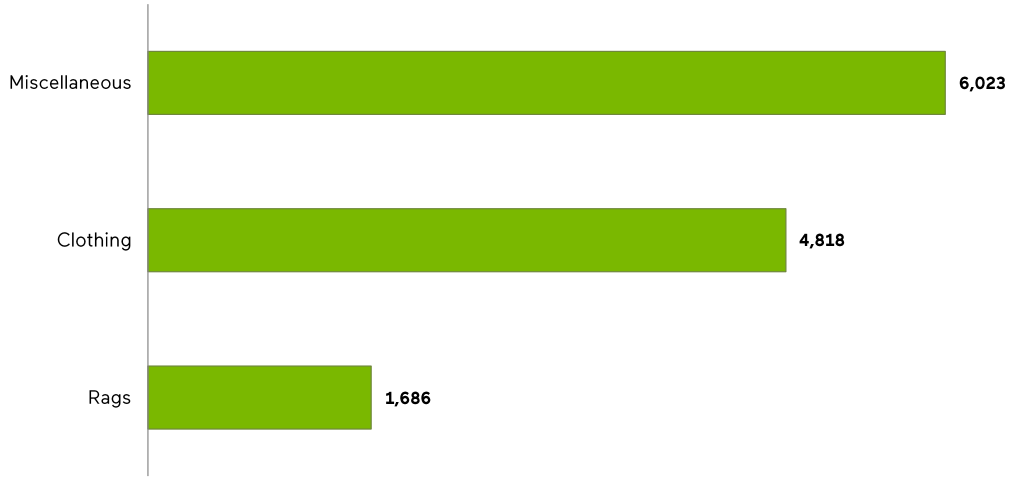
Figure 11 - Annual Glass Disposed in Landfill (in kg)

Clear glass beverage bottles were represented in minimal amounts. These materials are accepted in the facility's recycling program.

Textiles

Textiles materials sent to landfill accounted for 1.3% of your total waste; nearly 12,527 kg of Textiles will be sent to landfill annually. There is currently no program in place to capture these materials.

Figure 12 - Annual Textiles Disposed in Landfill (in kg)

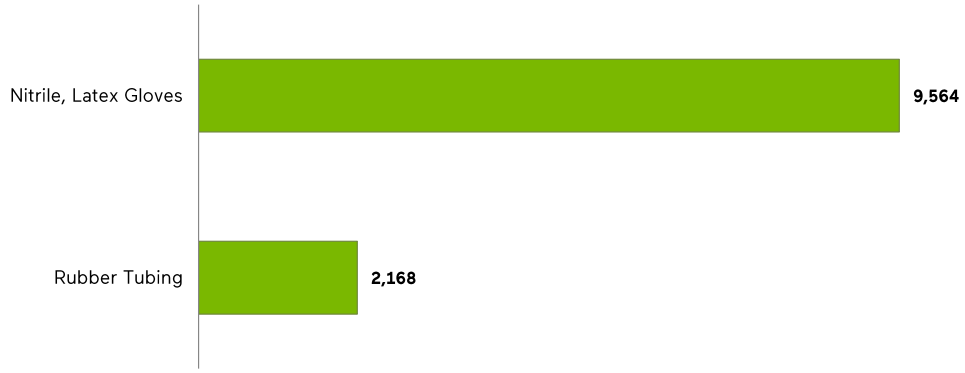


Textiles identified in the landfill waste stream are not currently recyclable. The facility should ensure the employees are trained to fully use all resources such as rags prior to disposal. As well, the facility should provide the opportunity to collect and donate clothing is the material is in good condition.

Rubber

Rubber materials sent to landfill accounted for 1.2% of your total waste; nearly 11,732 kg of Rubber will be sent to landfill annually. There are currently no programs in place to capture these items.

Figure 13 - Annual Rubber Disposed in Landfill (in kg)



Nitrile work gloves accounted for 1.0% of the landfill sample. These are not accepted in mixed recycling programs. The facility should consider implementing a targeted program from a supplier such as a Terracycle or Go Zero. These vendors can offer programs for diverting unique materials not typically recycled.

Photographs 16 to 17 – Rubber Material Examples in Landfill Sample (Nitrile Gloves, Rubber Tubing)

Wood

Wood materials sent to landfill accounted for 2.1% of your total waste; nearly 21,223 kg of Wood will be sent to landfill annually. The facility has a program to collect wooden pallets for diversion.

Figure 14 - Annual Wood Disposed in Landfill (in kg)

Scrap wood represented 2.0% of the audited sample. These materials are not accepted in the facility's diversion program. Scrap wood could be collected through a special collection program.

Photograph 18 – Wood Material Examples in Landfill Sample (Scrap Wood)

Government of Canada Actions on Plastic Waste

With the consistent growth in plastic pollution and associated carbon emissions, the Government of Canada has made robust commitments to address the developing problem of plastic use. The *'Single-Use Plastics Prohibition Regulation'* (SUPPR) is a part of the Government of Canada's plan to support the concerns of pollution and GHG emissions, meeting a target of zero plastic waste by 2030.

Materials such as, single-use plastic checkout bags, ring carriers, foodservice ware, stir sticks, and straws will be prohibited from manufacture, import, and sale within Canada. The government has set explicit targets and commitments including plastic waste diversion, reducing single use materials, and procuring sustainable plastic products.

Table 9: Goals to Reduce or Divert Plastics

Goal and Commitment	Facility Participation	Facility Recommendations
Increase Plastic Waste Diversion:	Container recycling collection is in place.	▪ Increase capture rates in existing programs through education. ▪ Consider local procurement to reduce shipping materials. ▪ Implementation of additional diversion program for limited materials.
Reduce Single-Use Plastics in Operations, Meetings and Events:	Currently, there are minimal in-person events and meetings. Most kitchens are equipped with reusable dishes that can be washed and reused, as observed on site tour.	▪ Ensure all kitchens are equipped with reusable cutlery and assess options for sanitizing dishwashing systems. ▪ Discourage single-use beverage pods and offer refillable pods as an alternative. ▪ Reduce foil packaging by encouraging employees to participate in 'waste-free lunches.'
Procure Sustainable Plastics:	When procuring products that contain plastics, promote the procurement of sustainable products and the reduction of associated plastic packaging waste.	▪ Ensure all operational plastics are accepted into the current recycling program. ▪ Seek local procurement to avoid shipping material. ▪ Source procurement options with minimal packaging.

A considerable amount of the single-use plastics identified in the waste assessment were related to takeout food. This included plastic cutlery, hard to recycle food packaging, stir sticks, and straws. Once implemented, the facility should complete a waste assessment to determine progress and opportunities for future waste diversion programs.

Employee, Contractor and Visitor Education and Engagement

The success of a Diversion Program is driven by user participation. If those who generated the waste are not utilizing diversion programs, success will never be achieved as it is not enough to simply implement programs and expect those programs to be effective. There are two critical factors necessary to ensure that diversion programs are effective. These factors are education and engagement.

As many different stakeholders are involved and contribute to the waste and diversion program it is important to target education towards each group.

1. Communication Program - The facility could maintain a communication program to communicate to educate all stakeholders. The following are all methods that can ensure stakeholders understand the steps that are being taken to achieve environmental sustainability within the facility and feel included in its successes.

   Promotion - The facility could use internal communication such as newsletters, internal emails, and educational boards to relay their message. As well as Earth Day or Environment Days to promote the waste management program through promotional materials or information booths; Waste Reduction Week in October is another opportunity for communication around waste reduction.

   As well, the facility could create a **slogan or branding** to help promote their diversion program and create continuity for all promotional or educational materials.

   Information can be tailored to reflect the findings of this assessment. For example, create a campaign to encourage employees to take a moment to put their mixed paper in the correct receptacle, no matter where they are on site.

   Green information boards, similar to health and safety boards, can be a centralized place for relevant environmental information and reference material, example below.

Below, is an example of colour coded pictorial signage. Each provider should be able to provide similar material to educate stakeholders.

The following is an example of a customized signage in hospital cafeterias.

2. <u>Training</u> - Regular training of employees, custodial staff and contractors on diversion procedures help demonstrate the facility's commitment to diversion programs, update staff on policy changes and account for changes in workforce. Regular training has also been shown to aid in the elimination of inconsistency and complacency in diversion programs.
   - Training can be provided with power point presentations and examples of educational signage and recyclable materials.
   - Training can be just a few minutes during safety talks or weekly check-ins.
   - Ongoing training and education are critical due to turnover of employees and contractors as well as occasional program changes.
   - Management and supervisors could be trained on all aspects of the diversion program which will allow them to be an ambassador and a resource to support employees and visitors.

3. Maintenance/ Custodial Review – Facility management could regularly meet with the custodial manager and maintenance staff (custodians) as they may be able to provide hands on insight into aspects of the diversion program and areas of improvement.

   Custodial staff should be trained on the diversion program during their orientation and reminded on a regular basis by their managers. Input from custodians and custodial managers may prove beneficial as they have firsthand knowledge of the program.

Site Observations

- Below are examples of multi-stream receptacle stations that are equipped with labelling. The facility should consider include pictorial signage that highlight commonly accepted materials in each stream.

- To improve the facility-wide capture rate, all garbage bins should be paired with a recycling bin. Below is an example of a garbage bin in a public area with no recycling bin in the immediate area.

Continual Improvement and Additional Recommendations

The following are suggested actions to help the facility improve their internal processes and strive to reach higher diversion rates while maintaining a strong, efficient Diversion Program.

It is recommended that the facility regularly check with their waste hauler to confirm what materials are recyclable in their jurisdiction. As some of these materials may be integral to the operations of the facility, it is recommended that you regularly review opportunities to reduce or substitute these materials in your operations.

i. Capture Additional Materials

Some non-traditional recyclable materials were identified in the landfill waste sample. This included nitrile gloves and safety gear. Programs are available from companies like TerraCycle or Go Zero in to provide the resources to set up a collection station at your facility.

https://www.terracycle.ca/en-CA/brigades/writing-instrument-retail-based-brigade

https://gozerorecycle.com/pages/recyclingboxes

Example of Go Zero collection box

In addition, TerraCycle or Go Zero offer other recycling programs for common non-conventional materials which were identified during the audit. These include single use beverage pods, creamer containers and plastic wrappers.

ii. Educate Staff on 'Easy Targets' for Diversion

The hospital should target specific recyclable materials used throughout the facility, particularly in active patient areas.

Examples of materials include:

- Boxboard such as Kleenex boxes or latex gloves used by cleaning staff and medical staff.
- HDPE containers of cleaning products including sanitary wipe containers, soap dispensers, and other cleaning products used by cleaning staff, vendors, and medical staff. Some of these containers may be unique to the hospital environment and may not be commonly understood as recyclable blue box items.

Examples of materials that could be easy targets for diversion (HDPE, Boxboard)

The following is an example of a customized signage used in a medical setting

iii. Sustainability Goal Setting

It is recommended that the facility set specific diversion **goals** regarding their waste management program.

- Goals must be accompanied by a target date and progress reviewed at least once per year to maintain effectiveness.
- Through the process of goal setting, there is inherent motivation to meet those goals and it is believed that organizations who establish goals publicly are more likely to act with pressure from those who would like to see these goals met. Waste disposal represents a significant cost to the facility and all efforts to reduce disposal cost are beneficial.
- Managers and personnel may change but once the momentum is started and goals are set, new staff will be motivated to see projects through.

iv. Top-Down Support and Green Champion

Perhaps the most important element of a successful recycling program is top-down support and approval. It is key to find support from ownership and management who can lead the facility towards its goals and are willing to lead from example to all employees.

- The facility should establish a **Green Champion** who will be responsible for their assigned facility and be aware of the needs and requirements to make their facility successful. 'Champions' must have a set list of responsibilities and be trained appropriately so that they can communicate and be a resource for colleagues. These representatives must have communication channels open to them to be able to recommend actions as required.

It is recommended that Champions and Managers have a system in place to review the infrastructure on site monthly, including:

- Identify gaps & areas of improvement;
- Ensure recycling receptacles available and replace missing bins;
- Ensure signage or labelling is present;
- Have a protocol in place to ask for replacements for missing signage or to notify management if receptacles are damaged or missing;
- Have a protocol in place for staff suggestions on how to increase participation.

v. Purchasing Power

Unity Health – St. Michael's Hospital should use its purchasing power to influence its employees, suppliers, and contactors to follow the same recommendations. A commitment to waste management should be a significant aspect within future contracts with service providers.

- The facility should establish a vendor selection protocol to reflect a commitment to the 3R's: reduction, reuse, and recycling;
- The facility should conduct "vendor pre-qualifications" to evaluate the protocol and vendor environmental track records;
- Contract language should reflect the facility's objectives and allow periodic reviews to determine if those objectives are being met throughout the life of the contract;
- Get buy-in and support from contractors and service providers who work on site. All service providers, vendors or contractors should be aware of the environmental goals and be active participants, including education programs and purchasing decisions.

vi. Bin Assessment

Facility managers should, as part of their duties, periodically and routinely tour the facility to monitor the infrastructure of the waste management program. By ensuring recycling stations are present, and conveniently available throughout the facility, the recycling participation rate will improve. Ensuring that there are recycling receptacles in every area of the facility, where waste is generated, will allow for the proper source separation of materials.

The manager should ensure that all receptacles are clearly labelled, and pictorial guidelines are present to educate staff, as described above.

Black bags should never be used in recycling receptacles as they can often be confused as landfill waste and there is a risk that already sorted recyclables are disposed incorrectly.

vii. Material Substitutions: Paper Towel

When considering environmental and financial costs of paper towel manufacturing and disposal, alternatives such as High-Speed Energy Efficient (HSEE) hand dryers would be a favourable option for the facility.

a) The **environmental factor**: In comparing the carbon footprint of paper towel and hand dryers, material production, manufacturing, transportation, material use, and its end of life are considered. The carbon footprint for an HSEE hand dryers is estimated to be less than one third of paper towel even if produced from recycled materials.
b) The **cost factor**: Paper towel use involves continuous costs: purchasing, handling (custodial operations), and disposal (both composting and landfilling have costs associated). The initial capital cost of hand dryers begins to see a payback within a reasonable timeframe.
c) The **hygiene factor**: Paper towels are typically determined to be more hygienically effective in comparison to hand dryers as the hands dry more quickly. However, this can be mitigated with measures such as ensuring antibacterial soaps and guidelines of drying length on hand dryers. There is no research connecting use of hand dyers to infection. The research suggests that thorough handwashing will not lead to the spread of bacteria with use of hand dryers.

viii. Alternatives to Recycling: Reuse Programs

According to the waste hierarchy, recycling should be considered after reduction and reuse programs have been considered. Materials that are still usable, do not need to be disposed of, could be donated, or sold for reuse.

Several options for donations exist in your region for materials such as used furniture (ReStore, Habitat for Humanity) or bulk containers in good condition. Materials can also be bought and sold on online platforms such as Kijiji Canada, Facebook Market Place and Craigslist. These platforms can be used to sell items no longer serving the facility and could be repurposed. As well, there are organizations such as the Material Exchange Program that can facilitate that help facilitate reuse or repurposing of materials.

Material Exchange Program, operated by Partners in Project Green, is a circular economy focused platform that allows businesses and non-profit organizations access to an inventory of materials that have been donated. Conversely, the facility can also donate their reusable materials toward this inventory.

Common materials accepted in the inventory include:

Industrial Ladders | Office Supplies | Various Container | Chairs | Planters | Textiles

Material Exchange - Partners in Project Green: Partners in Project Green

Waste Management Sustainability Services

2024 Recycling Benefits for St. Michael's Hospital

In 2024, we recycled 493 tons of mixed paper, cardboard, plastics, scrap metal, aluminum cans, steel cans and glass

These recycling efforts conserved the following resources/prevented these emissions:

11,498 Mature Trees

Represents enough saved timber resources to produce 195,471,900 sheets of printing and copy paper!

1,099 Cubic Yards of Landfill Airspace

Enough airspace to fulfill the annual municipal waste disposal needs for 1,277 people!

603,299 Kw-Hrs of Electricity

Enough power to fulfill the annual electricity needs of 54 homes!

Avoided 1,664 Metric Tons (MTCO2E) of GHG Emissions

That GHG reduction is equivalent to removing annual emissions from 353 passenger vehicles!

1,444,696 Gallons of Water

Represents enough saved water to meet the daily fresh water needs of 19,262 people!

Sources: U.S. Environmental Protection Agency, U.S. Energy Information Administration, Environmental Paper Network-Paper Calculator V4.0, Domtar Paper, Gaylord Corporation, U.S. Forest Products Laboratory, and Waste Management.
Notes: GHG = Greenhouse Gas; MTCO2E = Metric Tons of Carbon Dioxide Equivalent

WASTE MANAGEMENT

Appendix 2 - Detailed Waste Breakdown by Generation Area

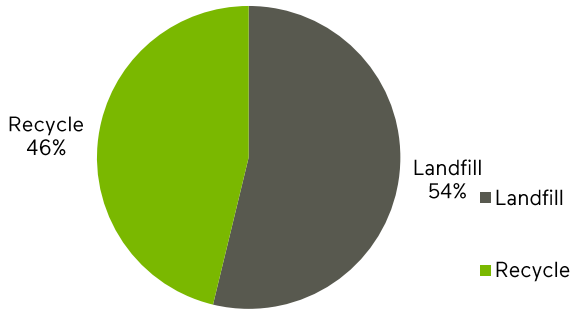
Area	Paper	Metal	Plastic	Textile	Wood	Glass	Rubber	Organic	Other	Total
Patient Area	64.64	2.76	74.60	4.50	0.02	2.16	3.64	2.18	122.14	276.64
Food Service	30.04	1.88	30.58	0.70	0.01	0.60	0.53	18.59	10.92	93.85
Other	2.84	0.00	7.74	0.00	8.78	0.00	0.68	0.00	16.67	36.71
Office	5.60	0.48	1.84	0.00	0.00	0.00	0.02	0.50	0.36	8.80
Grand Total	**103.12**	**5.12**	**114.76**	**5.20**	**8.81**	**2.76**	**4.87**	**21.27**	**150.09**	**416.00**

Appendix 3 – Diversion Report

Diversion Overview
Unity Health - St. Michael's Hospital, Toronto ON

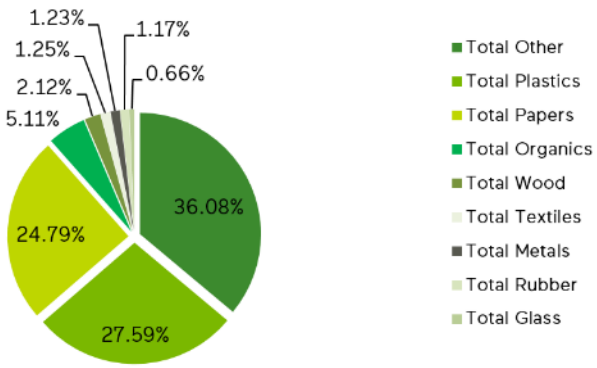
Diverted Materials	Annual Projected Volume (kg)	% Of Diverted Materials
Confidential Paper Shredding	334,833	38.9%
Organics	301,730	35.0%
Cardboard	143,900	16.7%
Skids	61,235	7.1%
Metal	13,608	1.6%
E-Waste, Batteries	4,536	0.5%
Mixed Paper and Beverage Containers	1,500	0.2%
Total	**861,341**	**100.0%**

Diversion Summary



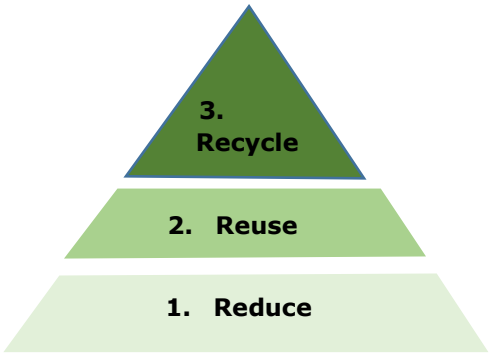
Waste Category	Material Composition (%)	Annual Projected Volume (kg)
Total Other	36.1%	361,569
Total Plastics	27.6%	276,458
Total Papers	24.8%	248,418
Total Organics	5.1%	51,240
Total Wood	2.1%	21,223
Total Textiles	1.3%	12,527
Total Metals	1.2%	12,334
Total Rubber	1.2%	11,732
Total Glass	0.7%	6,649
Total	**100.0%**	**1,002,150**

Waste Material By Category



Appendix 4 – Three R's Waste Hierarchy

The three R's waste hierarchy gives an order of priority of actions to be taken to reduce the overall amount of waste generated at the site.



Studies indicate that between 2 and 5 percent of waste streams are reusable. There are many ways to prevent waste, at the source, and reuse products to reduce waste, including:

	Material	Reduction Strategies	Reuse Strategies	Recycling Strategies
Papers	**Cardboard / boxboard**	Encourage suppliers to use reusable packaging (e.g., plastic totes) Purchase reusable products	Re-use of cardboard for storage and packaging	Provide enough receptacles, information and signposting for OCC and mixed recycling programs
	Office paper	Encourage use of electronic communications Encourage tenants to print two sided	Encourage one sided printed paper for scrap paper Creation of scrap pads Utilize centralized notice boards	
	Paper towels	Install hand-dryers in washrooms and dish cloths in kitchens		
	Newsprint / Magazines	Provide communal newspapers in break out areas and spaces	Encourage staff to share magazines and newspapers Donate used magazines and newsprint Use newsprint for packaging materials	
	Paper cups	Place reusable coffee cups in kitchen areas Encourage users to bring reusable coffee cups Incentivize the use of own cups (discounts, loyalty cards)	Provide coffee making facilities in kitchens and encourage users to refill reusable coffee cups	Encourage tenants to use compostable and recycling coffee cups which are accepted in organics/mixed recycling programs
Plastics	**PETE**	Encourage building users to bring reusable water bottles Ensure sufficient water fountains for building users	Encourage building users to reuse plastic bottles Use refundable recycling schemes at the site	Provide enough receptacles, information, and signposting for mixed recycling programs
	HDPE	Encourage bulk buying of goods to reduce volume of packaging Purchase products with minimal packaging		

	LDPE	Train custodial staff to empty individual waste receptacles into single black garbage bag		
	Polystyrene	Develop procurement policies which require on-site retailers to use compostable and recyclable packaging and cutlery		
	Organics	Set up partnerships and donation programs with local charities		Implement organics program
Containers	**Beverage Cans**	Encourage use of drinks dispensers at food courts and in kitchens	Use refundable recycling schemes at the site	Provide enough receptacles, information, and signposting for mixed recycling programs
	Glass Bottles/Jars	Encourage use of drinks dispensers at food courts and in kitchens		
	Single Use Beverage Pods	Encourage use alternative coffee making facilities (i.e., filter coffee, pod free coffee machines)	Use reusable k-cups	Set up k-cup recycling programs with local supply companies
	Office supplies	Set up communal stationary points in offices for building users	Establish donation programs with local schools	Set up recycling programs with specialist companies such as Teracycle

Appendix 5 – Material Descriptions

Material	General Descriptions	Waste Stream
#1 PETE	Polyethylene Terephthalate, Water Bottles, Soft Drink Bottles	Recycle
#2 HDPE	High Density Polyethylene Containers, Chemical Containers or Jugs; High Density Polyethylene Bags or Film, Strong "crispy" Bags	Recycle
#3 PVC	Plastic pipes, Cleaning Supply Jugs, Pool Liners, Sheeting, Twine, Carpet Backing	Landfill
#4 LDPE	Low Density Polyethylene Bags and Film, Garbage Bags, Shopping Bags	Landfill
#5 PP	Poly Propylene, Yogurt Containers, Straws	Recycle
#6 PS	Poly Styrene, Beverage Containers, Packaging Materials, Take-out Food Containers, Packing Popcorn	Recycle
#7 Other (Bottles & Containers)	Bottles and Containers Labeled #7	Recycle
#7 Other (excl. Bottles & Containers)	Unlabeled Plastic Items, Plastic Cutlery, Plastic Parts	Landfill
Medical Plastics	IV Bags, Tubing, Syringes, Unlabelled Containers	Landfill
Courier and Shipping Bags	Poly Mailer Bags	Landfill
Misc. Plastics	Plastic Utensils	Landfill
Plastic Cutlery	Plastic Forks, Spoons, Knives, Stirring Sticks	Landfill
Plastic Strapping	Plastic Shipping Straps, Plastic Banding	Landfill
Polycoat	Milk Cartons, Tetra Packs	Recycle
Polyfoam	Foam Protective Packaging Materials, Styrofoam	Landfill
Shrink Wrap	Shrink Wrap, Plastic Film	Landfill
OCC	Old Corrugated Cardboard	Recycle
Boxboard	Cereal, Tissue Box Material	Recycle
Cores and Tubes	Paper-Based Cores and Tubes	Recycle
Kraft Paper	Paper Bags, Heavy Brown Paper	Recycle
Label Paper	Sticker Paper	Landfill
Magazines	Glossy Magazines and Newspapers	Recycle
Newsprint	Newspapers, Weekly Flyers	Recycle
Molded Pulp	Drink Trays, Egg Cartons, Product Packaging	Recycle
Paper Cups	Paper or Polycoated Cups	Landfill
Paper Plates	Paper Food Plates	Organics
Paper Towels	Paper Hand Towels	Organics
Photo Paper	Glossy Paper	Recycle
Tetra Pak Containers	Juice Boxes, Liquid Beverage Containers	Recycle
Wax Paper	Paper for Wrapping or Packaging	Landfill
Medical Paper	Wet Strength Kraft Paper, Medical Paper, Moulded Bed Pans	Landfill

White/ Ledger/ Office Paper	White Paper, Printer Paper	Recycle
Aerosol Cans	Spray Cans	Recycle
Aluminum	Aluminum Parts and Products	Recycle
Aluminum F & B Cans	Aluminum Food and Beverage Cans, Pop Cans	Recycle
Aluminum Foil / Wrappers	Food Wrappers and Packaging	Landfill
Metal Banding	Metal Straps	Landfill
Scrap Metal	Aluminum, Steel and Copper Parts	Special Program
Paint Cans	Empty Paint Cans	Landfill
Steel Cans	Steel Food Cans	Recycle
Coloured Glass	Coloured Beverage Bottles and Jars	Recycle
Clear Glass	Clear Beverage Bottles and Jars	Recycle
Drinking Glass	Glass Cups, Wine Glass	Landfill
Lab, Medical Glass	Flasks, Beaker, Dropper, Measuring Cylinder, Test Tubes, Jars	Landfill
Pallets and Skids	Wooden Pallets and Skids	Landfill
Scrap Wood	Construction Materials, Misc. Wood Pieces	Landfill
Wood Shavings	Scrap Construction Shavings and Debris	Landfill
Wooden Crates	Shipping Crates	Landfill
Stir or Chop Sticks	Wooden Stir or Chop Sticks	Landfill
Batteries	Dry Cell Batteries, Large Batteries	Special Program
Electronics	Cables, Computer Equipment, Toasters, TVs, Phones, Printers	Special Program
IT Equipment	IT Visual and Audio Equipment, Wires, Cords	Special Program
Printer Cartridges	Used Printer or Ink Cartridges	Special Program
Coffee Grounds	Used Coffee Grounds	Organics
Plants / Flowers / Yard Waste	Indoor and Outdoor Plants, Flowers, Leaves, Yard Waste	Organics
Post-Consumer Waste	Scrap Food Waste	Organics
Pre-Consumer Waste	Food Preparation Waste	Organics
Compostable Containers	Compostable Take-Out Containers, Paper Plates	Organics
Rubber Tubing	Cable Protection, Metal Coverings, Pipe Fittings	Landfill
Nitrile and Latex Gloves	Nitrile and Latex Gloves	Landfill
Rags	Used Rags and Cloths	Landfill
Shoes and Boots	Assorted Footwear	Landfill
Personal Clothing	Used Shirts, Uniforms, Hats	Landfill
Misc. Textiles	Mop Heads, Cloth Gloves, Reusable Bags	Landfill
Building Material	Construction Material, Drywall, Insulation	Landfill
Bulbs	CFL, LED, Fluorescent Bulbs and Tubes	Landfill
Ceramics	Objects Formed with Clay (e.g., Pottery)	Landfill
Cooking Grease	Fats, Oils and Grease	Organics
Drywall	Regular or White Board Drywall	Landfill
Disposable Diapers	Disposable Diapers	Landfill
Face Coverings	Surgical Masks, Dust Masks, N95 Masks	Landfill

Floor Sweepings	Debris, Dust	Landfill
Furniture	Chairs, Desks, Lamps, Shelves	Landfill
Hygiene Materials	Feminine Hygiene Materials, Disposable Diapers, Cloth Diapers	Landfill
Liquid in Container	Significant Liquid in Bottle, Container or Cup	Landfill
Mixed Material Packaging	Condiment Containers, Envelope with Window, Miscellaneous Product Packaging	Landfill
Air Filters	Furnace Filters, Vehicle Filters	Landfill
Safety Gear	Safety Vests, Jackets, Harness, Safety Toe Covers, Work Gloves	Landfill
Single Use Beverage Pods	K-Cups and Pods	Landfill

Appendix 6 – Ontario's 3Rs Regulations

Ontario's 3Rs Regulations

Ontario's 3Rs Regulations governing non-hazardous solid waste from residential, industrial, commercial and institution sources became law in March 1994. Designated IC&I organizations are now required to conduct annual waste audits and update annual waste reduction work plans. This documents overviews the regulatory requirements for IC&I sector organizations.

Regulation	Intent	Requirements	Who Must Comply
Ontario Regulation 102/94 ***Waste Audits*** ***Waste Reduction Work Plans***	To understand the amount and composition of all waste produced, how the waste is produced including relevant management policies and practices, and how the waste is managed A waste reduction work plan seeks to establish concrete goals to reduce waste	Annual waste audit must be completed in which the types of waste and quantities of waste are assessed. A waste reduction work plan must contain a strategy for reducing, reusing and recycling waste, identify who is responsible for implementation and provide a summary of timing and expected results from the waste reduction projects. This plan must be communicated with all employees	• Retail shopping complexes of 10,000+ m^2 floor area • Class A, B or F hospitals under Ontario Reg. 964 • Schools with 350+ students at a location or campus • Restaurants with gross annual sales of $3,000,000+ • Office buildings with 10,000m^2 of floor area • Hotels and motels with 75+ units • Building construction projects of 2,000+ m^2 • Building demolition projects of 2,000+ m^2 • Manufacturing sites with 16,000 employee hours per month
Ontario Regulation 103/94 ***Source Separation Programs***	To promote the source separation of materials throughout the facility	Handling and storage facilities must be provided for recyclable materials. Efforts must be made to ensure the system is used and that source-separated materials are reused or recycled. Employees must be instructed on the use of the program	
Ontario Regulation 104/94 ***Packaging Audits*** ***Packaging Reduction Work Plans***	To examine the impact of packaging on the waste management system and identify waste reduction plans. Packaging refers to all materials used to protect, contain or transport a product.	Bi-annual audit must address; types and quantities of packaging used, reusability or recyclability of packaging, the environmental impact of the waste and the lifecycle of the packaging materials. Reduction work plan must identify ways to reduce packaging used, increase reuse or recyclability content, reduce the environmental impact and reduce the burden of waste for the consumer.	• Manufactures or packagers of packaged food, beverage, paper or chemical products with total employee hours of 16,000+ per month • Importers of packaged food, beverage, paper or chemical products for sale in Ontario with value of goods imported $20,000,000 per year

THINK GREEN.