

Getting Serious About Sorting: Managing Our Waste

**Campus Sustainability Planning Studio
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1.0 Executive Summary

1.1 Problem

Western Washington University is in need of more waste sorting stations on campus. Currently, 85% of the landfill waste generated on campus is either compostable or recyclable. This material could be diverted from the landfill if the appropriate infrastructure was more available across campus.

1.2 Solution

Our proposal to Western is to create an intermediary sorting station solution by combining the AS Recycle Center's 55 gallon blue barrel system with the CleanRiver Recycling Solutions* sorting stations already in use by Facilities Management. By combining the CleanRiver stations and the blue barrels, Western can create more stations across campus in a shorter amount of time. This solution allows Western to continue to purchase CleanRiver Recycling Solutions sorting stations, the current campus standard for indoor waste management containers, and to complete the four bin CleanRiver sorting stations over time as the funds are available.



We propose to pilot two of these combination sorting stations in the SMATE building on campus. This location was chosen because there is enough room to accommodate the new stations, the coordinating blue barrels are already in the hallways, and it presents an opportunity to educate students about Western's waste management efforts due to the large volume of students that participate in lecture classes in SMATE throughout the day.

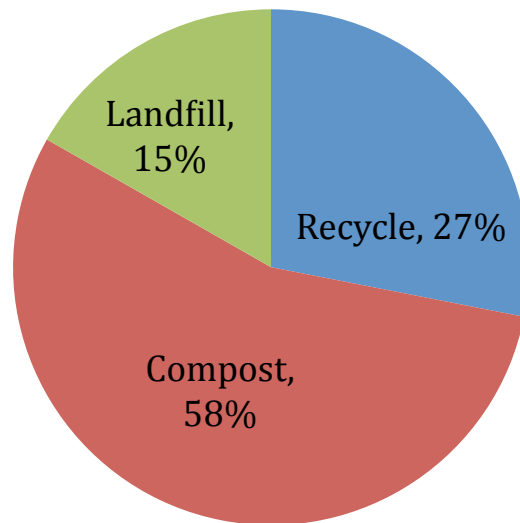
1.3 Funding Requirements

Facilities Management needs to be able to provide CleanRiver sorting stations across campus and currently is not allocating funds due to budget restrictions. Through supporting the SMATE pilot project, Facilities Management can double their purchasing power and move towards creating more stations to fully equip campus. The cost of the Pilot would be approximately \$2150, the purchase of two landfill and two compost bins from CleanRiver Recycling Solutions. This does not include labor, station liners or the cost of evaluation.

2.0 Statement of Need

Western Washington University needs to expand the availability of waste sorting stations on campus. According to aggregate waste audits done from 2009-2011 by the Air and Waste Management Association, 85% of the landfill collected in academic buildings on campus is incorrectly sorted materials. This breaks down into 58% compostable materials and 27% recyclable materials. This suggests that students, faculty, and visitors to Western's campus are struggling to effectively sort their landfill waste.

Landfill Waste Composition 2009 - 2011



In a focus group conducted on Western's campus in ANTH 454 Participatory Action Research, a randomly selected half of the class was asked to talk about their experience with the CleanRiver Recycling Solutions sorting stations on campus. The students reported being frustrated that they could not find a sorting station when they needed one and stated that Western's campus did not have enough stations. Many students also expressed feeling guilty if they had to put an item in the wrong container. This focus group suggests that students at Western would like to see more sorting stations available across campus.

The current waste sorting solution on campus is a set of four sorting bins created by CleanRiver Recycling solutions*. These include landfill, mixed paper, glass/aluminum/plastic, and compost. The four bins are modular so they can be moved to where they are needed most on campus. They are made from 98% recycled plastic and are purchased through WWU Facilities Management.



The cost of purchasing four bins is about \$2150. This breaks down to \$400 per bin plus \$550 in shipping. The main problem is that Western has not allocated enough funding to buy enough complete stations to sufficiently meet campus needs due to budget cuts.

The Western Washington University Sustainable Committee defines sustainability as protecting the local and global ecology, upholding social equity, creating economic vitality, and maintaining human health. Diverting compostable and recyclable items from the landfill protects our local and global economy by encouraging reuse of valuable resources to help prevent over exploitation of our environment. Western shows its commitment to social equity by responsibly dealing with campus waste. Western, as a large institution, has a unique opportunity to better our community through education and waste reduction and management. Economically, the AS Recycle Center and Facilities Management are invaluable to the university and deal with most of the waste campus creates. By making a decision to increase their presence and efforts on campus Western encourages awareness and responsible choices among the students and staff. By educating those who pass through Western, our university sends people out into the world with a unique perspective that there is no “away” that we can throw our trash. The efforts Western makes to continue to expand their waste management efforts can continue to inspire other institutions to follow suit and create a cleaner, healthier world.

Western has an incredible opportunity to encourage more participation in waste sorting and diversion efforts on campus, which will increase the amount of compostable and recyclable waste being sent to the landfill.

3.0 Project Description

3.1 Objectives

To provide Western with the best option for recycling, trash, and compost sorting stations on campus to increase the student, faculty, and visitor participation in Western's waste management efforts.

3.2 Methods

Pilot Project

Idea 1: Combination stations

The best solution is a combination of the current blue barrel system used by the AS Recycle Center and the CleanRiver sorting stations. The blue barrels are already in use and have proved over the last 70 years to be incredibly effective in handling the amount of recyclable material that Western's campus creates. Also, they cost approximately \$5 per barrel as opposed to \$400 per bin. By combining the CleanRiver stations and the barrels, Western can double the amount of stations provided and also allow the opportunity to add to the sorting stations over time to create the four bin CleanRiver station as money can be attributed.

We propose to pilot two of these combination sorting stations in the SMATE building on campus. This location was chosen because there is enough room to accommodate the new stations, the coordinating blue barrels are already in the hallways, and it presents an opportunity to educate students about Western's waste management efforts due to the large volume of students that participate in lecture classes in SMATE throughout the day.



Idea 2: Station made entirely of blue barrels

An alternative solution would be a sorting station created completely out of the blue barrels. This would be much less expensive, \$20 for a set of four bins, and would provide an excellent opportunity to educate the wider campus community about the work the AS Recycle Center does on campus. Although this idea would be much less expensive, this solution is not our first choice because these four bins take up a very large amount of space in a given area. They would be overwhelming in certain areas across campus and are not as aesthetically pleasing as the CleanRiver stations.



Idea 3: Blue barrel enclosure



In addition, we discussed the possibility of enclosing the blue barrels in a structure to make them more aesthetically attractive. The AS Recycle Center already has a design for an enclosure and is currently working on getting a cost estimate. The photograph included below are the existing structures on campus the AS Recycle Centers new design is intended to replace. This design was specifically made to accommodate the dorms but could also be used in other outdoor areas on campus. Though this station is intended just to accommodate paper, plastic/glass and cardboard, we feel compost could easily be included as well.



When investigating different waste and recycle bin options available commercially, we compared six different criteria that we thought were important. These include cost, durability, capacity, color coordination/aesthetics, ease of use/signage, and sustainable materials and production processes used. The commercially available options did not fit enough of the categories to be the best option for Western. Most of the options that cost significantly less left too much to be desired in the realm of aesthetics, ease of use, and dedication to sustainability.

Another issue was that most of the bins are only available in sets of three rather than four. They are either designed for use with a single stream recycling system or does not accommodate compostable waste. The table below shows two of the best commercial options we found and a comparison of the criteria we thought was important to Western.

Commercially Available Options

	Cost	Signage	Sustainable production/materials
	\$179.95/unit	Room for signage on unit Room for signage above	No mention Made of steel
	\$146/3 bin unit	Room for signage on unit Room for signage above	Made of 100% recyclable polyethylene

3.3 Evaluation

To evaluate our pilot in SMATE, we will give student surveys to receive input asking them if the sorting stations were effective in helping them sort their trash, if they like the look of the station and many other avenues of inquiry. We also will speak to the custodial staff and AS Recycle Center to get their input as well either through informal interviews or surveys as well.

3.4 Sustainability

Again this proposal is intended to be an intermediary solution rather than a permanent one. This solution offers Western an opportunity to equip campus with more sorting stations in a shorter amount of time while allowing them to also stay true to their campus standard over time. Western can continue to complete CleanRiver sorting stations as funds can be allocated. In the mean time Western can increase their commitment to landfill diversion with more sorting stations across campus.

4.0 Budget

The cost of the Pilot would be approximately \$2150, the purchase of two landfill and two compost bins from CleanRiver Recycling Solutions, plus the labor to place them. Facilities Management custodial staff along with AS Recycle Center staff already empty landfill and recycle containers in this building so additional staffing is not expected to be necessary.

5.0 Future Thoughts

In the future we would like to see waste management efforts to continue to expand on Western's campus. We would also like to see more education provided to students, staff, and faculty about recycling and composting efforts on campus.

6.0 Conclusion

As we have said, the landfill waste created on Western's campus is comprised of 85% divertible materials. This gives Western a unique opportunity to make a positive difference regarding this issue. In fact, since Western has established itself as a university dedicated to working towards sustainability, it is their duty to manage their waste in a responsible manner. This is why the issue of sorting waste is so important for Western's campus at this time and needs to be addressed.

External Link:

*More information about the CleanRiver sorting stations can be found at http://www.cleanriver.com/recycling_and_waste_containers/Recycled_Plastic_Bins/products/555.aspx