



# WASTE AUDIT

WESTMOUNT PARK  
ELEMENTARY SCHOOL

18TH MARCH 2024

## About enuf

*enuf* is a B-Corp whose mission is to do whatever it takes to solve the waste crisis. We work for cultural change in two interrelated ways: by helping to build better infrastructure for waste sorting and organics collection, and by running education and awareness campaigns in institutions and with the public. We work with cities, businesses and schools at all levels, and are involved in social mobilization in partnership with community organizations.

*enuf* is co-founded by three equal partners: one woman and two immigrant people of colour. We benefit greatly from a broad range of diverse perspectives within our team. We have recently become a “Benefit Corporation” (B Corp), which we pursued to ensure that we are anchoring our organization in sustainability best practices from the get-go. For example, our legal incorporation articles include the following text to ensure that executive officers can make decisions for social good, even if such decisions do not maximize profit, without being liable to shareholders:

“The purpose of the Company shall include, but is not in any way limited to or restricted by, the creation of a positive impact on society and the environment, taken as a whole, from the business and operations of the Company, which impact is material in view of the size and nature of the Company’s business”.



## Introduction:

We conducted a waste audit for *Westmount Park Elementary School* on Monday 18<sup>th</sup> March 2024, immediately after 'refresher' sessions on waste-sorting with most classes. Previously, the following activities have been completed:

- 🌱 September 20<sup>th</sup>, 2023: Green brigade training where *enuf* trained a student and staff green team on being waste ambassadors.
- 🌱 October 2<sup>nd</sup>, 2023: Preliminary waste audit at the end of the first day of the educational workshops and compost implementation.
- 🌱 October 2<sup>nd</sup> & 4<sup>th</sup>, 2023: *enuf* conducted waste-sorting education workshops across the entire school.
- 🌱 March 18<sup>th</sup>, 2024: Class refreshers on waste sorting.

The objectives of the work conducted by *enuf* are:

- 🌱 Assess the impact of waste-sorting workshops conducted last October.
- 🌱 Assess the impact the roll-out of compost bins has on capture and contamination rates.
- 🌱 Identify opportunities to improve waste reduction and diversion.
- 🌱 Identify non-compliance in waste disposal to inform educational efforts.

## Waste audit process summary:

The *enuf* auditors separated items into containers for each of the following waste streams:

- 1) Cardboard/paper,
- 2) Plastics,
- 3) Metals,
- 4) Organic waste,
- 5) Trash.

## Waste audit parameters:

*enuf* is committed to providing the best quality of waste audit for the best price. Our processes adhere to general waste audit guidelines. The amount of waste generated allowed *enuf* to conduct a full waste audit without the need to sample the waste bins. These parameters give us a high confidence in the representativeness of our data and analysis.

In this 2024 audit, we were able to conduct a thorough and deep assessment of the waste sorting conditions, where we went through **2** days' worth of recycling, **1** day of trash and **5** days of compost totalling **136.4 kg** of waste. On average, each person generated **160 g** of waste per day, assuming a 675 population of students and staff, at *Westmount Park Elementary School*.



## Current state:

The total weight of waste captured in recycling bins in the audited two days is **72.1 kg**. The total weight of waste captured in landfill bins in the audited one day is **30.3 kg**. The total weight of waste captured in the compost bins in the audited 5 days was **34.0 kg**. The composition of the audited waste, normalized by day, is shown in **Figure 1**, alongside that from the October audit last year. Less than an **11%** of the audited waste has to go to landfills. Organic waste and paper represent majority of the audited waste, at **51%** and **26%**, respectively. Thus, waste reduction and diversion efforts are best placed targeting these two categories.

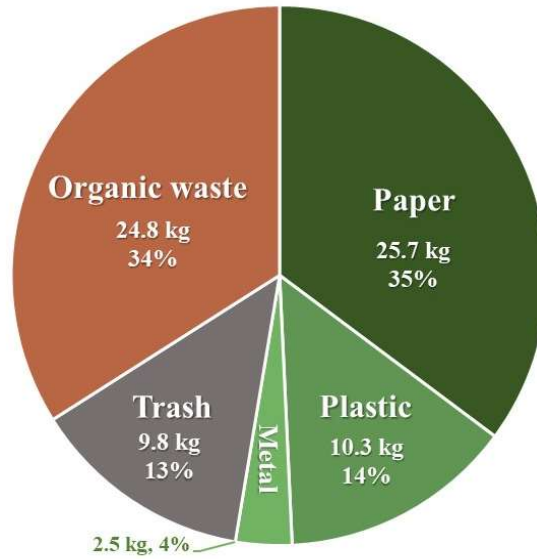
It is worth noting that the relatively significant discrepancy between waste generated per day between the audits could be due to not receiving and assessing all the waste generated. In particular, 8 full recycling bins were audited in the follow-up audit in 2024. Whereas, in 2023, only 4 recycling bins were provided for the preliminary audit.



### March 2024

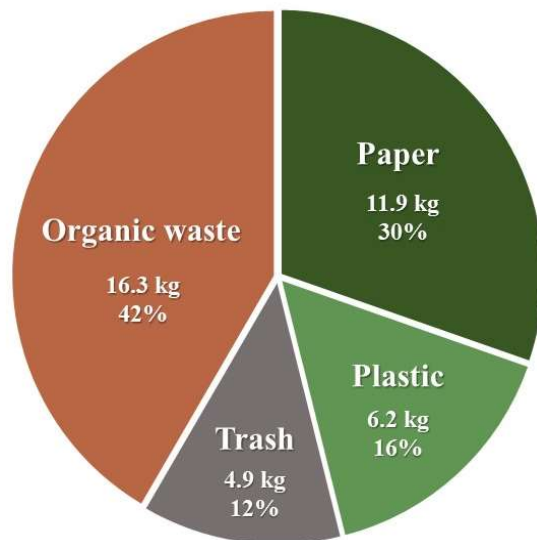
Overall waste per day:  
**73.1 kg**

- Recycling
- Organic Waste
- Trash



### October 2023

Overall waste per day:  
**39.3 kg**



**Figure 1: Overall waste composition, normalised per day, for waste audits conducted in March 2024 and October 2023.**

**Takeaways:** The two largest components of the waste generated are 1) **organic** which can be **composted** and 2) **paper** (and cardboard) which can be **reduced**.

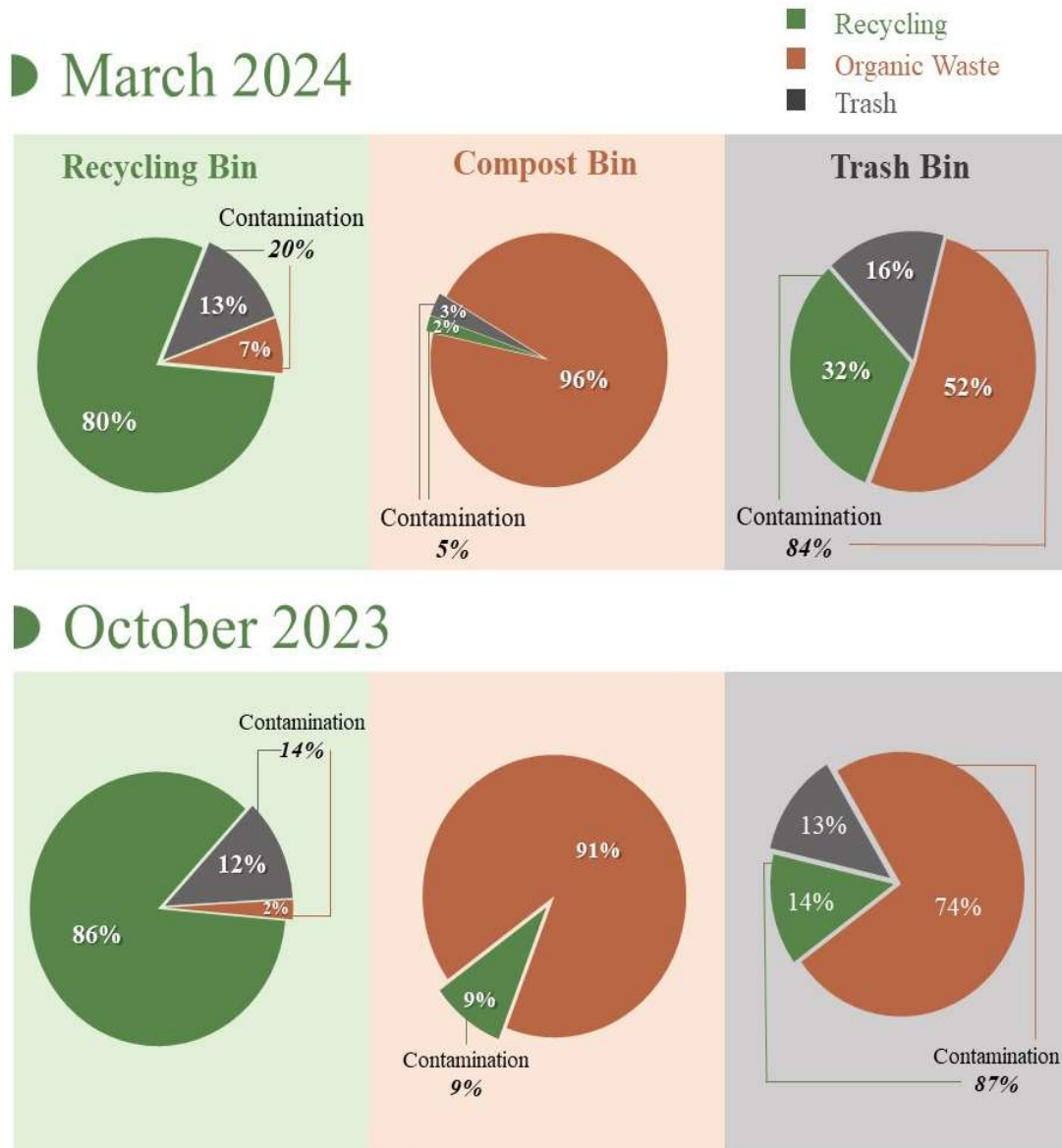
### Contamination:

**Figure 2** shows the composition of waste in the recycling, compost and landfill streams, alongside the contamination recorded in the preliminary audit in 2023. We observe a small decrease in contamination in compost (from 9% to 5%), and trash (from 87% to 85%). On the



other hand, about **20%** of the waste in the recycling bins isn't actually recyclable, a **6%** increase in contamination since the preliminary audit.

The mixed results and the relatively small magnitude are likely because the first audit was not a true "before", as it was conducted in tandem with the educational activities and likely captured some of the associated improvement spike. On the other hand, the second audit likely captured the equilibrium state reached a few months after the educational activities. Typically, recycling contamination is closer to 25% before educational activities.



**Figure 2: Composition of the recycling, compost and landfill bins in the audits conducted in March 2024 and October 2023.**

**Takeaways:** Only 16% of what is in the landfill bins is actually trash, with more than half being organic and can be composted instead.

Most confusion is around recycling sorting rules.



The contamination in recycling bins (non-recyclable items) was primarily due to the presence of paper towel and tissues in the recycling stream. The remaining contamination was unrecyclable plastics of food wrappers, utensils and containers.

Strikingly, only **16%** of the waste in the landfill bins was trash. Majority (**52%**) of what *Westmount Park Elementary School* sends to landfills is **organic** and can be **composted** instead. Since the implementation of school-wide **composting**, there was a 22% decrease in the composition of organics in the trash bins, down from **74%** in 2023. However, this contamination rate is still quite high and can be reduced. This can be achieved by expanding the composting program and implementing it more widely.

Furthermore, the presence of recyclable plastics in the trash bins contributed **32%** of contamination, over double the previously reported **14%** in October 2023. This counteracted the decrease in organic contamination, leading to an overall contamination rate of **84%** for the trash stream, only 3% less than that previously reported.

Since the implementation of composting across the school, the contamination rate presented as **5%**, almost evenly comprised of non-recyclable (**3%**) and recyclable (**2%**) plastics. The previous compost audit was conducted before the compost program, and consisted of a singular bin, rarely yet used by students and staff. Nonetheless, the current contamination was lower than reported **9%** in the single bin.

As such, it appears that the *Westmount Park Elementary School* community is using the new compost bins well, and are well positioned to take advantage of more compost bins. However, additional efforts to better inform the school's community about recycling waste sorting rules can be beneficial.

## ► Capture rate:

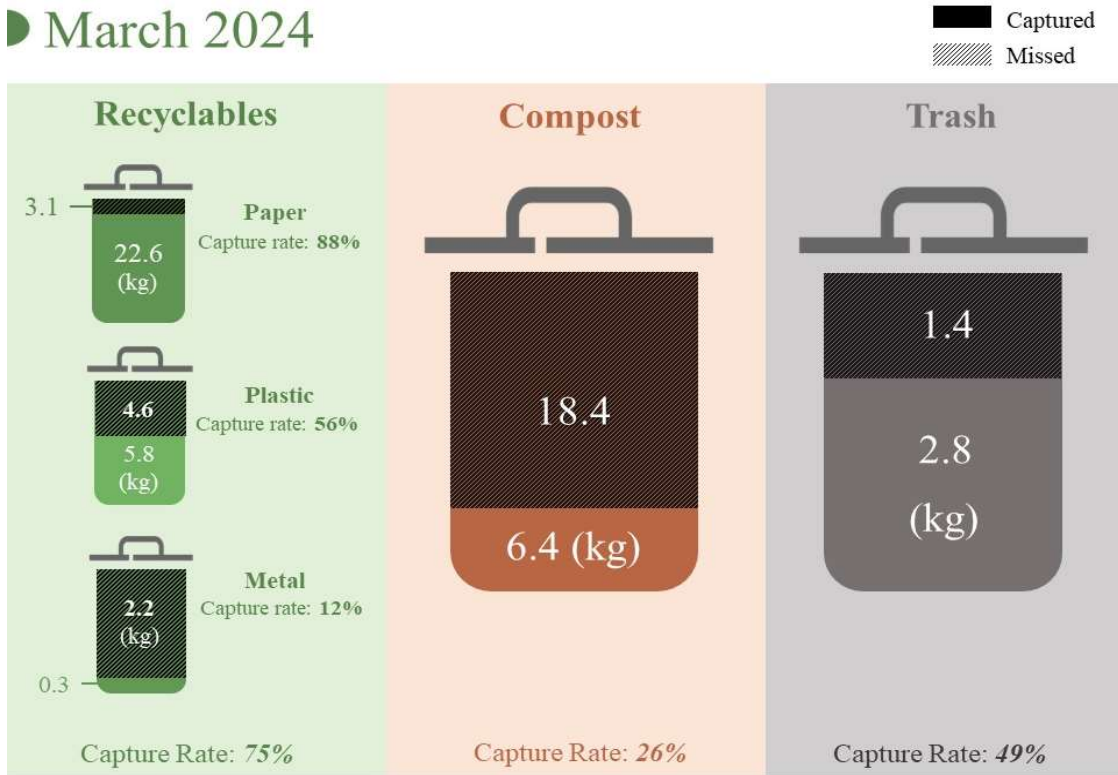
**Figure 3** shows the capture rate per day of the different waste streams. About **75%** of all recyclable material was captured in the recycling bin, lower than the previously reported capture rate of **84%** in October. Furthermore, the capture rate for paper (and cardboard) slightly decreased (**88%**), with the very common recyclable material also being placed in the trash instead. Seeing as this one of the most produced materials of schools, efforts should be refocused on the proper disposal of paper and cardboard, aiming to capture above 95%.

Similarly, the capture rate of the trash stream slightly dropped from **56%** in October to **49%** in the most recent audit in March. This was due to placing non-recyclable food containers in the compost bins, as well as non-recyclable plastics (snack wrappers) in the recycling stream. Since non-recyclable trash has the potential to contaminate and subsequently discard recycling waste, efforts to check for recyclability should be made.

In this recent analysis of the compost bins, the capture rate per day was reported as **26%**- relatively lower than expected. This is primarily due to food being placed in trash bins as opposed to being composted, with over **70%** of organics going to landfill trash bins instead. Additionally, the aforementioned presence of paper towel and tissues contaminating the recycling stream also contributed to the low capture rate of the compost bins. The assessment of the compost stream in the 2023 preliminary audit consisted of one singular 7L compost bin, before the school-wide roll out of compost bins. This unusually small compost stream contributed to the extremely low capture rate for this stream.



March 2024



October 2023

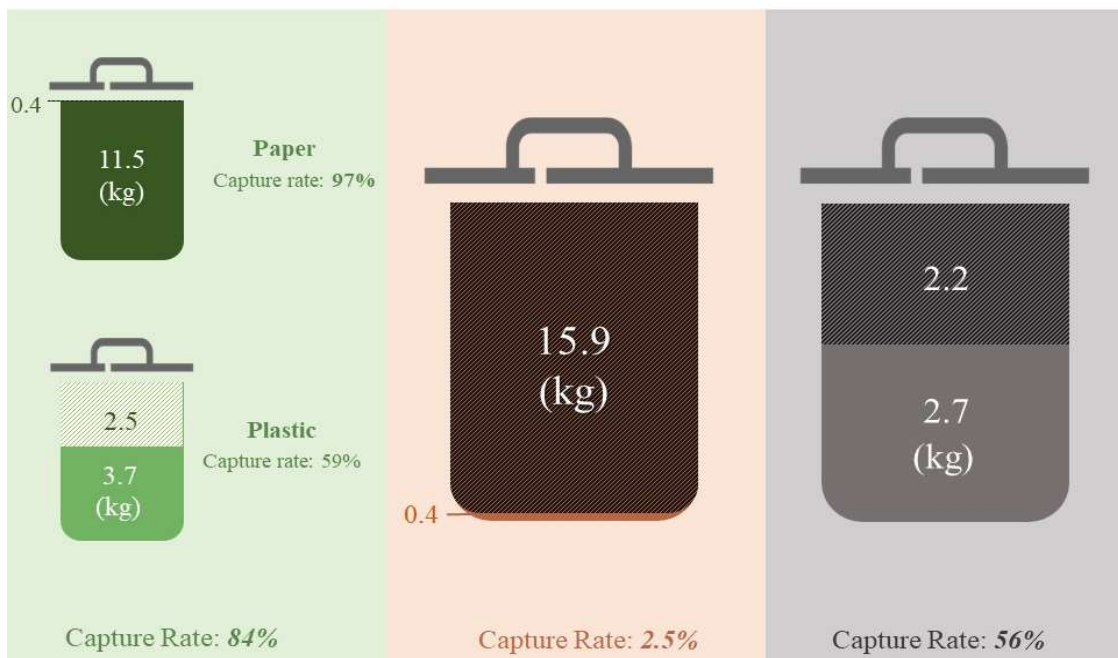


Figure 3: Capture rates per day of different waste streams in the audits conducted in March 2024 and October 2023.

**Takeaway:** Low capture rates for compost and trash streams.





## ► Recommendations:

- 1) Include a presentation on the project in a teachers & staff meeting to build buy-in, and improve community engagement. While the majority of the school's community is receptive and cooperative, the resistance encountered came from some of the teachers.
- 2) Further increase the number of compost bins available, to increase the capture rate of organics.
- 3) Identify major sources of paper and target them with reduction efforts such as digitization and reuse initiative for school supplies.
- 4) Integrate green brigade training on the standard onboarding of lunch monitors.  
Continue annual waste audits, and school-wide waste sorting education workshops.

