



## WASTE AUDIT REPORT

SHERIDAN COLLEGE  
HMC CAMPUS

2019 SOLID NON-HAZARDOUS WASTE  
AUDIT O.REG. 102/94

PREPARED BY

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## EXECUTIVE SUMMARY

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This waste audit was conducted in April 2019 at the Hazel McCallion (HMC) Campus of Sheridan College. The HMC Campus is the smallest Sheridan College campus in terms of student population and in terms of physical size. The campus has two buildings each comprised of four floors totaling more than 300,000 square feet and they include classrooms, studios, offices, cafeteria, washrooms, hallways, etc.

There are three campuses at Sheridan: Davis, Trafalgar & Hazel McCallion (HMC). All three campuses have implemented a number of diversion programs in an effort of getting to Zero Waste by 2020. Each of the campuses has a variety of single-stream recycling/reuse programs (Ex. cardboard, E-waste) as well as the three-stream Zero Waste (ZW) bins, implemented in 2014, which are the identically marked and colour-coded collection stations for organics, mixed recycling and waste-to-landfill that are found throughout the campus.

In addition to single stream recycling/reuse collection programs and the ZW bin program, Sheridan College has implemented many reduction and sustainability programs including:

1. Installed water bottle refilling stations to reduce PET water bottle generation.
2. Implemented a program to eliminate paper towels from all washrooms by switching to air hand dryers instead of repairing broken paper towel dispensers (most washrooms have already eliminated paper towel usage).
3. Implemented a paper reduction program at all campus printers.
4. The campuses host Repair Cafe's to change society's throwaway mindset and empower people to repair broken household items.
5. The Sheridan Student Union (SSU) runs a Food Donation program.
6. The library has a well-established book donation program.
7. Sheridan hosted a Winter Office Cleanup collecting office furniture and supplies to donate to various charities (new 2018).

With the exception of the furniture donation program component of the Winter Office Cleanup, the waste reduction realized by these additional programs was not quantified for inclusion in this report.

The ZW bin program was rolled out over the course of 2014 at the campuses so this program has matured: students and staff have are familiar with and knowledgeable of the ZW bin collection program. Sheridan continues to encourage participation through engagement and information programs. The weight based information for the 2019 waste audit was from 2018 data provided by the service providers.

## ANNUAL DIVERSION RATES OVER TIME

Waste diversion rates at the campus have dramatically and consistently improved since 2015. The 2019 waste diversion rates at the HMC Campus are presented below. The 2019 diversion rates were calculated using calendar year 2018 weight-based information provided by Sheridan management and their waste service providers. Although the final disposition of the electronics in the electronics lease-return program is not known, it is included in the reuse category for the purpose of the 2019 waste audits at Sheridan College.



### HMC Campus 2019 Waste Diversion Rate: 66.7%



- Mixed Recycling (23,546 kg/yr; 21.5%)
- Bulk OCC Recycling 1,224 kg/yr; 1.1%)
- Paper - Confidential Shred (5,897 kg/yr; 5.4%)
- E-Waste & Battery Recycling (71 kg/yr; 0.1%)
- Wood Recycling & Wood Dust Recycling (0 kg/yr; 0.0%)
- Organics (38,327 kg/yr; 34.9%)
- Reuse-Textiles, Leased Electronics & Office Furniture (978 kg/yr; 0.9%)
- Energy from Waste (Hygeine) (1,184 kg/yr; 1.1%)
- Waste to Landfill (35,338 kg/yr; 32.2%)

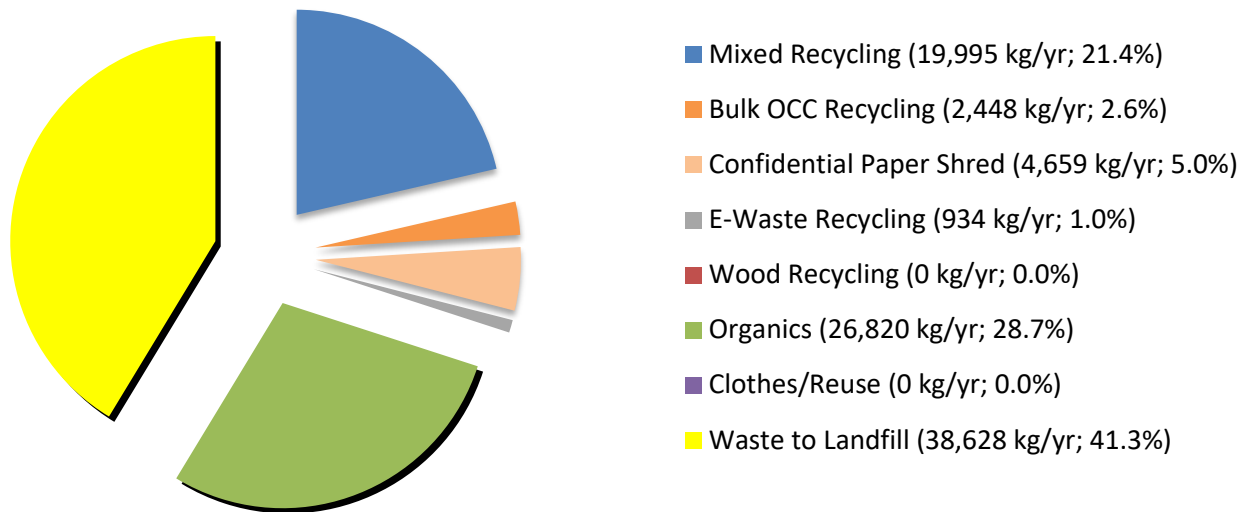
### HMC Campus 2018 Waste Diversion Rate: 61.4%



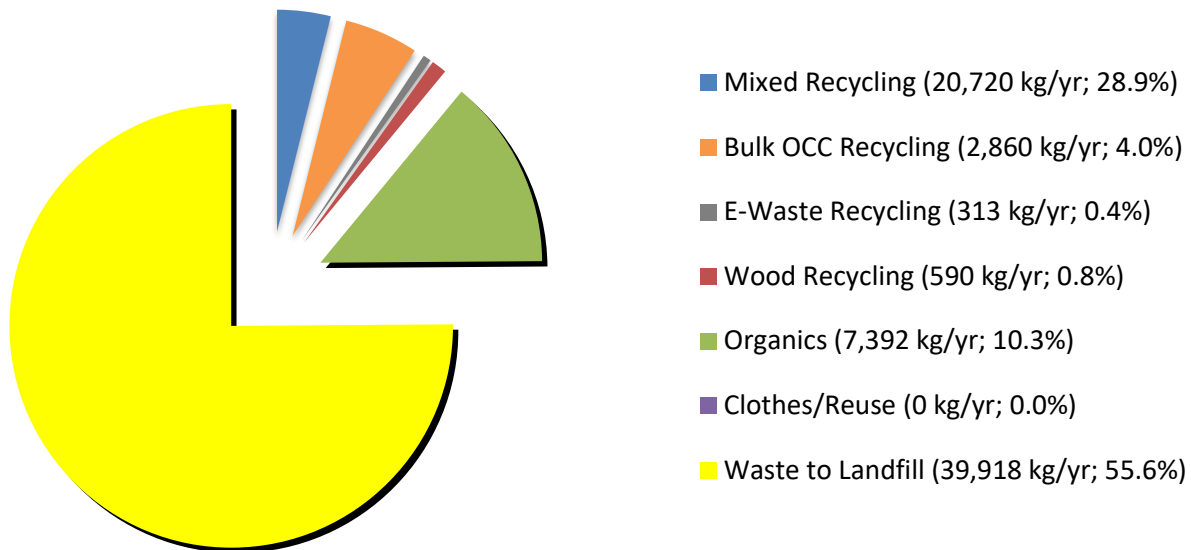
- Mixed Recycling (31,208 kg/yr; 25.5%)
- Bulk OCC Recycling 9,792 kg/yr; 8.0%)
- Paper - Confidential Shred (6,577 kg/yr; 5.4%)
- E-Waste & Battery Recycling (136 kg/yr; 0.1%)
- Wood Recycling & Wood Dust Recycling
- Organics (26,000 kg/yr; 21.3%)
- Textile - reuse (0 kg/yr; 0.0%)
- Energy from Waste (Hygeine) (1,184 kg/yr; 1.0%)
- Waste to Landfill (46,000 kg/yr; 37.6%)



### HMC Campus 2017 Waste Diversion Rate: 58.7%



### HMC Campus 2015 Waste Diversion Rate: 44.4%



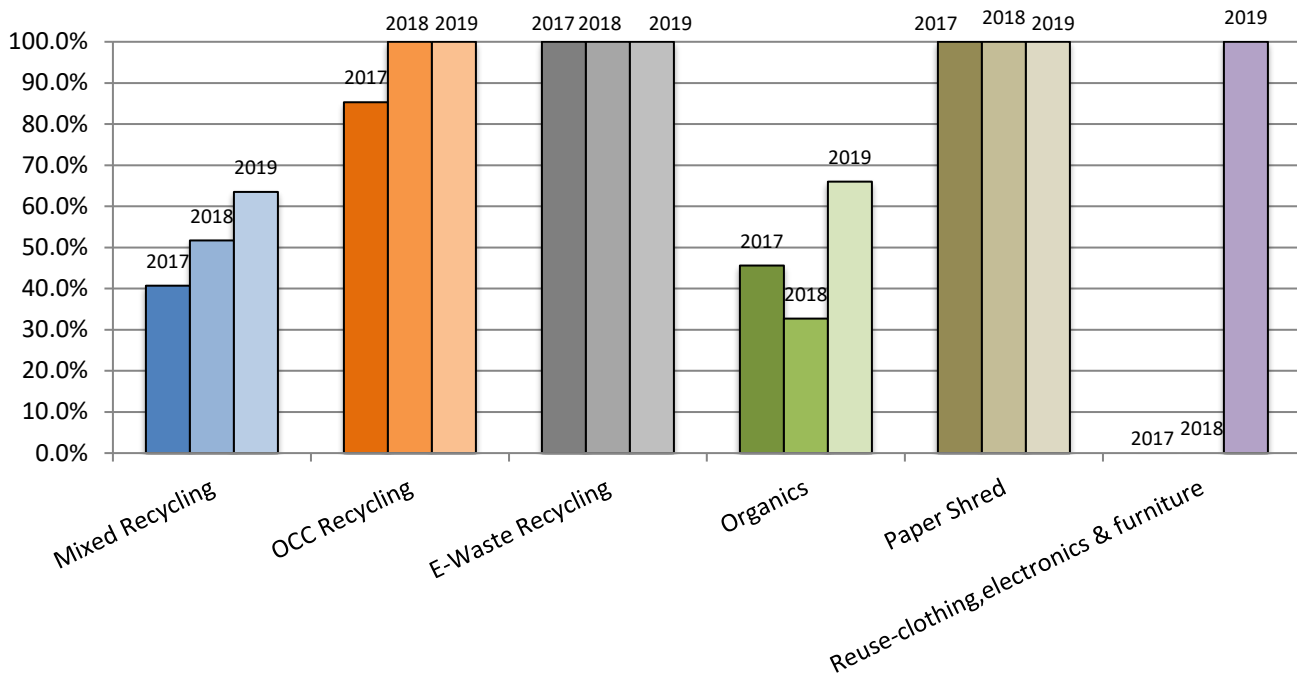
The HMC Campus waste diversion rate has improved dramatically from 44.4% in 2015 to 66.7% in 2019. The improvements since 2018 can be attributed to a significant improvement in organics program capture.

### OVERALL CAPTURE RATES BY DIVERSION PROGRAM OVER TIME

Capture rates for each diversion program were calculated at the HMC Campus using results of the 2019 waste audit of the ZW bins, combined with 2018 weight based information on collection programs. The capture rates were consistently high for the bulk single-stream recycling programs where they exist. The capture rate for the ZW mixed recycling has increased slightly; while the ZW organic capture rate has declined slightly since 2017.



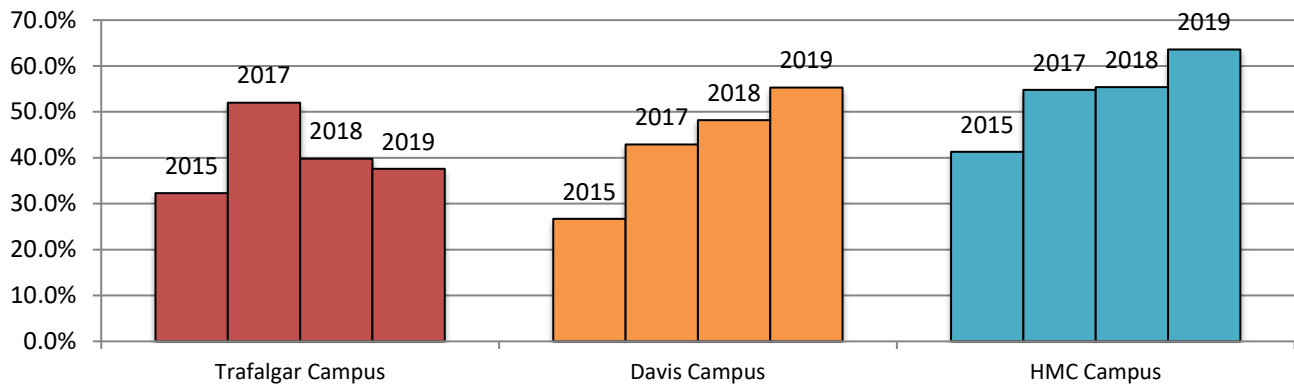
### Capture Rates by Waste Diversion Collection Programs Over Time



### ZW COLLECTION PROGRAM PERFORMANCE OVER TIME

At HMC and also at the Davis Campus the ZW bin program waste diversion performance has steadily increased over time. Only at the Trafalgar campus has there been a decline in ZW waste diversion performance.

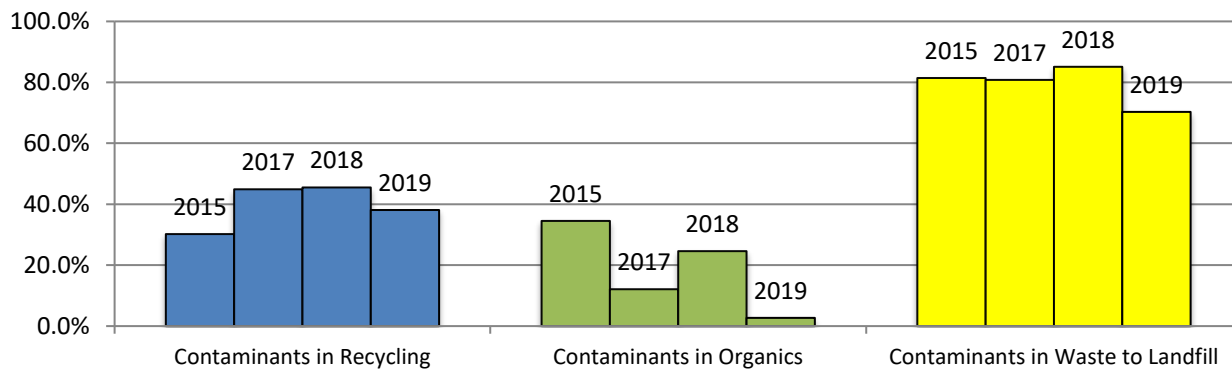
### ZW Diversion Rates over Time (2015-2019)



### ZW COLLECTION PROGRAM CONTAMINATION RATES OVER TIME

At HMC, contamination rates for all three ZW collection programs have improved since 2018. This is evidence that the Campus community understands the ZW collection program, is committed to complying with the ZW program and is improving their material sorting behaviour.

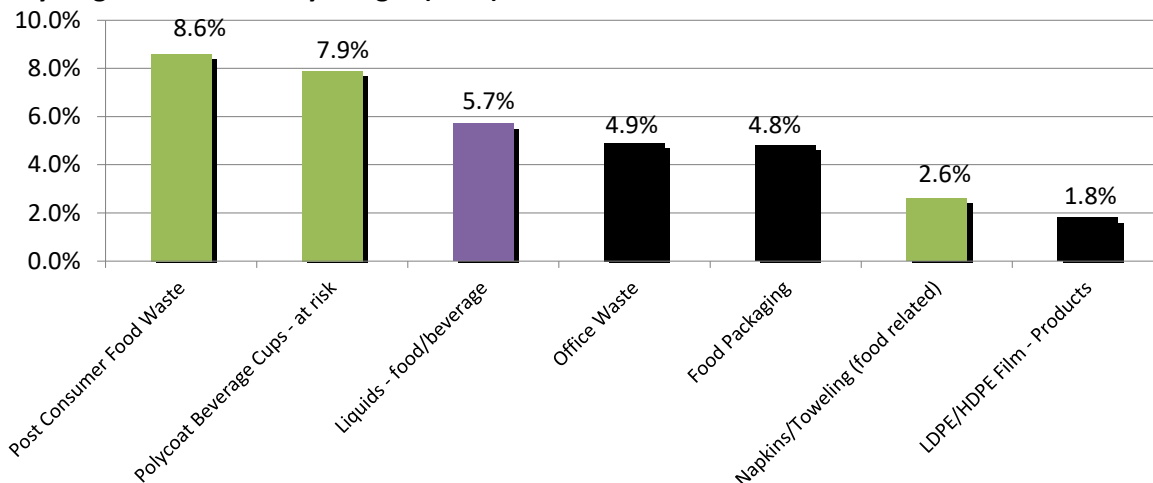




### 2019 ZW COLLECTION PROGRAM SPECIFIC WASTE CONTAMINANTS

The most significant contaminants in each of the ZW collection program streams are presented below. Contamination can be reduced through improving sorting behaviours with targeted programs to address the most significant contaminants. Food waste is the most consistently improperly disposed material in the ZW Recycling and ZW Waste-to-Landfill streams; while a variety of materials (mostly food packaging) contaminate the ZW Organics program. In the following charts, specific wastes are colour coded: green are suitable for ZW organic bin, black are suitable for ZW waste-to-landfill bin and purple are reducible wastes.

#### ZW Recycling Contaminants by Weight (2019)

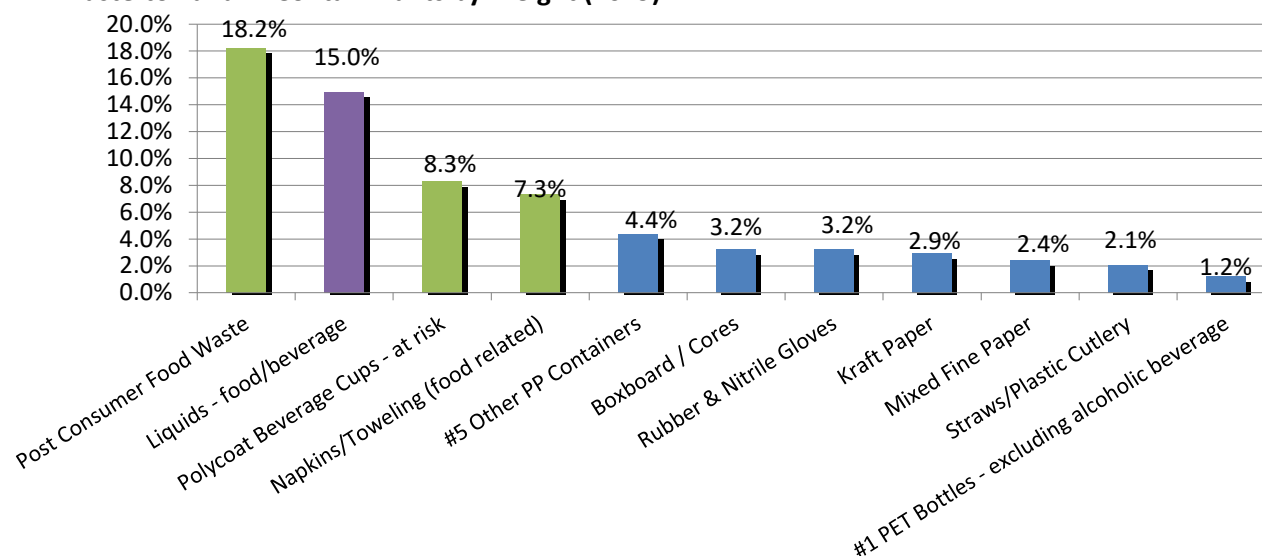


#### ZW Organics Contaminants by Weight (2019)

The contamination of the organics stream is so low that there are no contaminants in the organics program over 1.0% by weight. Polypropylene containers (mostly cold drink cups) and food packaging wastes are two single largest contaminants.



### ZW Waste-to-Landfill Contaminants by Weight (2019)



### 2019 ZW COLLECTION PROGRAM BY AREA

Waste diversion rates for the fourteen areas sampled during the audit at the HMC Campus are presented below. You will note that the HMC Area ZW waste diversion rate (63.6%) is lower than the 2019 HMC Campus waste diversion rate (66.7%) because the area diversion rates are based on the ZW bin diversion program alone and do not include single stream recycling/reuse programs. Food service back of house diversion rates are excellent, while Hallways diversion rates could be improved.

| Area                                   | Percentage by Weight Collected During 24 Hour Sampling Period |              |                      | Area Waste Diversion Rate |
|--|---|--------------|----------------------|---------------------------|
|  | ZW Recycling  | ZW Organics  | ZW Waste-to-Landfill |                           |
| HMC A - Starbucks Back of House        | 25.3%   | 51.5%        | 23.2%                | 76.8%                     |
| HMC A - Cafeteria Front of House       | 35.9%   | 21.7%        | 42.3%                | 57.7%                     |
| HMC A - Cafeteria Back of House        | 26.2%   | 38.7%        | 35.1%                | 64.9%                     |
| HMC A - 4th Floor Faculty of Business  | 44.1%   | 10.2%        | 45.6%                | 54.4%                     |
| HMC A - 3rd & 4th Floor Hallways       | 37.9%   | 11.1%        | 51.0%                | 49.0%                     |
| HMC B - Tim Hortons Back of House      | 4.2%  | 80.2%        | 15.6%                | 84.4%                     |
| HMC B - 2nd Floor Gallery              | 56.6%   | 10.4%        | 33.0%                | 67.0%                     |
| HMC B - 3rd Floor & 4th Floor Hallways | 31.4%   | 10.8%        | 57.8%                | 42.2%                     |
| <b>ALL AREAS</b>                       | <b>24.2%</b>  | <b>39.4%</b> | <b>36.4%</b>         | <b>63.6%</b>              |

### GENERAL RECOMMENDATIONS

The recommendations appearing in this report are to be considered for implementation as Sheridan College feels appropriate and cost effective.



Ensure the campuses waste reduction workplans use the hierarchical components of the 3Rs. Reduction or elimination of waste should be given top priority, then reuse and lastly recycling. Similarly, choose suppliers who offer products with post-consumer recycled content. Purchasing supplies and materials with recycled content encourages and sustains growth in existing and developing recycling end-markets. The 3Rs Regulations require not only that these practices are conducted but also recorded and documented.

Review purchasing, packaging and environmental policies to ensure each reflects and emphasizes consistent hierarchical Reduce, Reuse, Recycle strategies. Reduction or elimination of waste should be given top priority, then reuse and lastly recycling. A consistent 3Rs policy will benefit the campuses by communicating its environmental stewardship to its employees, its suppliers and its patrons.

Given that the recycling programs are well established, the campuses need to examine ways of reducing waste. Many facilities fail to achieve waste reduction targets because they use the 3Rs in the reverse order. Unfortunately, many companies use this approach based on the misinformed belief that recycling is the easiest, most cost-effective and the least time consuming form of waste diversion. Consider some of the following costs associated with recycling that would not be incurred if the materials were not generated in the first place:

- Recycling requires additional material handling
- Cost of containers / floor space / storage areas
- Education and training of employees
- Promotion of the programs to maintain cooperation
- Removal service costs
- Contamination issues/disposal fees
- Sourcing available end-markets for materials

In the auditor's experience, companies that make substantial gains in waste reduction are those that periodically improve their recycling programs while continuously examining ways to eliminate materials that contribute to their daily and annual waste output.

Employees should evaluate, improve and expand waste reduction efforts in their own areas. Active employee involvement will generate cooperation and enthusiasm.

Ontario Regulation 102/94 requires that the audit findings be posted in accessible areas to inform employees of the sources of waste generation and the company's commitment to waste reduction. Further, posting waste audit findings and educating employees in waste diversion programs and including them in the successes, will generate continued compliance with and commitment to the waste diversion programs.

## **SPECIFIC RECOMMENDATIONS –THE WASTE REDUCTION WORKPLANS**

### **Campus Wide Focus:**

Sheridan HMC campus has an excellent combination of diversion programs that address the divertible materials generated at the campus. Consequently, future waste diversion improvements will likely come from enhancing compliance with the three stream ZW bins across campus. Sheridan should continue to assess and identify barriers to sorting and develop area-specific action plans to increase participation.

### **Specific Recommendations:**



1. **Enhancing Food Waste, Polycoat Cup, Molded Coffee Cup Trays and Napkins Capture Rate Throughout the Campus:** 11,980 kg/year of food waste, polycoat cups & trays and napkins are being disposed in waste-to-landfill. Though this is a significant improvement from 2018, Sheridan must continue to encourage the proper disposal in organics of food waste and napkins through education/signage. Consider a campaign to encourage sorting behaviour using a multi-media approach and consider 'branding' the campaign. Engage and challenge environmental studies students to design the campaign and develop a multi-media approach/roll-out. Promote HMC as the best performing Sheridan campus in diversion performance and challenge the campus community to keep up the good work. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 2,396 kg per year (20% of organic improperly disposed across the campus).
2. **Enhancing Mixed Recycling Capture Rate Throughout the Campus:** 7,569 kg/year of recycling is being disposed in waste-to-landfill. Sheridan must continue to encourage the proper disposal in mixed recycling of: #5 polypropylene containers (cold drink cups), boxboard/cores, rubber/nitrile gloves, kraft paper, mixed fine paper, straws & plastic cutlery and #1 PET Bottles through education/signage. Though recycling capture rates have improved over time, Sheridan must continue to encourage the proper sorting of materials. Consider a campaign to encourage sorting behaviour using a multi-media approach and consider 'branding' the campaign. Engage and challenge environmental studies students to design the campaign and develop a multi-media approach/roll-out. Promote HMC as the best performing Sheridan campus in diversion performance and challenge the campus community to keep up the good work. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 1,523 kg per year (20% of mixed recycling improperly disposed across the campus).
3. **Emptying Beverage Containers:** Continue to encourage the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable. Consider launching a campaign. Anticipated reduction in disposal of liquids in any stream: 40%. Anticipated reduction in waste-to-landfill of 2,114 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams.
4. **Reducing Contamination in the ZW Collection Programs at Targeted Underperforming Areas:** Sheridan should continue to identify behavioural and structural issues and opportunities to improve material sorting, with particular focus in Hallways, Galleries and Cafeteria Front of House where sorting is particularly poor. Estimating the impact of targeted area programs on waste diversion is beyond the scope of this study as not all areas of the Campus were audited in 2019.
5. **Monitoring the Coffee Cup Program:** More and more cups are being considered not compostable all the while Sheridan's population continues haphazardly dispose of coffee cups largely in waste-to-landfill and organics, but also with significant disposal in recycling. Coffee cup types and disposition (compostable vs. non-compostable) is in flux. Consider developing a strategy to manage coffee cups at the three campuses to ensure the coffee cup program is future-looking, flexible, efficient and effective. Impact on waste diversion cannot be quantified at this time as it is strategy dependent.
6. **Capturing & Reporting Material Weights for All Diversion Programs at the Campus:** Sheridan has made significant progress in reporting material diversion streams since 2015 however there may



be other diversion programs in place at the Campus but the weight-based data is not currently captured for reporting purposes (Examples Electronics Reuse and Office Furniture Donation). Sheridan should continue to conduct an inventory of all diversion programs, with particular focus on reduction and reuse programs, and should ensure there are procedures in place to collect, monitor and report on these programs.

**Anticipated Result:**

With the implementation of the above noted waste reduction plans, it is estimated that the waste diversion rate at the HMC Campus will increase from 66.7% to 72.2% and the Campus will divert an additional 6,033kg per year of waste from landfill in 2020.



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## 1.0 INTRODUCTION

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### 1.1 PURPOSE

The solid waste audits performed by *Spinnaker Recycling Corp.* (“Spinnaker”) at the HMC Campus of Sheridan College was designed to:

CALCULATE CURRENT DIVERSION RATES FOR RECYCLED, ORGANIC AND REUSED MATERIALS TO DETERMINE THE EFFECTIVENESS OF DIVERSION PROGRAMS

IDENTIFY OPPORTUNITIES FOR IMPROVEMENT AND EXPANSION TO DIVERSION PROGRAMS

DEVELOP A WASTE REDUCTION WORKPLAN THAT IDENTIFIES POLICIES, PRACTICES, TARGETS AND GOALS FOR NEW AND DEVELOPING WASTE REDUCTION PROGRAMS

COMPLETE & DOCUMENT THE AUDIT AS PER ONTARIO REGULATION 102/94 UNDER THE ENVIRONMENTAL PROTECTION ACT

This waste audit has been conducted and documented to be compliant with Ontario Regulation 102/94.

At the time of the 2017 audit, the HMC had implemented and reported material weights for the following collection programs:

1. ZW Mixed Recycling (includes glass, metal, paper, plastic)
2. ZW Organics
3. ZW Waste to Landfill
4. Bulk Old Corrugated Cardboard (OCC) Recycling
5. Paper Shred (Confidential) Recycling
6. Metal Recycling
7. E-Waste Recycling
8. Electronic Equipment Lease-Return (new 2019)
9. Office Furniture Reuse Event(s) (new 2019)
10. Hygiene Waste Energy from Waste (EFW) Program

Sheridan College recycling programs meet and exceed Ontario Regulation 102/94 requirements for designated facilities as the recycling programs include the capture of the following recyclable materials:

- Aluminum food or beverage cans
- Cardboard
- Fine Paper
- Glass Bottles, Jars & Food/Beverage
- Newsprint
- Steel Food & Beverage Cans
- Polyethylene Terephthalate (PET)



## 1.2 METHODOLOGY

The waste audit results presented in this report were obtained from observations and information collected during one on-site meeting and on two days of on-site waste auditing conducted in April 2019 at the HMC Campus.

Two data sets were employed to generate the annual waste generation rates of specific waste materials at the HMC Campus. First, the 2017 annual weight information for the individual collection streams was obtained from the service providers and the second data set was generated during the sorting and weighing of a 24 hour accumulation of material in ZW bins during the April 2018 on-site waste audit at the Campus.

The 2018 single-material stream weights provided by the service providers were not audited and were assumed to be 100% single-stream without any contamination by other materials. Sheridan has implemented the following single-material stream diversion programs including:

1. Bulk Old Corrugated Cardboard (OCC) Recycling
2. Paper Shred Recycling
3. Metal Recycling
4. E-Waste Recycling
5. Hygiene Waste Energy-from-Waste (EFW) Program

The second source of data was generated through the on-site audit of the ZW bin streams at HMC. All Sheridan College campuses have implemented a Zero Waste (ZW) program with a long-term goal of eliminating all landfill waste by 2020. The ZW program includes three regular collection streams in ZW bins:

1. Organics
2. Mixed Recycling (glass, metal, paper, plastic)
3. Waste-to-landfill

These material streams are “mixed” composition so they were sorted and weighed to determine the relative proportions by weight of specific wastes in the individual ZW bin program streams. These relative proportions were applied to the 2018 annual weight information by ZW stream provided by the service providers. In this way, it is possible to determine contamination levels and identify specific materials that are being improperly disposed in these “mixed” waste streams.



One project manager and three waste analysts sorted, quantified and recorded the waste generated over a 24-hour sample accumulation period. In order to identify opportunities to improve waste diversion at specific functional areas within the campus, the HMC campus was divided into 8 areas for the purpose of the waste audit which represented most but not all of the campus. The areas audited included:

1. HMC A - Starbucks Back of House
2. HMC A - Cafeteria Front of House
3. HMC A - Cafeteria Back of House
4. HMC A - 4th Floor Faculty of Business
5. HMC A - 3rd & 4th Floor Hallways
6. HMC B - Tim Hortons Back of House
7. HMC B - 2nd Floor Gallery



## 8. HMC B - 3rd Floor & 4th Floor Hallways

ZW bin material streams were collected by the cleaning personnel and labeled as to the area from where it was generated. The ZW mixed recycling, organics and waste-to-landfill bags were collected on-site and delivered to a designated area for sorting and weighing. All bags were sorted by generation area and ZW bin type (organics, recycling, waste-to-landfill), opened, and further sorted into labeled collection bins by specific waste category (Appendix). A Digital Receiving Scale was used for all measurements to the nearest one thousandth decimal. All recyclable material and organic material removed from the waste were discarded in appropriate containers for landfill diversion.

At the HMC Campus, Spinnaker sorted, weighed and evaluated over 192 kilograms of organics, 63 kilograms of mixed recycling, and 62 kilograms of waste-to-landfill.

Specific waste categories were established before the audit based on *Ontario Ministry of Environment, Conservation & Parks* guidelines and industry best practices. Additional categories were added to the list based on the waste composition observed during the audit. This audit surpasses the requirements outlined in the *Ontario Ministry of Environment, Conservation & Parks Guide to Waste Audits and Waste Reduction Work Plans* and includes completed Ministry required audit report forms in the Appendix.

The annual diversion rate was calculated by adding total recycled with total reused and dividing by the amount of total waste generated. *Annual Diversion Rate = (Total Recycled+Total Reused) / (Total Recycled+Total Reused+Total Landfilled)*.

### 1.3 OBSERVATIONS

Hazel McCallion (HMC) Campus is a college campus managed by Sheridan College in Mississauga, Ontario. The HMC Campus is the smallest Sheridan College campus in terms of student population and in terms of physical size. The campus has two buildings each comprised of four floors totaling more than 300,000 square feet.

HMC Campus of Sheridan College is committed to its Zero Waste Program: a program guiding the institution to becoming a zero waste campus by 2020. An integral part of the program, the Zero Waste (ZW) stations were introduced to increase waste diversion at Sheridan. These ZW stations have replaced the old waste bins in the public and office areas in all of the three campuses. Three waste streams are provided: Organics, Mixed Recycling, and Waste-to-landfill (see photo). All ZW stations have the same order, colour coding, labeling and signage.

Cleaning of this facility is completed by a team of cleaners who use a cart system for the collection of the ZW bin material from the office staff and students. The different ZW streams are collected daily on an as needs basis. The campus operates 7 days a week with offices open generally 5 days a week during normal business hours while other buildings such as the library are open on weekends with shortened hours. At the time of the audit there were regular classes and no unusual activities taking place in the building that may have altered the audit results.





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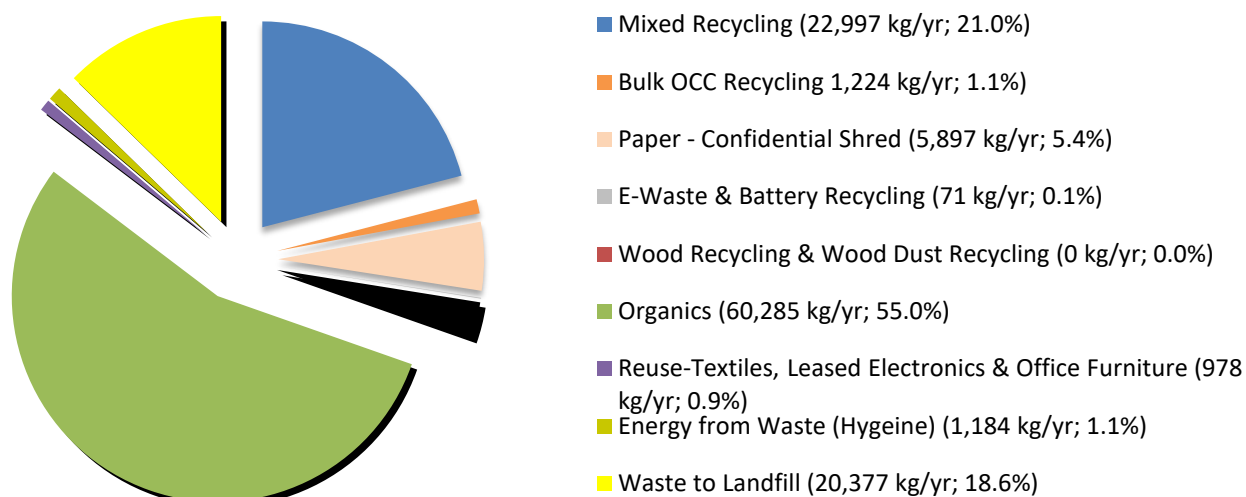
## 2.0 RESULTS

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### 2.1 WASTE DIVERSION

Analysis of all the specific wastes to be removed from Sheridan College HMC Campus in 2019 reveals that the campus could potentially achieve a waste diversion rate of 81.4% through the existing diversion programs (note: hygiene waste is not considered diversion as it is combusted in an energy from waste (EFW) facility). Figure 1 below shows the weight of the specific wastes being disposed at the campus in 2019 grouped by existing diversion, reuse and waste-to-landfill programs. This figure represents the HMC campus potential for waste diversion using existing programs and assumes a 100% capture rate for all programs.

**Figure 1: HMC Campus Waste Generation (81.4%)**



The 2019 HMC waste diversion rate is 66.7% which is excellent and approaching the waste generation profile for the Campus. Figure 2 below shows the 2018 weight of material being collected through the existing waste collection programs. Although the final disposition of the electronics in the electronics lease-return program is not known, it is included in the reuse category for the purpose of the 2019 waste audits at Sheridan College.

**Figure 2: HMC Campus Waste Diversion (66.7%)**

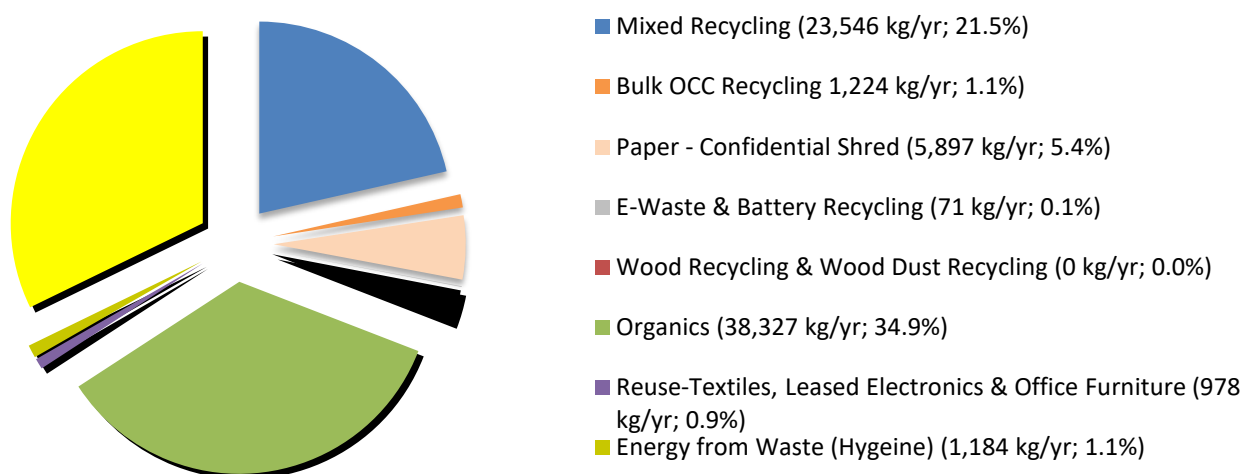
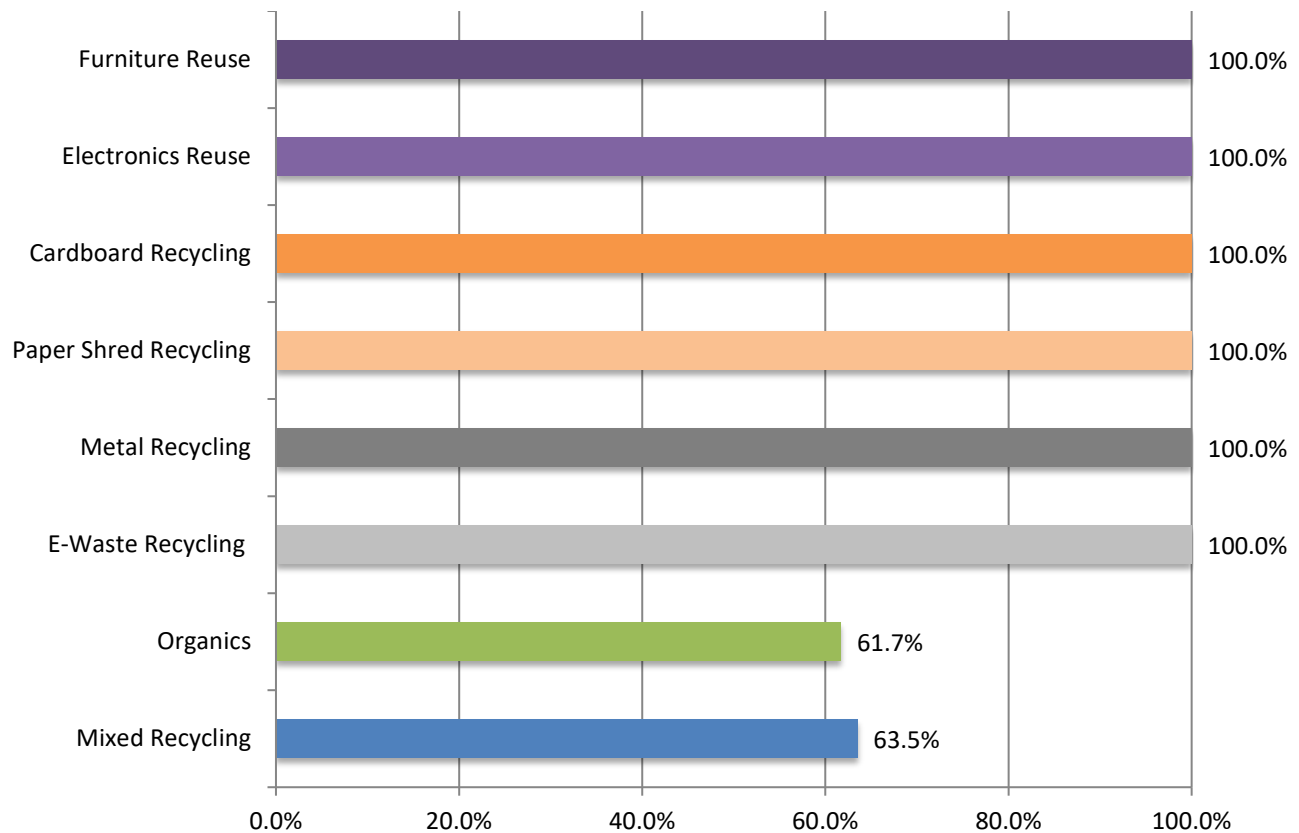




Figure 3 below shows the capture rates by the individual collection programs. The HMC Campus has six diversion programs. Capture rates were calculated as follows: total weight of all divertible material correctly captured by the diversion stream exclusive of contaminants divided by the total weight of all divertible material generated at the campus in any stream.

All diversion programs at HCM Campus are excellent and have excellent results at capturing and diverting waste from landfill. Only the ZW organics and ZW mixed recycling capture rates could be improved through improved sorting behaviour.

**Figure 3: HMC Capture Rates by Collection Program**

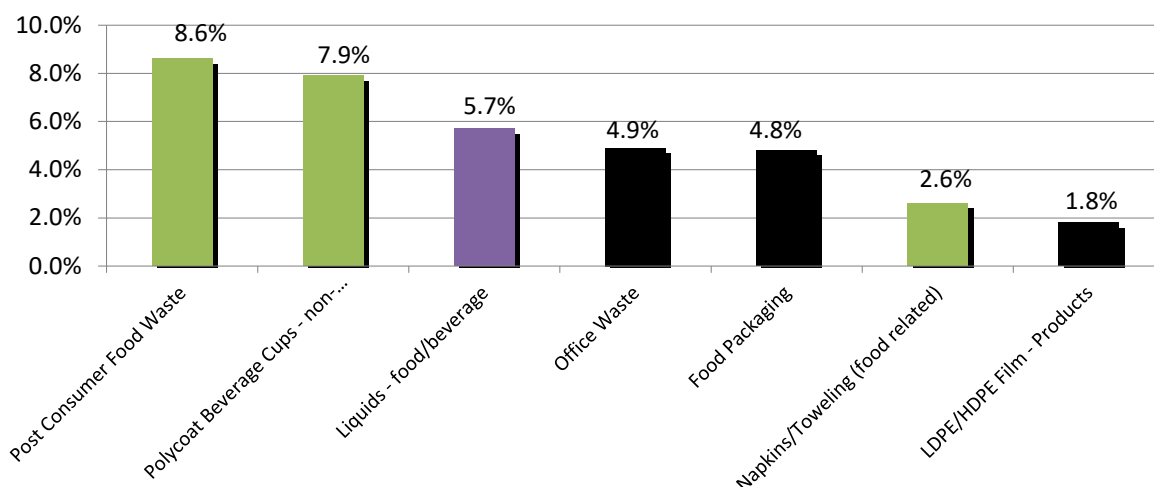


## 2.2 MIXED RECYCLING COMPOSITION

The ZW mixed recycling contamination rate was fairly high at 38.1% by weight. The most commonly disposed contaminants (i.e. non-recyclable specific wastes) disposed in the ZW mixed recycling at HMC are presented in the Figure below. Specific wastes are colour coded: green are suitable for ZW organic bin, black are suitable for ZW waste-to-landfill bin and purple are reducible wastes.



**Figure 4: HMC Contaminants in Mixed Recycling (over 1.0% by weight of material stream)**



The waste reduction workplan should focus on those contaminants that can with minimal effort and cost be managed to be suitable for inclusion in ZW mixed recycling or eliminated from improper disposal. These include:

1. Minimizing post-consumer food waste, polycoat beverage cups and napkins/towelings in mixed recycling through education/signage.
2. Encouraging the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable.

### 2.3 ORGANIC COMPOSITION

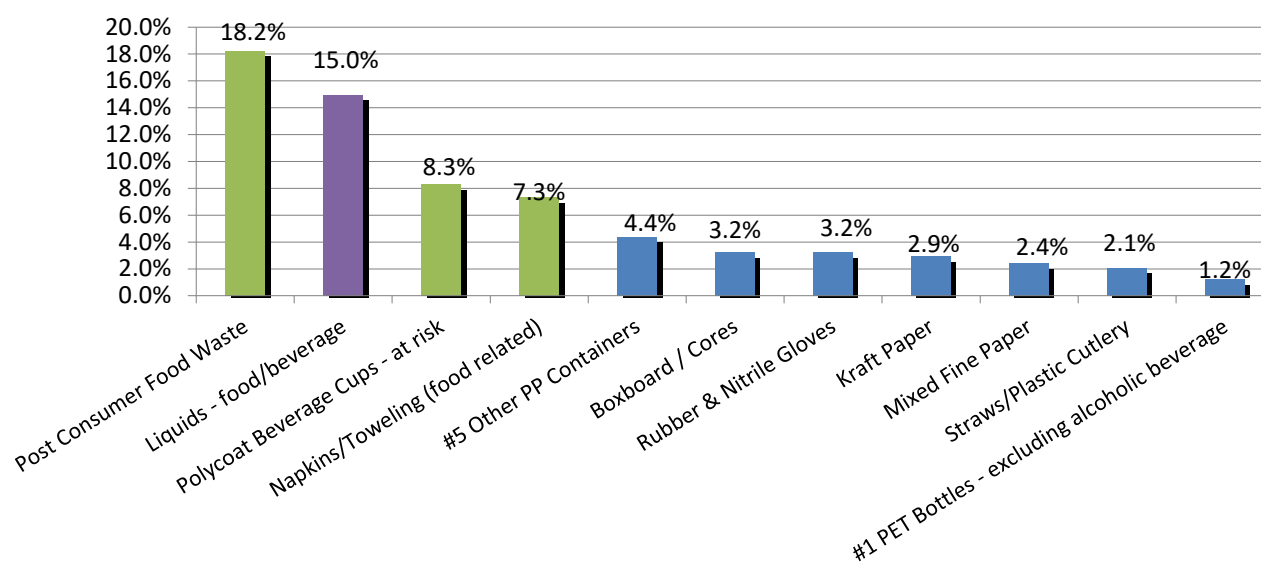
As in 2018, the contamination rate in the ZW organic bins was significantly lower than in ZW recycling at 2.7% by weight. The most commonly disposed contaminants (i.e. non-organic specific wastes) disposed in the ZW organics bins are polypropylene containers and other food packaging waste. Contamination in the organics stream is so low that it does not warrant any further action at this time.

### 2.4 WASTE-TO-LANDFILL COMPOSITION

The ZW waste-to-landfill contamination rate was calculated by summing the weight of material that was disposed in waste-to-landfill for which there is a diversion program available on campus divided by the total weight of material disposed in waste-to-landfill. The ZW waste-to-landfill contamination rate was 70.3% - significantly lower than in 2018 when it was 85.1%. This suggests that users are improving in their sorting behaviour and are increasingly sorting mixed food related materials into their respective streams prior to disposing them. The most commonly disposed contaminants (i.e. organic or mixed recyclable wastes) disposed in the ZW waste-to-landfill bins at HMC are presented in the Figure below. Specific wastes are colour coded: blue are suitable for ZW mixed recycling bin, green are suitable for ZW organics bin and purple are reducible.



**Figure 5: HMC Contaminants in Waste-to-Landfill (over 1.0% by weight of material stream)**



Analysis of the ZW waste-to-landfill streams at this campus has indicated that the most significant impediment to improved diversion is the use of the ZW waste-to-landfill bin for the disposal of organic wastes. The waste reduction workplan must focus on those contaminants that can with minimal effort and cost be managed to be suitable for inclusion in ZW organics or eliminated from improper disposal. These include:

1. Encouraging the emptying of food waste, polycoat beverage cups and napkins in the organics bin, then the disposal of the food packaging in the appropriate ZW mixed recycling or ZW organics bin through education/signage.
2. Encouraging the proper disposal in ZW mixed recycling of #5 polypropylene containers, boxboard/cores, rubber/nitrile gloves, kraft paper, mixed fine paper, straws & plastic cutlery and #1 PET Bottles.
3. Encouraging the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable.

## 2.5 ANALYSIS OF ZW BINS BY AREA

For the purpose of identifying opportunities to improve waste diversion, eight areas of distinct waste generation were identified and audited. This sampling did not include every area of the campus. Each area generated a different amount of ZW mixed recycling, organics and mixed waste-to-landfill (Table 1). In order to maximize waste reduction, opportunities should focus on the areas with the lowest diversion rate.

**Table 1: HMC Campus ZW Material Diversion Rate by Area**

| Area                                  | Percent By Weight of Material Stream Generated During the 24-hour Sampling Period |             |                      |                   |
|---------------------------------------|---|-------------|----------------------|-------------------|
|                                       | ZW Mixed Recycling  | ZW Organics | ZW Waste-to-landfill | ZW Diversion Rate |
| HMC A - Food Service - Front of House | 35.3%   | 21.6%       | 43.1%                | 56.9%             |



| Area                                   | Percent By Weight of Material Stream Generated During the 24-hour Sampling Period |             |                      |                   |
|--|---|-------------|----------------------|-------------------|
|  | ZW Mixed Recycling  | ZW Organics | ZW Waste-to-landfill | ZW Diversion Rate |
| HMC A - Food Service - Back of House   | 13.4%   | 38.1%       | 48.5%                | 51.5%             |
| HMC A - Faculty of Business Office     | 64.1%   | 8.2%        | 27.8%                | 72.2%             |
| HMC A - 3rd Floor & 4th Floor Hallways | 42.8%   | 19.5%       | 37.7%                | 62.3%             |
| HMC B - Food Service - Front of House  | 35.8%   | 18.4%       | 45.7%                | 54.3%             |
| HMC B - Food Service - Back of House   | 20.0%   | 30.7%       | 49.4%                | 50.6%             |
| HMC B - 2nd Floor Gallery              | 39.1%   | 19.7%       | 41.3%                | 58.7%             |
| HMC B - 3rd Floor & 4th Floor Hallways | 26.5%   | 22.8%       | 50.8%                | 49.2%             |

The contamination rates for each of the eight areas sampled during the audit were analyzed to identify the best and worst performers. This analysis was done for all three ZW bins streams.

Table 2 below presents the percentage by weight of contaminants in ZW mixed recycling by area sorted to present the best to the worst performers. Areas appearing in red have a ZW contamination rate above the campus average.

**Table 2: Percentage of Contaminants in ZW Mixed Recycling by Area: the Best to the Worst Performers**

| Area                                   | Contaminants in ZW Mixed Recycling |
|--|------------------------------------|
| HMC A - 4th Floor Faculty of Business  | 3.4%                               |
| HMC A - Cafeteria Back of House        | 16.0%                              |
| HMC A - Starbucks Back of House        | 31.6%                              |
| HMC A - 3rd & 4th Floor Hallways       | 35.7%                              |
| HMC B - Tim Hortons Back of House      | 39.1%                              |
| HMC A - Cafeteria Front of House       | 46.8%                              |
| HMC B - 3rd Floor & 4th Floor Hallways | 47.3%                              |
| HMC B - 2nd Floor Gallery              | 69.1%                              |
| <b>Campus-Wide</b>                     | <b>38.1%</b>                       |

Table 3 below presents the percentage by weight of contaminants in ZW organics by area sorted to present the best to the worst performers. Areas appearing in red have a ZW contamination rate above the campus average.



**Table 3: Percentage of Contaminants in ZW Organics by Area: the Worst to the Best Performers**

| Area                                   | Contaminants in ZW Organics |
|--|-----------------------------|
| HMC A - Starbucks Back of House        | 0.0%                        |
| HMC A - Cafeteria Back of House        | 0.0%                        |
| HMC B - Tim Hortons Back of House      | 0.0%                        |
| HMC A - 4th Floor Faculty of Business  | 10.3%                       |
| HMC B - 3rd Floor & 4th Floor Hallways | 12.2%                       |
| HMC B - 2nd Floor Gallery              | 18.6%                       |
| HMC A - 3rd & 4th Floor Hallways       | 18.9%                       |
| HMC A - Cafeteria Front of House       | 28.1%                       |
| <b>Campus-Wide</b>                     | <b>3.0%</b>                 |

Table 4 below presents the percentage by weight of contaminants in ZW waste-to-landfill by area sorted to present the worst to the best performers. The average contamination rate of ZW waste-to-landfill at the HMC campus is 70.3%. The average is the sum of the weights of the contaminants in the ZW waste-to-landfill bin in all fourteen areas audited divided by the total amount of ZW waste-to-landfill material sorted.

**Table 4: Percentage of Contaminants in ZW Waste-to-Landfill by Area: the Worst to the Best Performers**

| Area                                   | Contaminants in ZW Waste-to-landfill |
|--|--------------------------------------|
| HMC A - 4th Floor Faculty of Business  | 11.2%                                |
| HMC A - Starbucks Back of House        | 51.1%                                |
| HMC B - Tim Hortons Back of House      | 53.9%                                |
| HMC A - Cafeteria Back of House        | 62.8%                                |
| HMC A - 3rd & 4th Floor Hallways       | 70.4%                                |
| HMC A - Cafeteria Front of House       | 86.0%                                |
| HMC B - 3rd Floor & 4th Floor Hallways | 86.0%                                |
| HMC B - 2nd Floor Gallery              | 90.5%                                |
| <b>Campus-Wide</b>                     | <b>70.3%</b>                         |

For the purpose of identifying the areas where the ZW bin program is underperforming each Area was ranked for:

1. Waste Diversion Rate
2. ZW Recycling Contamination Rate
3. ZW Organics Contamination Rate, and
4. ZW Waste-to-Landfill Contamination Rate

Of the Areas audited at HMC in 2019 the best to worst Area for overall ZW bin performance are in order:

1. HMC A - Starbucks Back of House
2. HMC B - Tim Hortons Back of House
3. HMC A - Cafeteria Back of House
4. HMC A - 4th Floor Faculty of Business
5. HMC A - 3rd & 4th Floor Hallways



6. HMC B - 2nd Floor Gallery
7. HMC A - Cafeteria Front of House
8. HMC B - 3rd Floor & 4th Floor Hallways

## 2.6 ALL CAMPUSES: CONTAMINATED LOADS OF DIVERTIBLE MATERIAL

Loads of divertible material that were highly contaminated and re-directed to waste-to-landfill (as noted by the service supplier) was analyzed across the three campuses using the 2018 service data. Contamination of divertible material is a hot topic given waste processors decreasing tolerance for contamination.

Of the three Sheridan Campuses, HMC Campus had the lowest rate of dedicated recycling material being rejected and disposed as waste-to-landfill. Only 1.6% of all the waste-to-landfill at the HMC Campus could have been diverted had the contamination rate been lower.

**Table 5: Contaminated Recycling: All Campuses**

|   | Trafalgar (kg/a) | Davis (kg/a) | HMC (kg/a) |
|---|------------------|--------------|------------|
| Waste-to-Landfill (dedicated)                               | 317,094          | 203,152      | 34,766     |
| Contaminated Recycling                                      | 44,586           | 14,720       | 572        |
| Total Waste-to-Landfill                                     | 361,680          | 217,872      | 35,338     |
| Percent of Waste-to-Landfill that is Contaminated Recycling | 12.3%            | 6.8%         | 1.6%       |

Almost all contaminated loads at the Campuses were ZW mixed recycling that were too contaminated though there were a few contaminated loads of contaminated wood.

## 2.7 HMC CAMPUS: COFFEE CUP MANAGEMENT OVER TIME

Although all polycoat cups were considered suitable for the green bin program for the purpose of this audit, polycoat cups suitable for diversion programs is changing. Consequently coffee cups were classified as currently suitable for Sheridan's green bin program "green bin suitable" and at-risk of being excluded from Sheridan's green bin program in the future "at risk". This minor classification was done so that Sheridan management may be kept aware of how polycoat cup disposition changes may impact its existing polycoat cup diversion program. It is important to note that Campus compliance with disposing of coffee cups in the "signed" organic receptacles is not improving: in 2017, 34.8% of cups were captured in the green bin program and in 2019, 25.5% of cups were captured in the green bin program.

At the HMC Campus, the waste reduction workplan should include:

1. A rethink of the coffee cup program at the three campuses to ensure the program is future-looking, flexible, efficient and effective.



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### 3.0 SUMMARY OF RECOMMENDATIONS

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#### Campus Wide Focus:

Sheridan HMC campus has an excellent combination of diversion programs that address the divertible materials generated at the campus. Consequently, future waste diversion improvements will likely come from enhancing compliance with the three stream ZW bins across campus. Sheridan should continue to assess and identify barriers to sorting and develop area-specific action plans to increase participation.

#### Specific Recommendations:

1. **Enhancing Food Waste, Polycoat Cup, Coffee Cup Trays and Napkins Capture Rate Throughout the Campus:** 11,980 kg/year of food waste, polycoat cups and napkins are being disposed in waste-to-landfill. Though this is a significant improvement from 2018, Sheridan must continue to encourage the proper disposal in organics of food waste and napkins through education/signage. Consider a campaign to encourage sorting behaviour using a multi-media approach and consider 'branding' the campaign. Engage and challenge environmental studies students to design the campaign and develop a multi-media approach/roll-out. Promote HMC as the best performing Sheridan campus in diversion performance and challenge the campus community to keep up the good work. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 2,396 kg per year (20% of organic improperly disposed across the campus).
2. **Enhancing Mixed Recycling Capture Rate Throughout the Campus:** 7,569 kg/year of recycling is being disposed in waste-to-landfill. Sheridan must continue to encourage the proper disposal in mixed recycling of: #5 polypropylene containers (cold drink cups), boxboard/cores, rubber/nitrile gloves, kraft paper, mixed fine paper, straws & plastic cutlery and #1 PET Bottles through education/signage. Though recycling capture rates have improved over time, Sheridan must continue to encourage the proper sorting of materials. Consider a campaign to encourage sorting behaviour using a multi-media approach and consider 'branding' the campaign. Engage and challenge environmental studies students to design the campaign and develop a multi-media approach/roll-out. Promote HMC as the best performing Sheridan campus in diversion performance and challenge the campus community to keep up the good work. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 1,523 kg per year (20% of mixed recycling improperly disposed across the campus).
3. **Emptying Beverage Containers:** Continue to encourage the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable. Consider launching a campaign. Anticipated reduction in disposal of liquids in any stream: 40%. Anticipated reduction in waste-to-landfill of 2,114 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams.
4. **Reducing Contamination in the ZW Collection Programs at Targeted Underperforming Areas:** Sheridan should continue to identify behavioural and structural issues and opportunities to improve material sorting, with particular focus in Hallways, Galleries and Cafeteria Front of House where sorting is particularly poor. Estimating the impact of targeted area programs on waste diversion is beyond the scope of this study as not all areas of the Campus were audited in 2019.



5. **Monitoring the Coffee Cup Program:** More and more cups are being considered not compostable all the while Sheridan's population continues haphazardly dispose of coffee cups largely in waste-to-landfill and organics, but also with significant disposal in recycling. Coffee cup types and disposition (compostable vs. non-compostable) is in flux. Consider developing a strategy to manage coffee cups at the three campuses to ensure the coffee cup program is future-looking, flexible, efficient and effective. Impact on waste diversion cannot be quantified at this time as it is strategy dependent.
6. **Capturing & Reporting Material Weights for All Diversion Programs at the Campus:** Sheridan has made significant progress in reporting material diversion streams since 2015 however there may be other diversion programs in place at the Campus but the weight-based data is not currently captured for reporting purposes (Examples Electronics Reuse and Office Furniture Donation). Sheridan should continue to conduct an inventory of all diversion programs, with particular focus on reduction and reuse programs, and should ensure there are procedures in place to collect, monitor and report on these programs.

**Anticipated Result:**

With the implementation of the above noted waste reduction plans, it is estimated that the waste diversion rate at the HMC Campus will increase from 66.7% to 72.2% and the Campus will divert an additional 6,033kg per year of waste from landfill in 2020.



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## APPENDICES

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### GLOSSARY OF WASTE TERMS

In order to reduce potential confusion that may arise from the use of terms in this report, the following is a brief description of the waste and waste diversion terms.

#### **TOTAL WASTE GENERATED**

Total waste generated refers to all materials generated by the Facility's operations.

Total Waste Generated = Waste Disposed + Material Recovered From 3Rs Programs

#### **RECOVERED WASTE**

Recovered waste refers to materials diverted from the Facility's waste stream and from landfill as a result of 3Rs Programs.

#### **CAPTURE RATES**

Recycling rates for the Facility's 3Rs Programs based on the amount of material recovered versus the amount of the same material disposed into the waste stream.

Capture Rate = Recycled or Reused Material / (Material Disposed + Recycled or Reused)

#### **ANNUAL DIVERSION RATE**

The Facility's annual diversion rate is the percentage of waste material that it diverts from landfill versus what it generates in total.

Annual Diversion Rate = 3Rs Programs / Total Waste Generated

#### **ONTARIO'S 60% REDUCTION TARGET**

The *Ontario Ministry of Environment & Climate Change's* 60% reduction target is a comparison between a Facility's current year waste-to-landfill figure and a figure obtained from an earlier base year.

60% Reduction Target = (Waste Disposed 2018 - Waste Disposed Base Year 2012) / Waste Disposed Base Year 2012



## SPECIFIC WASTE CATEGORIES & WASTE AUDIT DATA (HMC CAMPUS)

The following is the list of specific wastes, the associated appropriate waste management collection program, and the amount by weight generated per year and disposed by collection program at the HMC Campus in 2019. The specific wastes are listed alphabetically.

| Specific Waste Category                              | Acceptable in Collection Program | All Streams (kg/yr) | ZW Mixed Recycling (kg/yr) | ZW Organics (kg/yr) | Other / Bulk Recycling (kg/yr) | Reuse (kg/yr) | Disposal (kg/yr) |
|--|----------------------------------|---------------------|----------------------------|---------------------|--------------------------------|---------------|------------------|
| #1 PET - clear thermoform packaging                  | Mixed Recycling                  | 74                  | 14                         | 0                   | 0                              | 0             | 60               |
| #1 PET - other thermoform (coloured)                 | Mixed Recycling                  | 16                  | 8                          | 0                   | 0                              | 0             | 7                |
| #1 PET Bottles - excluding alcoholic beverage        | Mixed Recycling                  | 1,751               | 1,287                      | 36                  | 0                              | 0             | 429              |
| #2 HDPE Bottles and Jugs                             | Mixed Recycling                  | 392                 | 275                        | 0                   | 0                              | 0             | 117              |
| #2 Other HDPE Containers                             | Mixed Recycling                  | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| #5 Other PP Containers                               | Mixed Recycling                  | 2,991               | 1,241                      | 202                 | 0                              | 0             | 1,549            |
| #6 PS - Expanded polystyrene                         | Waste                            | 218                 | 60                         | 133                 | 0                              | 0             | 26               |
| #6 PS - Non-expanded - all other                     | Mixed Recycling                  | 1,277               | 1,135                      | 31                  | 0                              | 0             | 111              |
| #7 Other Plastics                                    | Mixed Recycling                  | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Aluminum beverage - alcohol                          | Alcohol Beverage Container Reuse | 19                  | 0                          | 0                   | 0                              | 0             | 19               |
| Aluminum Foil & Foil Trays                           | Mixed Recycling                  | 76                  | 27                         | 33                  | 0                              | 0             | 16               |
| Aluminum Food & Other Beverage Cans                  | Mixed Recycling                  | 264                 | 225                        | 30                  | 0                              | 0             | 9                |
| Aseptic Containers - (excluding alcoholic beverages) | Mixed Recycling                  | 283                 | 204                        | 9                   | 0                              | 0             | 70               |
| Batteries  | Battery Recycling                | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Boxboard / Cores                                     | Mixed Recycling                  | 2,713               | 1,408                      | 160                 | 0                              | 0             | 1,145            |
| Clear Glass Other Beverage and Food                  | Mixed Recycling                  | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Clothing/Textiles                                    | Dropbox/Textile Reuse            | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Coffee Grinds  | Organics                         | 2,451               | 0                          | 2,451               | 0                              | 0             | 0                |
| Coffee pods  | Waste                            | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Confidential Paper - Paper Shred                     | Paper Shred Recycling            | 5,897               | 0                          | 0                   | 5,897                          | 0             | 0                |
| Corrugated Cardboard - Bulk                          | Cardboard Recycling              | 1,224               | 0                          | 0                   | 1,224                          | 0             | 0                |
| Corrugated Cardboard - Loose                         | Mixed Recycling                  | 520                 | 520                        | 0                   | 0                              | 0             | 0                |
| Diapers  | Waste                            | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Electronics  | E-Waste Recycling & Reuse        | 321                 | 0                          | 0                   | 71                             | 250           | 0                |
| Feminine Hygiene Products                            | Hygiene Waste*                   | 2,368*              | 0                          | 0                   | 0                              | 0             | 1,184*           |
| Food packaging                                       | Waste                            | 3,466               | 1,139                      | 164                 | 0                              | 0             | 2,163            |
| Furniture & Bulky Items                              | Furniture Reuse                  | 728                 | 0                          | 0                   | 0                              | 728           | 0                |
| Gable Top Containers                                 | Mixed Recycling                  | 393                 | 237                        | 14                  | 0                              | 0             | 142              |
| Glass - Clear Other Beverage and Food                | Mixed Recycling                  | 374                 | 374                        | 0                   | 0                              | 0             | 0                |
| Glass - Clear Alcoholic Beverage                     | Mixed Recycling                  | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Kraft Paper  | Mixed Recycling                  | 1,673               | 550                        | 86                  | 0                              | 0             | 1,037            |
| Laminated Paper Packaging                            | Waste                            | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Large HDPE & PP Pails & Lids                         | Mixed Recycling                  | 319                 | 319                        | 0                   | 0                              | 0             | 0                |



| Specific Waste Category                         | Acceptable in Collection Program | All Streams (kg/yr) | ZW Mixed Recycling (kg/yr) | ZW Organics (kg/yr) | Other / Bulk Recycling (kg/yr) | Reuse (kg/yr) | Disposal (kg/yr) |
|---|----------------------------------|---------------------|----------------------------|---------------------|--------------------------------|---------------|------------------|
| LDPE/HDPE Film - Products (non-packaging)       | Waste                            | 1,483               | 415                        | 11                  | 0                              | 0             | 1,057            |
| Liquids - food/beverage                         | Organics                         | 6,621               | 1,335                      | 0                   | 0                              | 0             | 5,286            |
| Maintenance Waste                               | Waste                            | 1,165               | 237                        | 1                   | 0                              | 0             | 927              |
| Metal - Bulk                                    | Metal Recycling                  | 3,130               | 0                          | 0                   | 3,130                          | 0             | 0                |
| Mixed Fine Paper                                | Mixed Recycling                  | 6,783               | 5,846                      | 91                  | 0                              | 0             | 846              |
| Molded Pulp/Fibre                               | Organics or Mixed Recycling      | 542                 | 269                        | 113                 | 0                              | 0             | 160              |
| Napkins/Toweling (food related)                 | Organics                         | 3,608               | 601                        | 416                 | 0                              | 0             | 2,592            |
| Newspaper – Dailys and Weeklys                  | Mixed Recycling                  | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Office Waste                                    | Waste                            | 6,839               | 1,156                      | 4                   | 0                              | 0             | 5,679            |
| Other Metal                                     | Mixed Recycling                  | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Other Non-Recyclable Material                   | Waste                            | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Other Paper                                     | Mixed Recycling                  | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Paper Straws                                    | Organics                         | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Parchment Paper                                 | Waste                            | 763                 | 127                        | 0                   | 0                              | 0             | 635              |
| Polycoat Beverage Cups - suitable for green bin | Organics                         | 5                   | 5                          | 0                   | 0                              | 0             | 0                |
| Polycoat Beverage Cups - at risk                | Organics                         | 6,444               | 1,858                      | 1,643               | 0                              | 0             | 2,943            |
| Post Consumer Food Waste                        | Organics                         | 41,156              | 2,028                      | 32,684              | 0                              | 0             | 6,444            |
| Rubber & Nitrile Gloves                         | Mixed Recycling                  | 1,177               | 38                         | 0                   | 0                              | 0             | 1,139            |
| Spiral Wound Containers                         | Waste                            | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Steel Food & Other Beverage Cans                | Mixed Recycling                  | 509                 | 509                        | 0                   | 0                              | 0             | 0                |
| Straws/Plastic Cutlery                          | Mixed Recycling                  | 851                 | 100                        | 20                  | 0                              | 0             | 732              |
| Tissue/Toweling (cleaning related)              | Waste                            | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Tissue/Toweling (washroom related)              | Organics                         | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Wood  | Wood Recycling                   | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
| Wood Dust                                       | Wood Dust Recycling              | 0                   | 0                          | 0                   | 0                              | 0             | 0                |
|   | <b>Grand Total</b>               | <b>110,884</b>      | <b>23,546</b>              | <b>38,330</b>       | <b>10,322</b>                  | <b>978</b>    | <b>36,524</b>    |

*\*Feminine hygiene products are collected separately from ZW waste-to-landfill however the collected waste is combusted in an energy-from-waste facility so it is included as "disposal" for the purpose of calculating waste diversion*



## MECP WASTE FORM: REPORT OF A WASTE AUDIT (HMC)

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 (HMC)

|  |                              |   |
|--|------------------------------|---|
| Name of Owner and/or Operator of Entity(ies) and Company Name:<br>Sheridan College Institute of Technology and Advanced Learning |                              |   |
| Name of Contact Person:<br>Wai Chu Cheng   | Telephone #:<br>905 845 9430 | Email address:<br>Waichu.cheng@sheridancollege.ca |
| Street Address(es) of Entity(ies):<br>HMC Campus of Sheridan College   |                              |   |
| Municipality:<br>Mississauga, ON Canada  |                              |   |
| Type of entity<br>Educational Institution  |                              |   |

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

### II. Description of Entity (HMC)

|   |
|---|
| Provide a brief overview of the entity(ties):   |
| <p>This waste audit was conducted in April 2019 at the HMC Campus of Sheridan College. The campus has two buildings each comprised of four floors totaling more than 300,000 square feet.</p> <p>The Zero Waste streams which include mixed recycling, organics and waste-to-landfill were audited for the purpose of identifying current diversion rates by specific waste category and to calculate contamination rates. A 24-hour sample of organics, mixed recycling and waste-to-landfill was sorted and weighed in each of the 8 areas audited. Weight based generation information from 2018 for the waste and diversion programs were obtained from the service provider(s) and were used in the calculation of diversion rates.</p> <p>At the time of the audit, the campus had fully implemented the following collection programs:</p> <ol style="list-style-type: none"><li>1. ZW Mixed Recycling (includes glass, metal, paper, plastic)</li><li>2. ZW Organics</li><li>3. ZW Waste to Landfill</li><li>4. Bulk Old Corrugated Cardboard (OCC) Recycling</li><li>5. Paper Shred (Confidential) Recycling</li><li>6. Metal Recycling</li><li>7. E-Waste Recycling</li><li>8. Electronic Equipment Lease-Return (new 2019)</li><li>9. Office Furniture Reuse Event(s) (new 2019)</li><li>10. Hygiene Waste Energy from Waste (EFW) Program</li></ol> |



### III. How Waste is Produced And Decisions Affecting the Production of Waste (HMC)

| 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?   |
| #1 PET - clear thermoform packaging   | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students  |
| #1 PET - other thermoform (coloured)  | Minimal amounts generated on campus   |
| #1 PET Bottles - excluding alcoholic beverage   | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students. ZW water bottle refill stations installed to reduce PET water bottle generation/disposal. |
| #2 HDPE Bottles and Jugs  | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students  |
| #2 Other HDPE Containers  | Minimal amounts generated on campus   |
| #5 Other PP Containers  | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students  |
| #6 PS - Expanded polystyrene  | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students  |
| #6 PS - Non-expanded - all other  | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students  |
| #7 Other Plastics   | Minimal amounts generated on campus.  |
| Aluminum beverage - alcohol   | Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others.  |
| Aluminum Foil & Foil Trays  | Small quantities generated on campus and should be included in the ZW recycling program.  |
| Aluminum Food & Other Beverage Cans   | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students  |
| Aseptic Containers - (excluding alcoholic beverages)  | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students  |
| Batteries   | Minimal amounts generated in campus. Should be included in battery recycling program.   |
| Boxboard / Cores  | Generated all over the campus as a packaging material for food products, office products and class material supplies.   |
| Clear Glass Other Beverage and Food   | Minimal amounts generated on campus.  |
| Clothing/Textiles   | Minimal amounts generated on campus.  |



|   |  |
|---|--|
| Coffee Grinds                             | Generated in Starbucks area and captured in organics program.  |
| Coffee pods                               | Minimal amounts generated on campus.   |
| Confidential Paper - Paper Shred          | Generated across campus in offices and captured for shredding and recycling.   |
| Corrugated Cardboard - Bulk               | Generated in receiving area through delivery. Almost all captured in bulk recycling program.   |
| Corrugated Cardboard - Loose              | Generated across campus. Almost all captured in recycling program.   |
| Diapers                                   | Minimal amounts generated on campus.   |
| Electronics                               | Generated throughout campus and suitable for the E-waste recycling program or electronics reuse (lease) program.                                       |
| Feminine Hygiene Products                 | Generated across campus in washrooms. Material collected for diversion from landfill (incineration).   |
| Food packaging                            | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Gable Top Containers                      | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Glass - Clear Other Beverage and Food     | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Glass - Clear Alcoholic Beverage          | Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others.                         |
| Kraft Paper                               | Paper products generated through campus activities. Most generated in printing and photocopying areas.   |
| Laminated Paper Packaging                 | Minimal amounts generated on campus  |
| Large HDPE & PP Pails & Lids              | Minimal amounts generated on campus suitable for inclusion in the ZW recycling program.  |
| LDPE/HDPE Film - Products (non-packaging) | Minimal amounts generated on campus  |
| Liquids - food/beverage                   | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Maintenance Waste                         | Minimal amounts generated on campus.   |
| Metal - Bulk                              | Generated in receiving and maintenance areas. Well captured by bulk metal recycling program.   |
| Mixed Fine Paper                          | Paper products generated through campus activities. Most generated in printing and photocopying areas.   |
| Molded Pulp/Fibre                         | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Napkins/Toweling (food related)           | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Newspaper – Dailys and Weeklys            | Available for sale at Campus. Most should be captured in   |



|  |  |
|--|--|
|  | the ZW mixed recycling.  |
| Office Waste   | Generated in offices and classrooms around campus. Disposed as waste.  |
| Other Metal  | Minimal amounts generated on campus and suitable for inclusion in ZW recycling program.  |
| Other Non-Recyclable Material  | Minimal amounts generated on campus.   |
| Other Paper  | Minimal amounts generated on campus  |
| Paper Straws   | None generated on campus.  |
| Parchment Paper  | Generated in Tim Hortons area where it is disposed in waste-to-landfill.   |
| Polycoat Beverage Cups - suitable for green bin  | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Polycoat Beverage Cups - at risk of exclusion  | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Post Consumer Food Waste   | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Rubber & Nitrile Gloves  | Generated in cafeterias across campus. Suitable for inclusion in the ZW recycling program.   |
| Spiral Wound Containers  | Minimal amounts generated on campus.   |
| Steel Food & Other Beverage Cans   | Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students |
| Straws/Plastic Cutlery   | Minimal amounts generated in cafeterias across campus. Suitable for inclusion in the ZW recycling program though much disposed in waste-to-landfill.   |
| Tissue/Toweling (cleaning related)   | Minimal amounts generated on campus.   |
| Tissue/Toweling (washroom related)   | Minimal amounts generated on campus.   |
| Wood   | Not generated at HMC Campus  |
| Wood Dust  | Not generated at HMC Campus.   |
|  |  |
| 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 (HMC)

| 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  |
| #1 PET - clear thermoform packaging   |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| #1 PET - other thermoform (coloured)  |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| #1 PET Bottles - excluding alcoholic beverage   |  | Should be included in ZW Recycling Bin Program though some may end up in landfill. Reduction in PET water bottles through installation of reusable water bottle filling stations.                                 |
| #2 HDPE Bottles and Jugs  |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| #2 Other HDPE Containers  |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| #5 Other PP Containers  |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| #6 PS - Expanded polystyrene  | Generated across campus. No diversion program currently available. |   |
| #6 PS - Non-expanded - all other  |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| #7 Other Plastics   |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Aluminum beverage - alcohol   |  | Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others. Should be included in ZW Recycling Bin Program though some may end up in landfill. |
| Aluminum Foil & Foil Trays  |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Aluminum Food & Other Beverage Cans   |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Aseptic Containers - (excluding   |  | Should be included in ZW Recycling  |



|                                       |   |   |
|---------------------------------------|---|---|
| alcoholic beverages)                  |   | Bin Program though some may end up in landfill  |
| Batteries                             |   | Should be included in E-Recycling or captured during E-Recycling Events.  |
| Boxboard / Cores                      |   | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Clear Glass Other Beverage and Food   |   | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Clothing/Textiles                     |   | None generated at this campus.  |
| Coffee Grinds                         |   | Little generated. Should be included in ZW Organics Bin Program.  |
| Coffee pods                           | Little generated and no diversion program currently available.  |   |
| Confidential Paper - Paper Shred      |   | Well captured in paper shred recycling  |
| Corrugated Cardboard - Bulk           |   | Well captured in OCC bulk recycling program.  |
| Corrugated Cardboard - Loose          |   | Should be included in ZW Recycling Bins throughout the campus, though some may end up in landfill   |
| Diapers                               | Small quantities generated on campus and disposed as waste.   |   |
| Electronics                           |   | Should be included in E-Recycling, captured during E-Recycling Events or included in the Electronics Reuse (lease) program.   |
| Feminine Hygiene Products             | Generated across campus in washrooms. Material collected for diversion from landfill. Material is sent to Energy-from-Waste facility. |   |
| Food packaging                        | Generated across campus and no diversion program currently available.   |   |
| Gable Top Containers                  |   | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Glass - Clear Other Beverage and Food |   | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Glass - Clear Alcoholic Beverage      |   | Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others. Should be included in ZW Recycling Bin Program though some may end up in |



|   |  |  |
|---|--|--|
|   |  | landfill.  |
| Kraft Paper                                     |  | Should be included in ZW Recycling Bin Program though some may end up in landfill  |
| Laminated Paper Packaging                       | Little generated and no diversion program currently available. |  |
| Large HDPE & PP Pails & Lids                    |  | Little generated and should be included in ZW Recycling Bin Program  |
| LDPE/HDPE Film - Products (non-packaging)       | Little generated and no diversion program currently available. |  |
| Liquids - food/beverage                         |  | Should be included in ZW Organics Bin Program though much ends up in landfill  |
| Maintenance Waste                               | Little generated and no diversion program currently available. |  |
| Metal - Bulk                                    |  | Generated in receiving and maintenance areas. Well captured by bulk metal recycling program.   |
| Mixed Fine Paper                                |  | Should be included in ZW Recycling Bin Program though some may end up in landfill  |
| Molded Pulp/Fibre                               |  | Should be included in ZW Organics or ZW Recycling Bin Program though some may end up in landfill   |
| Napkins/Toweling (food related)                 |  | Should be included in ZW Organics Bin Program though much ends up in landfill  |
| Newspaper – Dailys and Weeklys                  |  | Should be included in ZW Recycling Bin Program though some may end up in landfill  |
| Office Waste                                    | No diversion program currently available.                      |  |
| Other Metal                                     |  | Should be included in ZW Recycling Bin Program though some may end up in landfill  |
| Other Non-Recyclable Material                   | Little generated and no diversion program currently available. |  |
| Other Paper                                     |  | Little generated and should be included in ZW Recycling Bin Program  |
| Paper Straws                                    |  | Little generated and should be included in ZW Organics Bin Program   |
| Parchment Paper                                 | No diversion program currently available.                      |  |
| Polycoat Beverage Cups - suitable for green bin |  | Compostable and non-compostable cup identification and disposition is not clear at this time. Current direction: should be included in ZW Organics Bin Program though much |



|   |  |   |
|---|--|---|
|   |  | ends up in landfill.  |
| Polycoat Beverage Cups - at risk of exclusion |  | Compostable and non-compostable cup identification and disposition is not clear at this time. Current direction: should be included in ZW Organics Bin Program though much ends up in landfill. |
| Post Consumer Food Waste                      |  | Should be included in ZW Organics Bin Program though much ends up in landfill   |
| Rubber & Nitrile Gloves                       |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Spiral Wound Containers                       | Little generated and no diversion program currently available. |   |
| Steel Food & Other Beverage Cans              |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Straws/Plastic Cutlery                        |  | Should be included in ZW Recycling Bin Program though some may end up in landfill   |
| Tissue/Toweling (cleaning related)            | Little generated. Should be included in waste-to-landfill      |   |
| Tissue/Toweling (washroom related)            |  | Should be included in ZW organics program though most ends up in waste-to-landfill  |
| Wood  |  | Not generated at HMC Campus.  |
| Wood Dust                                     |  | Not generated at HMC Campus.  |

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 Annually – HMC

|   | Estimated Amount of Waste Produced (kgs) |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |                         |
|---|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|   | Generated                                |                         |                         | Reused                  |                         |                         | Recycled                |                         |                         | Disposed                |                         |                         |
| Categories of Waste                           | "A" Base Year 2012 (kg)                  | "B" * Current Year (kg) | "C" * Change (A-B) (kg) | "A" Base Year 2012 (kg) | "B" * Current Year (kg) | "C" * Change (A-B) (kg) | "A" Base Year 2012 (kg) | "B" * Current Year (kg) | "C" * Change (A-B) (kg) | "A" Base Year 2012 (kg) | "B" * Current Year (kg) | "C" * Change (A-B) (kg) |
| Cans/bottles/plastics (2012 grouping)         | 7,680                                    | 0                       | -7,680                  | 0                       | 0                       | 0                       | 6,710                   | 0                       | -6,710                  | 970                     | 0                       | -970                    |
| Paper products (2012 grouping)                | 10,150                                   | 0                       | -10,150                 | 0                       | 0                       | 0                       | 10,070                  | 0                       | -10,070                 | 80                      | 0                       | -80                     |
| Other Non-Recyclable Material (2012 grouping) | 16,730                                   | 0                       | -16,730                 | 0                       | 0                       | 0                       | 0                       | 0                       | 0                       | 16,730                  | 0                       | -16,730                 |
| #1 PET - clear thermoform packaging           | 0  | 74                      | 74                      | 0                       | 0                       | 0                       | 0                       | 14                      | 14                      | 0                       | 60                      | 60                      |
| #1 PET - other thermoform (coloured)          | 0  | 16                      | 16                      | 0                       | 0                       | 0                       | 0                       | 8                       | 8                       | 0                       | 7                       | 7                       |
| #1 PET Bottles - excluding alcoholic beverage | 0  | 1,751                   | 1,751                   | 0                       | 0                       | 0                       | 0                       | 1,322                   | 1,322                   | 0                       | 429                     | 429                     |
| #2 HDPE Bottles and Jugs                      | 0  | 392                     | 392                     | 0                       | 0                       | 0                       | 0                       | 275                     | 275                     | 0                       | 117                     | 117                     |
| #2 Other HDPE Containers                      | 0  | 0                       | 0                       | 0                       | 0                       | 0                       | 0                       | 0                       | 0                       | 0                       | 0                       | 0                       |
| #5 Other PP Containers                        | 0  | 2,991                   | 2,991                   | 0                       | 0                       | 0                       | 0                       | 1,442                   | 1,442                   | 0                       | 1,549                   | 1,549                   |
| #6 PS - Expanded polystyrene                  | 0  | 218                     | 218                     | 0                       | 0                       | 0                       | 0                       | 193                     | 193                     | 0                       | 26                      | 26                      |



|  |                |       |        |   |     |     |   |       |       |   |       |       |
|--|----------------|-------|--------|---|-----|-----|---|-------|-------|---|-------|-------|
| #6 PS - Non-expanded - all other                     | 0              | 1,277 | 1,277  | 0 | 0   | 0   | 0 | 1,166 | 1,166 | 0 | 111   | 111   |
| #7 Other Plastics                                    | 0              | 0     | 0      | 0 | 0   | 0   | 0 | 0     | 0     | 0 | 0     | 0     |
| Aluminum beverage - alcohol                          | 0              | 19    | 19     | 0 | 0   | 0   | 0 | 0     | 0     | 0 | 19    | 19    |
| Aluminum Foil & Foil Trays                           | 0              | 76    | 76     | 0 | 0   | 0   | 0 | 60    | 60    | 0 | 16    | 16    |
| Aluminum Food & Other Beverage Cans                  | 0              | 264   | 264    | 0 | 0   | 0   | 0 | 255   | 255   | 0 | 9     | 9     |
| Aseptic Containers - (excluding alcoholic beverages) | 0              | 283   | 283    | 0 | 0   | 0   | 0 | 213   | 213   | 0 | 70    | 70    |
| Batteries  | 0              | 0     | 0      | 0 | 0   | 0   | 0 | 0     | 0     | 0 | 0     | 0     |
| Boxboard / Cores                                     | 0              | 2,713 | 2,713  | 0 | 0   | 0   | 0 | 1,568 | 1,568 | 0 | 1,145 | 1,145 |
| Clear Glass Other Beverage and Food                  | 0              | 0     | 0      | 0 | 0   | 0   | 0 | 0     | 0     | 0 | 0     | 0     |
| Clothing/Textiles                                    | 0              | 0     | 0      | 0 | 0   | 0   | 0 | 0     | 0     | 0 | 0     | 0     |
| Coffee Grinds  | 0              | 2,451 | 2,451  | 0 | 0   | 0   | 0 | 2,451 | 2,451 | 0 | 0     | 0     |
| Coffee pods  | 0              | 0     | 0      | 0 | 0   | 0   | 0 | 0     | 0     | 0 | 0     | 0     |
| Confidential Paper - Paper Shred                     | 0              | 5,897 | 5,897  | 0 | 0   | 0   | 0 | 5,897 | 5,897 | 0 | 0     | 0     |
| Corrugated Cardboard - Bulk                          | 4,680          | 1,224 | -3,456 | 0 | 0   | 0   | 0 | 1,224 | 1,224 | 0 | 0     | 0     |
| Corrugated Cardboard - Loose                         | (incl in bulk) | 520   |        | 0 | 0   | 0   | 0 | 520   | 520   | 0 | 0     | 0     |
| Diapers  | 0              | 0     | 0      | 0 | 0   | 0   | 0 | 0     | 0     | 0 | 0     | 0     |
| Electronics  | 0              | 321   | 321    | 0 | 250 | 250 | 0 | 71    | 71    | 0 | 0     | 0     |
| Feminine Hygiene Products                            | 0              | 1,184 | 1,184  | 0 | 0   | 0   | 0 | 0     | 0     | 0 | 1,184 | 1,184 |
| Food packaging                                       | 0              | 3,466 | 3,466  | 0 | 0   | 0   | 0 | 1,303 | 1,303 | 0 | 2,163 | 2,163 |
| Furniture & Bulky                                    | 0              | 728   | 728    | 0 | 728 | 728 | 0 | 0     | 0     | 0 | 0     | 0     |



|   |   |       |       |   |   |   |   |       |       |   |       |       |
|---|---|-------|-------|---|---|---|---|-------|-------|---|-------|-------|
| Items                                     |   |       |       |   |   |   |   |       |       |   |       |       |
| Gable Top Containers                      | 0 | 393   | 393   | 0 | 0 | 0 | 0 | 251   | 251   | 0 | 142   | 142   |
| Glass - Clear Other Beverage and Food     | 0 | 374   | 374   | 0 | 0 | 0 | 0 | 374   | 374   | 0 | 0     | 0     |
| Glass - Clear Alcoholic Beverage          | 0 | 0     | 0     | 0 | 0 | 0 | 0 | 0     | 0     | 0 | 0     | 0     |
| Kraft Paper                               | 0 | 1,673 | 1,673 | 0 | 0 | 0 | 0 | 636   | 636   | 0 | 1,037 | 1,037 |
| Laminated Paper Packaging                 | 0 | 0     | 0     | 0 | 0 | 0 | 0 | 0     | 0     | 0 | 0     | 0     |
| Large HDPE & PP Pails & Lids              | 0 | 319   | 319   | 0 | 0 | 0 | 0 | 319   | 319   | 0 | 0     | 0     |
| LDPE/HDPE Film - Products (non-packaging) | 0 | 1,483 | 1,483 | 0 | 0 | 0 | 0 | 426   | 426   | 0 | 1,057 | 1,057 |
| Liquids - food/beverage                   | 0 | 6,621 | 6,621 | 0 | 0 | 0 | 0 | 1,335 | 1,335 | 0 | 5,286 | 5,286 |
| Maintenance Waste                         | 0 | 1,165 | 1,165 | 0 | 0 | 0 | 0 | 238   | 238   | 0 | 927   | 927   |
| Metal - Bulk                              | 0 | 3,130 | 3,130 | 0 | 0 | 0 | 0 | 3,130 | 3,130 | 0 | 0     | 0     |
| Mixed Fine Paper                          | 0 | 6,783 | 6,783 | 0 | 0 | 0 | 0 | 5,937 | 5,937 | 0 | 846   | 846   |
| Molded Pulp/Fibre                         | 0 | 542   | 542   | 0 | 0 | 0 | 0 | 382   | 382   | 0 | 160   | 160   |
| Napkins/Towelings (food related)          | 0 | 3,608 | 3,608 | 0 | 0 | 0 | 0 | 1,017 | 1,017 | 0 | 2,592 | 2,592 |
| Newspaper – Dailys and Weeklys            | 0 | 0     | 0     | 0 | 0 | 0 | 0 | 0     | 0     | 0 | 0     | 0     |
| Office Waste                              | 0 | 6,839 | 6,839 | 0 | 0 | 0 | 0 | 1,160 | 1,160 | 0 | 5,679 | 5,679 |
| Other Metal                               | 0 | 0     | 0     | 0 | 0 | 0 | 0 | 0     | 0     | 0 | 0     | 0     |
| Other Non-Recyclable Material             | 0 | 0     | 0     | 0 | 0 | 0 | 0 | 0     | 0     | 0 | 0     | 0     |
| Other Paper                               | 0 | 0     | 0     | 0 | 0 | 0 | 0 | 0     | 0     | 0 | 0     | 0     |
| Paper Straws                              | 0 | 0     | 0     | 0 | 0 | 0 | 0 | 0     | 0     | 0 | 0     | 0     |
| Parchment Paper                           | 0 | 763   | 763   | 0 | 0 | 0 | 0 | 127   | 127   | 0 | 635   | 635   |




|   |        |         |        |   |     |     |        |        |        |        |        |        |
|---|--------|---------|--------|---|-----|-----|--------|--------|--------|--------|--------|--------|
| Polycoat Beverage<br>Cups - suitable for<br>green bin   | 0      | 5       | 5      | 0 | 0   | 0   | 0      | 5      | 5      | 0      | 0      | 0      |
| Polycoat Beverage<br>Cups - at risk   | 0      | 6,444   | 6,444  | 0 | 0   | 0   | 0      | 3,501  | 3,501  | 810    | 2,943  | 2,133  |
| Post Consumer Food<br>Waste   | 810    | 41,156  | 40,346 | 0 | 0   | 0   | 0      | 34,712 | 34,712 | 0      | 6,444  | 6,444  |
| Rubber & Nitrile<br>Gloves  | 0      | 1,177   | 1,177  | 0 | 0   | 0   | 0      | 38     | 38     | 0      | 1,139  | 1,139  |
| Spiral Wound<br>Containers  | 0      | 0       | 0      | 0 | 0   | 0   | 0      | 0      | 0      | 0      | 0      | 0      |
| Steel Food & Other<br>Beverage Cans   | 0      | 509     | 509    | 0 | 0   | 0   | 0      | 509    | 509    | 0      | 0      | 0      |
| Straws/Plastic Cutlery  | 0      | 851     | 851    | 0 | 0   | 0   | 0      | 119    | 119    | 0      | 732    | 732    |
| Tissue/Toweling<br>(cleaning related)   | 0      | 0       | 0      | 0 | 0   | 0   | 0      | 0      | 0      | 0      | 0      | 0      |
| Tissue/Toweling<br>(washroom related)   | 0      | 0       | 0      | 0 | 0   | 0   | 0      | 0      | 0      | 0      | 0      | 0      |
| Wood  | 0      | 0       | 0      | 0 | 0   | 0   | 0      | 0      | 0      | 0      | 0      |        |
| Wood Dust   | 0      | 0       | 0      | 0 | 0   | 0   | 0      | 0      | 0      | 0      | 0      | 0      |
| FACILITY WIDE<br>TOTALS   | 40,050 | 109,700 | 69,650 | 0 | 978 | 978 | 16,780 | 72,198 | 55,418 | 18,590 | 36,524 | 17,934 |
| Percent Change (total<br>C ÷ total A x 100 )<br>from Base Year:   | 173.9% |         |        | - |     |     | 330.3% |        |        | 96.5%  |        |        |
| 2019 Current year<br>Diversion Rate:  | 66.7%  |         |        |   |     |     |        |        |        |        |        |        |
| 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. <ul style="list-style-type: none"><li>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.</li><li>Specific waste categories appearing in RED were ones employed during 2012 base audit</li></ul> |        |         |        |   |     |     |        |        |        |        |        |        |



VI. Extent to Which Materials or Products Used Or Sold By the Entity Consist of Recycled or Reused Materials or Products (HMC)

Please answer the following questions (and please attach any additional page(s) as required):

|    |  |
|----|--|
| 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.   |
|    | <p>Sheridan's Sustainability Policy outlines one of its principles that is based on a model called The Natural Step as follows: "We must eliminate our contributions to the systematic physical degradation of nature and natural processes (e.g. overharvesting forests, destroying habitat and overfishing)".</p> <p>In the Request of Proposal documents, the contractors are required to outline how they demonstrate sustainability in their project proposals.</p> |
| 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.<br>* 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.   |
|    | It is in Sheridan College's long-term plan.  |

|  |                                     |                            |
|--|-------------------------------------|----------------------------|
| I hereby certify that the information provided in this Report of Waste Audit is complete and correct.                    |                                     |                            |
| Signature of authorized official:<br> | Title:<br>DIRECTOR - SUSTAINABILITY | Date:<br>DECEMBER 18, 2017 |



## MECP WASTE FORM: REPORT OF A WASTE REDUCTION WORK PLAN (HMC)

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 (HMC)

|  |                              |   |
|--|------------------------------|---|
| Name of Owner and/or Operator of Entity(ies) and Company Name:<br>Sheridan College Institute of Technology and Advanced Learning |                              |   |
| Name of Contact Person:<br>Wai Chu Cheng   | Telephone #:<br>905 845 9430 | Email address:<br>Waichu.cheng@sheridancollege.ca |
| Street Address(es) of Entity(ies):<br>HMC Campus of Sheridan College   |                              |   |
| Municipality:<br>Mississauga, ON Canada  |                              |   |
| Type of entity<br>Educational Institution  |                              |   |

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

### II. Description of Entity (HMC)

|   |
|---|
| Provide a brief overview of the entity(ties):   |
| <p>This waste audit was conducted in April 2019 at the HMC Campus of Sheridan College. The campus has two buildings each comprised of four floors totaling more than 300,000 square feet.</p> <p>The Zero Waste streams which include mixed recycling, organics and waste-to-landfill were audited for the purpose of identifying current diversion rates by specific waste category and to calculate contamination rates. A 24-hour sample of organics, mixed recycling and waste-to-landfill was sorted and weighed in each of the 8 areas audited. Weight based generation information from 2018 for the waste and diversion programs were obtained from the service provider(s) and were used in the calculation of diversion rates.</p> <p>At the time of the audit, the campus had fully implemented the following collection programs:</p> <ol style="list-style-type: none"><li>1. ZW Mixed Recycling (includes glass, metal, paper, plastic)</li><li>2. ZW Organics</li><li>3. ZW Waste to Landfill</li><li>4. Bulk Old Corrugated Cardboard (OCC) Recycling</li><li>5. Paper Shred (Confidential) Recycling</li><li>6. Metal Recycling</li><li>7. E-Waste Recycling</li><li>8. Electronic Equipment Lease-Return (new 2019)</li><li>9. Office Furniture Reuse Event(s) (new 2019)</li><li>10. Hygiene Waste Energy from Waste (EFW) Program</li></ol> |



### III. Plans to Reduce, Reuse and Recycle Waste (HMC)

|  |  |
|--|--|
| 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. |  |
| #1 PET - clear thermoform packaging  | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| #1 PET - other thermoform (coloured)   | Little generated.  |
| #1 PET Bottles - excluding alcoholic beverage  | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| #2 HDPE Bottles and Jugs   | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| #2 Other HDPE Containers   | Little generated.  |
| #5 Other PP Containers   | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| #6 PS - Expanded polystyrene   | Little generated. Should be disposed in ZW waste-to-landfill.  |
| #6 PS - Non-expanded - all other   | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| #7 Other Plastics  | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| Aluminum beverage - alcohol  | Little generated. Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage. |
| Aluminum Foil & Foil Trays   | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| Aluminum Food & Other Beverage Cans  | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| Aseptic Containers - (excluding alcoholic beverages)   | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| Batteries  | Most captured through E-recycling programs.  |
| Boxboard / Cores   | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| Clear Glass Other Beverage and Food  | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                   |
| Clothing/Textiles  | Little generated.  |
| Coffee Grinds  | Little generated.  |
| Coffee pods  | Little generated. Should be disposed in ZW waste-to-landfill.  |
| Confidential Paper - Paper Shred   | Well captured in recycling program. No action required.  |



|   |   |
|---|---|
| Corrugated Cardboard - Bulk               | Well captured in recycling program. No action required.   |
| Corrugated Cardboard - Loose              | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Diapers                                   | Little generated.   |
| Electronics                               | Well captured in E-Waste recycling and Electronics Reuse (lease) programs.  |
| Feminine Hygiene Products                 | Continue to capture for energy from waste. Research diversion options that are higher use than incineration.  |
| Food packaging                            | Little generated.   |
| Gable Top Containers                      | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Glass - Clear Other Beverage and Food     | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Glass - Clear Alcoholic Beverage          | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Kraft Paper                               | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Laminated Paper Packaging                 | Little generated.   |
| Large HDPE & PP Pails & Lids              | Little generated. Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.                                  |
| LDPE/HDPE Film - Products (non-packaging) | Staff/students will be encouraged to include material in the ZW waste-to-landfill bin through education/signage.  |
| Liquids - food/beverage                   | Staff/students will be encouraged to empty then recycle containers education/signage.   |
| Maintenance Waste                         | Little generated.   |
| Metal - Bulk                              | No action required.   |
| Mixed Fine Paper                          | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Molded Pulp/Fibre                         | Staff/students will be encouraged to include material in the ZW organic or ZW mixed recycling bin through education/signage.                                      |
| Napkins/Toweling (food related)           | Staff/students will be encouraged to include material in the ZW organics bin through education/signage.   |
| Newspaper – Dailys and Weeklys            | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Office Waste                              | Little generated.   |
| Other Metal                               | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Other Non-Recyclable Material             | Little generated.   |
| Other Paper                               | Little generated.   |
| Paper Straws                              | None generated.   |
| Parchment Paper                           | Staff/students will be encouraged to include material in the ZW waste-to-landfill bin through education/signage.  |
| Polycoat Beverage Cups - suitable for     | Polycoat cups suitable for organics program though polycoat cup acceptance by recyclers is in flux with increasing amount of polycoat cups being not suitable for |



|                                    |   |
|------------------------------------|---|
| green bin                          | composting. Polycoat cup diversion program should be monitored to ensure best diversion result.   |
| Polycoat Beverage Cups - at risk   | Polycoat cups suitable for organics program though polycoat cup acceptance by recyclers is in flux with increasing amount of polycoat cups being not suitable for composting. Polycoat cup diversion program should be monitored to ensure best diversion result. |
| Post Consumer Food Waste           | Staff/students will be encouraged to include material in the ZW organics bin through education/signage.   |
| Rubber & Nitrile Gloves            | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Spiral Wound Containers            | Little generated.   |
| Steel Food & Other Beverage Cans   | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Straws/Plastic Cutlery             | Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.  |
| Tissue/Toweling (cleaning related) | Little generated.   |
| Tissue/Toweling (washroom related) | Staff/students will be encouraged to include material in the ZW organics bin through education/signage.   |
| Wood                               | Not generated at HMC Campus.  |
| Wood Dust                          | Not generated at HMC Campus.  |



IV. Responsibility for Implementing The Waste Reduction Work Plan (HMC)

|   |   |                     |
|---|---|---------------------|
| 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 #         |
| Wai Chu Cheng   | Promoting, developing and implementing the Zero Waste program, tracking and assessing of data and evaluating the program. | 905-845-9430 x 5423 |
| Herbert Sinnock   | Developing and evaluating the Zero Waste program  | 905-875-4405        |
|   |   |                     |
|   |   |                     |
|   |   |                     |
|   |   |                     |



## V. Timetable for Implementing Waste Reduction Work Plan (HMC)

|  |  |
|--|--|
| 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  |
| Example:<br>Fine Paper 3Rs Program   | “Desk side receptacles and centralized containers to be purchased in March. New collection contract for recycling to be arranged for April Kick off for program and instructions to staff regarding 3Rs program to occur in April” <u>OR</u> “3Rs Program currently in place.”   |
| <b>1. Enhancing Food Waste, Polycoat Cup, Coffee Cup Trays and Napkins Capture Rate</b>  | <p><b>Enhancing Food Waste, Polycoat Cup, Coffee Cup Trays and Napkins Capture Rate Throughout the Campus:</b> 11,980 kg/year of food waste, polycoat cups &amp; trays and napkins are being disposed in waste-to-landfill. Though this is a significant improvement from 2018, Sheridan must continue to encourage the proper disposal in organics of food waste and napkins through education/signage. Consider a campaign to encourage sorting behaviour using a multi-media approach and consider 'branding' the campaign. Engage and challenge environmental studies students to design the campaign and develop a multi-media approach/roll-out. Promote HMC as the best performing Sheridan campus in diversion performance and challenge the campus community to keep up the good work. Expected improvement in capture rate of 20%.</p> <p>Anticipated reduction in waste-to-landfill of 2,396 kg per year (20% of organic improperly disposed across the campus).</p> <p>Due date: December 31, 2020</p>   |
| <b>2. Enhancing Mixed Recycling Capture Rate</b>   | <p><b>Enhancing Mixed Recycling Capture Rate Throughout the Campus:</b> 7,569 kg/year of recycling is being disposed in waste-to-landfill. Sheridan must continue to encourage the proper disposal in mixed recycling of: #5 polypropylene containers, boxboard/cores, rubber/nitrile gloves, kraft paper, mixed fine paper, straws &amp; plastic cutlery and #1 PET Bottles through education/signage. Though recycling capture rates have improved over time, Sheridan must continue to encourage the proper sorting of materials. Consider a campaign to encourage sorting behaviour using a multi-media approach and consider 'branding' the campaign. Engage and challenge environmental studies students to design the campaign and develop a multi-media approach/roll-out. Promote HMC as the best performing Sheridan campus in diversion performance and challenge the campus community to keep up the good work. Expected improvement in capture rate of 20%.</p> <p>Anticipated reduction in waste-to-landfill of 1,523 kg per year (20% of mixed recycling improperly disposed across the campus).</p> <p>Due date: December 31, 2020</p> |
| <b>3. Encouraging Emptying of Beverage</b>   | <b>Emptying Beverage Containers:</b> Continue to encourage the emptying of beverage containers prior to placement in mixed recycling through a   |



|   |  |
|---|--|
| <b>Containers</b>   | <p>combination of education/signage and placement of emptying stations where practicable. Consider launching a campaign. Anticipated reduction in disposal of liquids in any stream: 40%.</p> <p>Anticipated reduction in waste-to-landfill of 2,114 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams.</p> <p>Due date: December 31, 2020</p>  |
| <b>4. Reducing Contamination at Targeted Underperforming Areas</b>                            | <p><b>Reducing Contamination in the ZW Collection Programs at Targeted Underperforming Areas:</b> Sheridan should continue to identify behavioural and structural issues and opportunities to improve material sorting, with particular focus in Hallways, Galleries and Cafeteria Front of House where sorting is particularly poor.</p> <p>Estimating the impact of targeted area programs on waste diversion is beyond the scope of this study as not all areas of the Campus were audited in 2019.</p> <p>Due date: December 31, 2020</p>  |
| <b>5. Re-examination of the Coffee Cup Program</b>  | <p><b>Re-examination of the Coffee Cup Program:</b> More and more cups are being considered not compostable all the while Sheridan's population continues haphazardly dispose of coffee cups largely in waste-to-landfill and organics, but also with significant disposal in recycling. Coffee cup types and disposition (compostable vs. non-compostable) is in flux. Consider developing a strategy to manage coffee cups at the three campuses to ensure the coffee cup program is future looking, flexible, efficient and effective.</p> <p>Impact on waste diversion cannot be quantified at this time as it is strategy dependent.</p> <p>Due date: December 31, 2020</p>                         |
| <b>6. Capturing &amp; Reporting Material Weights for All Diversion Programs at the Campus</b> | <p>Sheridan has made significant progress in reporting material diversion streams since 2015 however there may be other diversion programs in place at the Campus but the weight-based data is not currently captured for reporting purposes (Examples Electronics Reuse and Office Furniture Donation). Sheridan should continue to conduct an inventory of all diversion programs, with particular focus on reduction and reuse programs, and should ensure there are procedures in place to collect, monitor and report on these programs.</p> <p>Anticipated reduction in waste-to-landfill: Effect on diversion rate likely significant but not quantifiable</p> <p>Due date: December 31, 2020</p> |



VI. Communication to Staff, Customers, Guests and Visitors (HMC)

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

The Waste Reduction Plan will be posted on the Sheridan Sustainability website. Comprehensive strategies will be adopted in promoting the Zero Waste program, including the weekly e-newsletter Insider, Sustainability website, campus TV screens, campus newspaper, Sheridan social media and the Zero Waste promotion booths across all campuses. These media as well as promotional material and additional signage will be employed, where practicable, to promote the implementation of each of the individual waste reduction work plans.



# **VII. Estimated Waste Produced By Material Type And The Projected Amount (HMC)**

|   | Estimated Annual Waste Produced * (kg) | Annual Amount Currently Diverted (2019) (kg) | Name of Proposed 3Rs Program (as stated in Part III)   | Projections to Further Reduce, Reuse or Recycle Waste (kg) |        |         | Estimated Annual Amount to be Diverted ** (%) |
|---|--|--|--|--|--------|---------|---|
|   |  |  |  | Reduce   | Re-use | Recycle |   |
| #1 PET - clear thermoform packaging           | 74                                     | 14   | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |        | 12      | 35.3%   |
| #1 PET - other thermoform (coloured)          | 16                                     | 8  | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |        | 1       | 53.5%   |
| #1 PET Bottles - excluding alcoholic beverage | 1,751                                  | 1,322  | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |        | 86      | 80.4%   |
| #2 HDPE Bottles and Jugs                      | 392                                    | 275  | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |        | 23      | 76.2%   |
| #2 Other HDPE Containers                      | 0                                      | 0  |  |  |        |         |   |
| #5 Other PP Containers                        | 2,991                                  | 1,442  | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |        | 310     | 58.6%   |
| #6 PS - Expanded polystyrene                  | 218                                    | 193  | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |        | 5       | 88.3%   |
| #6 PS - Non-expanded - all other              | 1,277                                  | 1,166  | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |        | 22      | 93.0%   |
| #7 Other Plastics                             | 0                                      | 0  |  |  |        |         |   |
| Aluminum beverage -                           | 19                                     | 0  | Enhance capture rate for specific recyclables in ZW mixed recycling across   |  |        | 4       | 0.0%  |



|  |       |       |  |  |  |     |        |
|--|-------|-------|--|--|--|-----|--------|
| alcohol  |       |       | the Campus through education and signage.  |  |  |     |        |
| Aluminum Foil & Foil Trays                           | 76    | 60    | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |  | 3   | 82.8%  |
| Aluminum Food & Other Beverage Cans                  | 264   | 255   | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |  | 2   | 97.4%  |
| Aseptic Containers - (excluding alcoholic beverages) | 283   | 213   | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |  | 14  | 80.1%  |
| Batteries  | 0     | 0     |  |  |  |     |        |
| Boxboard / Cores                                     | 2,713 | 1,568 | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |  |  | 229 | 66.2%  |
| Clear Glass Other Beverage and Food                  | 0     | 0     |  |  |  |     |        |
| Clothing/Textiles                                    | 0     | 0     |  |  |  |     |        |
| Coffee Grinds  | 2,451 | 2,451 |  |  |  |     | 100.0% |
| Coffee pods  | 0     | 0     |  |  |  |     |        |
| Confidential Paper - Paper Shred                     | 5,897 | 5,897 |  |  |  |     | 100.0% |
| Corrugated Cardboard - Bulk                          | 1,224 | 1,224 |  |  |  |     | 100.0% |
| Corrugated Cardboard - Loose                         | 520   | 520   |  |  |  |     |        |
| Diapers  | 0     | 0     |  |  |  |     |        |
| Electronics  | 321   | 321   |  |  |  |     | 100.0% |
| Feminine Hygiene Products                            | 1,184 | 0     |  |  |  |     |        |
| Food packaging                                       | 3,466 | 1,303 |  |  |  |     |        |
| Furniture & Bulky Items                              | 728   | 728   |  |  |  |     |        |



|   |       |       |  |       |  |     |        |
|---|-------|-------|--|-------|--|-----|--------|
| Gable Top Containers                      | 393   | 251   | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |       |  | 28  | 71.1%  |
| Glass - Clear Other Beverage and Food     | 374   | 374   |  |       |  |     | 100.0% |
| Glass - Clear Alcoholic Beverage          | 0     | 0     |  |       |  |     |        |
| Kraft Paper                               | 1,673 | 636   | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |       |  | 207 | 50.4%  |
| Laminated Paper Packaging                 | 0     | 0     |  |       |  |     |        |
| Large HDPE & PP Pails & Lids              | 319   | 319   |  |       |  |     | 100.0% |
| LDPE/HDPE Film - Products (non-packaging) | 1,483 | 426   |  |       |  |     |        |
| Liquids - food/beverage                   | 6,621 | 1,335 | Promote the emptying of beverage containers prior to placement in ZW mixed recycling                                 | 2,115 |  |     | 20.2%  |
| Maintenance Waste                         | 1,165 | 238   |  |       |  |     |        |
| Metal - Bulk                              | 3,130 | 3,130 |  |       |  |     | 100.0% |
| Mixed Fine Paper                          | 6,783 | 5,937 | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |       |  | 169 | 90.0%  |
| Molded Pulp/Fibre                         | 542   | 382   | Enhancing food waste coffee cups & trays and napkins capture rate throughout the Campus                              |       |  | 32  | 76.4%  |
| Napkins/Towel (food related)              | 3,608 | 1,017 | Enhancing food waste coffee cups & trays and napkins capture rate throughout the Campus                              |       |  | 518 | 42.5%  |
| Newspaper – Dailys and Weeklys            | 0     | 0     |  |       |  |     |        |
| Office Waste                              | 6,839 | 1,160 |  |       |  |     |        |
| Other Metal                               | 0     | 0     |  |       |  |     |        |
| Other Non-                                | 0     | 0     |  |       |  |     |        |



|   |                |               |  |              |  |              |              |
|---|----------------|---------------|--|--------------|--|--------------|--------------|
| Recyclable Material (Laundry)                   |                |               |  |              |  |              |              |
| Other Paper (paper plates)                      | 0              | 0             |  |              |  |              |              |
| Paper Straws                                    | 0              | 0             |  |              |  |              |              |
| Parchment Paper                                 | 763            | 127           |  |              |  |              |              |
| Polycoat Beverage Cups - suitable for green bin | 5              | 5             |  |              |  |              | 100.0%       |
| Polycoat Beverage Cups - at risk                | 6,444          | 3,501         | Enhancing food waste coffee cups & trays and napkins capture rate throughout the Campus                              |              |  | 589          | 54.3%        |
| Post Consumer Food Waste                        | 41,156         | 34,712        | Enhancing food waste coffee cups & trays and napkins capture rate throughout the Campus                              |              |  | 1,289        | 87.5%        |
| Rubber & Nitrile Gloves                         | 1,177          | 38            | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |              |  | 228          | 22.6%        |
| Spiral Wound Containers                         | 0              | 0             |  |              |  |              |              |
| Steel Food & Other Beverage Cans                | 509            | 509           |  |              |  |              | 100.0%       |
| Straws/Plastic Cutlery                          | 851            | 119           | Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage. |              |  | 146          | 31.2%        |
| Tissue/Towel ing (cleaning related)             | 0              | 0             |  |              |  |              |              |
| Tissue/Towel ing (washroom related)             | 0              | 0             |  |              |  |              |              |
| Wood  | 0              | 0             |  |              |  |              |              |
| Wood Dust                                       | 0              | 0             |  |              |  |              |              |
| <b>CAMPUS WIDE TOTALS</b>                       | <b>109,700</b> | <b>73,176</b> |  | <b>2,115</b> |  | <b>3,918</b> | <b>72.2%</b> |

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

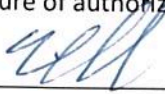
\*\* Estimated Waste Diversion Rate = Amount of Waste Diverted (3Rs) ÷ Estimated Waste Produced x 100%

\*\*\* Waste-to-landfill material that is being diverted as a contaminant in ZW organics and/or mixed recycling



I hereby certify that the information provided in this Waste Reduction Work Plan is complete and correct.

Signature of authorized official:



Title:

DIRECTOR - SUSTAINABILITY

Date:

DECEMBER 18, 2019