RIVERSIDE SECONDARY SCHOOL

2023 Solid Non-Hazardous Waste Audit Report

Prepared For:

GREATER ESSEX COUNTY DISTRICT SCHOOL BOARD
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October 2023

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Executive Summary

The Greater Essex County District School Board retained the services of Waste Reduction Group Inc. ("WRG") to conduct solid non-hazardous waste audits (in compliance with the Environmental Protection Act., O. Reg. 102/94: Waste Audits and Waste Reduction Work Plans and O. Reg. 103/92: Industrial, Commercial and Institutional Source Separation Program) for ten representative schools in October 2023. The following report details the waste audit results at Riverside Secondary School (8465 Jerome Street, Windsor, Ontario).

The objective of the waste audit was to analyze samples from the Garbage, Blue Box and Red Box waste streams, collected from each functional area, that illustrate the point of origin of each stream. This report includes an in-depth analysis of the waste audit and estimated annual data to develop a greater understanding of student and staff waste disposal practices and to determine additional opportunities for waste reduction and diversion to further improve awareness and performance.

Twenty-four hour samples of garbage, and blue box and red box recyclables were collected for the waste audit, which consisted of 58.05 kg of garbage, 19.06 kg of blue box recycling, and 23.97 kg of red box recycling. The collected samples were audited on October 27, 2023, and the waste materials were differentiated through various tags to indicate each functional area of the school that generated waste, which included classrooms, cafeteria, hallways, staffroom, offices, and washrooms. The following table summarizes the waste stream compositions determined from the audit:

Material	Garbage Stream	Blue Box Stream	Red Box Stream
Organics	26.46%	14.06%	7.59%
Paper Towels	22.27%	0.94%	10.93%
Non-Recyclable	15.23%	10.44%	4.67%
Red Box	15.11%	3.73%	73.97%
Blue Box	10.90%	69.25%	0.63%
LDPE (#4) Plastic Films	8.42%	1.57%	0.46%
PPE	0.98%	--	--
Cold Beverage Paper Cups	0.60%	--	1.75%
Styrofoam	0.02%	--	--
Contamination Rate	--	**30.75%**	**26.03%**

In the garbage stream, 73.99% consisted of accepted materials, such as LDPE #4 plastic films, cold beverage wax-lined cups, non-recyclable waste, PPE, Styrofoam, organic waste and paper towels. The remaining 26.01% contained divertible materials, such as blue box and red box materials. It was found that a large portion of the garbage stream comprised of organic materials (48.73%), such as food waste and paper towels. No composting program is currently implemented at the school.

The Blue Box waste stream was composed of primarily mixed containers (69.25%). The contamination rate was 30.75%, which included materials such as non-recyclable waste, organics, paper towels, red box recyclables, and LDPE #4 plastic films.

The Red Box waste stream was composed of primarily mixed papers (73.97%). The contamination rate was 26.03%, which included paper towels, organics, non-recyclable waste, blue box recyclables, LDPE #4 plastic films, and cold beverage wax-lined paper cups.

Waste diversion programs have been implemented at the school for blue box (mixed containers) and red box (mixed papers) recycling. The school currently meets the minimum requirements for Educational Institutions as per O. Reg. 102/94. Through discussions with GECDSB, Riverside Secondary School, and waste management and recycling service providers, estimates of the annual amounts of solid non-hazardous waste materials disposed and diverted were determined. The following table summarizes the annual quantities of wastes recycled and disposed in 2023.

Annual Quantities Disposed & Diverted

Metric	Disposed to Landfill	Diverted from Landfill	Total
Total Annual Generation (kg)	11,261.70	8,347.82	19,609.52
Total Generated/Student/Year (kg)	11.00	8.15	19.15
Percentage	57.43%	42.57%	100.00%

Based on the total annual amount of waste generated and materials diverted, the 2023 waste diversion rate at Riverside Secondary School was determined to be approximately 42.57%. The Ministry of the Environment, Conservation & Parks (MECP) provincial objective is 60% waste diversion. GECDSB is committed to attaining a diversion rate above 60% and minimizing the number of materials disposed to landfill.

WRG recommends that Riverside Secondary School increase efforts to provide awareness regarding materials accepted in each stream and implement new waste diversion programs, such as a compost program, to improve the waste diversion rate. This can be accomplished through educational means, such as engaging assemblies, active events, clear signage with pictures/graphics on bins, and the implementation of a student/staff environmental committee. Moreover, it is also recommended that the school increase participation and engagement through promoting a culture of waste diversion through achievable goals and creating community diversion days for specific waste streams. The recommendations outlined in this report can potentially help GECDSB increase its waste diversion rates and decrease contamination within each stream.

A Waste Reduction Work Plan is provided in this report.

1 Introduction

The Greater Essex County District School Board (GECDSB) retained the services of Waste Reduction Group Inc. (WRG) to conduct a solid non-hazardous waste audit and prepare a Waste Reduction Work Plan (WRWP) for each of the ten representative schools in GECDSB. The ten schools are considered representative of the remaining 69 currently operational school and administrative facilities, which would be used as a basis report and WRWP for the remaining schools in the district. This waste audit report focuses on Riverside Secondary School, located at 8465 Jerome Street, Windsor, Ontario.

The waste audit examined samples of waste (Garbage, Blue Box, Red Box) from the entire school over a day (1) period on October 27, 2023. The goal of the waste audit was to gain an understanding of the quantities and composition of solid wastes generated at the facility.

GECDSB conducted a solid non-hazardous waste audit with the intent of complying with the requirements of O. Reg. 102/94 and to further improve upon their present waste reduction, reduce, and recycling programs.

1.1 Purpose and Objectives

The purpose of the waste audit was to comply with Ontario Regulation 102/94 – Waste Audits and Waste Reduction Work Plans Part X, which requires the operator of an educational institution with more than 350 student enrollment per year to conduct an annual waste audit, and prepare and implement a waste reduction work plan. The audit shall ensure compliance with Section 14 of Ontario Regulation 103/94 'Industrial, Commercial and Institutional Source Separation Programs', and Part X 'Educational Institutions' of the Schedule attached to the regulation.

The objectives are as follows:

- Determine the composition of the Garbage, Blue Box, and Red Box streams by point of origin;
- Quantify the estimated 2023 annual waste generation for all waste streams using the 2023 collection data provided by each school;
- Determine the waste diversion and capture rates;
- Identify additional opportunities for waste reduction and diversion; and
- Address any specific concerns identified during the study.

1.2 Site Description

There were ten representative schools included in the October 2023 waste audits (Table 1). Riverside Secondary School is the representative school focused on this report, located at 8465 Jerome Street, Windsor, Ontario. It has an enrollment of 1024 students in 2023, which meets the requirement of O. Reg. 102/94 for educational institutions. Riverside Secondary School has diversion programs for Blue Box and Red Box recycling. The functional areas identified during the audit were classrooms, cafeteria hallways, staffroom, offices, and

washrooms.

The school facility is considered to be applicable to O. Reg. 103/94 – Educational Institutions.

Table 1: List of schools involved in the 2023 October Waste Audit.

School Name	Type	Address	Audit Date
Anderdon Public School	Elementary	3170 Middle Side Road, Amherstburg, ON N9V 2Y9	October 16th, 2023
Princess Elizabeth Public School	Elementary	5399 Raymond Avenue, Windsor, ON N8S 1Z6	October 17th, 2023
Dr. David Suzuki Public School	Elementary	6320 Raymond Avenue, Windsor, ON N8S 1Z9	October 18th, 2023
Forest Glade Public School	Elementary	9485 Esplanade Drive, Windsor, ON N8R 1J5	October 19th, 2023
Forest Glade Primary Learning Centre	Elementary	9367 Esplanade Drive, Windsor, ON N8R 1J3	October 20th, 2023
Amherstburg Public School	Elementary	252 Hamilton Drive, Amherstburg, ON N9V 1E1	October 23rd, 2023
Malden Central Public School	Elementary	5620 County Road 20, Amherstburg, ON N9V 2Y8	October 24th, 2023
North Star High School	Secondary	330 Simcoe Street, Amherstburg, ON N9V 0H2	October 25th, 2023
Eastview Horizon Public School	Elementary	3070 Stillmeadow Road, Windsor, ON N8R 1N3	October 26th, 2023
Riverside Secondary School	Secondary	8465 Jerome Street, Windsor, ON N8S 1W8	October 27th, 2023

1.3 Scope of Work

To satisfy the purpose of the waste audit, the following activities were undertaken by WRG:

- Collected data pertaining to waste composition and collection practices on October 27, 2023.
- Determined the total quantity of waste materials diverted from landfill by Riverside Secondary School through current reduction, reuse, and recycling programs.
- Completed a Waste Audit Report (per MECP protocol) that addressed the amount, nature and composition of the waste, the manner by which the waste was generated, including management decisions and policies that relate to the production of waste, and the way in which the waste is managed at the school; and
- Completed a Waste Reduction Work Plan (per MECP protocol) regarding plans to reduce, reuse and recycle waste on campus. The report set out who will implement each part of the plan, when each part will be implemented and what the expected results shall be (Appendix D).

2 Methodology

Discussions were held with Riverside Secondary School to review existing waste management and recycling programs implemented at the facility. In coordination with the school's facilities staff, one (1) twenty-four hour sample was collected from each of the identified functional areas of the building, including classrooms, cafeteria, hallways, staffroom, offices, and washrooms. Bags of garbage, and blue box and red box recyclables were collected, tagged, and brought to a designated sorting area by the custodial staff. The weights of waste materials from each functional area and stream were recorded. Refer to Appendix A for a copy of the Scale Calibration Certificate.

Waste materials were unloaded, sorted into individual waste categories, weighed, and disposed of in appropriate waste bins by a dedicated waste audit team from Waste Reduction Group. The materials were established prior to the audit (Appendix B), based on O. Reg. 103/94 requirements for source separation educational institutions, including:

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

In addition to these standard categories, other important waste streams, such as other mixed containers (PET, HDPE, polypropylene, polystyrene, aseptic, gable top), other mixed papers (boxboard, craft paper, coffee cups), organic wastes, paper towels (includes all compostable fibres and other one-time use paper products), mixed plastics, Styrofoam, wax-lined paper disposable cups, electronic waste (e-waste), textiles and special waste (i.e., batteries, bulbs and ballasts) were included, depending on what the auditors found in the samples.

3 Current Waste Management and Diversion Systems

As part of the waste audit, WRG staff conducted a tour of each school to document existing waste disposal systems. Interviews with GECSB personnel were also conducted to gain an understanding of the existing waste diversion programs and practices.

All schools within the GECDSB follow the prescribed Windsor-Essex Solid Waste Management Authority's Red and Blue Box programs. Presently, waste materials generated in schools are typically segregated into three categories: Garbage, Red Box, and Blue Box (mixed containers).

Red box materials consist of a range of paper materials, including fine paper, newsprint, boxboard, craft paper, coffee cups, brochures, paper packing materials, envelopes, magazines, and clean food wrap products. These materials are collected throughout the school in dedicated Red Bins, situated in various functional areas of the facility. They are further stored in 95-gallon totes on-site for collection.

Blue box materials consist of a range of recyclable materials, including plastic food and beverage containers (PET #1, HDPE #2, PP #5, PS #6), aluminum, steel and glass food and beverage containers, and gable tops and aseptic containers (juice boxes, tetra packs). These materials are collected throughout the school in dedicated Blue Bins, situated in various functional areas of the school. Afterward, they are further stored in 95-gallon totes on-site for collection.

Garbage materials, such as non-recyclable plastics, Styrofoam, textiles, organic waste, and paper towels, are stored in 95-gallon containers or a 6-yard dumpster, depending on the school, for collection.

The following waste diversion programs exist at Riverside Secondary School:

- Garbage – collected in two (2) 6-yard waste bins, picked up twice a week by the City of Windsor.
- Blue Box and Red Box Recycling – diverted from landfill through collection in fifteen (15) 95-gallon recycling totes every other week. All waste materials are serviced by the City of Windsor.

Waste diversion programs implemented at the school meet the minimum requirements of O. Reg. 103/94 for educational institutions.

Based on information provided by GECDSB, Riverside Secondary School produced approximately 11,261.70 kg of garbage, and 8,347.82 kg of Blue Box and Red Box recycling, which totalled 19,609.52 kg of waste annually in 2023, as shown in Table 2. Table 2 provides annual estimation values for each waste stream at Riverside Secondary School, which has a student enrollment of 1024 students.

Table 2: Riverside Secondary School Estimated Annual Generation

Metric	Disposed to Landfill	Diverted from Landfill	Total
Total Annual Generation (kg)	11,261.70	8,347.82	19,609.52
Total Generated/Student/Year (kg)	11.00	8.15	19.15
Percentage	57.43%	42.57%	100.00%

4 Waste Audit Results

4.1 Waste Quantities & Distribution

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

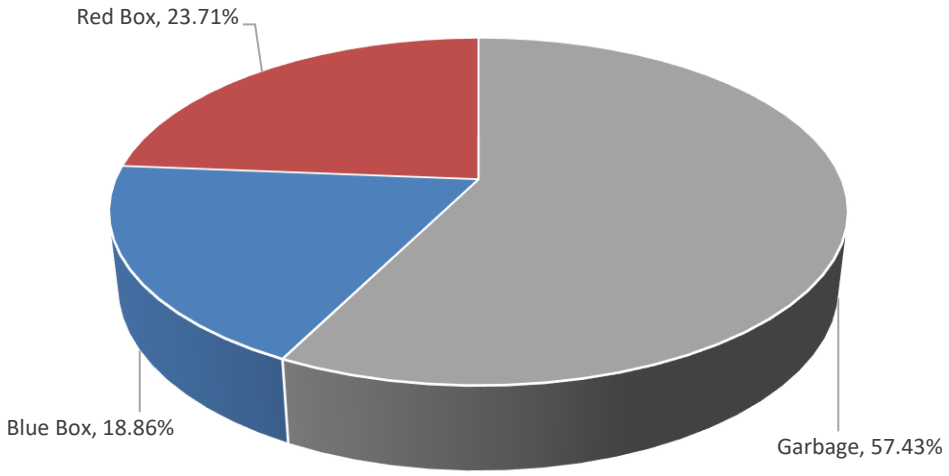

Figure 1: Distribution of the Garbage, Blue Box, and Red Box Waste Streams at Riverside Secondary School

Figure 1 illustrates the waste stream at Riverside Secondary School is dominated by the Garbage stream, representing 57.43% of waste generated (58.05 kg). The Red Box stream consists of 23.71% of waste materials (23.97 kg), while the Blue Box stream has the lowest amount of waste generated at 18.86% (19.06 kg). The total weight of all audit samples was determined to be 101.08 kg.

Table 3 and Figure 2 summarize the quantity and distribution of waste materials collected for the waste audit.

Table 3: Quantity & Distribution of Waste Audit Sample

Functional Area	Waste Stream	Waste Audit Sample	
		Sample Weight (kg)	Distribution (%)
Classrooms	Garbage	12.36	12.23%
	Blue Box	7.14	7.06%
	Red Box	11.15	11.03%
Cafeteria	Garbage	12.87	12.73%
	Blue Box	4.82	4.77%
	Red Box	3.49	3.45%
Hallways	Garbage	8.68	8.59%
	Blue Box	7.10	7.02%
	Red Box	9.33	9.23%
Staffroom	Garbage	8.02	7.93%
Offices	Garbage	11.24	11.12%
Washrooms	Garbage	4.88	4.83%
Total		101.08	100.00%

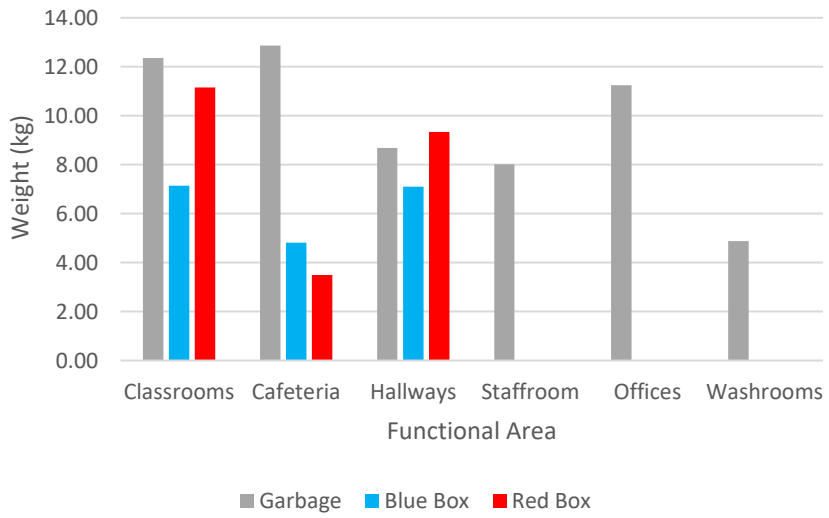

Figure 2: Riverside Secondary School Waste Audit Waste Generation Distribution 2023

As noted above, a review of Riverside Secondary School's activities identified that following functional areas within campus buildings:

- Classrooms
- Cafeteria
- Hallways
- Staffroom
- Offices
- Washrooms

It was discovered that classrooms were the most significant generator of waste in the facility, which accounted for approximately 30.32% of the overall waste sample. The cafeteria was the largest generator of Garbage, with approximately 12.23% of the total audit waste sample. Meanwhile, hallways were the largest generator of Blue Box materials in the school, with approximately 7.02% of the total audit waste sample. Classrooms were the largest generator of Red Box recycling in the school, with approximately 11.03% of the total waste audit sample.

4.2 Garbage Composition

The total weight of garbage collected and sorted for the audit was 58.05 kg. Figure 3 summarizes the overall combined garbage composition determined from the waste audit.

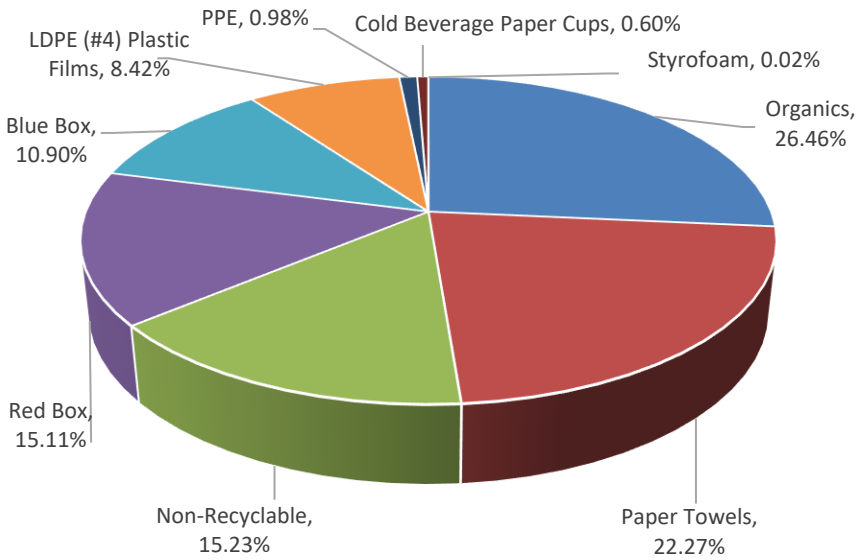

Figure 3: Overall Garbage Composition

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Organic waste (i.e., food waste) was the largest contributor to the Garbage stream, with approximately 26.46%, or 2,979.84 kg being disposed to landfill annually. This was followed by paper towels and non-recyclable waste with 22.27% or 2508.42 kg, and 15.23% or 1,714.96 kg, respectively.

Other material categories were found in small quantities, including red (15.11%) and blue box materials (10.90%), LDPE #4 plastic films (8.42%), PPE (0.98%), cold beverage wax-lined paper cups (0.60%), and Styrofoam (0.02%). Refer to Appendix C for details of waste material items for each category and functional area.

A breakdown of the composition of the Garbage stream by functional area is displayed in Figure 4.

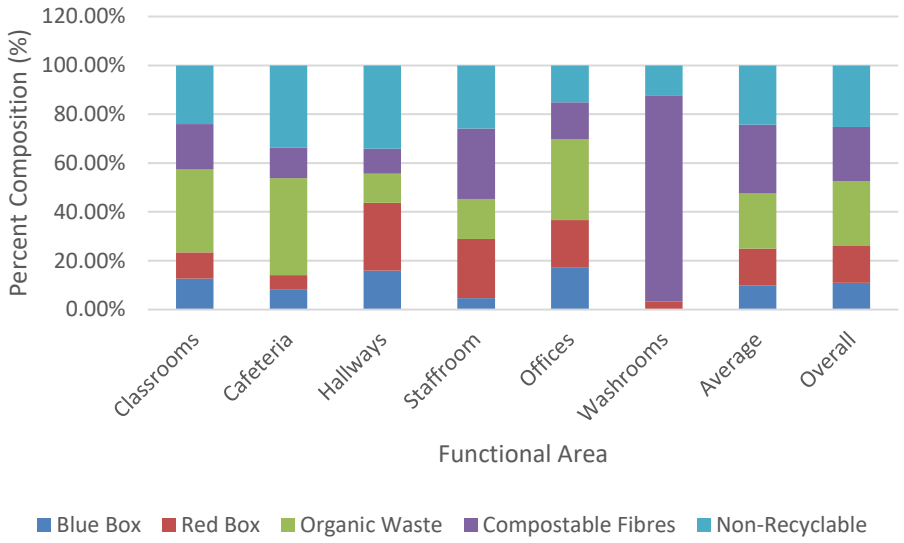

Figure 4: Percentage of the Garbage Stream by Functional Area

Organic waste and compostable fibres were found significantly the largest in all of the functional areas, such as classrooms, cafeteria, hallways, staffrooms, offices, and washrooms, Organic waste represented on average 22.48% in the garbage stream per functional area, while compostable fibres represented an average of 28.27% in the garbage stream per functional area. The largest generator of organic waste was attributed to the cafeteria with 39.70% of the total cafeteria sample. In addition, a large portion of the washrooms consisted of compostable fibres/paper towels at 84.22%. These two organic material categories represented 48.73% of the total garbage stream that would be suitable for an organics diversion program. There are currently no diversion initiatives for organic waste, such as a compost program, at Riverside Secondary School. Therefore, it is recommended that Riverside Secondary School discuss the plausibility of implementing a compost program, or a paper towel reduction program (i.e., more air-dryers) on-site and focus attention of the largest areas of organic waste generation (i.e., cafeteria, washrooms) to increase the amount of organic material being captured and diverted from landfill.

Mixed containers that can be diverted into the Blue Box stream accounted for 10.90% of the overall Garbage stream. It was found the largest in the hallways with 15.90% of the total hallway sample, and on average, 9.90% in the garbage stream per functional area. In addition, the mixed papers that can be diverted into the Red Box stream accounted for 15.11% of the overall Garbage stream. It was found significantly large in most functional areas, including hallways, staffrooms, and offices, with an average of 15.21% in the garbage stream per functional area. The highest amount of mixed papers can be found in the hallways with 27.88% of the total hallway sample. In total, 26.01% of the Garbage stream was composed of divertible materials. Therefore, it is suggested that better collection systems, improved labels, program promotion, and/or student/staff education on proper waste disposal practices may be required to increase the capture rate of these materials from landfills.

The accepted materials in the garbage stream comprised 25.25% (apart from organic waste and paper towels) and were found the largest in hallways with a percentage of 34.10% in the total hallway sample. On average, there was a total of 24.24% of non-recyclable waste in the garbage stream per functional area. The materials in this category included LDPE #4 plastic films, PPE, cold beverage wax-lined paper cups, Styrofoam and other non-recyclable waste (i.e., rigid packaging, chip bags, etc.).

4.2.1 Percentage of Recyclable Materials in the Garbage Stream

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

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

Figure 5 summarizes the quantity of these ‘mandatory recyclable’ materials found in the waste audit garbage samples compared to ‘other recyclable’ materials (i.e., PET #1, boxboard, etc.) and ‘non-recyclable’ materials.

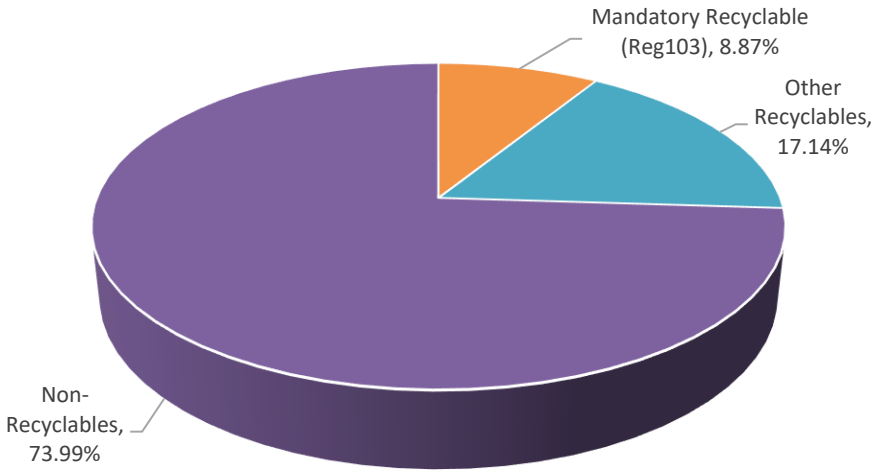

Figure 5: Percentage of Recyclables in the Garbage Stream

The data suggests that Riverside Secondary School has an overall 'mandatory' recyclable content of 8.87% in the combined garbage of the facility. The main 'mandatory' recyclable materials were fine paper and aluminum food and beverage cans. 'Other recyclables' represented 17.14% of the sample and consisted mainly of boxboard, PP #5 and PET #1. 'Non-recyclable' waste represented approximately 73.99% of the overall garbage sample.

4.3 Blue Box Recycling

The total weight of blue box recycling collected and sorted for the audit was 19.06 kg. Figure 6 summarizes the overall combined blue box recycling composition determined from the waste audit.

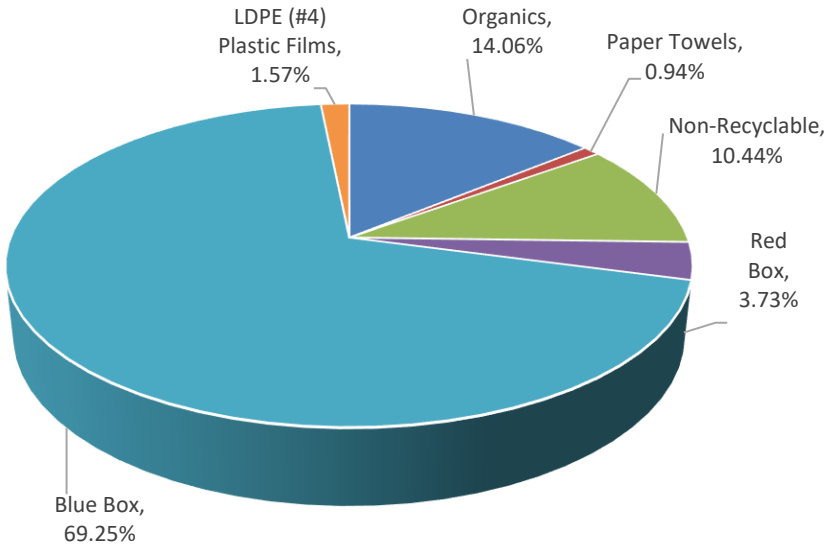

Figure 6: Overall Blue Box Recycling Composition

Summary tables, including composition, weights, and percentages, are found in Appendix C. The Blue Box recycling sample contained 69.25% of blue box materials, 14.06% of organics, and 10.44% of non-recyclable waste. The contamination rate of this waste stream was found to be 30.75%. The contaminants found were non-recyclable waste, organics, red box recyclables, LDPE #4 plastic films, and paper towels.

The Blue Box composition by functional area is illustrated in Figure 7. Based on the composition per functional area, the largest contamination can be found in the classrooms with approximately 9.94% of red box recyclables, 19.05% of organics, 2.52% of compostable fibres, and 3.64% of non-recyclable waste in the total classroom sample of blue box recycling. Each functional area had an average of 70.49% of blue box materials and a contamination of 29.51% in the blue box stream.

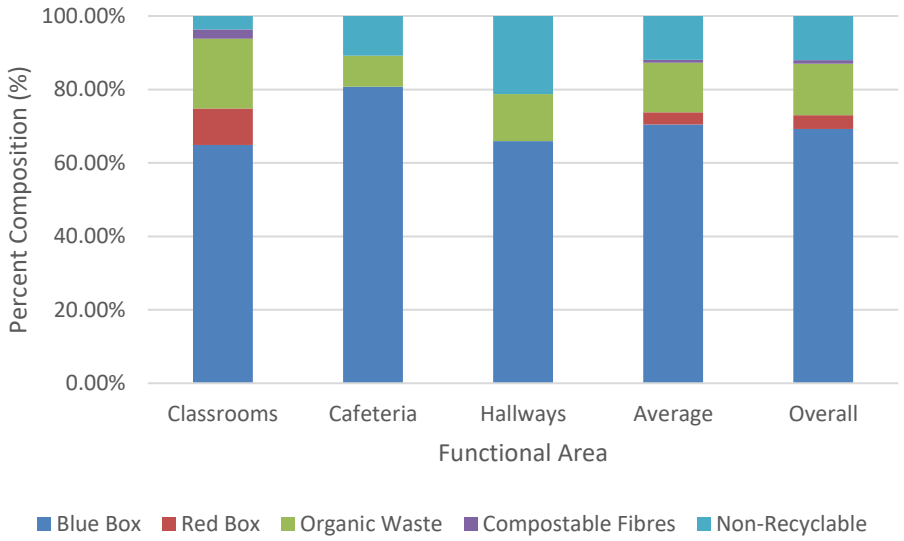

Figure 7: Percentage of the Blue Box Stream by Functional Area

4.4 Red Box Recycling

The total weight of red box recycling collected and sorted for the audit was 23.97 kg. Figure 8 summarizes the overall combined red box recycling composition determined from the waste audit.

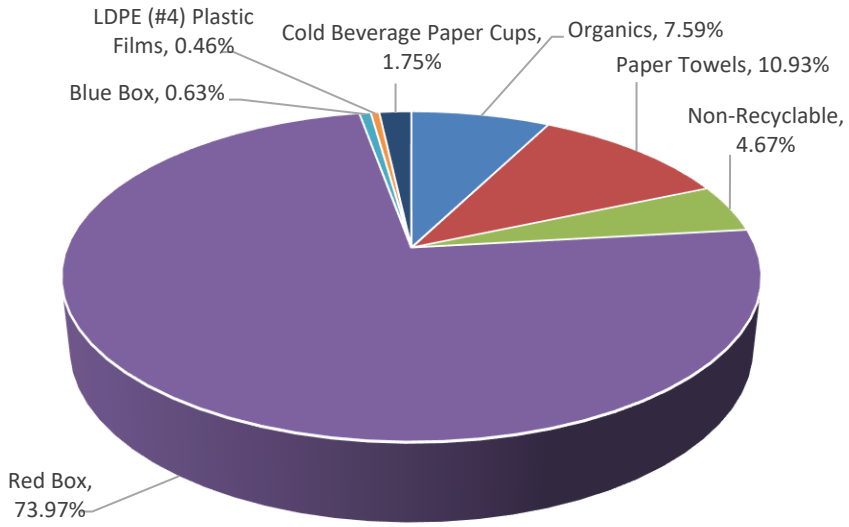

Figure 8: Overall Red Box Recycling Composition

Summary tables, including composition, weights, and percentages, are found in Appendix C. The Red Box recycling sample contained 73.97% of red box materials, 10.93% of paper towels, and 7.59% of organics. The contamination rate of this waste stream was found to be 26.03%. The contaminants found were paper towels, organics, non-recyclable waste, blue box recyclables, LDPE #4 plastic films, and cold beverage wax-lined paper cups.

The Red Box composition by functional area is illustrated in Figure 9. Based on the composition per functional area, the largest contamination can be found in the hallways with approximately 1.81% of blue box materials, 16.18% of organic waste, 7.61% of compostable fibres, and 10.93% of non-recyclable waste in the total hallway sample of red box recycling. Each functional area had an average of 74.08% of red box materials and a contamination of 25.92% in the red box stream.

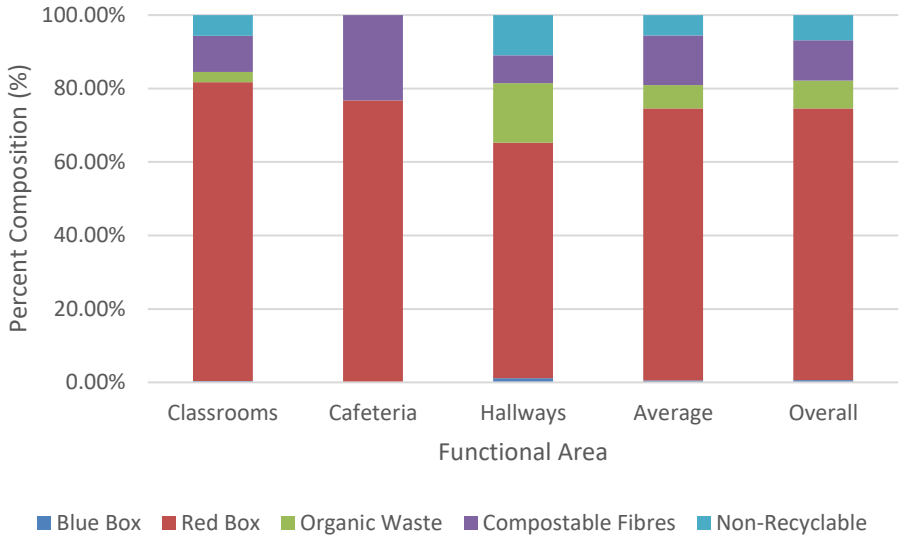

Figure 9: Percentage of the Red Box Stream by Functional Area

5 Performance Metrics

5.1 Waste Diversion Rate

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

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

Based on the total annual amount of waste generated and materials diverted, the 2023 waste diversion rate at Riverside Secondary School was determined to be approximately 42.57%. Table 4 and Figure 10 summarize the quantities of waste reduced, reused, recycled, and disposed. Riverside Secondary School's 2023 waste diversion rate does not exceed the MECP provincial objective of 60% waste diversion.

In addition, if the divertible materials in garbage (5,050.60 kg) were disposed into the appropriate waste streams, the potential waste diversion rate would increase to 68.33%. However, if the contaminants in the blue box and red box streams (1,136.84 kg and 1,210.56 kg, respectively) were properly disposed of into garbage, the potential waste diversion rate would further decrease to 30.60%.

Table 4: Annual Quantities of Materials Diverted and Disposed

Material	Total Waste	
	Kilograms	**Percent**
Disposed to Landfill	11,261.70	57.43%
Materials Diverted	8,347.82	42.57%
Total Waste Generated	19,609.52	100.00%
ACHIEVED WASTE DIVERSION RATE		**42.57%**
Additional Divertible Material in Wastes Disposed to Landfill (kg)		5,050.60
POTENTIAL WASTE DIVERSION RATE		**68.33%**

Note: Annual values taken from the estimation of average weights.

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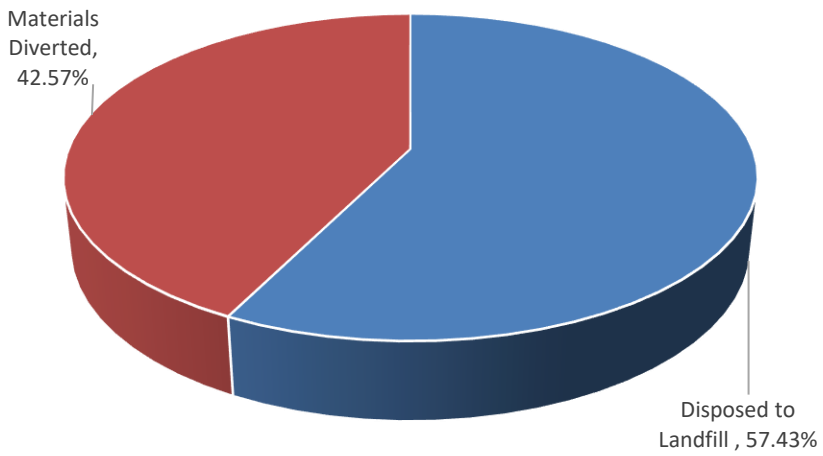

Figure 10: 2023 Waste Audit Summary

5.2 Capture Rate

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

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

Thus, capture rate assists in determining the effectiveness of the recycling programs. Table 5 summarizes the capture rate for the divertible materials at Riverside Secondary School.

Table 5: Capture Rate Summary

Divertible Material	Annual Material Generated (kg)	Annual Diverted Material Captured (kg)	Capture Rate (%)
Blue Box	4,954.76	3,697.64	74.63%
Red Box	6,489.30	4,650.18	71.66%
Overall Facility	11,444.06	8,347.82	72.94%

The capture rates at Riverside Secondary School for all of the materials ranged from approximately 71.66% to 74.63%, which indicated that some of the divertible generated were placed into the appropriate recycling streams; and that the current systems in place were fairly effective. The overall capture rate of all recyclables at Riverside Secondary School is considered to be fairly good at approximately 72.94%.

5.3 Year-over-Year Change in Waste Generation

Waste diversion rate and capture rate do not always demonstrate how effective a site's 3R programs are operating. This is due to the continual change of many important factors involved in waste and recyclable material generation, such as the number of students enrolled. As the number of students change per year, quantities of waste and recyclables change, making it difficult to have a direct comparison of data between the years. It is recommended that GECDSB start tracking 'Year over Year' changes in the amount of waste disposed and/or materials recycled per standard unit. This allows direct comparison of data from year to year, thus assisting the school board in gaining a better understanding of the effectiveness of their waste diversion programs. For GECDSB, the most applicable standard unit is the number of students enrolled, with each individual school level being the optimum focus. This approach will allow GECDSB to effectively predict future requirements and thus initiate the appropriate planning procedures as well as gain valuable insight into the actual effectiveness of their diversion programs at an enhanced granular level.

5.3.1 Year-over-Year Change in Diverted Quantities

The 'Year-over-Year Change in Diverted Quantities' is the indicator of the amount of materials diverted from disposal through reduce, reuse, and/or recycle activities per student compared to previous data. Table 6 summarizes the results for the 2023/2024 school year. A positive year-over-year change indicates waste diversion programs are improving over time. Currently, the waste diverted per student at Riverside Secondary School is 8.15 kg per year.

Table 6: Year-over-Year Change in Waste Diversion

Waste Diversion Metric	Value	Unit
Curriculum Year	2023/2024	Year
Total Materials Diverted	8,347.82	Kilogram (kg)
Enrollment	1024	Students
Annual Diverted Quantity per Student	8.15	Kilogram (kg)
Year-over-Year Change in Diverted Quantity	To be determined	Kilogram (kg)

5.3.2 Year-over-Year Change in Garbage Disposed

The 'Year-over-Year Change in Garbage Disposed' is the indicator of the amount of reduction in waste materials disposed to landfills due to waste diversion activities at the facility. A reduction in the year-over-year value will indicate that the 3Rs programs are continually reducing waste disposed to landfills. Currently, the waste disposed to landfill per student at Riverside Secondary School is 11.00 kg per year.

Table 6: Year-over-Year Change in Garbage Disposed

Waste Diversion Metric	Value	Unit
Curriculum Year	2023/2024	Year
Total Materials Disposed to Landfill	11,261.70	Kilogram (kg)
Enrollment	1024	Students
Annual Disposed Quantity per Student	11.00	Kilogram (kg)
Year-over-Year Change in Disposed Quantity	To be determined	Kilogram (kg)

6 Waste Audit Summary and Waste Reduction Work Plan

Refer to Appendix C for the Waste Audit Summary and Waste Reduction Work Plan. The last page of each set of forms in the appendix needs to be signed by an authorized representative at the facility.

According to O. Reg. 102/94, the Waste Reduction Work Plan (Appendix C), or a summary of the plan must be posted at the facility in a place where staff can review it. The waste audit report and entire Work Plan will be located in the school environmental manual, located in the office.

7 Conclusions

Based on the results of the solid non-hazardous waste audit conducted for Riverside Secondary School, the following conclusions can be made:

- For the curriculum year 2023/2024, the estimated annual landfill disposal rate at Riverside Secondary School is 11,261.70 kg. Approximately 8,347.82 kg of waste materials is diverted through existing reduce, reuse, and recycling activities. This represents a diversion rate of 42.57%. The provincial objective is 60% waste diversion. In addition, if the divertible materials in garbage (5,050.60 kg) were disposed of into the appropriate waste streams, the potential waste diversion rate would increase to 68.33%.

- Riverside Secondary School maintains diversion programs for Red Box (i.e., cardboard and mixed papers) and Blue Box (i.e., mixed containers) recycling. These programs meet the minimum requirements of O. Reg. 103/94 for educational institutions.

- The capture rates for all divertible materials were ranked good at 71.66% to 74.63%. The overall capture rate of all recyclables at Riverside Secondary School was 72.94%.

- Classrooms were the most significant generators of waste at the school, which accounted for approximately 30.32% of the overall waste sample.

- 73.99% of the Garbage stream was determined to be acceptable materials, including organic waste (26.46%), paper towels (22.27%), and non-recyclable waste (25.25%). Divertible materials such as blue box and red box recyclables were also present to be 10.90% and 15.11%, respectively.

- The overall 'mandatory' recyclable content in the Garbage stream was 8.87% of the combined waste of the facility, which consisted mainly of fine paper and aluminum food and beverage cans. 'Other recyclables' represented 17.14%, and 'non-recyclables' consisted of 73.99% of the overall Garbage sample.

- The Blue Box recycling was composed primarily of accepted mixed containers materials, which represented 69.25% of the whole stream. The contamination rate was determined to be 30.75%, where the remaining sample contained 3.73% of red box recyclables, 14.06% of organic waste, 0.94% of compostable fibers, and 12.01% of non-recyclable waste.

- The Red Box recycling was composed primarily of accepted mixed paper materials, which represented 73.97% of the whole stream. The contamination rate was determined to be 26.03%, where the remaining sample contained 0.63% of blue box recyclables, 7.59% of organic waste, 10.93% of paper towels, and 6.88% of non-recyclable waste.

8 Recommendations

Based on the conclusions, the following recommendations are presented below to assist Riverside Secondary School in maximizing its waste diversion potential:

- Organic waste and paper towels contribute to 26.46% and 22.27%, respectively, of the garbage stream and are collected through most functional areas of the school. Currently, there is no organics diversion program implemented at Riverside Secondary School. Based on visual observations during the waste audit, the majority of the disposed organic waste was avoidable food products that could still be well-eaten. To reduce the amount of food waste disposed into landfills, it is recommended to:
    - Educate students/staff about the implications of food waste in their communities and the socioeconomic and environmental responsibilities they can have to mitigate this issue. This includes presentations/assemblies on the matter to encourage interest and engagement, and/or having an outdoor learning element in the curriculum about this topic.
    - Establish a quality and palatable school breakfast/lunch menu that can entice students to finish all of their servings and be less likely to dispose of them. It is also important to consider the serving size and presentation of the food. This includes taking into consideration younger students who are more likely to be picky with their food.

  - Create a compost program for a school or community garden. A compost program can be a viable outdoor learning experience for students. If there is no opportunity to compost the food waste on school grounds, the organic waste could be collected in clearly defined waste bins throughout the school. These waste bins could be dedicated for food donations or compost, and placed in every hallway, classrooms, and common areas in the school. This also includes having specific waste bins labelled "paper towels only" in the washrooms to increase its capture rates from landfills.

- Providing clear signage with pictures can help staff and students to identify opportunities for proper disposal at the source. The signage should be continually updated in all of the garbage and recycling bins to assist in sorting wastes easily and correctly. Signs are a very effective method of increasing participation, reducing contamination, and increasing the capture rate. A copy of the Essex-Windsor Solid Waste Authority's recycling guide is provided in Appendix A.

- Updated receptacles are required throughout the school that clearly segregate the different waste streams. These receptacles should be sized appropriately according to use and color-coordinated to identify the type of waste (i.e., black for garbage, blue for mixed containers, red for mixed papers). It is also recommended to keep every type of waste bin attached or close to each other all over the school and remove all of the solitary garbage bins to increase the capture rates of the divertible materials.

- It is recommended to establish a committee (i.e., student environmental club) that oversees waste reduction and sustainability within the school and to promote a culture of waste diversion. Examples of activities include regular electronic newsletters promoting the school's waste reduction programs, goals, and concerns; placement of informative posters in strategic locations around the school; a suggestion box to address concerns and suggestions on developing/changing diversion programs; and promoting the use of reusable or recyclable materials (i.e., reusable water bottles, scrap paper collection).

- It is important for GECDSB and Riverside Secondary School staff to track year-over-year changes in waste diversion and capture rates, and communicate progress to the staff and students to encourage further participation/engagement. A copy of the school's environmental policy should be posted in all common areas throughout the school. Continuously monitoring and reporting the year-over-year changes for this school annually would act as a basis for policy decisions regarding solid waste management for future projects. Further refinements to programs/processes can be made and adherence to provincial requirements can be achieved.

- According to O. Reg. 102/94, the Waste Reduction Work Plan or a summary of the plan must be posted at the facility in a place where it can be viewed. If a summary of the work plan is posted, the full work plan must be made available for review upon request by any of the school's staff or students. The waste audit report and waste reduction work plan must be retained on file for a minimum of five (5) years.

Appendix A: 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,

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8. (1) A person who has an obligation to conduct a waste audit and prepare a report under Part II, III, VI, VII, VIII, IX, X or XI in respect of more than one retail shopping establishment, retail shopping complex, building, restaurant, hotel or motel, hospital, location or campus of an educational institution, or site of a manufacturing establishment, may conduct a single audit and prepare a single report for two or more of them if it is reasonable to expect that separate audits would have similar findings.

(2) Subsection (1) applies with necessary modifications with respect to updates of waste audits and reports. O. Reg. 102/94, s. 8.

PART X
EDUCATIONAL INSTITUTIONS

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

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

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

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

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

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

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

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

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

(a) that the plan or a summary be posted in places where most employees will see it; and

(b) if a summary is posted, that any employee who requests to look at the plan be allowed to do so. O. Reg. 102/94, s. 55.

Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 103/94

INDUSTRIAL, COMMERCIAL AND INSTITUTIONAL SOURCE SEPARATION PROGRAMS

Consolidation Period: From October 31, 2011 to the e-Laws currency date.

Last amendment: 230/11.

Legislative History: 230/11.

This Regulation is made in English only.

SOURCE SEPARATION PROGRAMS

1. In this Regulation,

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

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

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

(a) the provision of facilities for the collection, handling and storage of source separated wastes described in subsection (2) adequate for the quantities of anticipated wastes;

(b) measures to ensure that the source separated wastes that are collected are removed;

(c) the provision of information to users and potential users of the program,

(i) describing the performance of the program,

(ii) encouraging effective source separation of waste and full use of the program;

(d) reasonable efforts to ensure that full use is made of the program and that the separated waste is reused or recycled.

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

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

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

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

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

(a) the program is restricted to waste generated at a single site;

(b) the program only accepts waste that has been source separated from other kinds of waste and that consists solely of waste from one or more of the categories of waste set out in Schedule 1, 2 or 3 of Ontario Regulation 101/94;

(c) the program includes everything set out in subsection 2 (1).

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

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.

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).

CANADIAN SCALE COMPANY LIMITED

CALIBRATION CERTIFICATE

DATE: Aug 17 2023 **SR #** 51702

CUSTOMER:
Waste Reduction Group
214 Merton St. Unit 101
Toronto ON

REMARKS

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

Western model EWA-150
Capacity - 150 kg
S/N - 202304031

CANADIAN SCALE COMPANY LIMITED is accredited with Measurement Canada

_____
Technician's signature

Measurement Canada Authorized Service Provider – Fournisseur de services autorisé de Mesures Canada

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

EWSWA Recycling Guide

Weight Limit (per box): 20 kg / 44 lb

WHAT TO RECYCLE		HOW TO PREPARE (20 kg / 44 lb weight limit per box)	
NEW! CLAMSHELLS, TRAYS AND CUPS	Clear plastic containers, trays, clamshells, cups, plastic (fruit) baskets, etc.	Rinse and place LOOSE in the Blue Box. Flatten or crush to make more room in the recycle box.	
POLYCOAT BEVERAGE CARTONS & TETRA PAKS discard plastic lids	Milk cartons, juice cartons, creamer cartons, juice boxes, broth cartons, soup cartons, etc.	Rinse and place LOOSE in the Blue Box. Flatten or crush to make more room in the recycle box.	
ALUMINUM FOIL	Aluminum foil (loose sheets), aluminum trays, and aluminum pie plates - ONLY.	Plates & trays flatten. Foil, roll into a ball. Place loose in Blue Box.	
TUBS & LIDS	Margarine tubs, sour cream, yogurt, ice cream, spreads, and dips, etc.	Empty, rinse and place LOOSE in the Blue Box. Remove lid, and recycle lid as well.	
FOOD & BEVERAGE CANS	Pop & juice cans, vegetable cans, fruit cans, etc. All aluminum and steel cans are accepted, including frozen juice cans.	Rinse and place LOOSE in the Blue Box.	
PLASTIC BOTTLES & JUGS discard plastic lids	Pop, water, sport drink bottles, lotion, shampoo, fabric softener & squeeze bottles.	Rinse, and place LOOSE in your Blue Box - discard plastic lids.	
EMPTY PAINT & AEROSOL CANS discard plastic lids *(NO propane tanks)*	**Empty** alkyd & latex paint cans - no plastic cans. Empty Aerosol spray cans: deodorizers, cooking spray, shaving cream, etc.	**All cans MUST be empty.** **Paint Trick:** Let product dry out first or use it up prior to recycling. Paint cans with rubber bottoms are not accepted.	
GLASS BOTTLES & JARS recycle metal lids	Clear and coloured glass bottles and jars - ONLY. (i.e. condiment bottles & jars, dressings, sauces, etc.)	Place LOOSE in Box. No ceramics, window glass, broken glass, etc. Don't fill Blue Box with glass - it's too heavy for collectors.	

CONTAINERS ONLY IN YOUR BLUE BOX! - No paper, no other products.

NOT IN YOUR RECYCLE BOX!


NEVER - Propane Tanks


NO - Pots & Pans


NO - Electronics


NO -Styrofoam™


NO - Plastic Bags

Weight Limit (per box): 20 kg / 44 lb

WHAT TO RECYCLE		HOW TO PREPARE (20 kg / 44 lb weight limit per box)	
NEWSPAPER	Newspapers, junkmail, inserts and flyers.	Place LOOSE in your Red Box. Please remove any plastic inserts / wrap.	
MAGAZINES, CATALOGUES, & TELEPHONE BOOKS	Magazines, catalogues, telephone books, paperback books, & hardcover books.	Remove cover from hardcover books and discard. Place all materials LOOSE in your Red Box.	
MIXED PAPER & JUNKMAIL	Cereal, pasta, cookie, laundry detergent, tissue and shoe boxes. Pet food bags, sugar & flour bags, brown paper bags, toilet / paper towel tubes. Office paper, envelopes, paper egg trays, gift cards, gift wrap, etc.	Flatten boxes and place in a paper bag or one of the boxboard boxes. Remove any plastic inserts / wrap.	
CARDBOARD	Cardboard boxes, shipping or moving boxes, clean pizza boxes, etc.	Stack smaller boxes inside larger boxes. Large appliance boxes break down (no larger) than 30"x 30".	

PAPER ONLY IN YOUR RED BOX! - No containers, no other products.

CONTACT US FOR MORE INFORMATION:
General Inquiries: 1-800-563-3377 • **TTY:** 1-877-624-4832
Email: ask@ewswa.org • **Web:** www.wecanrecyclemore.org

CALL 311 WINDSOR CITY SERVICES

GREATER ESSEX COUNTY DISTRICT SCHOOL BOARD
School Year Calendar 2023-2024: Secondary

Month	1st Week					2nd Week					3rd Week					4th Week					5th Week				
	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F
September 2023					1	4 H	5 ★	6	7	8	11	12	13	14	15	18	19	20	21	22 P	25	26	27	28	29
October 2023	2	3	4	5	6	9 H	10	11	12	13	16	17	18	19	20	23	24	25	26	27 P	30	31			
November 2023			1	2	3	6	7	8	9	10	13	14	15	16	17 P	20	21	22	23	24	27	28	29	30	
December 2023					1	4	5	6	7	8	11	12	13	14	15	187	19	20	21	22	25 H	26 H	27 B	28 B	29 B
January 2024	1 H	2 B	3 B	4 B	5 B	8	9	10	11	12	15	16	17	18	19	22	23	24	25	26 E	29 E	30 E	31 E		
February 2024				1 E	2 P	5	6	7	8	9	12	13	14	15	16 P	19 H	20	21	22	23	26	27	28	29	
March 2024					1	4	5	6	7	8	11 B	12 B	13 B	14 B	15 B	18	19	20	21	22	25	26	27	28	29 H
April 2024	1 H	2	3	4	5	8	9	10	11	12	15	16	17	18	19	22	23	24	25	26 P	29	30			
May 2024			1	2	3	6	7	8	9	10	13	14	15	16	17	20 H	21	22	23	24	27	28	29	30	31
June 2024	3	4	5	6	7	10	11	12	13	14	17	18	19	20	21 E	24 E	25 E	26 E	27 E	28 P					

★ First Day of School B: Board Designated Holiday P: Professional Activity Day
H: Statutory Holiday E: Exam Day (Tentative)

Revised May 31, 2023

Appendix B: List of Categories

Material Category	Material Subcategory	Description
Mixed Containers (Blue Box)	#1 Polyethylene Terephthalate (PET)	All PET #1 plastics. Includes clear or coloured thermoform packaging, beverage bottles, non-beverage bottles used for food items and non-food items such as dish soap, shampoo, mouthwash, window cleaner, floor cleaner, etc. Does not include Black Plastics.
	#2 High-Density Polyethylene (HDPE)	All HDPE #2 plastics. Includes natural and coloured bottles, jugs, and containers for beverages, food items, and non-food items such as laundry soap, shampoo, bleach, vinegar, pill bottles, etc. Does not include Black Plastics.
	#5 Polypropylene (PP)	All #5 PP plastics. Includes clear and coloured food containers, jugs, and jars, take-out beverage cups, bottles, and jars for food items, etc. Does not include Black Plastics.
	#6 Non-Expanded Polystyrene (PS)	All Non-Expanded (rigid) #6 PS plastics. Includes clear or coloured rigid food trays, clamshells, cup lids, yogurt cups, CD and DVD cases only (no disk), etc. Does not include Black Plastics.
	Glass	All clear and coloured glass. Includes bottles and containers for food, beverage, cosmetics, toiletries, household pharmaceutical products, candle jars etc. Does not include non-recyclable glass such as windowpane glass, plates, drinking glasses, figures, incandescent light bulbs.
	Aluminum	All aluminum containers and foils. Includes food and beverage containers, rigid aluminum trays (pie plates, baking trays, etc.), empty aerosol containers, and containers for hair products, tubes, etc.

		Does not include full or partially full pressurized cans.
	Steel	All steel containers. Includes food and beverage containers, empty spray cans (for cooking oil, whipped cream, etc.), empty paint cans. Does not include full or partially full pressurized cans.
	Gable Top Containers	Polycoat containers with a gable shaped top used for milk, juice, some foods, etc.
	Aseptic Containers	Tetra-pak type polycoat packaging containers used for juice, milk, some soups & broths, alternative milk beverages, alcoholic beverages, etc.
Mixed Papers (Red Box)	Fine Paper	Includes mixed fine papers, writing paper, office paper, copy paper, bills and statements, ad mail, lottery tickets, receipts, envelopes, promotional cards, promotional calendars, printed information found within packaged products, etc. Also includes soft cover books, booklets, magazines, catalogs, calendars, flyers, and inserts.
	Newspaper	Major daily and weekly newspapers and community newspapers. Does not include flyers and inserts.
	Boxboard	Single layered paperboard and fiberboard with no corrugation. Includes cereal boxes, shoe boxes, cores from toilet paper/paper towels/gift wrap, etc.
	Craft Paper	Craft paper bags and wrap, grocery or retail bags, potato bags, some pet food bags, etc. Includes brown, white, and colored craft paper and bags. No bags with bonded plastic or foil lining.
	Cardboard	Waxed or unwaxed corrugated cardboard containers. Includes molded pulp materials such as egg cartons, drink trays, other trays, etc.
	Coffee Cups	All cups and containers used for hot beverages. Multiple layered, primarily fibre, hot beverage containers common in fast food industry.
Organics	Compostable Fibres	Paper towels, paper napkins, toilet papers, facial tissues, etc.
	Organic Food Waste	All edible and non-edible organic wastes that results from food items.

		Includes untouched and leftover bakery, meat & fish, dried food, fruits & vegetables, dairy, and other foods.
Operational Waste	Scrap Wood	Non-treated wood materials. Includes skids/pallets, wooden furniture, etc. Does not include branches, brush, or wood chips.
	Other Metals	Scrap metals, copper pipes, hardware, etc. Includes multi-material items that are mainly metal.
	Electronic Waste	All Waste from Electrical and Electronic Equipment (WEEE). Anything that is battery operated and/or can be plugged in to an electrical outlet. Includes computer / IT equipment, telecom equipment, TV & audio equipment, small kitchen appliances, wires/chargers/adapters, cocks, gadgets, etc.
	Batteries	All single-use and rechargeable batteries. Includes Alkaline-Manganese, Lithium, Silver Oxide, Zinc Air, Zinc-Carbon, etc.
Non-Recyclable Waste	Cold Beverage and Food Wax-Lined Paper Cups	All cups and containers used for cold beverages and food with a plastic or wax lining. Multiple layered, primarily fiber, cold food, and beverage containers, common in the fast food industry. Includes paper-based cups with a plastic lining, water cooler cups, freezer boxes, etc.
	#4 Low-Density Polyethylene (LDPE) Films	All #4 LDPE plastic films. Includes soft "stretchy" PE plastic used for items such as produce bags, overwrap for water bottles, garbage bags, kitchen liners, blue or clear recycling bags, sandwich and freezer bags, etc. Does not include Black Plastics.
	Expanded Polystyrene	Includes white, coloured, and black polystyrene foam packaging. Includes food trays, clamshells, etc. Also includes foam packaging "peanuts" and foam blocks used to protect boxed products.
	Plastic Strapping	All Plastic Strapping material.

		This material is used to bundle products together for retail sales and can come in a variety of colours and plastic materials.
	PPE	Single or multi-use face masks used as PPE. Includes ear loop masks, procedure/surgical masks, medical masks, reusable cloth masks, N95 masks, disposable respirators, etc. Disposable PPE used for protecting hands. Includes latex, nitrile, rubber, plastic, vinyl, surgical-type gloves, etc.
	Textiles	Clothing & cloth-based items – e.g., drapes, bedsheets, towels, outerwear, footwear, stuffed toys, purses, belts, bags, hat, scarves, mittens, etc.
	Non-recyclable/Garbage	All other non-recyclable waste materials not classified elsewhere. Includes hazardous waste, black plastics, all described below. Includes chip bags, furnace filters, laminated papers, rigid or durable plastics, non-recyclable glass, dust, single-use cleaning wipes, single-use coffee pods, plastic straws and cutlery, materials too small to process, etc.

Appendix C: Waste Audit Data

Table C1: Waste Audit Sample Summary

Sample #	Waste Stream	Waste Audit Date	Sample	
			kg	%
1	Garbage	27-Oct-23	58.05	57.43%
2	Blue Box	27-Oct-23	19.06	18.86%
3	Red Box	27-Oct-23	23.97	23.71%
Total			101.08	100.00%

Table C2: Garbage Sample Summary - By Functional Area

Waste Stream		**Garbage**													
Sample Date		**27-Oct-23**													
Waste Generating Areas		**Classrooms**		**Cafeteria**		**Hallways**		**Staffroom**		**Offices**		**Washrooms**		**Overall**	
Total Weight of Sample		**12.36**		**12.87**		**8.68**		**8.02**		**11.24**		**4.88**		**58.05**	
Total Percent of Sample		**21.29%**		**22.17%**		**14.95%**		**13.82%**		**19.36%**		**8.41%**		**100.00%**	
Composition of Garbage:		**kg**	**%**	**kg**	**%**	**kg**	**%**	**kg**	**%**	**kg**	**%**	**kg**	**%**	**kg**	**%**
Blue Box	PET #1	0.52	4.21%	0.11	0.85%	0.13	1.50%	0.07	0.87%	0.71	6.32%	0.00	0.00	1.54	2.65%
	HDPE Plastic Containers #2	0.10	0.81%	0.21	1.63%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.31	0.53%
	PP #5	0.18	1.46%	0.11	0.85%	0.71	8.18%	0.31	3.87%	0.89	7.92%	0.00	0.00	2.20	3.79%
	Polystyrene #6	0.01	0.08%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.11	0.98%	0.00	0.00	0.12	0.21%
	Glass	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
	Aluminum	0.52	4.21%	0.13	1.01%	0.33	3.80%	0.00	0.00%	0.13	1.16%	0.00	0.00	1.11	1.91%
	Steel Cans	0.00	0.00%	0.31	2.41%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.31	0.53%
	Gable Top Containers	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
	Aseptic Containers	0.24	1.94%	0.21	1.63%	0.21	2.42%	0.00	0.00%	0.08	0.71%	0.00	0.00	0.74	1.27%
Red Box	Fine Paper	0.14	1.13%	0.31	2.41%	1.19	13.71%	0.71	8.85%	1.31	11.65%	0.07	0.01	3.73	6.43%
	Newspaper	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
	Boxboard	0.38	3.07%	0.11	0.85%	0.61	7.03%	0.67	8.35%	0.41	3.65%	0.09	0.02	2.27	3.91%
	Craft Paper	0.72	5.83%	0.17	1.32%	0.31	3.57%	0.11	1.37%	0.11	0.98%	0.00	0.00	1.42	2.45%
	Cardboard	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
	Coffee Cups	0.08	0.65%	0.14	1.09%	0.31	3.57%	0.45	5.61%	0.37	3.29%	0.00	0.00	1.35	2.33%
Other Recyclables	Paper Towels	2.30	18.61%	1.61	12.51%	0.89	10.25%	2.31	28.80%	1.71	15.21%	4.11	0.84	12.93	22.27%
	Organics	4.20	33.98%	5.11	39.70%	1.03	11.87%	1.31	16.33%	3.71	33.01%	0.00	0.00	15.36	26.46%
	Scrap Wood	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
	Scrap Metal	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
	Electronic Waste	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
	Batteries	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
Other	Cold Beverage Wax-Lined Paper Cups	0.00	0.00%	0.00	0.00%	0.12	1.38%	0.23	2.87%	0.00	0.00%	0.00	0.00	0.35	0.60%
	LDPE (#4) Plastic Films	1.40	11.33%	1.13	8.78%	0.51	5.88%	0.71	8.85%	1.14	10.14%	0.00	0.00	4.89	8.42%
	Styrofoam	0.01	0.08%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.01	0.02%
	Plastic Strapping	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
	PPE	0.40	3.24%	0.11	0.85%	0.02	0.23%	0.04	0.50%	0.00	0.00%	0.00	0.00	0.57	0.98%
	Textiles	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
	Non-Recyclable	1.16	9.39%	3.10	24.09%	2.31	26.61%	1.10	13.72%	0.56	4.98%	0.61	0.13	8.84	15.23%
pecific Waste		0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00	0.00	0.00%
QAQC Check		12.36	100.00%	12.87	100.00%	8.68	100.00%	8.02	100.00%	11.24	100.00%	4.88	100.00%	58.05	100.00%
Blue Box		1.57	12.70%	1.08	8.39%	1.38	15.90%	0.38	4.74%	1.92	17.08%	0.00	0.00%	6.33	10.90%
Red Box		1.32	10.68%	0.73	5.67%	2.42	27.88%	1.94	24.19%	2.20	19.57%	0.16	3.28%	8.77	15.11%
Mandatory Recyclable (Reg103)		0.66	5.34%	0.75	5.83%	1.52	17.51%	0.71	8.85%	1.44	12.81%	0.07	1.43%	5.15	8.87%
Other Recyclables		2.23	18.04%	1.06	8.24%	2.28	26.27%	1.61	20.07%	2.68	23.84%	0.09	1.84%	9.95	17.14%
Non-Recyclables		9.47	76.62%	11.06	85.94%	4.88	56.22%	5.70	71.07%	7.12	63.35%	4.72	96.72%	42.95	73.99%
QAQC Check		True	100.00%	True	100.00%	True	100.00%	True	100.00%	True	100.00%	True	100.00%	True	100.00%

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Table C3: Blue Box Sample Summary - By Functional Area

Waste Stream		**Blue Box**							
Sample Date		**27-Oct-23**							
Waste Generating Areas		**Classrooms**		**Cafeteria**		**Hallways**		**Overall**	
Total Weight of Sample		**7.14**		**4.82**		**7.10**		**19.06**	
Total Percent of Sample		**37.46%**		**25.29%**		**37.25%**		**100.00%**	
Composition of Garbage:		**kg**	**%**	**kg**	**%**	**kg**	**%**	**kg**	**%**
Blue Box	PET #1	2.18	30.53%	1.19	24.69%	2.10	29.58%	5.47	28.70%
	HDPE Plastic Containers #2	0.14	1.96%	0.00	0.00%	0.02	0.28%	0.16	0.84%
	PP #5	0.52	7.28%	1.91	39.63%	1.49	20.99%	3.92	20.57%
	Polystyrene #6	0.06	0.84%	0.04	0.83%	0.11	1.55%	0.21	1.10%
	Glass	0.28	3.92%	0.00	0.00%	0.00	0.00%	0.28	1.47%
	Aluminum	1.42	19.89%	0.21	4.36%	0.32	4.51%	1.95	10.23%
	Steel Cans	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Gable Top Containers	0.03	0.42%	0.13	2.70%	0.21	2.96%	0.37	1.94%
	Aseptic Containers	0.00	0.00%	0.41	8.51%	0.43	6.06%	0.84	4.41%
Red Box	Fine Paper	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Newspaper	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Boxboard	0.40	5.60%	0.00	0.00%	0.00	0.00%	0.40	2.10%
	Craft Paper	0.03	0.42%	0.00	0.00%	0.00	0.00%	0.03	0.16%
	Cardboard	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Coffee Cups	0.28	3.92%	0.00	0.00%	0.00	0.00%	0.28	1.47%
Other Recyclables	Paper Towels	0.18	2.52%	0.00	0.00%	0.00	0.00%	0.18	0.94%
	Organics	1.36	19.05%	0.41	8.51%	0.91	12.82%	2.68	14.06%
	Scrap Wood	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Scrap Metal	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Electronic Waste	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Batteries	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Other	Cold Beverage Wax-Lined Paper Cups	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	LDPE (#4) Plastic Films	0.00	0.00%	0.21	4.36%	0.09	1.27%	0.30	1.57%
	Styrofoam	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Plastic Strapping	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	PPE	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Textiles	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Non-Recyclable	0.26	3.64%	0.31	6.43%	1.42	20.00%	1.99	10.44%
Facility-Specific Waste		0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
QAQC Check		7.14	100.00%	4.82	100.00%	7.10	100.00%	19.06	100.00%
Blue Box		4.63	64.85%	3.89	80.71%	4.68	65.92%	13.20	69.25%
Red Box		0.71	9.94%	0.00	0.00%	0.00	0.00%	0.71	3.73%

Table C4: Red Box Sample Summary - By Functional Area

Waste Stream		**Red Box**							
Sample Date		**27-Oct-23**							
Waste Generating Areas		**Classrooms**		**Cafeteria**		**Hallways**		**Overall**	
Total Weight of Sample		**11.15**		**3.49**		**9.33**		**23.97**	
Total Percent of Sample		**46.52%**		**14.56%**		**38.92%**		**100.00%**	
Composition of Garbage:		**kg**	**%**	**kg**	**%**	**kg**	**%**	**kg**	**%**
Blue Box	PET #1	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	HDPE Plastic Containers #2	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	PP #5	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Polystyrene #6	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Glass	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Aluminum	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Steel Cans	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Gable Top Containers	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Aseptic Containers	0.04	0.36%	0.00	0.00%	0.11	1.18%	0.15	0.63%
Red Box	Fine Paper	6.11	54.80%	2.16	61.89%	4.14	44.37%	12.41	51.77%
	Newspaper	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Boxboard	1.91	17.13%	0.31	8.88%	0.61	6.54%	2.83	11.81%
	Craft Paper	0.51	4.57%	0.21	6.02%	0.24	2.57%	0.96	4.01%
	Cardboard	0.13	1.17%	0.00	0.00%	0.51	5.47%	0.64	2.67%
	Coffee Cups	0.41	3.68%	0.00	0.00%	0.48	5.14%	0.89	3.71%
Other Recyclables	Paper Towels	1.10	9.87%	0.81	23.21%	0.71	7.61%	2.62	10.93%
	Organics	0.31	2.78%	0.00	0.00%	1.51	16.18%	1.82	7.59%
	Scrap Wood	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Scrap Metal	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Electronic Waste	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Batteries	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Other	Cold Beverage Wax-Lined Paper Cups	0.11	0.99%	0.00	0.00%	0.31	3.32%	0.42	1.75%
	LDPE (#4) Plastic Films	0.11	0.99%	0.00	0.00%	0.00	0.00%	0.11	0.46%
	Styrofoam	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Plastic Strapping	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	PPE	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Textiles	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
	Non-Recyclable	0.41	3.68%	0.00	0.00%	0.71	7.61%	1.12	4.67%
Facility-Specific Waste		0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
QAQC Check		11.15	100.00%	3.49	100.00%	9.33	100.00%	23.97	100.00%
Blue Box		0.04	0.36%	0.00	0.00%	0.11	1.18%	0.15	0.63%
Red Box		9.07	81.35%	2.68	76.79%	5.98	64.09%	17.73	73.97%

Table C5: Overall Garbage Composition Ranked

Waste Composition	%	Annual		Divert?	Est.
		11261.70	KG	Y/N	Amount
Organics	26.46%	2979.84	KG	Yes	1787.90
Paper Towels	22.27%	2508.42	KG	Yes	1505.05
Non-Recyclable	15.23%	1714.96	KG	No	
Red Box	15.11%	1701.38	KG	Yes	1020.83
Blue Box	10.90%	1228.02	KG	Yes	736.81
LDPE (#4) Plastic Films	8.42%	948.66	KG	No	
PPE	0.98%	110.58	KG	No	
Cold Beverage Wax-Lined Paper Cups	0.60%	67.90	KG	No	
Styrofoam	0.02%	1.94	KG	No	
QAQC Check	100.00%	11261.70	KG		5050.60

Note: Assumed 60% capture rate of materials in garbage stream.

Table C6: Percentage of Garbage Composition per Functional Area

Functional Area	Classrooms	Cafeteria	Hallways	Staffroom	Offices	Washrooms	Average	Overall
Blue Box	12.70%	8.39%	15.90%	4.74%	17.08%	0.00%	9.80%	10.90%
Red Box	10.68%	5.67%	27.88%	24.19%	19.57%	3.28%	15.21%	15.11%
Organic Waste	33.98%	39.70%	11.87%	16.33%	33.01%	0.00%	22.48%	26.46%
Compostable Fibres	18.61%	12.51%	10.25%	28.80%	15.21%	84.22%	28.27%	22.27%
Non-Recyclable	24.03%	33.72%	34.10%	25.94%	15.12%	12.50%	24.24%	25.25%
QAQC Check	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

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Table C7: Overall Blue Box Composition Ranked

Waste Composition	%	Annual		Contam.?	Est.
		3697.64	KG	Y/N	Amount
Blue Box	69.25%	2560.80	KG	No	
Organics	14.06%	519.92	KG	Yes	519.92
Non-Recyclable	10.44%	386.06	KG	Yes	386.06
Red Box	3.73%	137.74	KG	Yes	137.74
LDPE (#4) Plastic Films	1.57%	58.20	KG	Yes	58.20
Paper Towels	0.94%	34.92	KG	Yes	34.92
QAQC Check	100.00%	3697.64	KG		1136.84
		Contamination Rate			30.75%

Table C8: Percentage of Blue Box Composition per Functional Area

Functional Area	Classrooms	Cafeteria	Hallways	Average	Overall
Blue Box	64.85%	80.71%	65.92%	70.49%	69.25%
Red Box	9.94%	0.00%	0.00%	3.31%	3.73%
Organic Waste	19.05%	8.51%	12.82%	13.46%	14.06%
Compostable Fibres	2.52%	0.00%	0.00%	0.84%	0.94%
Non-Recyclable	3.64%	10.79%	21.27%	11.90%	12.01%
QAQC Check	100.00%	100.00%	100.00%	100.00%	100.00%

Table C9: Overall Red Box Composition Ranked

Waste Composition	%	Annual		Contam.?	Est.
		4650.18	KG	Y/N	Amount
Red Box	73.97%	3439.62	KG	No	
Paper Towels	10.93%	508.28	KG	Yes	508.28
Organics	7.59%	353.08	KG	Yes	353.08
Non-Recyclable	4.67%	217.28	KG	Yes	217.28
Cold Beverage Wax-Lined Paper Cups	1.75%	81.48	KG	Yes	81.48
Blue Box	0.63%	29.10	KG	Yes	29.10
LDPE (#4) Plastic Films	0.46%	21.34	KG	Yes	21.34
QAQC Check	100.00%	4650.18	KG		1210.56
			Contamination Rate		26.03%

Table C10: Percentage of Red Box Composition per Functional Area

Functional Area	Classrooms	Cafeteria	Hallways	Average	Overall
Blue Box	0.36%	0.00%	1.18%	0.51%	0.63%
Red Box	81.35%	76.79%	64.09%	74.08%	73.97%
Organic Waste	2.78%	0.00%	16.18%	6.32%	7.59%
Compostable Fibres	9.87%	23.21%	7.61%	13.56%	10.93%
Non-Recyclable	5.65%	0.00%	10.93%	5.53%	6.88%
QAQC Check	100.00%	100.00%	100.00%	100.00%	100.00%

Annual Data Request Form

Client Name: Riverside Secondary School

WRG Project No: *Date:* 2023 - 2024

Waste Management and Recycling Service Summary

If a bin is used for multiple waste streams (i.e. Garbage and PPE Gloves), please indicate these as separate on different rows so there is one row per waste stream.

Container Size	Waste Stream/Material	Service Provider	Contact Name	Contact Number	Equipment (Compactor/Shredder / Baler)	Pick-Up Frequency	Estimated Annual Quantity (MT)	Annual Quantity (Number of Items)	Average "Fullness" at Time of Pick-up (Check the cell with an "x" as applicable)					
									Empty	1/4 Full	1/2 Full	3/4 Full	Full	Notes
Examples:														
40-yard bin	Garbage	ABC	John Smith	(416) 823-4554		once every two weeks	191						x	
8-yard bin	Organics	ABC	John Smith	(416) 823-4554	Compactor	twice per week	70					x		
40-yard bin	PPE Gloves	ABC	John Smith	(416) 823-4554		once every two weeks								Conslidated with garbage stream
20L pail	light bulbs	XYZ	Bob	647-123-4567		once a month		40					x	
8-yard bin	Mixed Recycling	ABC	John Smith	(416) 823-4554		twice per week	95						x	
6 yard bin	Garbage		Jim Leether	NA	NA	twice/week	34.92	1.5					x	~50 kg/yd
95 GAL	Recycling		Jim Leether	NA	NA	every other week	8.48	11.25				x		~82.6 kg/yd
														38.8 weeks in calendar year
														194 days in calendar year
														1024 students

Appendix D: Waste Reduction Work Plan

wrg | waste reduction group Inc.
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Ministry of the Environment Waste

Form Report of a Waste Audit

Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

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

I. GENERAL INFORMATION

Name of Owner and/or Operator of Entity(ies) and Company Name: Greater Essex County District School Board – Riverside Secondary School		
Name of Contact Person: Rachel Bondy	**Telephone #:** (519) 966-0034 x10560	**Email address:** rachel.bondy@publicboard.ca
Street Address(es) of Entity(ies): 8465 Jerome Street, Windsor, ON N8S 1W8		
Municipality: Windsor, Ontario		

Type of Entity (check one)			
Retail Shopping Establishments		Hotels and Motels	
Retail Shopping Complexes		Hospitals	
Office Buildings		Educational Institutions	X
Restaurants		Large Manufacturing Establishments	

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

II. DESCRIPTION OF ENTITY

Provide a brief overview of the entity(ties):

Riverside Secondary School is an educational institution accommodating approximately 1024 students, fully compliant with Part X of Ontario Regulation 102/94 & 103/94. According to O.Reg. 102/94, operators of educational institutions with an enrollment exceeding 350 full- or part-time students during the calendar year are obligated to conduct an annual waste audit and implement a waste reduction work plan.

This report has been meticulously prepared to support Riverside Secondary School in emphasizing resource recovery through 3Rs diversion programs.

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) plastic jugs, crates, totes and drums	Brought onto campus or generated on campus by staff/students..
PP (#5) plastic food containers	Brought onto campus or generated on campus by staff/students.
PS (#6) plastic food 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.
Coffee Cups	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.
Craft Paper	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.
Organics	Brought onto campus or generated on campus by staff/students.
LDPE (#4) Plastic Film	Brought onto campus or generated on campus by staff/students.
Expanded Polystyrene (Styrofoam)	Brought onto campus or generated on campus by staff/students.
Plastic Strapping	Generated by staff/students on campus.
Scrap Woods	Generated by staff/students on campus.
Scrap Metals	Generated by staff/students on campus.
Electronic Wastes	Generated by staff/students on campus.
Batteries	Generated by staff/students on campus.
PPE	Brought onto campus or generated on campus by staff/students.
Cold Beverage Cups (Wax-Lined)	Brought onto campus or generated on campus by staff/students.
Coffee cups	Brought onto campus or generated on campus by staff/students.
Textiles	Brought onto campus or generated on campus by staff/students.
Other/Non-recyclable	Generated by staff/students on 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.

…/2

IV. MANAGEMENT OF WASTE

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

Category	Waste to be Disposed	Reused or Recycled Waste
PET (#1) plastic food and beverage bottles	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
HDPE (#2) plastic jugs, crates, totes and drums	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
PP (#5) plastic food containers	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
PS (#6) plastic food containers	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Glass food and beverage bottles/jars	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Aluminum food and beverage cans	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Steel food and beverage cans	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Gable top containers	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Aseptic containers	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Coffee cups	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Fine paper	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Newsprint	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Boxboard shoe boxes, cereal boxes, etc.	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Craft Paper	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Cardboard	*Staff/Students may place in garbage*	*Staff/Students may place in recycling containers.*
Paper towels	*Staff/Students may place in garbage*	*No recycling program currently implemented.*
Organics	*Staff/Students may place in garbage*	*No recycling program currently implemented.*
LDPE (#4) Plastic Film	*Staff/Students place in garbage*	*No recycling program implemented.*
Expanded Polystyrene (Styrofoam)	*Staff/Students place in garbage*	*No recycling program implemented.*
Plastic Strapping	*Staff/Students place in garbage*	*No recycling program implemented.*
Scrap Woods	*Staff/Students place in garbage*	*No recycling program currently implemented.*
Scrap Metals	*Staff/Students may place in garbage*	*No recycling program currently implemented.*
Electronic Wastes	*Staff/Students may place in garbage*	*No recycling program currently implemented.*
Batteries	*Staff/Students place in garbage*	*Place tape over battery contacts. Collect in sealed plastic bags and pack in a heavy duty containers. Label as "SPENT BATTERIES", send to the Kit Centre via board courier. To be recycled by Computers for Kids. Do NOT pack leaking batteries.*
PPE	*Staff/Students place in garbage*	*No recycling program implemented.*
Cold Beverage Cups (Wax-Lined)	*Staff/Students place in garbage*	*Staff/Students may place in recycling containers.*
Textiles	*Staff/Students place in garbage*	*No recycling program implemented.*
Other/Non-recyclable	*Staff/Students may place in garbage*	*Not applicable.*

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

IV. MANAGEMENT OF WASTE

…/3

V. ESTIMATED QUANTITY OF WASTE PRODUCED – Riverside Secondary School

Categories of Waste	Estimated Amount of Waste											
	Generated			Reduced/Reused			Recycled			Disposed		
	"A" Base Year	"B" Current Year	"C" * Change (A - B)	"A" Base Year	"B" Current Year	"C" * Change (A - B)	"A" Base Year	"B" Current Year	"C" * Change (A - B)	"A" Base Year	"B" Current Year	"C" * Change (A - B)
	Kilograms	Kilograms	Kilograms	Kilograms	Kilograms	Kilograms	Kilograms	Kilograms	Kilograms	Kilograms	Kilograms	Kilograms
PET (#1) plastic food and beverage bottles	0.00	1831.04	0.00	0.00	0.00	0.00	0.00	1532.28	0.00	0.00	298.76	0.00
HDPE (#2) Containers	0.00	104.96	0.00	0.00	0.00	0.00	0.00	44.82	0.00	0.00	60.14	0.00
Polypropylene (#5) Containers	0.00	1524.89	0.00	0.00	0.00	0.00	0.00	1098.09	0.00	0.00	426.80	0.00
Polystyrene (#6) Containers	0.00	82.11	0.00	0.00	0.00	0.00	0.00	58.83	0.00	0.00	23.28	0.00
Glass food and beverage bottles/jars	0.00	78.43	0.00	0.00	0.00	0.00	0.00	78.43	0.00	0.00	0.00	0.00
Aluminum food and beverage cans	0.00	761.58	0.00	0.00	0.00	0.00	0.00	546.24	0.00	0.00	215.34	0.00
Steel food and beverage cans	0.00	60.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.14	0.00
Gable Top/Milk Containers	0.00	103.65	0.00	0.00	0.00	0.00	0.00	103.65	0.00	0.00	0.00	0.00
Aseptic Containers	0.00	378.86	0.00	0.00	0.00	0.00	0.00	235.30	0.00	0.00	143.56	0.00
Fine paper	0.00	3978.48	0.00	0.00	0.00	0.00	0.00	3254.86	0.00	0.00	723.62	0.00
Newsprint	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boxboard shoe boxes, cereal boxes, etc.	0.00	1182.63	0.00	0.00	0.00	0.00	0.00	742.25	0.00	0.00	440.38	0.00
Craft Paper	0.00	527.27	0.00	0.00	0.00	0.00	0.00	251.79	0.00	0.00	275.48	0.00
Corrugated Cardboard	0.00	167.86	0.00	0.00	0.00	0.00	0.00	167.86	0.00	0.00	0.00	0.00
Coffee Cups	0.00	495.33	0.00	0.00	0.00	0.00	0.00	233.43	0.00	0.00	261.90	0.00
Paper Towels	0.00	2508.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2508.42	0.00
Organics	0.00	2979.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2979.84	0.00
Cold Beverage Wax-Lined Cups	0.00	67.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.90	0.00
LDPE (#4) Plastic Films	0.00	948.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	948.66	0.00
Styrofoam (#6) Plastic	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94	0.00
Other Plastics - Plastic Strappings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PPE	0.00	110.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	110.58	0.00
Textiles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-recyclable	0.00	1714.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1714.96	0.00
Total	0.00	19609.52	0.00	0.00	0.00	0.00	0.00	8347.82	0.00	0.00	11261.70	0.00
Percent Change (C ÷A x 100)			N/A						N/A			N/A

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.

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

Please answer the following questions:

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

   No, however, when feasible, the Facility will purchase and/or use materials or products that consist of recycled and/or reused materials or products.

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.

   No.

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

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

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

…

Ministry of the Environment Waste

Form Report of a Waste Reduction Work

Plan

Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

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

I. GENERAL INFORMATION

Name of Owner and/or Operator of Entity(ies) and Company Name: Greater Essex County District School Board – Riverside Secondary School		
Name of Contact Person: Rachel Bondy	**Telephone #:** (519) 966-0034 x10560	**Email address:** rachel.bondy@publicboard.ca
Street Address(es) of Entity(ies): 8465 Jerome Street, Windsor, ON N8S 1W8		
Municipality: Windsor, Ontario		

Type of Entity (check one)			
Retail Shopping Establishments		Hotels and Motels	
Retail Shopping Complexes		Hospitals	
Office Buildings		Educational Institutions	X
Restaurants		Large Manufacturing Establishments	

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

II. DESCRIPTION OF THE ENTITY

Provide a brief overview of the entity(ties):

Riverside Secondary School is an educational institution accommodating approximately 1024 students, fully compliant with Part X of Ontario Regulation 102/94 & 103/94. According to O.Reg. 102/94, operators of educational institutions with an enrollment exceeding 350 full- or part-time students during the calendar year are obligated to conduct an annual waste audit and implement a waste reduction work plan.

This report has been meticulously prepared to support Eastview Horizon Public School in emphasizing resource recovery through 3Rs diversion programs.

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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 (as stated in Part V of your "Report of a Waste Audit")	**Source Separation and 3Rs Program**
Mixed Containers (PET, HDPE, PP, PS, Glass, Aluminum, Steel, Gable Top, Aseptic, Coffee Cups)	*"Mixed Container/Plastics 3Rs Program"* *Reduce: Staff and students will be encouraged to bring drinks and food in reusable containers. Also, a ban on bottled water is underway.* *Reuse: Staff and students will be encouraged to bring drinks in reusable containers* *Recycle: Staff and students will be encouraged to recycle all mixed containers and will be reminded that the material is recyclable regularly during announcements. Staff and students will place containers into blue recycling bins which will continue to be located in key areas throughout the school. New/appropriate labels with text and pictures will be placed on or above all receptacles*
Mixed Papers (Fine Paper, Newsprint, Boxboard, Craft Paper, etc.)	*"Mixed Paper 3Rs Program"* *Reduce: Staff and students will be encouraged to print on both sides of each sheet. They will be encouraged to reduce newspaper use whenever possible and utilize all electronic options.* *Reuse: Discarded paper with print only on one side will be used for noting pads/scrap or to be placed in a bin.* *Recycle: Staff and students will be provided with instructions via email announcements and assemblies. Receptacles will be provided for every classroom. Staff will continue to break down boxes and place them into red recycling bins. Spot inspection will be encouraged to ensure that cardboard is not being placed in the waste stream.*
Cardboard	*"Cardboard 3Rs Program"* *Reduce: None.* *Reuse: Staff will continue to break down boxes and place them into red recycling bins. Spot inspection will be encouraged to ensure that cardboard is not being placed in the waste stream.*
Paper Towels	*No 3Rs program currently implemented.* *Reduce: None.* *Reuse: None.* *Recycle: Staff/Students will be trained about existing program. Cleaners will be trained on where to dispose of waste correctly.*
Organics	*No 3Rs program currently implemented.* *Reduce: None.* *Reuse: None.* *Recycle: Staff/Students will be trained about existing program. Cleaners will be trained on where to dispose of waste correctly.*
Electronic wastes	*"Electronic waste 3Rs Program"* *Reduce: None.* *Reuse: Staff/students will be encouraged to reuse/donate electronic wastes if possible. Usable spare parts are used for other programs.* *Recycle: Staff/Students will be reminded of the existing program. Electronic waste is collected via courier and brought to the Media Services Department*
Batteries	*"Batteries 3Rs Program"* *Reduce: None.* *Reuse: None.* *Recycle: Spent batteries are deposited in the hard-sided container labeled "spent batteries" located in the school's main office. The ends of the batteries are taped. Once the container reaches full capacity, it is shipped via courier to the Facility Services Department for proper disposal as hazardous waste.*
Other/Non-recyclable	*No 3Rs Program.*

IV. RESPONSIBILITY FOR IMPLEMENTING THE WASTE REDUCTION WORK PLAN

Identify who is responsible for implementing the Waste Reduction Work Plan at your entity(ies). If more than one person is responsible for implementation, identify each person who is responsible and indicate the part of the Waste Reduction Work Plan that each person is responsible for implementing.

Name of Person	Responsibility	Telephone #
	All recycling programs	

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V. TIMETABLE FOR IMPLEMENTING WASTE REDUCTION WORK PLAN

Provide a timetable indicating when each Source Separation and 3Rs program of the Waste Reduction Work Plan will be implemented.

Source Separation and 3Rs Program	Schedule for Completion
Cardboard	Recycling program implemented
Mixed Container	Recycling program implemented
Mixed Paper	Recycling program implemented
Organics	Recycling program to be implemented
Electronic Wastes	Recycling program implemented
Batteries	Recycling program implemented

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:

Written communication detailing the audit results and the plan to enhance and sustain recycling initiatives across all functional areas of the facility will be distributed or posted for all employees, students, and guests to read. This communication will address the Work Plan action items and objectives, serving as the means to propel ongoing efforts towards greater diversion success.

Follow-up communications will be regularly provided to all stakeholders, updating them on the program's successes, challenges, and any necessary improvements. Recycling handling and protocols will be incorporated into on-site Health and Safety Training and new staff orientation programs. Additionally, information will be posted in all common areas, encouraging employees and students to actively participate in available programs.

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VII. Estimated Waste Produced By amount Material Type And The Projected

Material Categories *(as stated in Part III)*	**Estimated Annual Waste Produced *** *(kilograms)*	**Name of Proposed 3Rs Program** *(as stated in Part III)*	**Projections to Reduce, Reuse or Recycle Waste** *(kilograms)*			**Estimated Annual Amount to be Diverted **** (%)
			Reduce	**Reuse**	**Recycle**	
PET (#1) plastic food and beverage bottles	1831.04	Mixed Container 3Rs Program			1538.07	84%
HDPE (#2) Containers	104.96	Mixed Container 3Rs Program			62.98	60%
Polypropylene (#5) Containers	1524.89	Mixed Container 3Rs Program			1097.92	72%
Polystyrene (#6) Containers	82.11	Mixed Container 3Rs Program			59.12	72%
Glass food and beverage bottles/jars	78.43	Mixed Container 3Rs Program			78.43	100%
Aluminum food and beverage cans	761.58	Mixed Container 3Rs Program			548.34	72%
Steel food and beverage cans	60.14	Mixed Container 3Rs Program			36.08	60%
Gable Top/Milk Containers	103.65	Mixed Container 3Rs Program			103.65	100%
Aseptic Containers	378.86	Mixed Container 3Rs Program			234.90	62%
Fine paper	3978.48	Mixed Paper 3Rs Program			3262.36	82%
Newsprint	0.00	Mixed Paper 3Rs Program			0.00	60%
Boxboard shoe boxes, cereal boxes, etc	1182.63	Mixed Paper 3Rs Program,			745.05	63%
Craft Paper	527.27	Mixed Paper 3Rs Program			316.36	60%
Corrugated Cardboard	167.86	Mixed Paper 3Rs Program			167.86	100%
Coffee Cups	495.33	Mixed Paper 3Rs Program			297.20	60%
Paper Towels	2508.42	No 3Rs Program				NA
Organics	2979.84	No 3Rs Program				NA
Cold Beverage Waxed Lined Cups	67.90	No 3Rs Program				NA
LDPE (#4) Plastic Films	948.66	No 3Rs Program				NA
Styrofoam (#6) Plastic	1.94	No 3Rs Program				NA
Plastic Strapping	0.00	No 3Rs Program				NA

Personal Protective Equipment (PPE)	110.58	No 3Rs Program				NA
Textiles	0.00					NA
Other/Nonrecyclable	1714.96	No 3Rs Program				NA

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

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

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