Mercer University

Campus Waste-Diversion Rate

To: Russ Vullo, Vice President of Facilities at Mercer University
From:
Subject: Feasibility of choosing a method to increase the campus's waste-diversion rate
Date: 21 June 2011

Background

Currently, the Macon campus of Mercer University has a waste-diversion rate of only 10 percent. This means that of all the waste produced that is either recyclable or compostable, only one tenth is actually being recycled or composted. By raising the percentage of waste being diverted to recycling or composting, the campus will not only be helping the environment but will cut down on the amount of waste produced, saving on space and on the cost of waste disposal. As a student in technical communications department, I was asked to research ways to improve the school's waste-diversion rate. The following report will explain the steps in my research, my conclusion, and my recommendations based on my chosen relevant criteria.

In my report I compare three options for increasing the amount of waste diverted: pulping and composting all food scraps produced by the dining facilities, implementing the recycling of more materials by the dining staff, and providing recycling receptacles for consumer use in all dining locations and all residential and academic buildings. All three options will decrease the amount of recyclable waste being discarded improperly and are popular among other green university campuses.

Conclusion

Although I believe that Mercer University should ultimately implement all three of the solution alternatives, the option I believe should be employed first is placing recycling receptacles in all dining, residential, and academic buildings. This solution is easy to implement and maintain, and while it costs the same as it would to collect recycling from the food preparation staff, more recyclables would be collected which would greater impact the school's waste-diversion rate.

Criterion

When considering the implementation of one waste-diversion method over another, four criteria need to be assessed:

1. Cost
2. Ease of Implementation
3. Maintenance
4. Effectiveness

Relevance of Criterion

Before deciding on any of the solution alternatives for increasing the waste-diversion rate on campus, there must be an understanding of the involved criteria. The criteria were chosen based on Mercer's interest in creating cost-efficient, effective ways to improve their "green report card."

Cost

The cost of each of the solution alternatives must be considered when determining which should be implemented. Not only should the price of the necessary equipment be evaluated, but the cost of the added labor required to help run the solution program and other associated costs must also be taken into account. Also to be considered is the amount of cost being compensated by the reduction in waste removal needed and by the lessened negative impact on the environment.

Ease of Implementation

In deciding on a solution to increasing the waste-diversion rate, it is important to think about which plan can be started up quickest and easiest. The sooner the solution can be put into place, the sooner its effects will be seen.

Maintenance

How easily a waste-reducing program is maintained plays a major role in whether or not that program will be implemented. A program that provides some increase in waste-diversion and is easily kept up-and-running may be chosen over another program that may provide a higher increase in waste-diversion but requires a lot of maintaining. There needs to be more gain from the program's outcome than there is difficulty in keeping it running.

Effectiveness

While it is important for a solution alternative to be affordable and easily maintained, it must also be effective. The main goal of implementing a recycling or composting program is to increase the waste-diversion rate, so the more a program increases the amount of waste diverted, the more likely that alternative is to be chosen over others.

Comparisons between composting, recycling by food staff, and recycling by students and administration

The comparisons are made based on the four criteria, and determine which alternative would be best to implement first on Mercer's Macon campus.

Pulping and composting all food scraps produced

Composting as a form of recycling is quickly spreading among college campuses across the nation. An alternative to dumpsters and garbage disposals, a pulper reduces the food waste to very small pieces and extracts all liquid. The pulped waste takes up less space than unpulped food waste, making storage and removal easier. The pulped waste is then composted, and the compost can be either sold or used to grow vegetables that can be used in the campus's dining locations. The average cost of a pulper is $25,000, and the program would require staff to sort the waste to be pulped. However, these costs would be offset over time by a reduction in the cost of waste removal, the possible sale of the composted food waste, and the savings from growing food that previously had to be purchased.

Implementing the recycling of more materials by the food preparation staff

Currently, the only recyclables being separated from the waste produced by the dining facilities on Mercer's Macon campus are paper and cardboard. This means that all food containers, eating utensils, and other waste made of aluminum and plastics that could potentially be recycled are being disposed of improperly. By having the dining staff separate aluminum and plastic in addition to paper and cardboard, the school will not only be increasing waste diversion but will be decreasing the amount of garbage to be picked up by waste removal. To have recyclable waste removed from campus costs approximately $1500 per month, but Mercer is already having some recycling removed so the added costs to what the university is already paying should be minimal.

Providing recycling receptacles in all dining, residential, and academic buildings

While there are currently some recycling receptacles available to consumers on campus, they are not available in all dining locations, nor are they available in all residential and academic buildings. While the need for recycling containers in dining facilities is obvious, recyclable waste is also being produced in students' homes and in faculty's workplaces. The average American drinks at least 2.5 cans of soda per day, many of these while at home or work. By providing a means to recycle cans and bottles in these places, many recyclables can be diverted from improper disposal. The recycled waste can then be collected and picked up with the recycled material already being removed from campus, making added costs minimal.

Matrix Analysis

The matrix below shows the values assigned to each solution alternative for each of the criteria. Based on a scale of 0-10, each category is assigned a score.

	Composting	Recycling by Dining Staff	Recycling by Students/ Faculty
Cost	7	8	8
Ease of Implementation	8	9	8
Maintenance	6	9	8
Effectiveness	8	7	9
Total	**29**	**33**	**33**

Conclusions and Recommendations

Based on the need to increase Mercer University's waste-diversion rate, accompanied by the research and evaluation criteria discussed in this report:

> I recommend that Mercer University implement a program to install recycling receptacles in all dining, residential, and academic buildings to increase the rate of waste being diverted.