



2021 Campus Race to Zero Waste Case Study Competition

Case Study Template

Please focus your case study on one component of your Campus Race to Zero Waste competition. This could be your outreach and marketing strategies, fundraising strategies, techniques to engage key campus stakeholders to ensure success, connecting with off-campus partners, key events or gatherings, incentives for engagement, etc. Winners will be recognized in four categories:

- Education and awareness campaign
- Waste minimization
- Food waste reduction
- Summary of Waste Reduction Efforts (more than 1 project/effort, over at least 1-year timeframe)

Note: Submissions for the 2021 Campus Race to Zero Waste Case Study Competition will be used as a best practice resource at www.campusracetozero.org.

1. Contact info (name, department, school, email, phone)

Dawn Roerink
Facilities Management Services
Carnegie Mellon University
droerink@andrew.cmu.edu
412.268.2586

2. Focus of Case study

Carnegie Mellon University waste/recycling monitoring, reduces services during 2021 CR2ZW and earns a big cost savings.

3. Detailed description of campaign or effort:

Remote learning for the spring semester during the 2021 CR2ZW contest created an opportunity to closely monitor our waste and recycling service collection process with focus on the operations process, instead of centering on education and waste reduction behaviors.

Typically, our campus concentrates on building capacity for trash and recycling, due to the greatly reduced population from the Covid-19 pandemic we were faced with a set of new challenges for waste and recycling service management.

Daily population decreased from 17,700 to 6,843.

Staff	1,140
Faculty	423
Student	4,915
Other	365
TOTAL	6,843

Pre-scheduled roll off contractor service was cancelled and changed to an 'on call' service and monitored once per week. However, the commercial dumpster service was more difficult to gauge, so we started initially by cutting the service in half. Prior to the CR2ZW we created a daily log for monitoring all of the outdoor site locations and dumpster fullness levels. This log provided us with a means to manage the rotations. Custodial Services managed the actual daily visual observations and completed a daily log which was forwarded to Staff for scheduling the full container rotation service. We used the log for all waste and recycling during the CR2ZW competition and found we eliminated unnecessary service rotations.

4. Planning steps & timeline to implement:

At the onset of the pandemic we cut the commercial dumpster service in half and roll off service to 'on call'. With the reduction of the winter term population, in January 2021 we developed the Daily Log and implemented the process on February 4th 2021. We observed the fullness of the containers and managed the number of service rotations of the commercial waste and recycling dumpsters. After making some minor adjustments to the log we initiated the 1st rotation service adjustment on March 3, 2021.

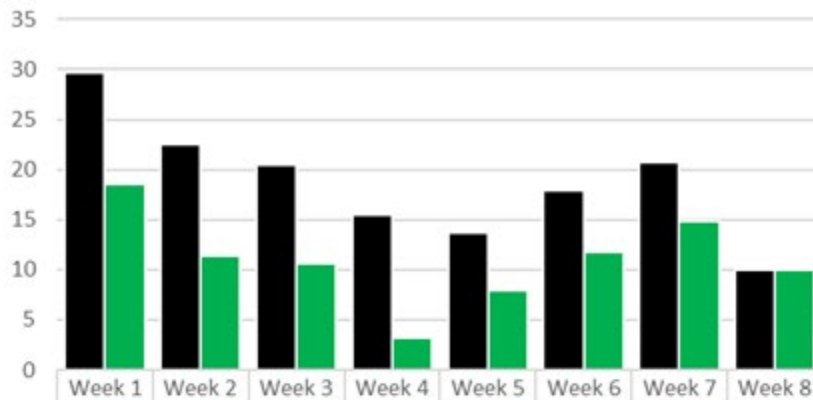
5. Resources and stakeholders involved

We utilized existing services and created an opportunity to retain employment of a Custodial Service Porter for half day to drive to all campus locations and complete the daily log. A Staff member then took the log information and recorded for use in monitoring and scheduling any needed service rotations.

6. Describe the Results of this campaign component

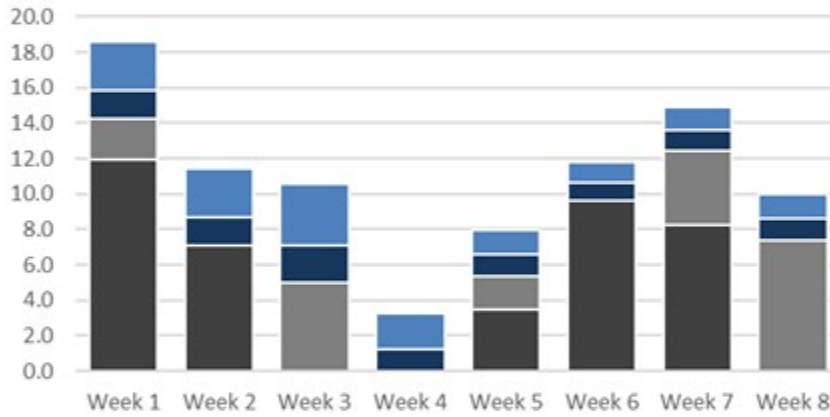
The following graphs show the impact of the adjustments implemented March 3rd, we recorded a 41% reduction overall and a savings of an additional \$5k per month that we could realize over the next 5 months. With the cost savings we were able to purchase 5 new Bigbelly double station units and more composting bins for our dining halls.

Tracking Reduced Recyclemania Trash 41%



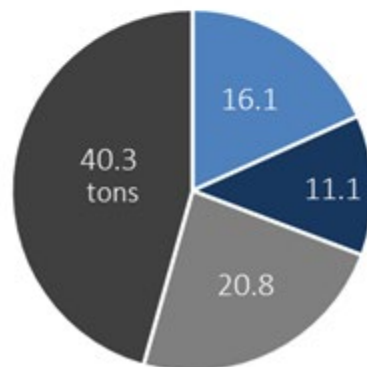
■ Original	30	23	20	15	14	18	21	10
■ Updated	19	11	11	3	8	12	15	10

Weekly Trash By Source (tons)



■ Housing Roll Off ■ Gen Ops Roll Off ■ Housing ■ Gen Ops

Roll Off Dumpsters = 69% of Total Reported Trash



■ Gen Ops ■ Housing ■ Gen Ops Roll Off ■ Housing Roll Off

7. What would you do differently in the future?

As we are planning for a fall and 90% staffing and student occupancy levels, we see opportunities in the future to use the log as a tool in a normal environment. Moving forward, we will use our daily log to review the entire waste-recycling scheduling removal service.

8. What advice would you give to another college that wanted to do a similar effort?

Create a monitoring system and observe for a month to research any cycles that happen on particular days or weeks which will help create a schedule for services.

9. Photos and Graphics

Please include photos and other visuals below, examples could include social media posts, posters or other graphics related to the project. Include captions where necessary. Please include credit information for all photos.

*Please email completed **Word** template form and attach supplemental documents (photos, newspaper articles, website links, etc.) to CR2ZW@nwf.org with "Case Study submission" in the subject line. **Case study submissions are due no later than Monday, May 31, 2021.***