WASTE AUDIT REPORT

SHERIDAN COLLEGE

HMC CAMPUS

2018 SOLID NON-HAZARDOUS WASTE AUDIT O.REG. 102/94

PREPARED BY

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EXECUTIVE SUMMARY

This waste audit was conducted in April 2018 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. One of the two buildings was opened in January 2017. There are more than 7,000 students attending this campus with more than 300 employees.

There are three campuses at Sheridan:

1) Davis
2) Trafalgar
3) Hazel McCallion (HMC)

All three campuses of Sheridan College 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 several 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.

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 2018 waste audit was from 2017 data provided by the service providers. Included for the first time in the 2018 waste audit is the hygiene waste single stream program. In prior years this material was not included as the weight-based information was either not available or unreliable. Note that this material diversion program, as energy-from-waste, is considered disposal for the purposes of calculating waste diversion at the Campus.

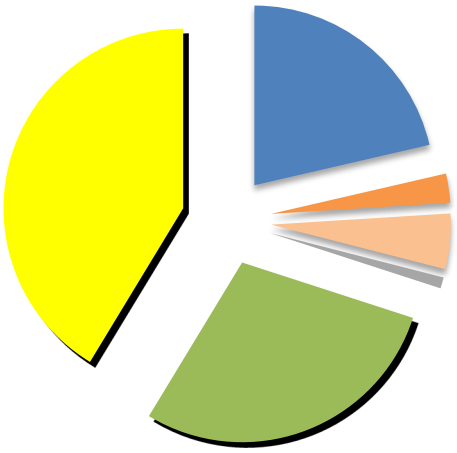
ANNUAL DIVERSION RATES OVER TIME

The 2018 waste diversion rates at the HMC Campus are presented below. The 2018 diversion rates were calculated using calendar year 2017 weight-based information provided by Sheridan management and their waste service providers.

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%



- Mixed Recycling (19,995 kg/yr; 21.4%)
- Bulk OCC Recycling (2,448 kg/yr; 2.6%)
- Confidential Paper Shred (4,659 kg/yr; 5.0%)
- E-Waste Recycling (934 kg/yr; 1.0%)
- Wood Recycling (0 kg/yr; 0.0%)
- Organics (26,820 kg/yr; 28.7%)
- Clothes/Reuse (0 kg/yr; 0.0%)
- Waste to Landfill (38,628 kg/yr; 41.3%)

HMC Campus 2015 Waste Diversion Rate: 44.4%

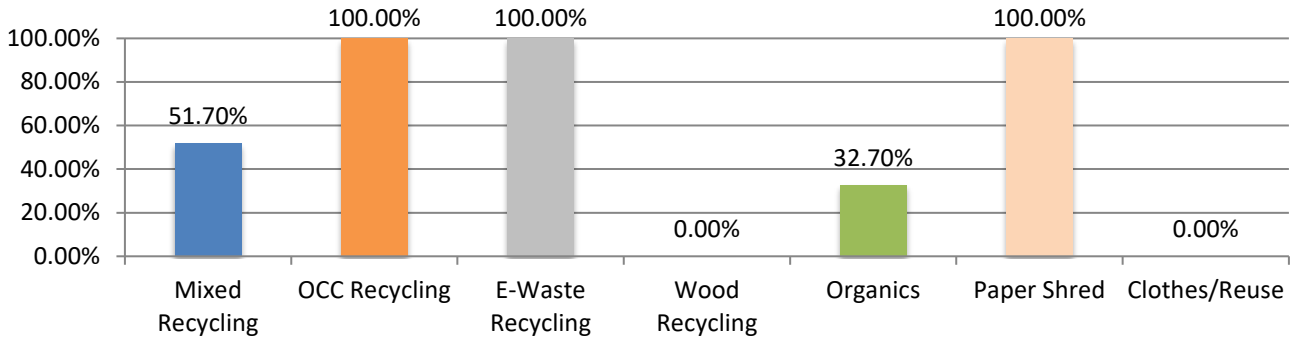
- Mixed Recycling (20,720 kg/yr; 28.9%)
- Bulk OCC Recycling (2,860 kg/yr; 4.0%)
- E-Waste Recycling (313 kg/yr; 0.4%)
- Wood Recycling (590 kg/yr; 0.8%)
- Organics (7,392 kg/yr; 10.3%)
- Clothes/Reuse (0 kg/yr; 0.0%)
- Waste to Landfill (39,918 kg/yr; 55.6%)

The HMC Campus waste diversion rate has improved dramatically from 44.4% in 2015 to 61.4% in 2018. The increased diversion can be attributed to a significant improvement in mixed recycling diversion and, to a somewhat lesser extent, to an increase in bulk cardboard recycling weights.

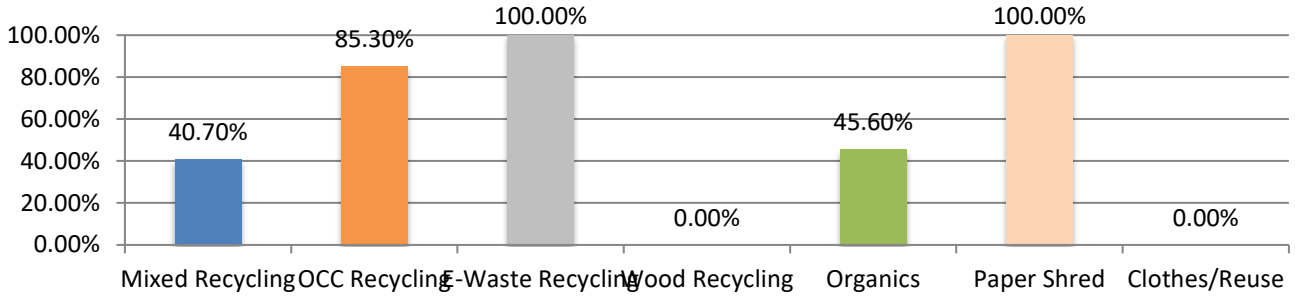
OVERALL CAPTURE RATES BY DIVERSION PROGRAM OVER TIME

Capture rates for each diversion program were calculated at the HMC Campus using results of the 2018 waste audit of the ZW bins, combined with 2017 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.

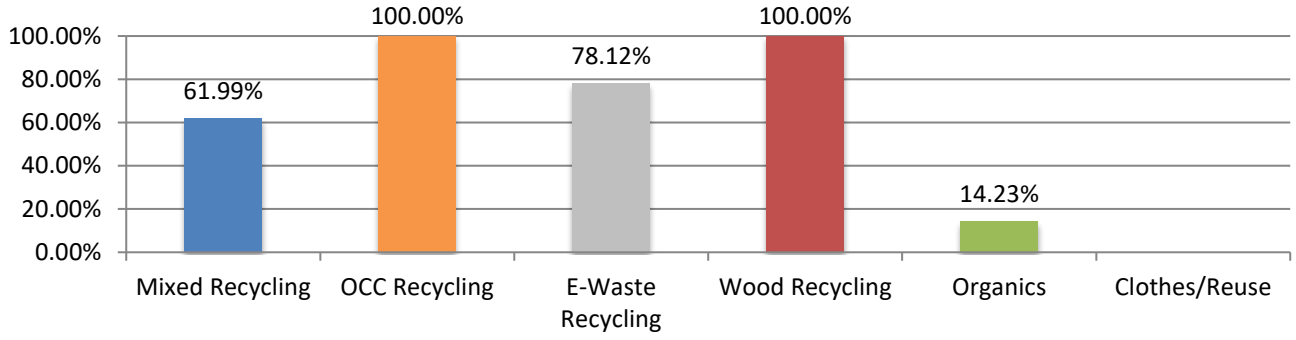
Capture Rates by Waste Diversion Collection Programs (2018)



Capture Rates by Waste Diversion Collection Programs (2017)

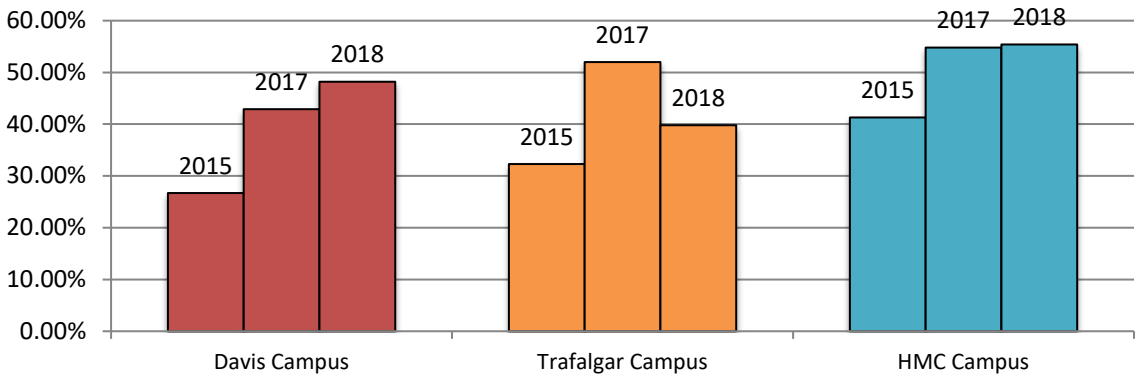


Capture Rates by Waste Diversion Collection Programs (2015)



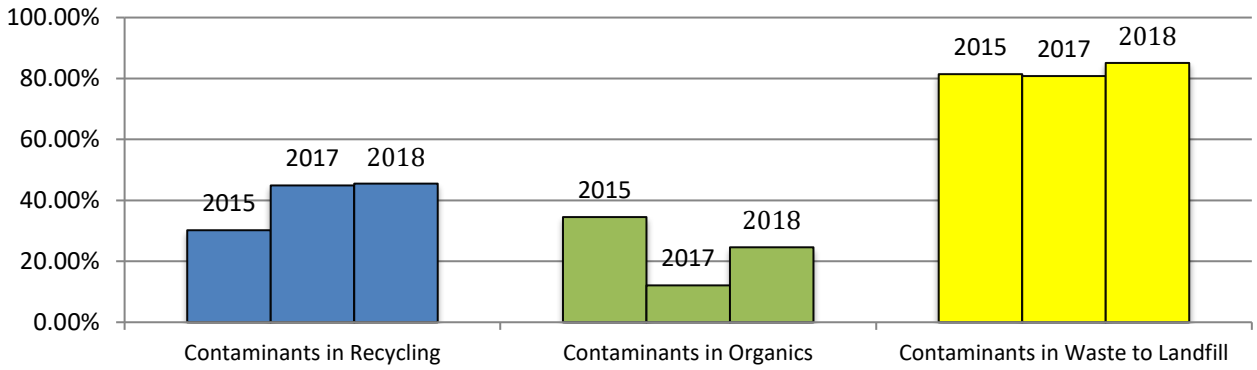
ZW COLLECTION PROGRAM PERFORMANCE OVER TIME

The ZW bin program waste diversion performance has been steadily increasing over time. Only at the Trafalgar campus and only in 2018 has there been a decline in waste diversion performance. At Trafalgar there was a slight increase in ZW waste-to-landfill, while a 45% decline in ZW mixed recycling and a 29% decline in ZW organics from 2017 to 2018.



ZW COLLECTION PROGRAM CONTAMINATION RATES OVER TIME

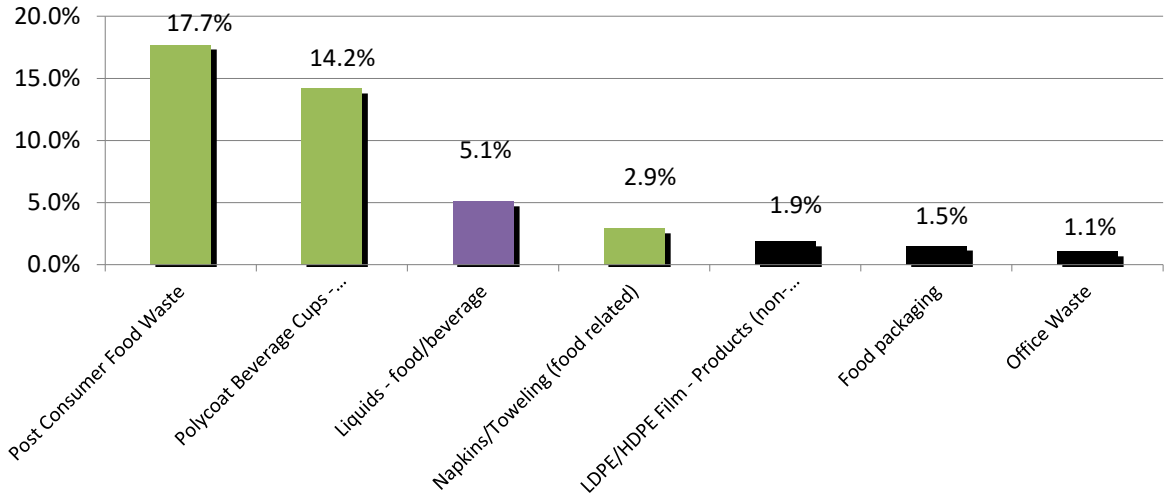
In 2018 the contamination rates for each of the three ZW bin streams were calculated for the HMC Campus and compared against contamination rates in 2015 & 2017. All three streams are showing an increase in contamination supporting the idea that, in general, the campus population is not improving sorting into the three streams.



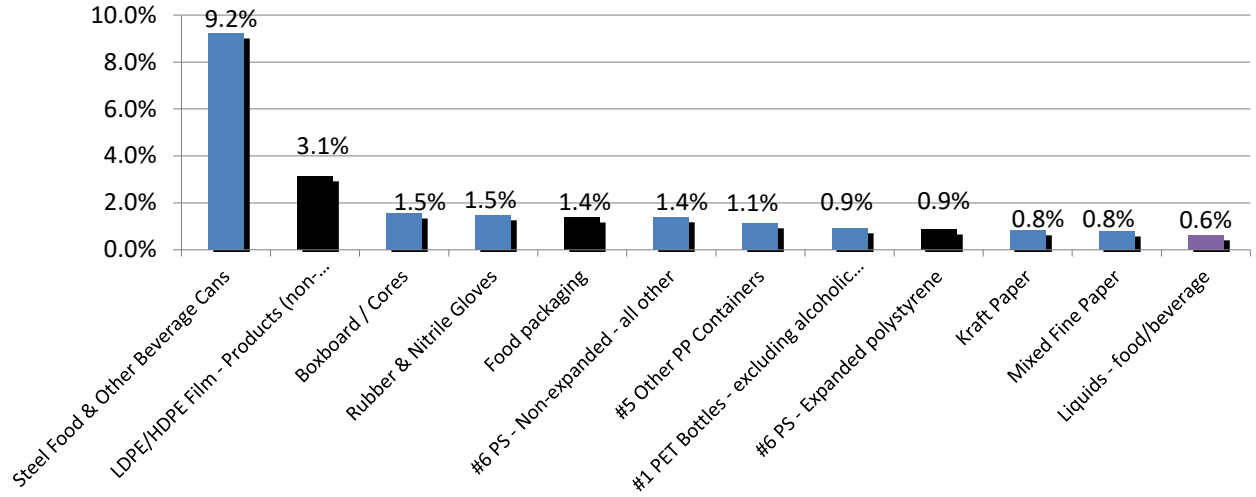
2018 ZW COLLECTION PROGRAM SPECIFIC WASTE CONTAMINANTS

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.

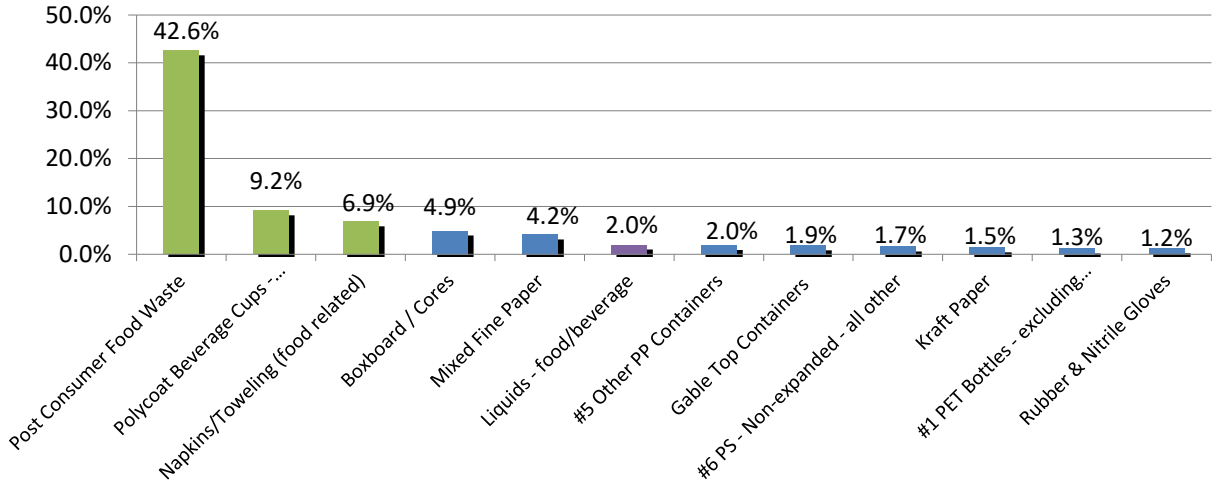
ZW Recycling Contaminants by Weight (2018)



ZW Organics Contaminants by Weight (2018)



ZW Waste-to-Landfill Contaminants by Weight (2018)



2018 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 waste diversion rate (55.4%) is lower than the 2018 HMC Campus waste diversion rate (61.4%) because the area diversion rates are based on the ZW bin diversion program alone and do not include single stream recycling/reuse programs. There were no missing samples from any area from any of the three ZW programs at the 2018 audit of the HMC Campus.

Area	Percentage by Weight Collected During 24 Hour Sampling Period			Area Waste Diversion Rate
	ZW Recycling	ZW Organics	ZW Waste-to-Landfill	
HMC A - Food Service - Front of House	35.3%	21.6%	43.1%	56.9%
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%
ALL AREAS	**30.2%**	**25.2%**	**44.6%**	**55.4%**

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 and Napkins Capture Rate Throughout the Campus:** 22,761 kg/year of food waste and napkins are being disposed in waste-to-landfill. 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. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 4,552 kg per year (20% of food waste and napkins improperly disposed across the campus).

2. **Enhancing Mixed Recycling Capture Rate Throughout the Campus:** Encouraging the proper disposal in mixed recycling of: boxboard/cores, fine paper, polypropylene containers (cold cups), gabletop containers, polystyrene (lids and cutlery), #1 PET bottles and rubber/nitrile gloves through education/signage. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 2,220 kg per year (20% of mixed recycling improperly disposed across the campus).

3. **Capturing Anaerobically Digested Coffee Cups in Organics:** 12,801 per year of compostable coffee cups are being disposed in mixed recycling, organics and waste-to-landfill at the HMC Campus. 4,434 kg are being disposed improperly in mixed recycling and 4,225 kg are being improperly disposed in mixed waste-to-landfill. Launch a campaign to capture compostable coffee cups in organics. Suggestions:

i. Improve signage on ZW bins to include a picture of a coffee cup on all three bins with an X through the cups on all but the ZW organics bin.
ii. Consider including the coffee cup education campaign in the action plan identified above for food waste and napkins, engaging environmental students to design the campaign. Ensure the non-compostable cups that are brought to campus are targeted as part of the education campaign. Focus should be to eliminate non-compostable beverage cups on campus since they are not recyclable at this time.

Expected improvement in capture rate of 50%. Anticipated reduction in waste-to-landfill of 2,113 kg per year (50% of coffee cups improperly disposed in waste-to-landfill).

4. **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 366 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams.
5. **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 Areas at the HMC Campus where sorting is particularly poor:
    - HMC A - Food Service - Back of House
    - HMC B - Food Service - Front of House
    - HMC B - 3rd Floor & 4th Floor Hallways
    - HMC B - Food Service - Back of House
    - HMC B - 2nd Floor Gallery

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 Repair Cafe and Food Donation Program). 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 64.1% to 69.0% and the Campus will divert an additional 9,251 kg per year of waste from landfill in 2019.

1.0 INTRODUCTION

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. 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 2018 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 2017 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 2017 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 - Food Service - Front of House
2. HMC A - Food Service - Back of house
3. HMC A - Faculty of Business Office
4. HMC A - 3rd Floor & 4th Floor Hallways
5. HMC B - Food Service - Front of House
6. HMC B - Food Service - Back of House
7. HMC B - 2nd Floor Gallery
8. HMC B - 3rd & 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 239 kilograms of organics, 186 kilograms of mixed recycling, and 184 kilograms of waste-to-landfill.

Specific waste categories were established before the audit based on *Ontario Ministry of Environment & Climate Change* 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 & Climate Change's* *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. One of the two buildings was open in January. There are more than 7,000 students attending this campus with more than 300 employees.

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.

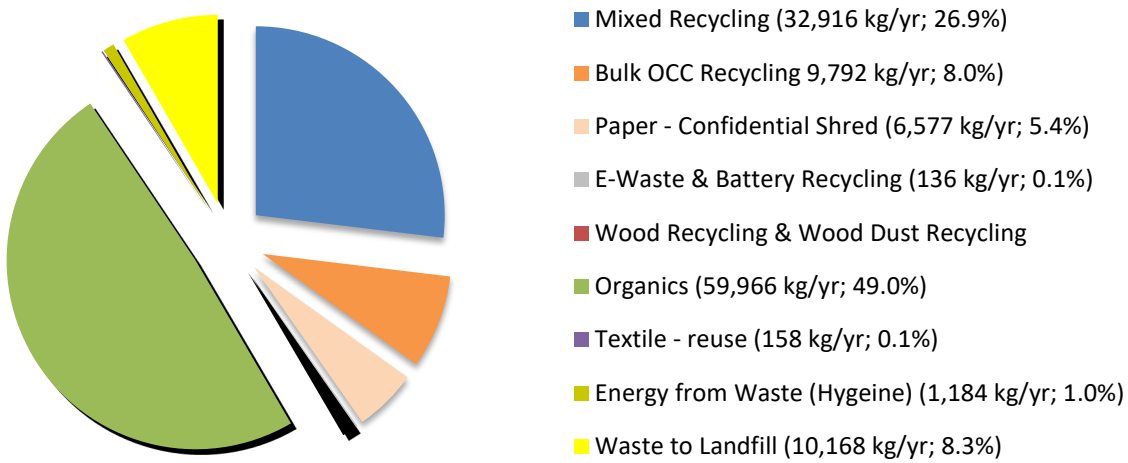
Cleaning of this facility is completed by a team of cleaners who use a cart system for the collection of the ZW bin material from the office staff and students. The different ZW streams are collected daily on an as needs basis. The campus operates 7 days a week with offices open generally 5 days a week 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.

2.0 RESULTS

2.1 WASTE DIVERSION

Analysis of all the specific wastes to be removed from Sheridan College HMC Campus in 2018 reveals that the campus could potentially achieve a waste diversion rate of 90.7% 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 2018 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 2018 Waste Generation



The 2018 HMC waste diversion rate is 61.4%. Figure 2 below shows the 2018 weight of material being collected through the existing waste collection programs.

Figure 2: HMC Campus 2018 Waste Diversion

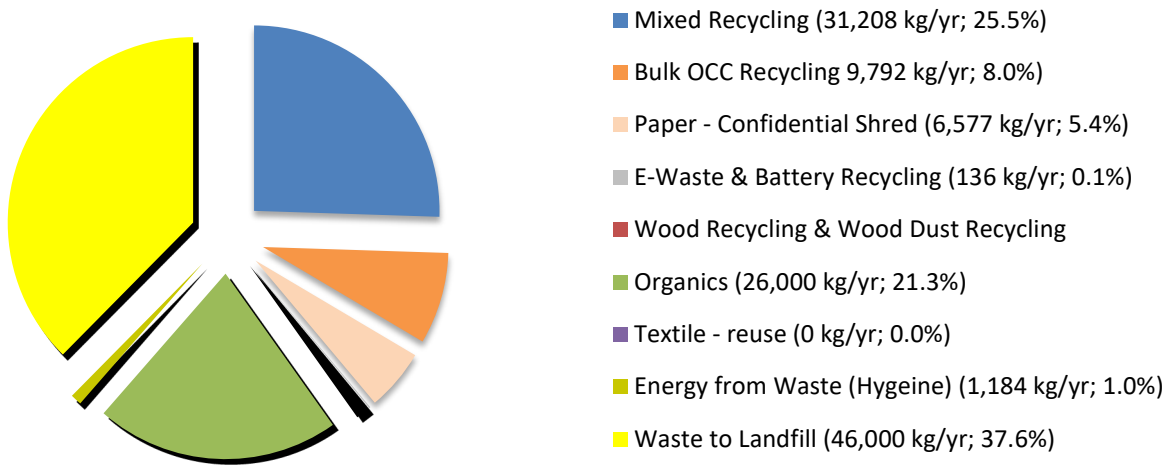
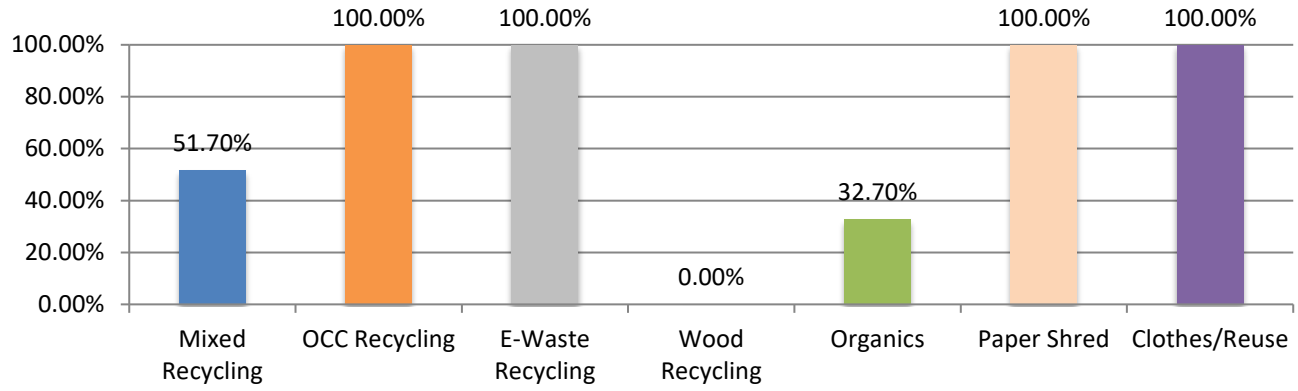


Figure 3 below shows the capture rates by the individual collection programs. The HMC Campus has six diversion programs. Capture rates were calculated as follows: total weight of all divertible material correctly captured by the diversion stream exclusive of contaminants divided by the total weight of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

The paper shred, E-waste and OCC recycling programs have a 100% capture rate. The ZW organics capture rate and to a lesser extent, the ZW mixed recycling capture rate, could be improved through programs to educate and encourage ZW material sorting.

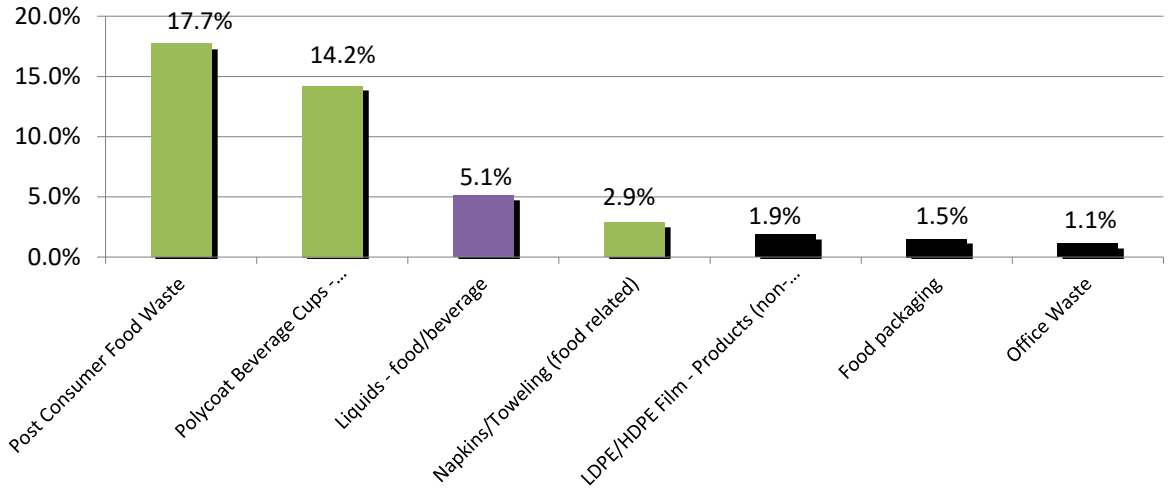
Figure 3: HMC Capture Rates by Collection Program



2.2 MIXED RECYCLING COMPOSITION

The ZW mixed recycling contamination rate was moderately high at 46.0% 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)



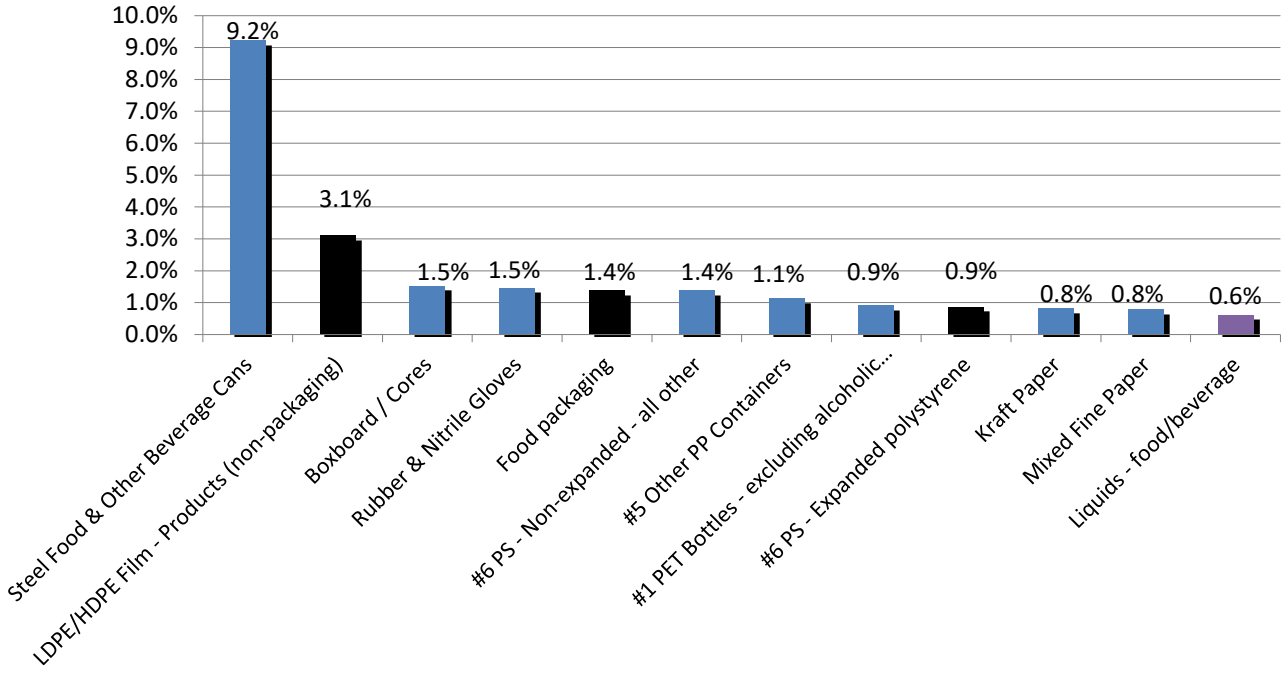
The waste reduction workplan should focus on those contaminants that can with minimal effort and cost be managed to be suitable for inclusion in ZW mixed recycling or eliminated from improper disposal. These include:

1. Minimizing post-consumer food waste, polycoat beverage cups and napkins/toweling 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

The contamination rate in the ZW organic bins was significantly lower than in ZW recycling at 17.6% by weight. The most commonly disposed contaminants (i.e. non-organic specific wastes) disposed in the ZW organics bins are presented in the Figure below. Specific wastes are colour coded: blue are suitable for ZW mixed recycling bin and black are suitable for ZW waste-to-landfill bin.

Figure 5: HMC Contaminants in Organic Stream (over 0.5% by weight of material stream)



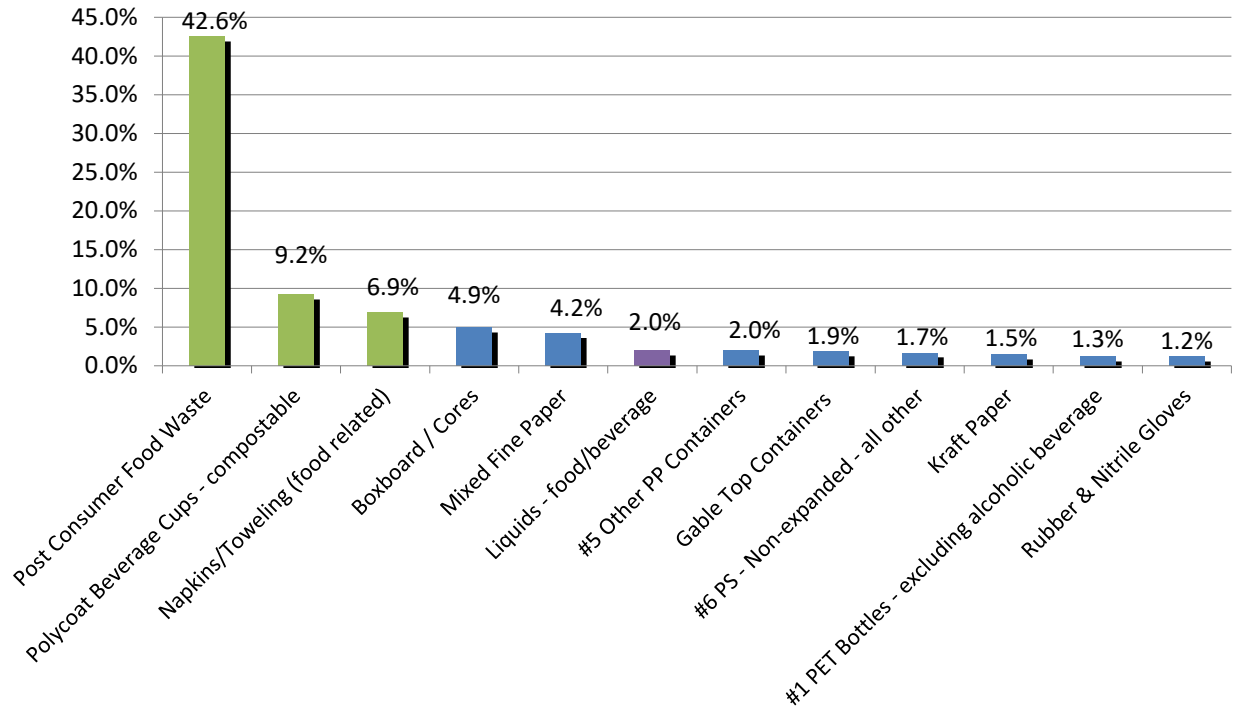
The waste reduction workplan should focus on those contaminants that can with minimal effort and cost be managed to be suitable for inclusion in ZW organics or eliminated from improper disposal. These include:

1. Encouraging the proper disposal in mixed recycling of steel food and other beverage cans, boxboard/cores, rubber gloves, #6 polystyrene, polypropylene containers (cold drink cups), #1 PET bottles, kraft and fine paper through education/signage.
2. Encouraging the emptying of liquids then the disposal of the food packaging in the appropriate ZW recycling or ZW organics bin through education/signage.

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 high at 85.1% and most of the contamination is food waste suitable for the ZW organics program. This suggests that users are defaulting to disposing of mixed food related materials in this stream and are not sorting food waste & containers/packaging into appropriate streams. The top 10 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 6: 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 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 capture of polycoat beverage cups in the ZW organics bin through education/signage.
3. Encouraging the proper disposal in ZW mixed recycling of boxboard/cores, fine paper, polypropylene containers (cold cups), gabletop containers, polystyrene (lids and cutlery), #1 PET bottles and rubber/nitrile gloves.
4. 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%
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 worst to the best performers.

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

Area	Contaminants in ZW Mixed Recycling
HMC B - Food Service - Back of House	83.4%
HMC B - Food Service - Front of House	61.6%
HMC A - Food Service - Front of House	54.2%
HMC B - 3rd Floor & 4th Floor Hallways	52.6%
HMC B - 2nd Floor Gallery	34.4%
HMC A - 3rd Floor & 4th Floor Hallways	32.3%
HMC A - Faculty of Business Office	29.6%
HMC A - Food Service - Back of House	24.3%
Campus-Wide	**45.5%**

Table 3 below presents the percentage by weight of contaminants in ZW organics by area sorted to present the worst to the best performers.

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

Area	Contaminants in ZW Organics
HMC A - Food Service - Back of House	55.0%
HMC B - 2nd Floor Gallery	25.2%
HMC A - 3rd Floor & 4th Floor Hallways	16.7%
HMC A - Food Service - Front of House	16.5%
HMC B - Food Service - Front of House	13.0%
HMC B - 3rd Floor & 4th Floor Hallways	12.9%
HMC A - Faculty of Business Office	8.7%
HMC B - Food Service - Back of House	3.0%
Campus-Wide	**24.6%**

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 85.1%. 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 - Food Service - Back of House	94.0%
HMC B - Food Service - Front of House	91.3%
HMC A - Faculty of Business Office	90.8%
HMC B - 2nd Floor Gallery	89.7%
HMC B - 3rd Floor & 4th Floor Hallways	89.2%
HMC B - Food Service - Back of House	84.2%
HMC A - Food Service - Front of House	75.5%
HMC A - 3rd Floor & 4th Floor Hallways	70.7%
Campus-Wide	85.1%

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 2018 the worst to the best Area for overall ZW bin performance are in order:

1. HMC A - Food Service - Back of House
2. HMC B - Food Service - Front of House

3. HMC B - 3rd Floor & 4th Floor Hallways
4. HMC B - Food Service - Back of House
5. HMC B - 2nd Floor Gallery
6. HMC A - Food Service - Front of House
7. HMC A - 3rd Floor & 4th Floor Hallways
8. HMC A - Faculty of Business Office

3.0 SUMMARY OF RECOMMENDATIONS

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 and Napkins Capture Rate Throughout the Campus:** 22,761 kg/year of food waste and napkins are being disposed in waste-to-landfill. 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. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 4,552 kg per year (20% of food waste and napkins improperly disposed across the campus).

2. **Enhancing Mixed Recycling Capture Rate Throughout the Campus:** Encouraging the proper disposal in mixed recycling of: boxboard/cores, fine paper, polypropylene containers (cold cups), gabletop containers, polystyrene (lids and cutlery), #1 PET bottles and rubber/nitrile gloves through education/signage. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 2,220 kg per year (20% of mixed recycling improperly disposed across the campus).

3. **Capturing Anaerobically Digested Coffee Cups in Organics:** 12,801 per year of compostable coffee cups are being disposed in mixed recycling, organics and waste-to-landfill at the HMC Campus. 4,434 kg are being disposed improperly in mixed recycling and 4,225 kg are being improperly disposed in mixed waste-to-landfill. Launch a campaign to capture compostable coffee cups in organics. Suggestions:
    iii. Improve signage on ZW bins to include a picture of a coffee cup on all three bins with an X through the cups on all but the ZW organics bin.
    iv. Consider including the coffee cup education campaign in the action plan identified above for food waste and napkins, engaging environmental students to design the campaign. Ensure the non-compostable cups that are brought to campus are targeted as part of the education campaign. Focus should be to eliminate non-compostable beverage cups on campus since they are not recyclable at this time.

    Expected improvement in capture rate of 50%. Anticipated reduction in waste-to-landfill of 2,113 kg per year (50% of coffee cups improperly disposed in waste-to-landfill).

4. **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 366 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams.

5. **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 Areas at the HMC Campus where sorting is particularly poor:
    - HMC A - Food Service - Back of House
    - HMC B - Food Service - Front of House
    - HMC B - 3rd Floor & 4th Floor Hallways
    - HMC B - Food Service - Back of House
    - HMC B - 2nd Floor Gallery

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 Repair Cafe and Food Donation Program). 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 64.1% to 69.0% and the Campus will divert an additional 9,251 kg per year of waste from landfill in 2019.

APPENDICES

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 2018. 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	564	274	27	0	0	263
#1 PET - other thermoform (coloured)	Mixed Recycling	473	273	28	0	0	172
#1 PET Bottles - excluding alcoholic beverage	Mixed Recycling	3,514	2,696	239	0	0	579
#2 HDPE Bottles and Jugs	Mixed Recycling	570	70	90	0	0	410
#2 Other HDPE Containers	Mixed Recycling	78	78	0	0	0	0
#5 Other PP Containers	Mixed Recycling	2,019	825	295	0	0	899
#6 PS - Expanded polystyrene	Waste	616	141	227	0	0	249
#6 PS - Non-expanded - all other	Mixed Recycling	1,873	743	359	0	0	771
#7 Other Plastics	Mixed Recycling	0	0	0	0	0	0
Aluminum beverage - alcohol	Alcohol Beverage Container Reuse	0	0	0	0	0	0
Aluminum Foil & Foil Trays	Mixed Recycling	114	28	0	0	0	86
Aluminum Food & Other Beverage Cans	Mixed Recycling	516	399	21	0	0	96
Aseptic Containers - (excluding alcoholic beverages)	Mixed Recycling	82	45	5	0	0	32
Batteries	Battery Recycling	0	0	0	0	0	0
Boxboard / Cores	Mixed Recycling	3,780	1,115	399	0	0	2,265
Clear Glass Other Beverage and Food	Mixed Recycling	0	0	0	0	0	0
Clothing/Textiles	Dropbox/Textile Reuse	158	0	0	0	0	158
Coffee Grinds	Organics	0	0	0	0	0	0
Coffee pods	Waste	0	0	0	0	0	0
Confidential Paper - Paper Shred	Paper Shred Recycling	6,577	0	0	6,577	0	0
Corrugated Cardboard - Bulk	Cardboard Recycling	9,792	0	0	9,792	0	0
Corrugated Cardboard - Loose	Mixed Recycling	2,141	1,780	0	0	0	361
Diapers	Waste	5	0	0	0	0	5
Feminine Hygiene Products	Hygiene Waste	1,184	0	0	0	0	1,184
Food packaging	Waste	3,268	457	361	0	0	2,450
Gable Top Containers	Mixed Recycling	950	84	0	0	0	866
Glass - Clear Other Beverage and Food	Mixed Recycling	1,517	1,161	0	0	0	356
Glass - Clear Alcoholic Beverage	Mixed Recycling	0	0	0	0	0	0
Kraft Paper	Mixed Recycling	1,692	792	214	0	0	687
Laminated Paper Packaging	Waste	0	0	0	0	0	0
Large HDPE & PP Pails & Lids	Mixed Recycling	0	0	0	0	0	0
LDPE/HDPE Film - Products (non-packaging)	Waste	2,485	584	810	0	0	1,092
Liquids - food/beverage	Organics	2,680	1,605	160	0	0	915

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)
Maintenance Waste	Waste	122	0	0	0	0	122
Metal - Bulk	Metal Recycling	1,433	0	0	1,433	0	0
E-Waste	E-Waste Recycling	136	0	0	136	0	0
Mixed Fine Paper	Mixed Recycling	7,743	5,598	205	0	0	1,940
Molded Pulp/Fibre	Mixed Recycling	660	198	141	0	0	321
Napkins/Toweling (food related)	Organics	6,529	895	2,451	0	0	3,183
Newspaper – Dailys and Weeklys	Mixed Recycling	0	0	0	0	0	0
Office Waste	Waste	853	335	0	0	0	518
Other Metal	Mixed Recycling	229	0	0	0	0	229
Other Non-Recyclable Material	Waste	0	0	0	0	0	0
Other Paper	Mixed Recycling	0	0	0	0	0	0
Parchment Paper	Waste	215	0	51	0	0	165
Polycoat Beverage Cups - compostable	Organics	12,801	4,434	4,142	0	0	4,225
Polycoat Beverage Cups - non-compostable	Waste	2,547	212	140	0	0	2,195
Post Consumer Food Waste	Organics	37,915	5,520	12,816	0	0	19,578
Rubber & Nitrile Gloves	Mixed Recycling	999	62	380	0	0	557
Spiral Wound Containers	Waste	56	12	0	0	0	44
Steel Food & Other Beverage Cans	Mixed Recycling	3,402	791	2,398	0	0	212
Straws/Plastic Cutlery	Mixed Recycling	1	1	0	0	0	0
Tissue/Toweling (cleaning related)	Waste	0	0	0	0	0	0
Tissue/Toweling (washroom related)	Organics	42	0	42	0	0	0
Wood	Wood Recycling	0	0	0	0	0	0
Wood Dust	Wood Dust Briquette Reuse	0	0	0	0	0	0
	Grand Total	**122,330**	**31,208**	**26,000**	**17,938**	**0**	**47,184**

**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*

MINISTRY OF THE ENVIRONMENT 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: Sheridan College Institute of Technology and Advanced Learning		
Name of Contact Person: Wai Chu Cheng	Telephone #: 905 845 9430	Email address: Waichu.cheng@sheridancollege.ca
Street Address(es) of Entity(ies): HMC Campus of Sheridan College		
Municipality: Mississauga, ON Canada		
Type of entity 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):
This waste audit was conducted in April 2018 at the HMC Campus of Sheridan College. The campus has two buildings each comprised of four floors totaling more than 300,000 square feet. One of the two buildings was open in January. There are more than 7,000 students attending this campus with more than 300 employees. 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 2017 for the waste and diversion programs were obtained from the service provider(s) and were used in the calculation of diversion rates. At the time of the audit, the campus had fully implemented 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 Recycling 6. Metal Recycling 7. E-Waste Recycling (includes Battery Recycling) 8. Hygiene Waste Energy-from-Waste (EFW)

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	Small quantities generated on campus and disposed as waste.

Clothing/Textiles	Little generated at the campus. Likely lost or intentionally disposed articles of clothing.
Coffee Grinds	Minimal amounts generated on campus
Coffee pods	Generated at coffee stations around the 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	Small quantities generated on campus and disposed as waste.
Feminine Hygiene Products	Generated across campus in washrooms. Material collected for diversion from landfill (incineration) though amounts have not been accurately quantified at this time for inclusion in this report
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.
E-Waste	Generated throughout campus and suitable for the E-waste 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
Parchment Paper	Minimal amounts generated on campus.
Polycoat Beverage Cups - compostable	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 - non-compostable	Not available for sale on campus as not included in ZW recycling program. Likely brought in from off-site vendors by students/staff.
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.
Tissue/Toweling (cleaning related)	Minimal amounts generated on campus.
Tissue/Toweling (washroom related)	Minimal amounts generated and disposed as waste. Dispensers have been removed from washrooms. What is generated should be included in ZW organics program.
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 alcoholic beverages)		Should be included in ZW Recycling 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.	
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.
E-Waste		Should be included in E-Recycling or captured during E-Recycling Events.
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 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
Parchment Paper	No diversion program currently available.	
Polycoat Beverage Cups - compostable (anaerobically digested)		Should be included in ZW Organics Bin Program though much ends up in landfill
Polycoat Beverage Cups - non-compostable	Generated throughout campus and should be disposed in waste-to-landfill but much	

	contaminates ZW mixed recycling and ZW organics streams	
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	564	564	0	0	0	0	301	301	0	263	263
#1 PET - other thermoform (coloured)	0	473	473	0	0	0	0	300	300	0	172	172
#1 PET Bottles - excluding alcoholic beverage	0	3,514	3,514	0	0	0	0	2,935	2,935	0	579	579
#2 HDPE Bottles and Jugs	0	570	570	0	0	0	0	160	160	0	410	410
#2 Other HDPE Containers	0	78	78	0	0	0	0	78	78	0	0	0
#5 Other PP Containers	0	2,019	2,019	0	0	0	0	1,120	1,120	0	899	899
#6 PS - Expanded polystyrene	0	616	616	0	0	0	0	367	367	0	249	249
#6 PS - Non-expanded - all other	0	1,873	1,873	0	0	0	0	1,102	1,102	0	771	771
#7 Other Plastics	0	0	0	0	0	0	0	0	0	0	0	0

Aluminum beverage - alcohol	0	0	0	0	0	0	0	0	0	0	0	0
Aluminum Foil & Foil Trays	0	114	114	0	0	0	0	28	28	0	86	86
Aluminum Food & Other Beverage Cans	0	516	516	0	0	0	0	420	420	0	96	96
Aseptic Containers - (excluding alcoholic beverages)	0	82	82	0	0	0	0	51	51	0	32	32
Batteries	0	0	0	0	0	0	0	0	0	0	0	0
Boxboard / Cores	0	3,780	3,780	0	0	0	0	1,515	1,515	0	2,265	2,265
Clear Glass Other Beverage and Food	0	0	0	0	0	0	0	0	0	0	0	0
Clothing/Textiles	0	158	158	0	0	0	0	0	0	0	158	158
Coffee Grinds	0	0	0	0	0	0	0	0	0	0	0	0
Coffee pods	0	0	0	0	0	0	0	0	0	0	0	0
Confidential Paper - Paper Shred	0	6,577	6,577	0	0	0	0	6,577	6,577	0	0	0
Corrugated Cardboard - Bulk	4,680	9,792	5,112	0	0	0	0	9,792	9,792	0	0	0
Corrugated Cardboard - Loose	(incl in bulk)	2,141	2,141	0	0	0	0	1,780	1,780	0	361	361
Diapers	0	5	5	0	0	0	0	0	0	0	5	5
Feminine Hygiene Products	0	1,184	1,184	0	0	0	0	0	0	0	1,184	1,184
Food packaging	0	3,268	3,268	0	0	0	0	818	818	0	2,450	2,450
Gable Top Containers	0	950	950	0	0	0	0	84	84	0	866	866
Glass - Clear Other Beverage and Food	0	1,517	1,517	0	0	0	0	1,161	1,161	0	356	356
Glass - Clear Alcoholic Beverage	0	0	0	0	0	0	0	0	0	0	0	0
Kraft Paper	0	1,692	1,692	0	0	0	0	1,006	1,006	0	687	687
Laminated Paper Packaging	0	0	0	0	0	0	0	0	0	0	0	0

Large HDPE & PP Pails & Lids	0	0	0	0	0	0	0	0	0	0	0	0
LDPE/HDPE Film - Products (non-packaging)	0	2,485	2,485	0	0	0	0	1,394	1,394	0	1,092	1,092
Liquids - food/beverage	0	2,680	2,680	0	0	0	0	1,765	1,765	0	915	915
Maintenance Waste	0	122	122	0	0	0	0	0	0	0	122	122
Metal - Bulk	0	1,433	1,433	0	0	0	0	1,433	1,433	0	0	0
E-Waste	0	136	136	0	0	0	0	136	136	0	0	0
Mixed Fine Paper	0	7,743	7,743	0	0	0	0	5,803	5,803	0	1,940	1,940
Molded Pulp/Fibre	0	660	660	0	0	0	0	339	339	0	321	321
Napkins/Toweling (food related)	0	6,529	6,529	0	0	0	0	3,346	3,346	0	3,183	3,183
Newspaper – Dailys and Weeklys	0	0	0	0	0	0	0	0	0	0	0	0
Office Waste	0	853	853	0	0	0	0	335	335	0	518	518
Other Metal	0	229	229	0	0	0	0	0	0	0	229	229
Other Non-Recyclable Material (Laundry)	0	0	0	0	0	0	0	0	0	0	0	0
Other Paper (paper plates)	0	0	0	0	0	0	0	0	0	0	0	0
Parchment Paper	0	215	215	0	0	0	0	51	51	0	165	165
Polycoat Beverage Cups - compostable	0	12,801	12,801	0	0	0	0	8,576	8,576	0	4,225	4,225
Polycoat Beverage Cups - non-compostable	0	2,547	2,547	0	0	0	0	352	352	0	2,195	2,195
Post Consumer Food Waste	810	37,915	37,105	0	0	0	0	18,336	18,336	810	19,578	18,768
Rubber & Nitrile Gloves	0	999	999	0	0	0	0	442	442	0	557	557
Spiral Wound Containers	0	56	56	0	0	0	0	12	12	0	44	44
Steel Food & Other Beverage Cans	0	3,402	3,402	0	0	0	0	3,189	3,189	0	212	212
Straws/Plastic Cutlery	0	1	1	0	0	0	0	1	1	0	0	0

Tissue/Toweling (cleaning related)	0	0	0	0	0	0	0	0	0	0	0	0
Tissue/Toweling (washroom related)	0	42	42	0	0	0	0	42	42	0	0	0
Wood	0	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 TOTALS	34,560	122,330	82,280	0	0	0	16,780	75,146	58,366	17,780	47,184	28,594
Percent Change (total C ÷ total A x 100) from Base Year:	238.1%			-			347.8%			160.8%		
2018 Current year Diversion Rate:	61.4%											

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

- Fill out these columns each year following the initial waste audit or baseline year to determine the progress that is being made by your waste reduction program.
- Specific waste categories appearing in RED were ones employed during 2012 base audit

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.
	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)". In the Request of Proposal documents, the contractors are required to outline how they demonstrate sustainability in their project proposals.
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. * 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:	Title:	Date:

MINISTRY OF THE ENVIRONMENT 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: Sheridan College Institute of Technology and Advanced Learning		
Name of Contact Person: Wai Chu Cheng	Telephone #: 905 845 9430	Email address: Waichu.cheng@sheridancollege.ca
Street Address(es) of Entity(ies): HMC Campus of Sheridan College		
Municipality: Mississauga, ON Canada		
Type of entity 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):
This waste audit was conducted in April 2018 at the HMC Campus of Sheridan College. The campus has two buildings each comprised of four floors totaling more than 300,000 square feet. One of the two buildings was open in January. There are more than 7,000 students attending this campus with more than 300 employees. 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 2017 for the waste and diversion programs were obtained from the service provider(s) and were used in the calculation of diversion rates. At the time of the audit, the campus had fully implemented 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 Recycling 6. Metal Recycling 7. E-Waste Recycling (includes Battery Recycling) 8. Hygiene Waste Energy-from-Waste (EFW)

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.
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.
E-Waste	Well captured through E-recycling programs.
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 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.
Parchment Paper	Staff/students will be encouraged to include material in the ZW waste-to-landfill bin through education/signage.
Polycoat Beverage Cups - compostable	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.

Polycoat Beverage Cups - non-compostable	Not sold or distributed at campus cafeterias or restaurants but brought to campus. Launch education on the preferred polycoat cups or use of reusable cups. These cups are waste.
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 and evaluating the program.	905-845-9430 x 5423
Muhammah Ishtiaq Afridi	Tracking and assessing of waste data	905-845-9430 x 5674
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: 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" OR "3Rs Program currently in place."
1. Enhancing Food Waste and Napkins Capture Rate	**Enhancing Food Waste and Napkins Capture Rate Throughout the Campus:** 94,174 kg/year of food waste and napkins are being disposed in waste-to-landfill. 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. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 4,552 kg per year (20% of food waste and napkins improperly disposed across the campus). Due date: 2018/2019
2. Enhancing Mixed Recycling Capture Rate	**Enhancing Mixed Recycling Capture Rate Throughout the Campus:** Encouraging the proper disposal in mixed recycling of: polypropylene containers, kraft and fine paper, boxboard/cores, PET bottles, polystyrene, molded pulp/fibre, PET bottles, cardboard and clear glass through education/signage. Expected improvement in capture rate of 20%. Anticipated reduction in waste-to-landfill of 2,220 kg per year (20% of mixed recycling improperly disposed across the campus). Due date: 2018/2019
3. Enhancing Coffee Cup Capture Rate	**Capturing Compostable (Anaerobically Digested) Coffee Cups in Organics:** 12,801 per year of compostable coffee cups are being disposed in mixed recycling, organics and waste-to-landfill at the HMC Campus. 4,434 kg are being disposed improperly in mixed recycling and 4,225 kg are being improperly disposed in mixed waste-to-landfill. Launch a campaign to capture compostable coffee cups in organics. Suggestions: 1. Improve signage on ZW bins to include a picture of a coffee cup on all three bins with an X through the cups on all but the ZW organics bin. 2. Consider including the coffee cup education campaign in the action plan identified above for food waste and napkins, engaging environmental students to design the campaign. Ensure the non-compostable cups that are brought to campus are targeted as part of the education campaign. Focus should be to eliminate non-compostable beverage cups on campus since they are not recyclable at this time.

	Expected improvement in capture rate of 50%. Anticipated reduction in waste-to-landfill of 2,113 kg per year (50% of coffee cups improperly disposed in waste-to-landfill). Due date: 2018/2019
4. Encouraging Emptying of Beverage Containers	**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 366 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams (40% reduction in liquids in waste-to-landfill stream). Due date: 2018/2019
5. Capturing & Reporting Material Weights for All Diversion Programs at the Campus	**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 HMC Campus but the weight-based data is not currently captured accurately for reporting purposes (Examples Repair Cafe and Food Donation Program). 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 reduction in waste-to-landfill: Effect on diversion rate likely significant but not quantifiable Due date: 2018/2019

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 (2018) (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	564	301	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			53	62.7%
#1 PET - other thermoform (coloured)	473	300	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			34	63.5%
#1 PET Bottles - excluding alcoholic beverage	3,514	2,935	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			116	86.8%
#2 HDPE Bottles and Jugs	570	160	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			82	42.5%
#2 Other HDPE Containers	78	78	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			0	100.0%
#5 Other PP Containers	2,019	1,120	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			180	64.4%
#6 PS - Expanded polystyrene	616	367***					
#6 PS - Non-expanded - all other	1,873	1,102	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			154	67.1%
#7 Other Plastics	0	0					

Aluminum beverage - alcohol	0	0					
Aluminum Foil & Foil Trays	114	28	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			17	39.6%
Aluminum Food & Other Beverage Cans	516	420	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			19	85.1%
Aseptic Containers - (excluding alcoholic beverages)	82	51	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			6	69.2%
Batteries	0	0					
Boxboard / Cores	3,780	1,515	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			453	52.1%
Clear Glass Other Beverage and Food	0	0					
Clothing/Textiles	158	0					
Coffee Grinds	0	0					
Coffee pods	0	0					
Confidential Paper - Paper Shred	6,577	6,577					100.0%
Corrugated Cardboard - Bulk	9,792	9,792					100.0%
Corrugated Cardboard - Loose	2,141	1,780	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			72	86.5%
Diapers	5	0					
Feminine Hygiene Products	1,184	0					0.0%
Food packaging	3,268	818***					
Gable Top Containers	950	84	Enhance capture rate for specific recyclables in ZW mixed recycling across			173	27.1%

			the Campus through education and signage.				
Glass - Clear Other Beverage and Food	1,517	1,161	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			71	81.2%
Glass - Clear Alcoholic Beverage	0	0					
Kraft Paper	1,692	1,006	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			137	67.5%
Laminated Paper Packaging	0	0					
Large HDPE & PP Pails & Lids	0	0					
LDPE/HDPE Film - Products (non-packaging)	2,485	1,394***					
Liquids - food/beverage	2,680	1,765***	Promote the emptying of beverage containers prior to placement in ZW mixed recycling	366			79.5%
Maintenance Waste	122	0					0.0%
Metal - Bulk	1,433	1,433					100.0%
E-Waste	136	136					100.0%
Mixed Fine Paper	7,743	5,803	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			388	80.0%
Molded Pulp/Fibre	660	339	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			64	61.1%
Napkins/Towe ling (food related)	6,529	3,346	Enhancing food waste and napkins capture rate throughout the Campus			637	61.0%
Newspaper – Dailys and Weeklys	0	0					
Office Waste	853	335***					
Other Metal	229	0	Enhance capture rate for specific recyclables in ZW mixed recycling across			46	0.0%

			the Campus through education and signage.				
Other Non-Recyclable Material (Laundry)	0	0					
Other Paper (paper plates)	0	0					
Parchment Paper	215	51***					
Polycoat Beverage Cups - compostable	12,801	8,576	Enhancing capture of compostable coffee cups in ZW organics program using education/signage			2,113	83.5%
Polycoat Beverage Cups - non-compostable	2,547	352***					
Post Consumer Food Waste	37,915	18,336	Enhancing food waste and napkins capture rate throughout the Campus			3,916	58.7%
Rubber & Nitrile Gloves	999	442	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			111	55.4%
Spiral Wound Containers	56	12***					
Steel Food & Other Beverage Cans	3,402	3,189	Enhance capture rate for specific recyclables in ZW mixed recycling across the Campus through education and signage.			42	95.0%
Straws/Plastic Cutlery	1	1					100.0%
Tissue/Toweling (cleaning related)	0	0					
Tissue/Toweling (washroom related)	42	42					100.0%
Wood	0	0					
Wood Dust	0	0					
CAMPUS WIDE TOTALS	**122,330**	**75,146**		**366**		**8,885**	**69.0%**

* 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:	Date: