The Office of Sustainability conducts waste audits to assess how far current consumer practices fall from ‘ideal’ waste sorting. These audits provide valuable insight into student behavior, allowing the Office of Sustainability to evaluate the effectiveness of strategies for improving waste diversion on campus. Waste audits also provide insight into staff practices that may have an effect on waste diversion rates.

Waste Audits are conducted by student volunteers and Office of Sustainability interns. The students receive and sort two full pulls of all three waste streams (compost, recycling and landfill) weighing the waste both before and after the sorting process.

Conducting multiple Waste Audits in the same locations on campus illuminates changes over time in student waste sorting practices. Outreach efforts are a huge part of improving student waste diversion, and looking at waste audit data can help inform future Office of Sustainability outreach.

**OUTREACH EFFORTS**

**Green Ambassador Program**
- Piloted in 2013 and installed as an annual program.
- 20-30 student “Green Ambassadors” helped to introduce incoming students to sustainability at Washington University.
- During regular meal hours for orientation and the first month of the semester, the Green Ambassadors stood adjacent to the waste disposal areas at major student dining facilities on the Danforth Campus (the DUC and Bear’s Den).

**Spring 2014 Compost Ambassador Volunteers**
- Student volunteers provided assistance with waste sorting in the first weeks of the spring semester.
- Outreach was a follow up to fall 2013 Green Ambassador efforts, although shifts were not covered as thoroughly.
- Outreach was expanded to The Village eatery during peak meal hours.

**Green Waste Stations**
- Many large events on campus (Convocation, WILD, WUStock, Thurtene) have converted from traditional waste disposal to Green Waste Stations, volunteer-run stations that ensure waste generated by the event is properly sorted.
The majority of the Office of Sustainability’s outreach efforts for waste sorting have taken place at the Bear’s Den eatery (BD) on the South 40. In order to understand the effectiveness of the outreach, The Office of Sustainability has conducted five waste audits in BD spanning over two years.

**DECEMBER 2012**

The waste audit in December 2012 was conducted prior to any student outreach in order to set a baseline. 50% of waste was being sorted into landfill, despite only 8% of all waste being disposed of needing to be sent to the landfill, and the compost was less than half what it should have been.

**SEPTEMBER 2013**

The September 2013 waste audit was conducted at the end of a month of Green Ambassadors helping students sort waste properly at BD. Green ambassadors were helping students sort the waste at the time of this audit. The success of the Green Ambassador program is reflected in the results of this waste audit - waste sorting was nearly ideal. Some of the recycling contamination shown consists of to-go boxes which can be either composted or recycled (this data was separated in following waste audits).
The October 2013 audit was conducted a month after Green Ambassador outreach ended. In other words, the students at BD had been sorting their own waste without any help for a month. The results of the audit show that the Green Ambassador program had a positive effect on student behavior that lasted beyond the direct outreach period.

Several months after the end of the Green Ambassador program, students’ waste sorting habits were still noticeably better than before any outreach was conducted. The amount of waste being sent to the landfill was still almost half of the amount being sent to landfill in December 2012. However, the decline in waste sorting habits suggests that a second round of outreach at the start of the second semester would improve student waste sorting practices even further.
By the end of the second semester following the Green Ambassador pilot, student waste sorting practices had declined further, but were still improved from the results of the first waste audit more than a year prior.

A common trend throughout the Bear’s Den waste audits is a high contamination rate in the recycling stream. The recycling stream has a 25% tolerance, meaning that when the contamination rate is higher than 25%, the recycling is no longer accepted by WUSTL’s waste contractor. In the first waste audit in December 2012, the contamination was at exactly 25%. In the waste audit with Green Ambassador’s present, contamination was 55% (although some of this may have been to-go boxes, which are accepted in both the compost and the recycling streams). In the following waste audits the recycling contamination rates were respectively 51%, 60%, and 57%, excluding to-go boxes.

With this information, The Office of Sustainability can inform future outreach at Bear’s Den to focus on reducing recycling contamination rates.
The Village has low diversion rates from landfill as well as high levels of contamination in the waste that is being diverted. Only 8% of waste produced at The Village should be sorted into the landfill, but in practice over half of all waste is put into the landfill.

After a small Compost Ambassador outreach effort in the Village at the beginning of the Spring 2014 semester, the waste sorting practices were not greatly changed. The recycling rates were collosally low at 5%, of which 94% was compostable material.

The Village waste sorting practices could use significant improvement and would benefit from a concentrated outreach effort. It is possible that when students move from the South 40, where outreach has been concentrated, to The Village that they will bring their waste sorting best practices with them.
The largest issues with the back of the house sorting at The Village are the over use of the landfill, and the fairly high contamination rate in the recycling. The composting is assumed to be sorted correctly as it is placed into a pulper which cannot accommodate non-food items.

The biggest focus area for The Village Kitchen should be ensuring that staff know the guidelines of what is recyclable and what must be sorted into the landfill. Ensuring that landfill and recycling bins are paired together and both are easily accessible may help with sorting practices, as well.
Waste sorting practices in the library would be greatly improved by providing access to composting.

The library recycling stream has a high rate of contamination that could be improved by ensuring that signage is prominent and accurate.

The library has not been the site of any outreach efforts towards students or staff. In order to learn more about waste sorting practices at the library, it would be helpful to assess the infrastructure and signage that exists, conduct further waste audits, and conduct outreach.
Bin Liners
Making sure all bins are being lined with the correct type of liner bags is a simple way of optimizing waste sorting practices. Coordination of correct liners is essential for clear communication and easy visual auditing throughout the waste sorting and disposal process.

Staff Training
Staff must be aware of all waste sorting practices. Ensuring that waste is properly sorted is an essential part of the job description of the staff. Awareness of discrepancies can help everyone to make small changes in order to divert a greater amount of waste from the landfill, which can save Bon Appetit money and save landfill space.

Ensure that staff know to ask whether a customer would like their meal to be served “For here or to-go?” Reminding consumers of the option of receiving their meal on a plate may help to reduce the number of unnecessary to-go boxes that are used. Ensuring that plates and Eco To-Go boxes are easily accessible for staff members who will be serving food can facilitate this.

Accessibility/Layout
Bear’s Den - Landfill bins in Bear’s Den are the first bins available when students enter the waste sorting/plate return area. Because of this, landfill bins are most accessible to students. It is possible that if bin locations were rearranged to place either compost or recycling bins closest to the entrance that students would be forced to sort their waste more consciously and effectively.

The Village - There is no central waste sorting area in The Village. As a result, plate return is not always available, and there is limited room for comprehensive signage. The scattered nature of the waste sorting areas in The Village also makes targeted outreach more difficult. Waste sorting would have a stronger emphasis if there was a significant area devoted to the process, as in Bear’s Den.

Kitchen - Staff practices might also be improved through accessibility. Landfill bins must always be paired with recycling bins in the kitchen. In the docking area of some eateries the landfill compactor is more directly accessible than the recycling receptacle, which may account for some of the inaccurate sorting practices that have been observed.

Library - Providing access to composting in the library would be an easy way to improve waste diversion rates in the library. Improving signage and labeling of recycling facilities may improve recycling contamination rates as well.
Purchasing
Consistent purchasing habits are critical when it comes to disposable service ware. When a new or different product must be purchased, it is essential that it can be disposed of in the same way. For example, the clear plastic water cups in The Village are sometimes compostable, and sometimes recyclable. When purchasing is inconsistent, everyone is more likely to be confused and to sort items incorrectly.

Much of the contamination in the compost and recycling streams comes from items such as disposable forks, coffee cup lids, condiment cups, and other landfill items that are often included with recyclable coffee cups or compostable to-go boxes. Ensuring that the smaller add-on items are disposable in the same way as larger items will reduce overall contamination.

Signage
Although Bear’s Den has accurate and thorough signage, many of the eateries on campus do not. The signs on The Village compactors do not match the new waste labels that are being used on compactors in other locations like Whisper’s Café and Café Bergson. There is no clear signage in the DUC to indicate that composting is available. Updating this information is important for consistent communication. Additionally, a more comprehensive display at large eateries around campus comparable to the display in Bear’s Den would help clarify waste sorting.

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