

Residence Hall Recycling Initiative
Michigan Technological University Sustainability and Resilience Initiative Grant Proposal

1.0 Project Summary

1.1 Description of Project

The Residence Hall Recycling Initiative team (the team), consisting of nine students spread across five departments, plans to distribute recycling bins throughout the Residence Halls to ease student, staff, and visitor accessibility to recycling. This involves putting a small bin in each Residence Hall room, as well as larger bins throughout the buildings in locations that are near normal trash routes for Facilities Management. The team has already gained responsibility of 450 small recycling bins from the Inter-Residence Housing Council (IRHC). The intended outcomes of this project include increased recycling rates in the residence halls, and a higher level of recycling understanding among students.

1.2 Proposed Timeline

January 10th, 2020 - Implementation of large and medium bins

August 22nd, 2020 - Implementation of small bins

August 23rd, 2020 - Begin educating residents and community on the importance of recycling

2.0 Statement of Need

The Michigan Technological University Residence Halls currently have very limited recycling access. Currently, students can check out a small recycling bin to keep in their room all year; however, there are only about 450 recycling bins available to students and 1100 rooms. When the bins are full, all recycling must be brought to the reception desk in each building. Each reception desk has one large recycling bin into which all recyclable materials are emptied. This large bin is then taken to the recycling compactor by Facilities Management at their convenience.

The issues with the current system are plentiful. There aren't enough recycling bins for every room and students must go out of their way to check out a bin. To make matters worse, they then must go out of their way to bring their recyclables to the Reception Desk, and often the Reception Desk staff have to turn students away because the bin at the desk is full. The Reception Desk staff also have to call Facilities Management frequently to have them empty the bin, which causes an inconvenience for Facilities Management staff. These issues are shown by the numbers. Out of 207 bins at the Reception Desks, only 110 bins have been checked out by residents as of October 21st, 2019.

The team sent out a survey to assess the desire for recycling in the Residence Halls. The survey was sent to a variety of groups on campus, and 422 responses were received. Of these students, 96% had previously lived or are currently living on campus. Additionally, about 37% of these students weren't aware that small recycling bins were available for checkout from the Reception Desks. The team's plan to increase education about the subject should make more students aware of their options. Lastly, out of all the students who have filled out this survey, about 91% of them have indicated that they agree with the following statement: "I would recycle if provided a recycling bin in my Residence Hall room." This shows that the team's plan to implement recycling bins is not only needed, but desired by students.

3.0 Impacts

3.1 Environmental Impact:

In two years, the Sustainability Demonstration House has collected data on their waste, recycling, and compost usage. During the first year in 2017, 23% of waste was recycled, 5% was composted, and 72% was garbage. In 2019, 43.8% of waste was recycled, 29.6% was composted, and 26.6% was garbage. Credit is given towards recycling education.

Douglass Houghton Hall (DHH) currently has large recycling bins on each floor. An audit was done by Jay Meldrum, Director of Sustainability, over the span of four months to determine how much of the waste in the building was being recycled. The data shows that an average of 16% of the waste in DHH was recycled, while the rest was garbage.

3.2 Educational Impact:

The team will be utilizing student staff within Residence Education and Housing Services (REHS) to relay recycling education and its importance to residents. Education for all students will be both passive and active. Passive education includes stickers on each bin which outline current Waste Management guidelines. Active education includes a presentation to all first year students during Orientation Week. Facilities Management will be given a presentation on the topic of recycling in the Residence Halls. Off campus students will have the opportunity to receive education from a day long booth on campus once a semester relating to recycling initiatives on campus.

4.0 Affected Community

4.1 Target Population:

This project targets the current 2406 students who live in Wadsworth Hall, McNair Hall, Douglas Houghton Hall, and Hillside Place, as well as future residents. The team also hopes that students will carry recycling knowledge with them as they move off campus.

4.2 Partnerships:

The team has partnered with Facilities Management, Residence Education and Housing Services, IRHC, and Reception Desk staff within the Residence Halls. The team's specific contact is Courtney Archambeau, a full-time REHS staff member who is also in charge of Sustainable Initiatives in the Residence Halls (SIRH). Partnerships outside of the residence halls include the Alternative Energy Enterprise, the Green Campus Enterprise, and the Society for Environmental Engineering.

5.0 Evaluation

The success of this program will be measured by the integration of recycling bins into every Residence Hall room in Wadsworth Hall, West McNair Hall, East McNair Hall, Douglass Houghton Hall, and Hillside Place as well as large recycling bins in common trash areas. The frequency with which recycling compactors are emptied both before and after the recycling program implementation will be received from Waste Management to measure the increase in recycling. A follow-up survey will be sent out to residents following program implementation to measure perceived success of the program.

6.0 Budgetary Information

It is planned to purchase six medium sized bins for McNair Hall and six large bins for Wadsworth Hall for general collection. A total of 756 small bins will be purchased to accommodate the 656 needed to satisfy the goal of having one bin in each of the Residence Hall rooms, with 100 extra bins allotted for extra supply. For the purposes of this grant, the team is only requesting enough money for 656 small bins, six medium bins, and six large bins. Funding for the extra 100 bins will come from Residence Education and Housing Services. It is also planned to attach educational stickers to each bin to ensure that recycling rules are reinforced.

This budget is based upon the assumption that recycling bins within Residence Hall rooms do not need to be fire retardant. However, the team is awaiting confirmation from Chris Maxon, Department of Environmental Health and Safety.

For the purposes of this grant, the team is requesting a total amount of \$4,981.66 for the items listed in bold below. It is expected the rest of the necessary funding will come from Residential Education and Housing Services.

Table 6.1. Description of items and corresponding prices needed to complete the project.

Item	Price Per	Qty	Total	Description
Small Bin	\$5.69	656	\$3,732.64	7 gallon blue bin
Medium Bin	\$62.17	6	\$373.02	50 gallon blue bin with wheels
Large Bin	\$146.00	6	\$876.00	95 gallon blue bin with wheels
		Total Cost	\$4,981.66	
Small Bin (Extra Supply)	\$5.69	100	\$569.00	7 gallon blue bin
Small Stickers (5"x7")	\$0.69	1250	\$865.00	
Large Stickers (8.5"x11")	\$3.58	40	\$143.00	
		Including Stickers	\$6,415.66	

7.0 Contact Information

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