

# Confederation College 2022 Solid Non-Hazardous Waste Audit

PREPARED BY: BEST



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# Executive Summary

On behalf of Confederation College, Best Service Pros conducted a solid non-hazardous waste audit at the main campus. Samples of the waste were collected at various areas on the campus for a total of 512.39 lbs. of garbage. The samples were collected and audited on November 7th, 2022, and November 11th, 2022. Waste materials collected for the audit were tagged to specify the area of the building, stream, and type of bin. The following table summarizes the amount of materials generated, diverted, and disposed including back of house kitchens and student kitchens at the main campus.

| MATERIAL | TOTAL CAMPUS  | ACE BUILDING | DORIAN BUILDING | MCINTYRE BUILDING | SHUNIAH BUILDING |
|----------|---------------|--------------|-----------------|-------------------|------------------|
| DIVERTED | 99.02 (19%)   | 2.19 (10%)   | 4.54 (33.5%)    | 11.22 (20%)       | 68.66 (16%)      |
| DISPOSED | 413.37 (81%)  | 21.11(90%)   | 13.54 (66.5%)   | 43.19 (80%)       | 339.53 (84%)     |
| TOTAL    | 512.39 (100%) | 23.3 (100%)  | 18.08 (100%)    | 54.41 (100%)      | 408.19 (100%)    |

TABLE 1 - SUMMARY OF THE NUMBER OF MATERIALS GENERATED, DIVERTED AND DISPOSED OF INCLUDING BACK OF HOUSE KITCHENS AND STUDENT KITCHENS.

Based on the amount of waste generated, diverted, and disposed, the waste diversion rate for the main campus is 19%, ACE Building is 10%, Dorian Building is 33.5%, McIntyre Building is 20%, and Shuniah Building 16%. The provincial objective for a waste diversion rate is 60%.

The following table summarizes the amount of material generated, diverted, and disposed excluding back of house kitchens and student kitchens at the main campus.

| MATERIAL | TOTAL CAMPUS   | ACE BUILDING | DORIAN BUILDING | MCINTYRE BUILDING | SHUNIAH BUILDING |
|----------|----------------|--------------|-----------------|-------------------|------------------|
| DIVERTED | 86.49 (28.5%)  | 2.19 (10%)   | 4.54 (33.5%)    | 11.22 (20%)       | 68.54 (33%)      |
| DISPOSED | 216.58 (71.5%) | 21.11(90%)   | 13.54 (66.5%)   | 43.19 (80%)       | 138.74 (66.9)    |
| TOTAL    | 303.07 (100%)  | 23.3 (100%)  | 18.08 (100%)    | 54.41 (100%)      | 207.28 (100%)    |

TABLE 2 - SUMMARY OF THE NUMBER OF MATERIALS GENERATED, DIVERTED AND DISPOSED OF EXCLUDING BACK OF HOUSE KITCHENS AND STUDENT KITCHENS.

Based on the amount of waste generated, diverted, and disposed, the waste diverted rate for the main campus is 28.5%, ACE Building is 10%, Dorian Building is 33.5%, McIntyre Building is 20% and Shuniah Building is 33%. The main provincial objective for a waste diversion rate is 60%.

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# 1 - Introduction

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On behalf of Confederation College, Best Service Pros conducted a solid non-hazardous waste audit at the main campus in various buildings and cafeterias (ACE, McIntyre, Dorian and Shuniah Buildings). The waste audit reviewed representative samples of the waste from various areas. The goal of the waste audit was to gain an understanding of the quantities and composition of solid non-hazardous wastes generated on campus. Confederation College has approximately 2314 full-time equivalents (refer to Appendix A) that generate waste and divertible material. Confederation College conducted a solid non-hazardous waste audit to comply with O. Reg. 102/94 and to confirm compliance with O. Reg 103/94 and to further improve upon their present waste reduction, reuse, and recycling programs.

## 1.1 Purpose

The purpose of the waste audit was to:

- Comply with Part X of O. Reg. 102/94 'Waste Audits and Waste Reduction Work Plans'
- Confirm compliance with Section 14 of O. Reg. 103/94 'Industrial, Commercial, and Institutional Source Separation Programs'
- Determine waste diversion rates for Confederation College
- Determine any opportunities for waste reductions and diversion

## 1.2 Scope of Work

Data was collected on November 8th, 2022, from the ACE and McIntyre Buildings, and November 11th, 2022, from the Dorian and Shuniah Buildings at the Confederation College Campus.

# 2 - Methodology

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Samples of waste were collected from each building during the evening shift, by students and Best Service Pros staff. Bags of garbage were collected and labelled indicating the building, area, and stream. A map was created to locate and label bins appropriately.

Waste materials were weighed, sorted into specific waste categories, weighed again, then recorded. The materials were sorted into specific waste material categories based on the O. Reg. 103/94 requirements for source separation at educational institutions and the municipalities sorting requirements. Due to the nature of this audit, we did not have the capabilities to sort into source separations according to the O. Reg. 103/94 requirements for source separation at educational institutions, including:

- |              |                               |
|--------------|-------------------------------|
| - Aluminum   | - Glass bottles or containers |
| - Cardboard  | - Newspaper                   |
| - Fine paper | - Steel food or beverage cans |

Mixed plastics and glass containers, organics, and paper were the waste streams we categorized into.

## 3 - Waste Audit Results

### 3.1. Garbage Quantities and Distribution

Table 3 summarizes the quantity and distribution of waste materials collected for the waste audit. Refer to Appendix B for waste audit data.

| CAMPUS LOCATION   | SAMPLE WEIGHT (LBS.) | DISTRIBUTION |
|-------------------|----------------------|--------------|
| ACE Building      | 23.3                 | 5%           |
| Mcintyre Building | 54.41                | 11%          |
| Dorian Building   | 18.08                | 4%           |
| Shuniah Building  | 408.19               | 81%          |
| Total             | 503.98               | 100%         |

TABLE 3 - SUMMARY OF QUANTITY AND DISTRIBUTION OF WASTE MATERIALS COLLECTED.

Shuniah Building generated the most garbage, representing 81% for the waste audit sample.

The various areas audited in each campus building include:

- Food areas
- Back of house kitchens
- Classrooms
- Hallways

### 3.2. Percentage of Recyclables in Garbage

**O. Reg. 103/94 mandates that 'educational institutions' source separate the following material:**

- Aluminum food or beverage containers
- Cardboard
- Fine paper
- Glass food or beverage containers
- Newsprint
- Steel food or beverage containers

### 3.2 Percentage of Recyclables in Garbage Stream

Figure 1 summarizes the quantity of recyclables found in the waste audit garbage stream.

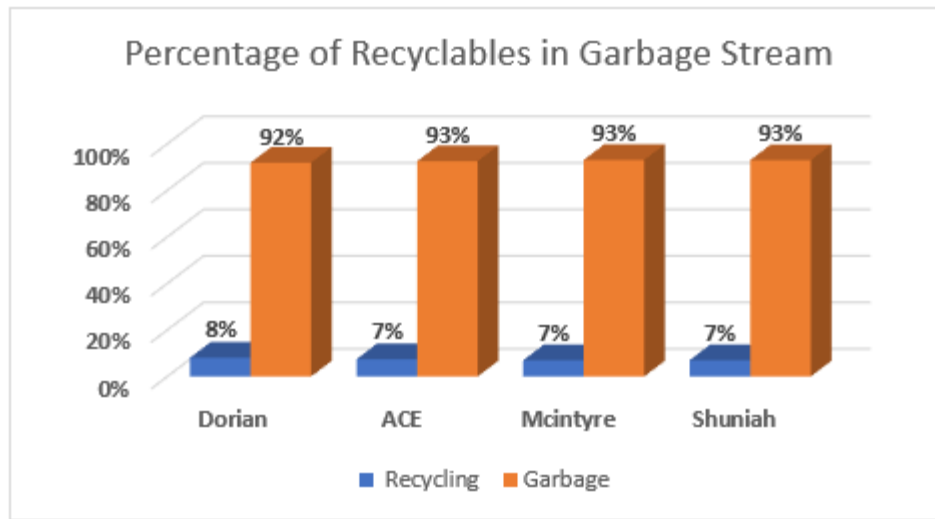


FIGURE 1 – COMPARES THE AMOUNT OF RECYCLABLES IN WASTE BINS ACROSS CONFEDERATION COLLEGE.

This data suggests that Confederation College has a low amount of recyclable content in the garbage stream. The average of recyclables found in the garbage stream across the campus is approximately 7%.

### 3.3 Percentage of Organics in All Streams

Figure 2 summarizes the percentage of organics found in all stream types (Landfill, paper/fiber, and containers).

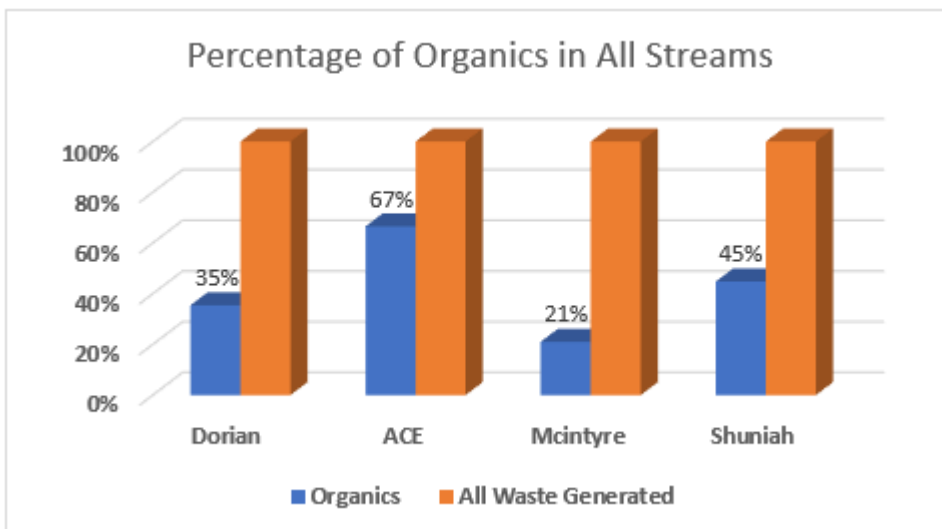


FIGURE 2 - COMPARES AND CONTRASTS THE AMOUNT OF ORGANICS FOUND IN ALL BINS AND STREAMS ACROSS CAMPUS.

## 4 - Diversion Programs & Waste Systems

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### 4.1 Waste Diversion Programs

There are multiple waste diversion programs in place at Confederation College to reduce, reuse and/or recycle materials.

**CARDBOARD:** Cardboard is flattened and placed next to the sorter bins. Roll-off bins are used at main campus and surrounding buildings. Cardboard is collected by Waste Connections.

**COMINGLED CONTAINERS:** Comingled containers include plastic, glass, tetra pak, and/or metal containers. Comingled containers are collected by Waste Connections.

**MIXED PAPER:** Paper recycling includes fine paper, magazines, brochures, newspaper, paper bags and other clean paper products. Mixed paper is collected by Waste Connections.

**LIGHT BULBS:** Light bulbs are recycled through a local distributor.

**SHARPS AND HAZARDOUS WASTE:** Sharps and hazardous waste

### 4.2 Waste Disposal System

Regular non-hazardous waste is collected and placed in bins or compactors. Service is provided on a schedule and/or when required.





## 5 - Performance Indicators

### 5.1 Waste Diversion Rates

Waste diversion rate is the percentage of waste materials that is diverted from landfill due to reduce, reuse, and recycling programs versus the total amount of waste generated.

Table 4 summarizes the quantities of waste diverted or landfilled and the waste diversion rates. The data includes back of house food kitchens and student kitchens from the main campus.

| MATERIAL                 | TOTAL CAMPUS (LBS) | ACE BUILDING (LBS) | DORIAN BUILDING (LBS) | MCINTYRE BUILDING (LBS) | SHUNIAH BUILDING (LBS) |
|--------------------------|--------------------|--------------------|-----------------------|-------------------------|------------------------|
| DIVERTED                 | 99.02              | 2.19               | 4.54                  | 11.22                   | 68.66                  |
| DISPOSED                 | 413.37             | 21.11              | 13.54                 | 43.19                   | 339.53                 |
| TOTAL                    | 512.39             | 23.3               | 18.08                 | 54.41                   | 408.19                 |
| WASTE DIVERSION RATE (%) | 19%                | 10%                | 33.5%                 | 20%                     | 16.8%                  |

TABLE 4 - SUMMARY OF THE QUANTITIES OF WASTE DIVERTED OR LANDFILLED AND THE WASTE DIVERSION RATES, INCLUDING BACK OF HOUSE KITCHENS AND STUDENT KITCHENS.

Table 5 summarizes the quantities of waste diverted or landfilled and the waste diversion rates. This data excludes back of house kitchens and student kitchens from the main campus.

| MATERIAL                 | TOTAL CAMPUS (LBS) | ACE BUILDING (LBS) | DORIAN BUILDING (LBS) | MCINTYRE BUILDING (LBS) | SHUNIAH BUILDING (LBS) |
|--------------------------|--------------------|--------------------|-----------------------|-------------------------|------------------------|
| DIVERTED                 | 86.49              | 2.19               | 4.54                  | 11.22                   | 68.54                  |
| DISPOSED                 | 216.58             | 21.11              | 13.54                 | 43.19                   | 138.74                 |
| TOTAL                    | 303.07             | 23.3               | 18.08                 | 54.41                   | 207.28                 |
| WASTE DIVERSION RATE (%) | 28.5%              | 10%                | 33.5%                 | 20%                     | 33%                    |

TABLE 5 - SUMMARY OF QUANTITIES OF WASTE DIVERTED AND LANDFILLED AND THE WASTE DIVERSION RATES, EXCLUDING BACK OF HOUSE KITCHENS AND STUDENT KITCHENS.



## 6 - Waste Audit Summary and Waste Audit Work Plan

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Refer to Appendix E and F for the Waste Audit Summary and the Waste Reduction Work Plan. The last page of each set of forms in the appendices needs to be signed by an authorized person at the College. The Waste Reduction Work Plan (Appendix F) must be posted at the College where staff/students can review it.

## 7 - Conclusions and Recommendations

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### 7.1 Conclusions

Based on the results of the solid non-hazardous waste audit, the following conclusions and recommendations can be made:

- The main campus diversion rate is 19%, the ACE building waste diversion rate is 10%, the Dorian building waste diversion rate is 33.5%, the McIntyre building waste diversion rate is 20%, and the Shuniah Building waste diversion rate is 16.8%. This is including all back of house kitchens and student kitchens, which means no buildings reached or surpassed the provincial average of 60%. There was a low amount of waste collected from the ACE and Dorian Buildings, which may have affected the diversion rate for both buildings.
- If the back of house kitchens and student kitchens are not considered, Confederation College does not meet the provincial average of 60% in all buildings.
- Increasing the front of house waste diversion rate by 25-35% is a recommended goal for all buildings in CONFEDERATION COLLEGE.
- Confederation College runs the main diversion program of containers, papers and waste, however, would benefit from an organics program. Refer to Figure 2, organics waste is found in abundance in ACE and Shuniah Building, it is evident that most of the back of house kitchens and student kitchens would produce food waste, as well as the large central cafeteria.
- Referring to Figure 1, recycling was found in the landfill stream, however in small amounts, Confederation College could benefit from waste sorting training provided to staff members, faculty members and students.

## 7.2 Recommendations

Recommendations are listed in priority sequence, quick hits referring to items that may not take up time or money and will provide smaller value in return, gems refer to items that have low effort but provide a high value project in return, and strategic refers to items with high effort that provide a high value project in return.

**Table 6: Recommendations Chart**

| QUICK HITS  |
|---|
| <ul style="list-style-type: none"> <li>• Creating communication campaigns for alternative recycling options available on campus such as e-waste recycling.</li> <li>• Creating communication campaigns regarding all streams, what is and isn't accepted and answering questions from staff and student members.</li> <li>• Switching to clear bags in kitchens and student kitchens, for BEST staff and campus staff to have clear view of contamination level when disposing of bags.</li> <li>• Removing all bins in washrooms and adding signage that emphasizes the use of hand driers and reducing paper production, refer to Appendix D, figure 11.</li> <li>• Adding signage at cafes and coffee shops regarding reusable mugs, and their discount.</li> <li>• Connect with waste hauler to understand better sorting tips and what is most seen in Confederations waste.</li> <li>• Coordinating with Chefs in kitchens, managers of cafes and other team members, to ensure they are not preparing extra amounts of food, or over-purchasing food and drink items.</li> <li>• Providing Food Labs and Staff Kitchens a recycling bin outside of the classroom, refer to Appendix D, figure 10.</li> <li>• Ensuring every bin has a sign and purpose, single stream bins should not be accessible in hallways, classrooms, or offices, refer to Appendix D, figure 7 and 8.</li> </ul>   |
| GEMS  |
| <ul style="list-style-type: none"> <li>• Purchasing alternative recycling boxes from Green Circle Salons for PPE recycling, an accessible and easy to manage system, to any program at Confederation College that utilizes PPE, as well as to the Dental Clinic. Refer to Appendix C and D.</li> <li>• Introducing alternative recycling programs such as, batteries, pen recycling, textbook recycling, and/or clothing donation bins. Refer to Appendix C and D.</li> <li>• Introducing printer cartridge recycling to all offices and provide them with a centralized space to bring their cartridges, rather than providing each office with a bin. Refer to Appendix C.</li> <li>• Purchasing a centralized bin in both cafeterias, with cafeteria specific signage, now only single stream bins are available, refer to Appendix D, figure 13.</li> <li>• Creating and implementing a waste training for staff members on campus, and BEST staff members, as well providing sorting guides specific to Confederation College.</li> <li>• Working towards a sorting training on streams and sorting habits at Confederation College, that can be presented to students during orientation or on first day of classes each semester.</li> <li>• Graphically designing signage curated for back of house kitchens and student kitchens and ensure to get feedback from instructors and Chef's on most used items.</li> <li>• Adding signage on all external bins, to depict what can or cannot be accepted into the bins, refer to Appendix D, figure 3.</li> <li>• Designing and implementing signage for water refill stations that encourage students to use reusable bottles. Refer to Appendix D, figure 6.</li> <li>• Encouraging all staff lounges to switch to reusable mugs, cups, plates, and cutlery to reduce their impact.</li> </ul> |

## STRATEGIC

- Removing all single stream bins from classrooms, cafeterias, and cafes, as they will end up contaminated. Refer to Appendix D, figure
- Running and organizing a composter on campus, that can be led by environmental students as a volunteer position or field course. This composter can also be led by employees or part time staff members to reduce contamination. Refer to Appendix C.
- Providing kitchens across campus with 3 stream bins (landfill, containers, and organics), to reduce contamination. Refer to Appendix D, Figure 9.
- Reducing or removing all office waste bins, most office waste is paper or recycling, and can become contaminated with food or liquid waste.



# Appendices

## Appendix A: Current Alternative Recycling Methods

| RECYCLING METHOD                  | References                               |
|-----------------------------------|--|
| E-WASTE RECYCLING                 | No signage, no location indicators. Etc. |
| SHARPS AND NEEDLE RECYCLING       | Bathrooms with clear signage.            |
| BULB RECYCLING                    | No signage, no location indicators. Etc. |
| METAL RECYCLING (AS NEEDED BASIS) | No signage, no location indicators. Etc. |

## Appendix B: Data – All of Campus

| Location of Bin                                | Stream | Total (lbs) | Paper (lbs) | Containers (lbs) | Organics (lbs) | Landfill (lbs) | Correct Sorting (%) | Contamination rate (%) |
|--|--------|-------------|-------------|------------------|----------------|----------------|---------------------|------------------------|
| ACE BUILDING AUDIT RESULTS AND CALCULATIONS    |        |             |             |                  |                |                |                     |                        |
| A 130C   | GARB   | 0.43        | 0.01        | 0                | 0.29           | 0.13           | 98%                 | 2%                     |
| A A0B  | GARB   | 0.42        | 0.05        | 0.05             | 0.19           | 0.13           | 76%                 | 24%                    |
| A A1   | GARB   | 0.15        | 0.07        | 0.01             | 0              | 0.08           | 53%                 | 47%                    |
| A A1   | REC    | 0.15        | 0           | 0.01             | 00             | 0.15           | 7%                  | 93%                    |
| A A209   | GARB   | 0.25        | 0           | 0.09             | 0.09           | 0.07           | 64%                 | 36%                    |
| A A209   | PAPER  | 0.36        | 0.36        | 0                | 0              | 0.01           | 100%                | 0%                     |
| A A221   | GARB   | 0.67        | 0           | 0.11             | 0.19           | 0.37           | 84%                 | 16%                    |
| A A3   | GARB   | 1.62        | 0           | 0.22             | 0.69           | 0.71           | 86%                 | 14%                    |
| A A3   | PAPER  | 0.44        | 0.34        | 0                | 0              | 0.1            | 77%                 | 23%                    |
| A A3   | REC    | 0.26        | 0           | 0.24             | 0              | 0.02           | 92%                 | 8%                     |
| A A4   | REC    | 0.25        | 0           | 0.12             | 0.06           | 0.07           | 48%                 | 52%                    |
| A A4   | GARB   | 0.3         | 0           | 0.01             | 0.24           | 0.06           | 100%                | 0%                     |
| A A4   | PAPER  | 0.1         | 0.04        | 0                | 0.06           | 0.01           | 40%                 | 60%                    |
| A A5   | REC    | 0.26        | 0           | 0.24             | 0              | 0.02           | 92%                 | 8%                     |
| A A5   | GARB   | 0.26        | 0.07        | 0.11             | 0              | 0.08           | 31%                 | 69%                    |
| A A5L  | GARB   | 15.94       | 0.24        | 0.89             | 13.37          | 1.44           | 93%                 | 7%                     |
| A A5R  | GARB   | 0.57        | 0           | 0.13             | 0.19           | 0.25           | 77%                 | 23%                    |
| A AD   | GARB   | 0.5         | 0.09        | 0.1              | 0.06           | 0.25           | 62%                 | 38%                    |
| A AG   | REC    | 0.37        | 0           | 0.17             | 0.07           | 0.13           | 46%                 | 54%                    |
| DORIAN BUILDING AUDIT RESULTS AND CALCULATIONS |        |             |             |                  |                |                |                     |                        |
| Location of Bin                                | Stream | Total (lbs) | Paper (lbs) | Containers (lbs) | Organics (lbs) | Landfill (lbs) | Correct Sorting (%) | Contamination rate (%) |
| D 122  | GARB   | 2.84        | 0.36        | 0.08             | 0.47           | 1.93           | 85%                 | 15%                    |
| D 251  | GARB   | 0.16        | 0           | 0.1              | 0              | 0.06           | 38%                 | 62%                    |
| D 265  | GARB   | 1.37        | 0.14        | 0.16             | 0.22           | 0.85           | 78%                 | 22%                    |
| D CAFÉ   | GARB   | 5.8         | 1           | 0.45             | 3.55           | 0.8            | 75%                 | 25%                    |
| D D0   | REC    | 0.98        | 0.85        | 0                | 0.13           | 0              | 0%                  | 100%                   |
| D D0   | GARB   | 0.68        | 0.08        | 0.1              | 0.2            | 0.3            | 74%                 | 16%                    |

|  |           |       |       |      |      |      |      |      |      |
|--|-----------|-------|-------|------|------|------|------|------|------|
| D  | D1        | GARB  | 0.68  | 0.06 | 0.15 | 0    | 0.47 | 69%  | 29%  |
| D  | D1        | PAPER | 0.3   | 0    | 0.14 | 0    | 0.16 | 0%   | 100% |
| D  | D2        | REC   | 0.11  | 0    | 0.11 | 0    | 0    | 100% | 0%   |
| D  | D2        | GARB  | 0.51  | 0    | 0.1  | 0.25 | 0.16 | 80%  | 20%  |
| D  | D3        | PAPER | 0.14  | 0.06 | 0    | 0    | 0.08 | 43%  | 57%  |
| D  | D3        | GARB  | 0.2   | 0    | 0    | 0    | 0.2  | 100% | 0%   |
| D  | D3        | REC   | 0.38  | 0    | 0.16 | 0    | 0.22 | 42%  | 58%  |
| D  | P1        | REC   | 0.22  | 0    | 0.12 | 0    | 0.1  | 55%  | 45%  |
| D  | SL        | GARB  | 0.7   | 0    | 0    | 0.48 | 0.22 | 100% | 0%   |
| D  | SL        | REC   | 2.29  | 0    | 0.94 | 0.58 | 0.77 | 41%  | 59%  |
| D  | TL        | GARB  | 0.6   | 0    | 0.05 | 0.4  | 0.15 | 92%  | 8%   |
| D  | TL        | PAPER | 0.12  | 0    | 0    | 0.12 | 0    | 0%   | 100% |
| MCINTYRE BUILDING AUDIT RESULTS AND CALCULATIONS |           |       |       |      |      |      |      |      |      |
| M  | Cafeteria | GARB  | 8.7   | 0.88 | 0.3  | 3.35 | 4.17 | 86%  | 14%  |
| M  | M-0       | PAPER | 0.23  | 0.22 | 0    | 0    | 0.01 | 96%  | 4%   |
| M  | M1        | GARB  | 2.04  | 0.48 | 0.03 | 0.73 | 0.8  | 75%  | 25%  |
| M  | M1        | PAPER | 0.53  | 0.31 | 0    | 0.11 | 0.11 | 58%  | 42%  |
| M  | M1        | REC   | 0.94  | 0    | 0.78 | 0    | 0.16 | 83%  | 17%  |
| M  | M2        | GARB  | 4.1   | 0.07 | 0.19 | 0.07 | 3.77 | 94%  | 6%   |
| M  | M2        | PAPER | 2.38  | 2.36 | 0    | 0    | 0.02 | 99%  | 1%   |
| M  | M2        | REC   | 0.6   | 0    | 0.53 | 0    | 0.07 | 88%  | 12%  |
| M  | M274      | GARB  | 0.37  | 0    | 0.09 | 0.04 | 0.24 | 76%  | 24%  |
| M  | M3        | GARB  | 0.42  | 0    | 0.17 | 0.15 | 0.1  | 60%  | 40%  |
| M  | M3        | REC   | 0.33  | 0    | 0.11 | 0.11 | 0.11 | 33%  | 66%  |
| M  | M4        | GARB  | 0.51  | 0    | 0.15 | 0.23 | 0.13 | 71%  | 29%  |
| M  | M4        | PAPER | 0.4   | 0.12 | 0    | 0.08 | 0.2  | 30%  | 70%  |
| M  | M4        | REC   | 0.3   | 0    | 0.13 | 0    | 0.17 | 43%  | 57%  |
| M  | M42       | GARB  | 0.45  | 0.12 | 0.13 | 0    | 0.2  | 44%  | 55%  |
| M  | M5        | GARB  | 1.61  | 0    | 0.06 | 1.26 | 0.29 | 96%  | 4%   |
| M  | M5        | PAPER | 1.44  | 1.3  | 0    | 0.13 | 0.1  | 90%  | 10%  |
| M  | M5        | REC   | 1.16  | 0.04 | 0.72 | 0.06 | 0.34 | 62%  | 38%  |
| M  | M6        | REC   | 1.73  | 0.01 | 0.94 | 0.1  | 0.68 | 54%  | 46%  |
| M  | M6        | GARB  | 0.86  | 0    | 0.09 | 0.51 | 0.26 | 90%  | 10%  |
| M  | M6        | PAPER | 0.29  | 0.11 | 0.06 | 0    | 0.12 | 38%  | 62%  |
| M  | MC        | REC   | 0.89  | 0    | 0.28 | 0.37 | 0.24 | 31%  | 69%  |
| M  | MC        | GARB  | 20.86 | 0    | 1.85 | 1.81 | 17.2 | 91%  | 9%   |
| M  | MOFFICE   | GARB  | 0.84  | 0.05 | 0.01 | 0.2  | 0.58 | 93%  | 7%   |
| M  | MSR       | GARB  | 2.43  | 0    | 0.15 | 2.17 | 0.11 | 94%  | 6%   |
| SHUNIAH BUILDING AUDIT RESULTS AND CALCULATIONS  |           |       |       |      |      |      |      |      |      |
|  | A1        | PAPER | 1.42  | 1.36 | 0    | 0    | 0.06 | 96%  | 4%   |
|  | A1        | GARB  | 3.12  | 0    | 0.64 | 1.58 | 0.9  | 79%  | 21%  |
|  | A1        | REC   | 2.19  | 0    | 2.19 | 0    | 0    | 100% | 0%   |
|  | A2        | PAPER | 0.31  | 0.06 | 0.04 | 0.12 | 0.09 | 19%  | 81%  |
|  | A2        | GARB  | 3.22  | 0.11 | 0.35 | 0.93 | 1.83 | 86%  | 14%  |
|  | A2        | REC   | 1.59  | 0    | 1.13 | 0.22 | 0.24 | 71%  | 29%  |

|        |       |       |      |      |      |       |      |      |
|--------|-------|-------|------|------|------|-------|------|------|
| A3     | REC   | 0.19  | 0    | 0.15 | 0.04 | 0     | 79%  | 21%  |
| A3     | GARB  | 1.91  | 0    | 0.12 | 0.66 | 1.13  | 94%  | 6%   |
| A3     | PAPER | 0.62  | 0    | 0.19 | 0.07 | 0.36  | 0%   | 100% |
| A4     | GARB  | 5.71  | 0.2  | 0.74 | 1.61 | 3.16  | 84%  | 16%  |
| A4     | REC   | 3.3   | 0.25 | 2.69 | 0.18 | 0.18  | 82%  | 28%  |
| A4     | PAPER | 0.26  | 0.1  | 0.07 | 0    | 0.09  | 38%  | 62%  |
| A5     | REC   | 2.29  | 0    | 0.64 | 0.08 | 1.57  | 28%  | 72%  |
| A5     | GARB  | 5.27  | 0.28 | 0.4  | 1.46 | 3.13  | 87%  | 13%  |
| A5     | PAPER | 0.44  | 0.15 | 0.16 | 0    | 0.13  | 34%  | 66%  |
| A6     | GARB  | 1.42  | 0.2  | 0.2  | 0.44 | 0.58  | 72%  | 28%  |
| A6     | PAPER | 0.55  | 0.01 | 0    | 0    | 0.54  | 2%   | 98%  |
| A6     | REC   | 0.78  | 0    | 0.25 | 0.18 | 0.35  | 32%  | 68%  |
| A7     | REC   | 0.75  | 0    | 0.39 | 0    | 0.36  | 52%  | 48%  |
| A7     | PAPER | 0.49  | 0.42 | 0.01 | 0    | 0.06  | 86%  | 14%  |
| A7     | GARB  | 3.22  | 0.09 | 0.41 | 0.89 | 1.83  | 84%  | 16%  |
| SUCCI  | PAPER | 6.13  | 6.13 | 0    | 0    | 0     | 100% | 0%   |
| SUCCI  | GARB  | 1.81  | 0.15 | 0.34 | 0.13 | 1.19  | 73%  | 27%  |
| SUCCI  | GARB  | 16.56 | 0.25 | 0.31 | 0.06 | 15.88 | 96%  | 4%   |
| 170    | GARB  | 0.6   | 0    | 0.11 | 0    | 0.49  | 82%  | 18%  |
| 172    | GARB  | 1.4   | 0.13 | 0.02 | 0.15 | 1.1   | 89%  | 11%  |
| 176    | GARB  | 1.06  | 0.06 | 0.1  | 0.1  | 0.8   | 85%  | 15%  |
| COFFEE | REC   | 0.13  | 0    | 0    | 0    | 0.13  | 0%   | 100% |
| D101   | GARB  | 9.23  | 0.12 | 0.5  | 0.37 | 8.24  | 93%  | 7%   |
| 234    | GARB  | 0.16  | 0    | 0.05 | 0    | 0.11  | 69%  | 31%  |
| 236    | REC   | 0.31  | 0.22 | 0.09 | 0    | 0     | 29%  | 71%  |
| 222K   | GARB  | 2.38  | 0    | 0.18 | 1.71 | 0.49  | 92%  | 8%   |
| 222K   | REC   | 0.76  | 0    | 0.26 | 0    | 0.5   | 34%  | 66%  |
| 222K   | REC   | 0.32  | 0    | 0.32 | 0    | 0     | 100% | 0%   |
| ADMIN  | GARB  | 7.51  | 0.65 | 0.94 | 2.58 | 3.34  | 79%  | 21%  |
| ADMIN  | GARB  | 14.58 | 3.75 | 2.1  | 2.41 | 6.32  | 60%  | 40%  |
| ADMIN  | REC   | 3.43  | 3.36 | 0.07 | 0    | 0     | 2%   | 98%  |
| B1     | PAPER | 1.57  | 0    | 0.2  | 0.2  | 1.17  | 0%   | 100% |
| B1     | GARB  | 3.25  | 0.17 | 0.45 | 0.97 | 1.66  | 81%  | 19%  |
| B1     | REC   | 1.99  | 0    | 1.9  | 0.09 | 0     | 95%  | 5%   |
| B1     | GARB  | 0.62  | 0.21 | 0.13 | 0.05 | 0.23  | 45%  | 55%  |
| B2     | REC   | 9.31  | 7.99 | 0.13 | 0.5  | 0.69  | 86%  | 14%  |
| B2     | PAPER | 1.75  | 0    | 0.81 | 0.13 | 0.81  | 46%  | 54%  |
| B2     | GARB  | 3.06  | 0    | 0.5  | 1.56 | 1     | 84%  | 16%  |
| B3     | REC   | 0.44  | 0    | 0.38 | 0.06 | 0     | 86%  | 14%  |
| B3     | GARB  | 0.63  | 0    | 0.19 | 0    | 0.44  | 70%  | 30%  |
| B4     | GARB  | 1.39  | 0.1  | 0.09 | 0.86 | 0.34  | 86%  | 14%  |
| B4     | PAPER | 0.31  | 0    | 0.12 | 0    | 0.19  | 0%   | 100% |
| B4     | REC   | 0.13  | 0    | 0.13 | 0    | 0     | 100% | 0%   |
| C240   | REC   | 0.82  | 0    | 0.82 | 0    | 0     | 100% | 0%   |
| C240   | GARB  | 3.64  | 0    | 0.04 | 0.54 | 3.06  | 99%  | 1%   |
| D219   | GARB  | 1.31  | 0    | 0.1  | 0    | 1.21  | 92%  | 8%   |

|  |               |       |       |      |       |       |      |      |     |
|--|---------------|-------|-------|------|-------|-------|------|------|-----|
|  | D220          | GARB  | 0.54  | 0    | 0.09  | 0.14  | 0.31 | 83%  | 17% |
|  | FOODLA<br>B   | GARB  | 17.3  | 0    | 0.37  | 15.58 | 1.35 | 98%  | 2%  |
|  | FOODLA<br>B   | GARB  | 9.02  | 0.75 | 0.68  | 6.8   | 0.79 | 84%  | 16% |
|  | FOODLA<br>B   | GARB  | 20.47 | 0.12 | 1.15  | 12.44 | 6.76 | 94%  | 6%  |
|  | FOODLA<br>B   | GARB  | 1.07  | 0.33 | 0.01  | 0.55  | 0.19 | 69%  | 31% |
|  | RYANH<br>ALL  | GARB  | 6.6   | 0.14 | 1.24  | 1.63  | 3.59 | 79%  | 21% |
|  | RYANH<br>ALL  | GARB  | 4.93  | 0.5  | 0.18  | 2.13  | 2.12 | 86%  | 14% |
|  | RYANH<br>ALL  | GARB  | 3.25  | 0.25 | 0.25  | 1.25  | 1.5  | 85%  | 15% |
|  | RYANH<br>ALL  | GARB  | 12.06 | 0.31 | 1.81  | 6.38  | 3.56 | 82%  | 18% |
|  | RYANH<br>ALL  | REC   | 12.5  | 0.06 | 2.31  | 4.25  | 5.88 | 18%  | 82% |
|  | RYANH<br>ALL  | REC   | 1.56  | 0    | 1.19  | 0.31  | 0.06 | 76%  | 24% |
|  | RYANH<br>ALL  | REC   | 0.5   | 0    | 0.44  | 0     | 0.06 | 88%  | 12% |
|  | RYANH<br>ALL  | Garb  | 12.75 | 0    | 2.38  | 5.81  | 4.56 | 81%  | 19% |
|  | SODEXO        | GARB  | 2.09  | 0.11 | 0.13  | 0.65  | 1.2  | 89%  | 11% |
|  | SODEXO        | GARB  | 8.09  | 0    | 0.11  | 4.24  | 3.74 | 99%  | 1%  |
|  | SODEXO        | GARB  | 5.42  | 0    | 0.62  | 3.52  | 1.28 | 89%  | 11% |
|  | SODEXO        | GARB  | 8.5   | 0    | 0.22  | 1.2   | 7.08 | 97%  | 3%  |
|  | SODEXO        | GARB  | 5.39  | 0    | 0.014 | 2.81  | 2.56 | 100% | 0%  |
|  | SODEXO        | GARB  | 15.34 | 0.35 | 1.11  | 13.04 | 0.84 | 90%  | 10% |
|  | SODEXO        | GARB  | 11.3  | 0.2  | 0.87  | 5.14  | 5.09 | 91%  | 9%  |
|  | SODEXO        | GARB  | 5.14  | 0    | 1.32  | 2.84  | 0.98 | 74%  | 26% |
|  | SODEXO        | GARB  | 16.08 | 0    | 0.85  | 14.3  | 0.93 | 95%  | 5%  |
|  | SODEXO        | GARB  | 1.51  | 0    | 0.44  | 0.44  | 0.63 | 71%  | 29% |
|  | SODEXO        | GARB  | 26.5  | 0    | 0.23  | 23.42 | 2.85 | 99%  | 1%  |
|  | SODEXO        | GARB  | 24.94 | 0    | 0.75  | 18.25 | 5.94 | 97%  | 3%  |
|  | SODEXO        | GARB  | 17.44 | 0    | 0.31  | 10.81 | 6.32 | 98%  | 2%  |
|  | SODEXO        | GARB  | 5.25  | 0    | 0.38  | 1.56  | 3.31 | 93%  | 7%  |
|  | 382           | GARB  | 0.38  | 0.05 | 0.1   | 0.21  | 0.02 | 61%  | 39% |
|  | C1            | REC   | 0.19  | 0    | 0.19  | 0     | 0    | 100% | 0%  |
|  | C1            | GARB  | 1     | 0    | 0.62  | 0.19  | 0.19 | 38%  | 62% |
|  | C2            | GARB  | 0.88  | 0    | 0.02  | 0.73  | 0.13 | 98%  | 2%  |
|  | C2            | REC   | 0.19  | 0    | 0.13  | 0     | 0.06 | 68%  | 32% |
|  | C2            | PAPER | 0.19  | 0.19 | 0     | 0     | 0    | 100% | 0%  |
|  | C3            | REC   | 0.25  | 0    | 0.12  | 0     | 0.13 | 48%  | 52% |
|  | C3            | GARB  | 1.75  | 0    | 0.19  | 0.31  | 1.25 | 89%  | 11% |
|  | C3            | PAPER | 0.13  | 0    | 0     | 0     | 0.13 | 100% | 0%  |
|  | C5-356        | PAPER | 8.35  | 8.35 | 0     | 0     | 0    | 100% | 0%  |
|  | C5-357        | REC   | 1.26  | 0    | 1.09  | 0     | 0.17 | 87%  | 13% |
|  | D313          | GARB  | 0.6   | 0    | 0.19  | 0     | 0.41 | 68%  | 32% |
|  | D313          | PAPER | 0.21  | 0    | 0     | 0     | 0.21 | 100% | 0%  |
|  | STAFFL<br>OUN | GARB  | 0.94  | 0    | 0     | 0.88  | 0.06 | 100% | 0%  |
|  | STAFFL<br>OUN | REC   | 0.63  | 0    | 0.56  | 0.06  | 0.01 | 88%  | 12% |

Table 6 - Raw and calculated audit data, building names have been shortened. i.e. Shuniah - S, ACE - A, Dorian - D, McIntyre – M



## Appendix C – Pricing for Suggested Recycling and Waste Solutions

| RECYCLING METHOD   | RECYCLING METHOD  |
|--|---|
| PPE Recycling ( <a href="#">Green Circle Salons</a> )      | Medium to large sizes (\$95-\$155)                              |
| Inkjet and Toner Cartridges ( <a href="#">Terracycle</a> ) | One size - \$150  |
| Pen and Marker Recycling ( <a href="#">Terracycle</a> )    | Varies based on size (\$198-\$509)                              |
| Battery Recycling ( <a href="#">RMC</a> )                  | Free of Charge  |
| Textbook For Change  | Price unknown   |
| Reusable Containers Program (O2GO)                         | Price varies based on # of containers and students              |
| Food Waste Composter (The Rocket)                          | Based on size and membership<br><a href="#">Case study link</a> |

## Appendix D – Photos and Recommendations

| EXTERNAL BINS | INTERNAL BINS |
|---------------|---------------|
|---------------|---------------|



FIGURE 3 - EXTERNAL BINS FOR CARDBOARD, PAPER AND WASTE.

### RECOMMENDATIONS

Place clear signage on the actual bin, on all sides of it. This specific bin in the photo is strictly for cardboard and paper only and should have clear signage with what is accepted and not accepted into the stream. There should be specific signage on what isn't permitted, for example liquids, food, or garbage of any type. Staff members from across Confederation College utilize these bins, so there should be clear instructions for each one of them across campus.



FIGURE 4 - 3 SORTER BINS UTILIZED ACROSS CAMPUS IN BUSY HALLWAYS.

### RECOMMENDATIONS

Signage is clear and concise across the campus, however if Confederation College intends on implementing organics and composters on campus, we recommend placing these bins near low traffic areas away from cafes and placing bins with organics sections in higher traffic areas on campus.

## EXTERNAL BINS



FIGURE 5 - A COMPACTOR AT THE SHUNIAH BUILDING, WHICH HAS NO SIGNAGE OR CLEAR IDENTIFIERS ON WHAT IS ACCEPTED.

## INTERNAL BINS



FIGURE 6 - WATER RE-FILL STATION, ACCESSIBLE ON SOME AREAS ACROSS CAMPUS.

## RECOMMENDATIONS

Placing an emphasis on how using these refill stations with reusable water bottles has on the planet, can and will encourage students to use them more often. As well as explaining the monetary aspect of saving money per bottle.

## ALTERNATIVE RECYCLING DEPOT

Creating a recycling depot with battery recycling, e-waste, and pens in 2 or more stations across campus, allowing students and staff to recycle as many things as possible throughout the year. Providing PPE recycling options to the clinics on campus, and faculties that use PPE during practicals or labs.



FIGURE 7 - SINGLE STREAM BIN BY THE BAABAASHI GIBICHII CAFE IN SHUNI-AH BUILDING, WHICH IS SITTING RIGHT ACROSS FROM A 3-SORTER BIN.

#### RECOMMENDATIONS

The menus at all cafes should include that there's a discount for using a reusable mug when purchasing lattes or coffee.



FIGURE 8 - WALK THROUGH AT MCINTYRE BUILDING SHOWED US THESE BINS, WHICH WERE USED DURING AN EVENT, BUT HAVEN'T BEEN TAKEN BACK TO STORAGE YET.

#### RECOMMENDATIONS

Completing a walk through of the college, noting down where single stream bins are and eliminating them from hallways. This will ensure that every student must use 3 sorter bins and will increase the chances of learning what each stream is used for. In terms of events and large groups of people attending campus, provide sorter bins with signage, rather than sign-less bins that could become a catch-all for waste.

## EXTERNAL BINS

## INTERNAL BINS



FIGURE 9 - BOTH PHOTOS DEPICTED ARE FROM BACK OF HOUSE KITCHENS ONLY UTILIZING GARBAGE BINS FOR WASTE REMOVAL.

### RECOMMENDATIONS

Placing 3 sorters (landfill, recycling and organics) in all of the kitchens, should be useful for chefs and cooks to place their waste into. Currently there are mostly garbage bins laid out everywhere, taking plastic waste, paper towels, food waste, and everything else.



FIGURE 10 - FOOD LABS AND KITCHENS BIN FOR COLLECTING GARBAGE THROUGHOUT THE DAY.

### RECOMMENDATIONS

Once the correct bins are placed inside the kitchens, there should be 2-3 rolling bins outside taking landfill, recycling, and organics out to the compactors and bins. Signage should be utilized here as well above the selected bins.

## EXTERNAL BINS

## INTERNAL BINS



FIGURE 11 - BATHROOMS ACROSS THE CAMPUS HAVE EITHER BOTH HAND DRIERS AND PAPER TOWEL DISPENSERS, OR JUST PAPER DISPENSERS.

### RECOMMENDATIONS

All bathrooms should only utilize hand driers, rather than paper towels, our recommendation is to remove paper towel dispensers, and install hand driers in all bathrooms without them. Remove all garbage bins from bathrooms as well, other than small bins inside the stalls.



FIGURE 12 - THE LIBRARY IN SHUNIAH BUILDING HAD MANY SINGLE STREAM BINS ACROSS THE FLOORS.

### RECOMMENDATIONS

Remove all single stream bins from the library, only provide sorter bins near the entrance and exits of the library. Providing single stream bins, gives students a freebie to throw everything and anything into bins.



FIGURE 13 - SHUNIAH BUILDING CAFETERIA UTILIZING SINGLE STREAM BINS ACROSS THE HALL.

### RECOMMENDATIONS

Remove all single stream bins from cafeteria, create 2 centralized recycling depots in the cafeteria, with all streams included paper, landfill, containers, and organics. Create it as a step-by-step program, allowing students to recycle and sort as much as possible till they must throw the least bit into the landfill.

## Appendix E – Supporting Documentation

### Environmental Protection Act

### Loi sur la protection de l'environnement

### **ONTARIO REGULATION 102/94**

### WASTE AUDITS AND WASTE REDUCTION WORK PLANS

Consolidation Period: From March 3, 1994 to the e-Laws currency date.

No amendments.

**This Regulation is made in English only.**

#### PART I

#### GENERAL

1. In this Regulation,

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

“waste audit” means a study relating to waste;

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

2. A waste audit required under this Regulation shall address,
- the amount, nature and composition of the waste;
  - the manner by which the waste gets produced, including management decisions and policies that relate to the production of waste; and
  - the way in which the waste is managed. O. Reg. 102/94, s. 2.

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

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

- Reduction is the first objective.
- If reduction is not possible, then reuse is the next objective.
- If reduction and reuse are not possible, then recycling is the final objective. O. Reg. 102/94, s. 3.
- A person who is required under this Regulation to prepare a report of a waste audit or a waste reduction work plan shall prepare it on a form provided by the Ministry or in the same format as such a form. O. Reg. 102/94, s. 4.

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5. (1) A person who is required under this Regulation to prepare a report of a waste audit or a waste reduction work plan shall retain a copy of the report or plan for at least five years after it was prepared.  
  
(2) A person who is required under this Regulation to prepare a report of a waste audit or a waste reduction work plan shall submit to the Director, on request, the required report or plan, within seven days of the Director requesting them. O. Reg. 102/94, s. 5.
6. (1) A person who becomes subject to an obligation under this Regulation to prepare a report of a waste audit or a waste reduction work plan shall do so within six months of becoming subject to the obligation.  
  
(2) This section does not apply with respect to updated reports or plans.  
  
(3) This section does not apply with respect to obligations of a builder under Part IV or a demolisher under Part V. O. Reg. 102/94, s. 6.
7. (1) A new owner or operator to whom this Regulation applies is not required to conduct a new waste audit or prepare a new waste reduction work plan if an audit or work plan was conducted or prepared by a previous owner or operator and the new owner or operator updates the audit and work plan as required under this Regulation.  
  
(2) This section does not apply with respect to a builder under Part IV or a demolisher under Part V. O. Reg. 102/94, s. 7.
8. (1) A person who has an obligation to conduct a waste audit and prepare a report under Part II, III, VI, VII, VIII, IX, X or XI in respect of more than one retail shopping establishment, retail shopping complex, building, restaurant, hotel or motel, hospital, location or campus of an educational institution, or site of a manufacturing establishment, may conduct a single
1. The waste reduction work plan shall include measures for communicating the plan to the operator's employees who work at the hospital and, as a minimum, those measures shall require,
  - a. that the plan or a summary be posted in places where most employees will see it; and
  - b. if a summary is posted, that any employee who requests to look at the plan be allowed to do so. O. Reg. 102/94, s. 50.

## **PART X**

### **EDUCATIONAL INSTITUTIONS**

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

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

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

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

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

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

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

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

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

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

**Environmental Protection Act**

**Loi sur la protection de l'environnement**

**ONTARIO REGULATION 103/94**

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

Consolidation Period: From March 3, 1994 to the e-Laws currency date.

No amendments.

**This Regulation is made in English only.**

**SOURCE SEPARATION PROGRAMS**

1. In this Regulation,

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

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

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

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

1. The categories of waste set out in the part of the Schedule applicable to the person required to implement the source separation program.

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2. The categories of waste set out in Schedule 1, 2 or 3 of Ontario Regulation 101/94 that the source separation program accepts.

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

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

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

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

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

#### **EDUCATIONAL INSTITUTIONS**

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

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

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

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

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

#### **TRANSITION**

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

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SCHEDULE

WASTES TO BE PROVIDED FOR IN SOURCE SEPARATION PROGRAMS

**PART X**

**EDUCATIONAL INSTITUTIONS**

(referred to in section 14)

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

**Appendix F – Waste Audit Summary**

**Ministry of the Environment Waste Form**

**Report of a Waste Audit**

**Industrial, Commercial and Institutional Establishments**

**As required by O. Reg. 102/94**

- *This report must be prepared for 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**

|  |                          |                                       |  |
|--|--------------------------|---------------------------------------|--|
| <b>Name of Owner and/or Operator of Entity and Company Name:</b><br>Confederation College                |                          |                                       |  |
| <b>Name of Contact Person:</b><br>Robin Gould  |                          | <b>Telephone #:</b><br>807-4756687    | <b>Email Address:</b><br>Robin.gould@confederatio<br>ncollege.ca |
| <b>Street Address of Entities:</b><br>1450 Nakina Drive<br>PO Boc 398<br>Thunder Bay, Ontario<br>P7C 4W1 |                          |                                       |  |
| <b>Municipality:</b><br>Thunder Bay, Ontario   |                          |                                       |  |
| <b>Type of Entity<br/>(check one)</b>  |                          |                                       |  |
| Retail Shopping Establishments   | <input type="checkbox"/> | Hotels and Motels                     | <input type="checkbox"/>   |
| Retail Shopping Complexes  | <input type="checkbox"/> | Hospitals                             | <input type="checkbox"/>   |
| Office Buildings   | <input type="checkbox"/> | Educational Institutions              | <input checked="" type="checkbox"/>                              |
| Restaurants  | <input type="checkbox"/> | Large Manufacturing<br>Establishments | <input type="checkbox"/>   |

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## II. Description of Entity

### Provide a brief overview of the entity(ies):

Confederation College is an educational institution with approximately 2314 FTE students which satisfies Part X of Ontario Regulation 102/94 & 103/94. O.Reg. 102/94 requires operators of educational institutions with more than 350 full- or part-time students enrolled during the calendar year to conduct an annual waste audit and implement a waste reduction work plan. O.Reg. 103/94 requires that source separation programs be implemented and maintained for fine papers, newsprint, aluminum cans, steel cans, glass beverage containers and corrugated cardboard. Confederation College undertook this audit in order to assist them in reducing wastes generated on campus and/or disposed to landfill, while being in compliance with the required Regulations.

## III. How Waste Is Produced and Decisions Affecting the Production of Waste

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

| CATEGORIES OF WASTE                        | HOW IS THE WASTE PRODUCED AND WHAT MANAGEMENT DECISIONS/POLICIES AFFECT ITS PRODUCTION |
|--|--|
| PET (#1) Plastic food and beverage bottles | Brought onto campus or generated on campus by staff/students                           |
| HDPE (#2) containers                       | Brought onto campus or generated on campus by staff/students                           |
| Polypropylene (#5) Containers              | Brought onto campus or generated on campus by staff/students                           |
| Polystyrene (#6) Containers                | Brought onto campus or generated on campus by staff/students                           |
| Glass food and beverage bottles/jars       | Brought onto campus or generated on campus by staff/students                           |
| Aluminum food and beverage cans            | Brought onto campus or generated on campus by staff/students                           |
| Steel food and beverage cans               | Brought onto campus or generated on campus by staff/students                           |
| Gable top containers                       | Brought onto campus or generated on campus by staff/students                           |
| Aseptic containers                         | Brought onto campus or generated on campus by staff/students                           |



|   |  |
|---|--|
| Fine paper                              | Brought onto campus or generated on campus by staff/students |
| Newsprint                               | Brought onto campus or generated on campus by staff/students |
| Boxboard shoe boxes, cereal boxes, etc. | Brought onto campus or generated on campus by staff/students |
| Glossy magazines, catalogues, flyers    | Brought onto campus or generated on campus by staff/students |
| Cardboard                               | Brought onto campus or generated on campus by staff/students |
| Paper towels                            | Generated by staff/students on campus                        |
| Coffee cups                             | Brought onto campus or generated on campus by staff/students |
| Organics/food waste                     | Brought onto campus or generated on campus by staff/students |
| LDPE (#4) plastic film                  | Brought onto campus or generated on campus by staff/students |
| Styrofoam                               | Brought onto campus or generated on campus by staff/students |
| Plastics Strapping                      | Brought onto campus or generated on campus by staff/students |
| Scrap Woods/Pallets                     | Generated by operations on campus                            |
| Scrap Metals                            | Generated by operations on campus                            |
| Electronics                             | Generated by staff/students on campus                        |
| Bulbs & Ballasts                        | Generated by staff/students on campus                        |
| Batteries                               | Generated by staff/students on campus                        |
| Printer Toners                          | Generated by operations on campus                            |
| Oil & Grease                            | Generated by operations on campus                            |
| Yard Wastes                             | Generated by operations on campus                            |
| Used Furniture Donations                | Generated by operations on campus                            |
| Air filters                             | Generated by operations on campus                            |
| Construction & Demolition               | Generated by operations on campus                            |
| Carpet                                  | Generated by operations on campus                            |
| Other/Non-recyclable                    | Generated by staff/students on campus                        |

#### IV. Management of Waste

| For each category of waste that is produced at the entity(ies), explain how the waste will be produced and how management decisions and policies will affect the production of waste |                                     |  |
|--|-------------------------------------|--|
| CATEGORY   | WASTE TO BE DISPOSED                | REUSED OR RECYCLED WASTE                         |
| PET (#1) Plastic food and beverage bottles   |                                     | Staff/students may place in recycling containers |
| HDPE (#2) containers   |                                     | Staff/students may place in recycling containers |
| Polypropylene (#5) Containers  |                                     | Staff/students may place in recycling containers |
| Polystyrene (#6) Containers  |                                     | Staff/students may place in recycling containers |
| Glass food and beverage bottles/jars   |                                     | Staff/students may place in recycling containers |
| Aluminum food and beverage cans  |                                     | Staff/students may place in recycling containers |
| Steel food and beverage cans   |                                     | Staff/students may place in recycling containers |
| Gable top containers   |                                     | Staff/students may place in recycling containers |
| Aseptic containers   |                                     | Staff/students may place in recycling containers |
| Fine paper   |                                     | Staff/students may place in recycling containers |
| Newsprint  |                                     | Staff/students may place in recycling containers |
| Boxboard shoe boxes, cereal boxes, etc.  |                                     | Staff/students may place in recycling containers |
| Glossy magazines, catalogues, flyers   |                                     | Staff/students may place in recycling containers |
| Cardboard  |                                     | Staff/students may place in recycling containers |
| Paper towels   | Staff/students may place in garbage |  |
| Coffee cups  | Staff/students may place in garbage |  |
| Organics/food waste  | Staff/students may place in garbage |  |
| LDPE (#4) plastic film   |                                     | Staff/students may place in recycling containers |
| Styrofoam  | Staff/students may place in garbage | No recycling program implemented                 |
| Plastics Strapping   | Staff/students may place in garbage | No recycling program implemented                 |

|                           |                                     |   |
|---------------------------|-------------------------------------|---|
| Scrap Woods/Pallets       | Staff/students may place in garbage | No recycling program implemented        |
| Scrap Metals              | Staff/students may place in garbage | Staff may place in recycling containers |
| Electronics               | Staff/students may place in garbage | Recycling program implemented           |
| Bulbs & Ballasts          | Staff/students may place in garbage | Recycling program implemented           |
| Batteries                 | Staff/students may place in garbage | No recycling program implemented        |
| Printer Toners            | Staff/students may place in garbage | No recycling program implemented        |
| Oil & Grease              | Staff may place in garbage          | Unsure of any program implemented.      |
| Yard Wastes               | Staff may place in garbage          | Unsure of any program implemented.      |
| Used Furniture Donations  | Staff may place in garbage          | Unsure of any program implemented.      |
| Air filters               | Staff may place in garbage          | Unsure of any program implemented.      |
| Construction & Demolition | Staff may place in garbage          | Unsure of any program implemented.      |
| Carpet                    | Staff may place in garbage          | Unsure of any program implemented.      |
| Other/Non-recyclable      | Staff/students may place in garbage | Not applicable                          |

## V. Extent to Which Materials or Products Used or Sold By the Entity Consist of Recycled or Reused Materials or Products

Please answer the following questions:

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

**I hereby certify that the information provided in this Report of Waste Audit is complete and correct**

**Signature of authorized official:**

**Title:**

**Date:**

## Appendix G – Waste Reduction Work Plan

### Ministry of the Environment Waste Form

#### Report of a Waste Reduction Work Plan

#### Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

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

#### I. General Information

|  |                          |                                     |  |
|--|--------------------------|-------------------------------------|--|
| <b>Name of Owner and/or Operator of Entity and Company Name:</b><br>Confederation College                |                          |                                     |  |
| <b>Name of Contact Person:</b><br>Robin Gould  |                          | <b>Telephone #:</b><br>807-475-6687 | <b>Email Address:</b><br>Robin.Gould@confederationcollege.ca |
| <b>Street Address of Entities:</b><br>1450 Nakina Drive<br>PO Boc 398<br>Thunder Bay, Ontario<br>P7C 4W1 |                          |                                     |  |
| <b>Municipality:</b><br>Thunder Bay, Ontario   |                          |                                     |  |
| <b>Type of Entity<br/>(check one)</b>  |                          |                                     |  |
| Retail Shopping Establishments   | <input type="checkbox"/> | Hotels and Motels                   | <input type="checkbox"/>                                     |
| Retail Shopping Complexes  | <input type="checkbox"/> | Hospitals                           | <input type="checkbox"/>                                     |
| Office Buildings   | <input type="checkbox"/> | Educational Institutions            | <input checked="" type="checkbox"/>                          |
| Restaurants  | <input type="checkbox"/> | Large Manufacturing Establishments  | <input type="checkbox"/>                                     |

## II. Description of the Entity

### Provide a brief overview of the entity(ies):

Confederation College is an educational institution with approximately 2314 FTE students which satisfies Part X of Ontario Regulation 102/94 & 103/94. O.Reg. 102/94 requires operators of educational institutions with more than 350 full- or part-time students enrolled during the calendar year to conduct an annual waste audit and implement a waste reduction work plan. O.Reg. 103/94 requires that source separation programs be implemented and maintained for fine papers, newsprint, aluminum cans, steel cans, glass beverage containers and corrugated cardboard. Confederation College undertook this audit in order to assist them in reducing wastes generated on campus and/or disposed to landfill, while being in compliance with the required Regulations.

## III. Plans to Reduce, Reuse and Recycle Waste

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.

| WASTE CATEGORY<br>(as stated in Part V of your<br>“Report of a Waste Audit”)                              | SOURCE SEPARATION AND 3RS PROGRAM   |
|---|---|
| Mixed Containers (PET, HDPE, LDPE, PP, PS, Aluminum, Steel, Glass, Aseptic)                               | <p>Comingled 3Rs Program</p> <p>Reduce: Staff/students will be encouraged to bring reusable containers food/beverage containers for lunch and breaks. Confederation College will encourage suppliers to reduce the amount of polystyrene used to transport supplies. Confederation College will encourage suppliers to reduce the amount of plastic film and wrapping materials used to transport supplies.</p> <p>Reuse: Staff/Students will be encouraged to reuse plastic crates and totes wherever possible. Recycle: Staff/Students will be provided with recycling bins in high waste generating areas and food service areas for mixed containers/plastics. Staff/Students will be encouraged to place mixed containers/plastics in appropriate recycling bins with appropriate signage affixed to the receptacle. Receptacles will be emptied on a regular basis before they become full into large roll away bins for collection as required.</p>  |
| Mixed Papers (Fine paper, newsprint, boxboard, magazines, molded papers, kraft, catalogues, flyers, etc.) | <p>“Mixed Paper 3Rs Program” Reduce: Staff/Students will be encouraged to print on both sides of each piece of paper as well as not print when it is unnecessary. Staff/Students will be encouraged to take reading materials home with them after they are finished with them. Staff and students will be sent, via email, news sources that are available online opposed to purchasing paper copies of news.</p> <p>Reuse: Discarded paper with print only on one side will be used for notepads/scrap paper. Staff/Students will be encouraged to leave newspapers they are finished reading in common areas for others to read. Recycle: Staff/Students will be provided with instructions via email. Receptacles will be provided in each office, classroom and high waste generating areas. Staff/Students will be encouraged to place newsprint, fine paper, boxboard, magazines, molded papers, etc. in appropriate recycling receptacles. Staff/Students will empty receptacles into centralized containers. Custodial Staff/Students will empty centralized containers into bulk container in designated area for collection as required.</p> |

|   |   |
|---|---|
| Confidential papers                             | "Confidential Paper 3Rs Program" Reduce: None. Reuse: None. Recycle: Staff/Students will be reminded of the existing program. Receptacles will be provided in each designated office area as required. Staff/Students will be encouraged to place all confidential paper in the designated consoles. Contactor will empty consoles appropriately for shredding and recycling as required. |
| Cardboard                                       | "Cardboard 3Rs Program" Reduce: Suppliers will be encouraged to make use of reusable containers for the shipment of supplies to Confederation College. Re-use: Cardboard boxes will be reused for shipments when appropriate. Recycle: Staff/Students will be reminded of the existing program. Cleaners will be trained on where to dispose of waste correctly.                          |
| Paper towels                                    | No 3 Rs Program.  |
| Organics  | No 3 Rs Program.  |
| Coffee cups, LDPE (#4) films, plastic strapping | "Comingled 3Rs Program" – Refer above for description   |
| Styrofoam                                       | No 3Rs programs   |
| Wood pallets/scrap woods                        | No 3Rs programs   |
| Scrap metals                                    | "Scrap Metals 3Rs Program" Reduce: None. Reuse: None. Recycle: Staff will be reminded of the existing program.  |
| Electronic waste                                | "Electronic Wastes 3Rs Program" Reduce: None. Reuse: Staff/students will be encouraged to reuse/donate electronic wastes if possible. Recycle: Staff/Students will be reminded of the existing program, continue collecting for proper recycling of waste materials.  |
| Bulbs and ballasts                              | "Bulbs & Ballasts 3Rs Program" Reduce: None. Reuse: None. Recycle: Staff/Students will be reminded of the existing program.   |
| Batteries                                       | No 3 Rs Program.  |
| Printer toners                                  | No 3 Rs Program.  |
| Oil & grease                                    | No 3 Rs Program.  |
| Yard waste                                      | No 3 Rs Program.  |
| Used furniture                                  | No 3 Rs Program.  |
| Air filter                                      | No 3 Rs Program.  |
| Construction & Demolition                       | No 3Rs programs   |
| Carpet  | No 3Rs programs   |

#### IV. Responsibility for Implementing the Waste Reduction Work Plan

| Identify who is responsible for implementing the Waste Reduction Work plan at your entity(ies). If more than one person is responsible for implementation, identify each person who is responsible and indicate the part of the Waste Reduction Work Plan each person is responsible for implementing. |                |              |
|--|----------------|--------------|
| COMPANY/CONTACT NAME   | RESPONSIBILITY | PHONE NUMBER |
|  |                |              |
|  |                |              |
|  |                |              |
|  |                |              |

#### V. Timetable for Implementing Waste Reduction Work Plan

| Provide a timetable indicating when each Source Separation and 3Rs program of the Waste Reduction Work Plan will be implemented. |  |
|--|--|
| SOURCE SEPARATION AND 3RS PROGRAM  | SCHEDULE FOR COMPLETION  |
| Mixed Containers   | 3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered |
| Mixed Papers   | 3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered |
| Confidential Papers  | 3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered |
| Cardboard  | 3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered |
| Organics   | Not currently in place, but could take form in next 2 years.   |
| Scrap Wood/Wood Pallets  | Not currently in place.  |
| Scrap Metals   | 3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered |
| Electronic Waste   | 3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered |



|  |  |
|--|--|
| Bulbs & Ballasts   | 3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered |
| Batteries  | Not currently in place.  |
| Printer Toners   | Not currently in place.  |
| Oil and Grease   | Not currently in place.  |
| Yard Wastes  | Not currently in place.  |
| Used Furniture   | Not currently in place.  |
| Construction & Demolition                                      | Not currently in place.  |
| Carpet   | Not currently in place.  |
| Reusable Containers  | Not currently in place but could take form in the next 2 years.  |
| PPE Recycling  | Not currently in place but could take form in the next year.   |
| Pen Recycling  | Not currently in place but could take form in the next year.   |
| Textbook for Change  | Not currently in place but could take form in the next year.   |
| Office Bin Reduction Project                                   | Not currently in place but could take form in the next year.   |
| Program Specific Sorting Guides                                | Not currently in place, project should take form in the next year.   |
| Custodial Staff Waste Training                                 | Currently in place and is presented annually as staff training.  |
| Waste Training for Confederation College Staff (Support Staff) | Not currently in place but could take form in the next year.   |
| Waste Training for Faculty Members                             | Not currently in place but could take form in the next 2 years.  |
| Residence Move-Out   | Not currently in place but could pilot in the next year.   |

VI. Communication to Staff, Customers, Guests and Visitors

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

|   |        |       |
|---|--------|-------|
| I HEREBY CERTIFY THAT THE INFORMATION PROVIDED IN THIS WASTE REDUCTION WORK PLAN IS COMPLETE AND CORRECT. |        |       |
| Signature of authorized official:   | Title: | Date: |
|   |        |       |



A large yellow triangle is positioned on the left side of the image, pointing towards the bottom right corner.

***BEST***

For a cleaner world