



Analyzing the solid waste stream of academic buildings at UNH: A pilot study

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INTRODUCTION

- Waste contributes negative environmental, social, and economic consequences in the form of landfills and wasted resources.
- To continue being a leading institute in sustainability we must better understand our waste stream to determine next steps in waste diversion.
- Examining waste in a pilot study we collaborated with the **Sustainability Institute** and members of the **Zero Waste Task Force**.

RESEARCH QUESTIONS

- What is the current composition of the landfill designated waste stream of three academic buildings on UNH's campus?
- What percentage of these waste streams could be recycled or otherwise diverted from landfill bound waste receptacles?
- How does the waste composition differ between buildings, given their respective functionalities?

METHODS



- Three audits of each building's solid waste including Nesmith, Paul and Morse.
- 10% of the buildings' solid waste dumpster contents.
- Sorted solid waste into the 11 categories, see figure 1.
- Recorded final weights of each category.

RESULTS

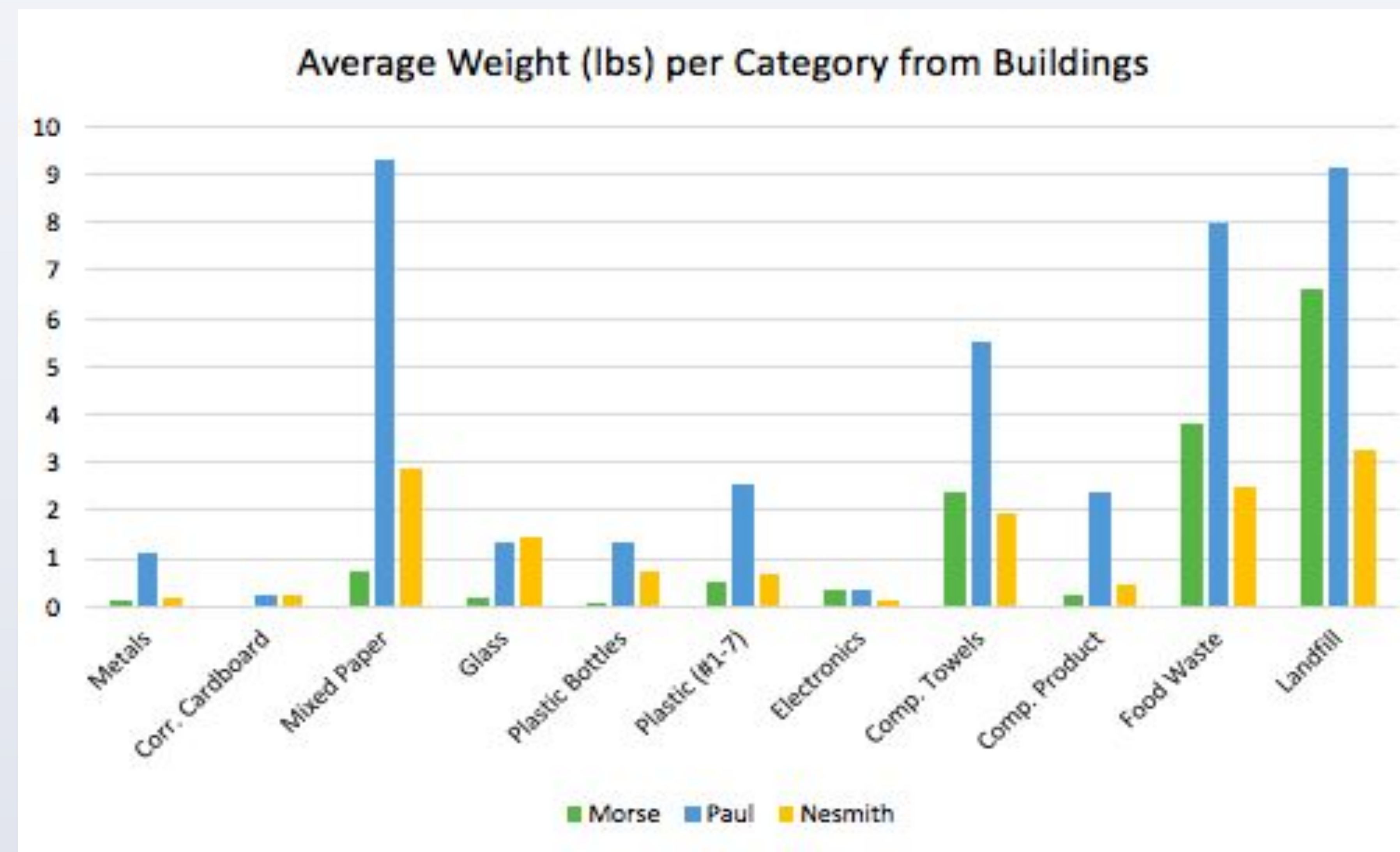


Figure 1. The average weights per building across the study for each waste category are shown

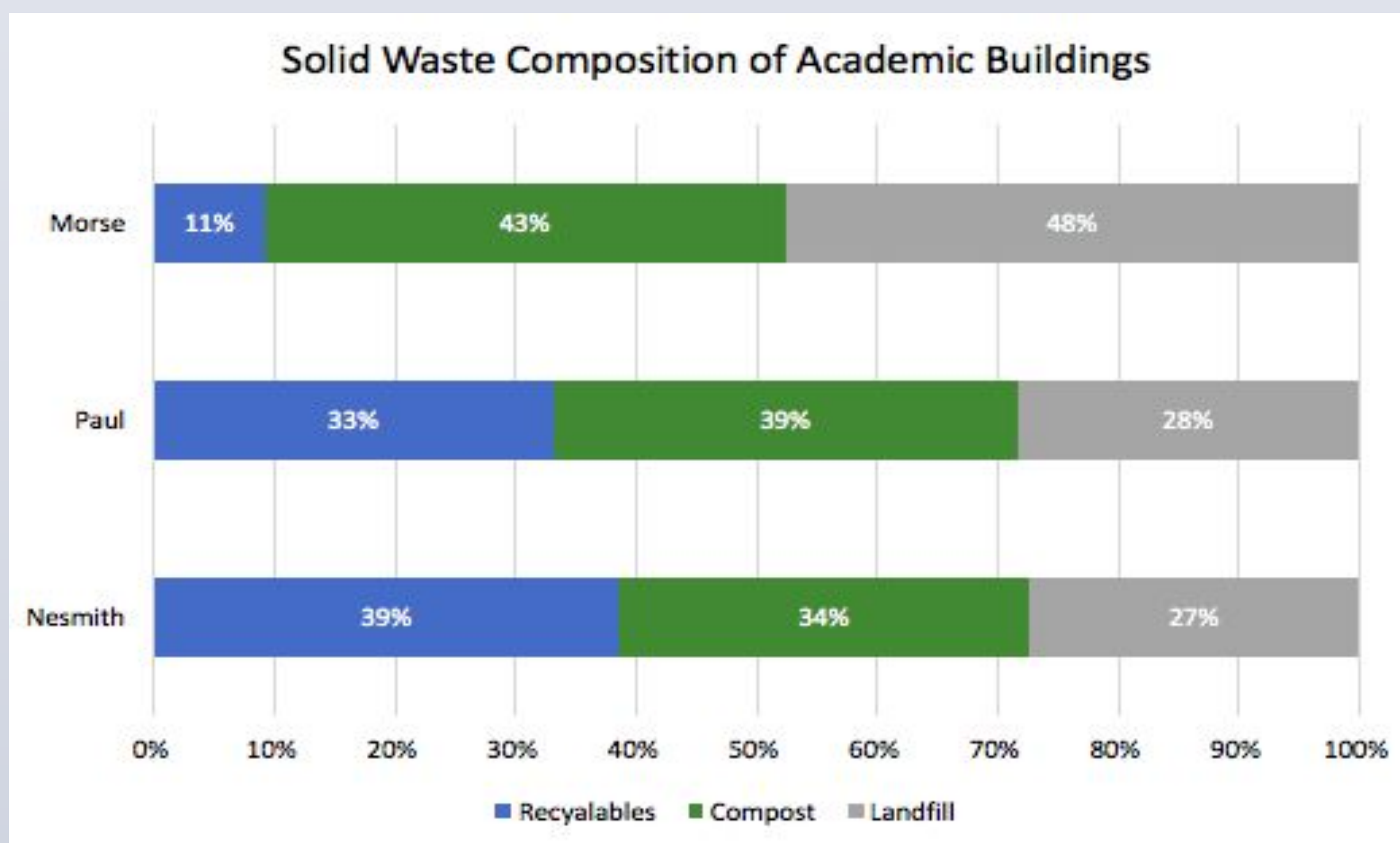


Figure 2. Solid waste composition of recyclable, compostable and landfill waste from each academic buildings

DISCUSSION

- This data suggests that **68%** of waste from the academic buildings could be diverted from landfill.
- 29%** of solid waste is currently recyclable. If a market existed for all #1-7 plastics, this percentage would increase to **34%**.
- Expanding the composting program to include food waste, compostable containers, utensils, and paper towels from academic buildings could account for **39%** diversion from landfill.
- A large number of non-recyclable items we found were plastic coffee cups and straws (plastics #1-7). Behavioral and purchasing change could lead to a dramatic decrease in the amount of plastics entering the waste stream.

NEXT STEPS

Recommendations for a future auditing study:

- Continued audits to understand patterns over time
- Record data in volume as well as weight
- Intercept study to understand recycling behavior

Recommendations for waste minimization:

- Purchasing and behavioral changes are needed to minimize plastic #1-7 usage
 - Compostable and reusable coffee cups as an alternative
- Have an accessible composting program throughout UNH
- Minimize the numbers of bags being thrown away
- More effective signage for recycling bins

REFERENCES

- Powley, L. (2017). A Zero-Waste Planning Guide University of New Hampshire. *UNH Sustainability Institute Fellow '17,1-29*.
- University of New Hampshire OP-19: Waste Minimization and Diversion. (2017, July 27).
- Post Landfill Action Network. (n.d.) *PLAN: Waste audit manual*. Dover, NH.