



## 2024 Campus Race to Zero Waste Case Study

### University of California, Irvine

#### Contact Info

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#### Focus of Case study:

Facilitated a robust dining hall event that accounted for both the average post-consumer food waste and total back of house kitchen diversion metrics.

#### Detailed description of campaign or effort:

UCI Dining participates in waste reduction practices, including composting food waste that is taken to a local processing center, where it is pulverized by Centralized Organic Recycling equipment. Each of our two dining halls participate in two Wiping Out Waste events each per quarter. One event is held in Week 2 and a second event is conducted during Week 9. For the purposes of this case study, only information from the Anteater dining hall will be analyzed. Furthermore, the event recorded for this case study is a dining hall-wide event that analyzes post-consumer food waste in addition to the back of house diversion metrics of recycling, compost, and landfill waste.

The focus of this case study took place on March 7, 2024 from 4:00 PM to 8:00 PM near the dish drop station of the Anteater. The information from these events allows us to understand the effectiveness of our student education campaigns around food waste measures. We are also able to analyze the back of house trends to better understand comprehensive dining hall waste reduction amongst both students and food service employees.

The trends indicate a considerable amount of post-consumer food waste in the Fall events with amounts tapering off each quarter throughout the school year. In Fall 2022, we recorded an average of 1.91 oz of post-consumer food waste per person, whereas in Spring 2023 we recorded 1.09 oz of waste per person.

These trends are due in part to our efforts to educate students throughout the school year. Our Green Captain Sustainability Interns consistently encourage students to dine more sustainably by only taking the items that they want, asking for smaller portions, and to go back for seconds if they are still hungry. The Green Captains also host tabling events at the dining halls, with information about sustainable dining practices. Throughout the year, students interact with a myriad of sustainability education to build better dining habits.

## Planning steps & timeline to implement:

### December 2023

- Developed the event idea to expand our Wiping Out Waste event to include all diversion metrics of landfill, recycling, and compost waste throughout a dinner time meal period within our Anteatory dining hall.
- Participated in the Mentor Matchup Program Meetings to gain advice and share strategies to conduct a successful Green Event from a sustainability representative that has been through the competition before.

### January 2024 (Winter Break)

- Notified the Anteatory dining hall managers and chefs of the structure for the newly expanded version of the upcoming Wiping Out Waste event.

### January 2024 (Week 1 of the Winter Quarter)

- Met with our Green Captain Sustainability Interns to let them know about the event and how it was going to be structured within the Anteatory.
- Conversed with Green Captains about tabling best practices for the event.
- Educated our Green Captains on Zero Waste practices, including our “Wiping Out Waste” tips that we use to help educate students about improving their sustainable dining habits.



### February 2024 (Week 6)

- Conducted a walkthrough of the Anteatory to assess the most efficient way of setting up the event.
- Sent another reminder to the Anteatory managers and workers about the structure of operating this upcoming event.

### **March 2024 (Week 9)**

- Hosted the event on March 7, 2024, during the dinner time meal period at The Anteatory with the UCI Dining Green Captain Sustainability Interns.

### **Resources and Stakeholders Involved:**

- One scale for food measurement
- Four reusable clear bins
- Two folding tables
- Two gray compost bins
- Two red landfill bins
- Gloves & aprons
- Four dishrags
- Two black liquid collection containers
- Staff/Volunteers Include:
  - One UCI Dining Sustainability Employee
  - Six Green Captain Sustainability Interns

### **Describe the results of this campaign component:**

#### a. General results:

Wiping Out Waste actively engages all diners that approach the dish drop within the four-hour dining period. Diners interact with Green Captains to learn more about food waste and landfill prevention practices. In addition to visually observing how much food waste is generated. We also note the common food items thrown away during this dining period of the event to help the dining hall staff become more aware of what to serve and improve for future meal options.

#### b. Specific measurable impact:

When considering the specific measurable impact, this event had 1,946 people actively engaged in it. We recorded 140.5 pounds of food waste throughout the four-hour period. Napkins and other non-food waste made up 41.0 pounds and 164.5 pounds of liquid waste.

Upon analyzing the trends from this academic year, it is evident that Fall 2023 waste rates were higher than Spring 2024, averaging 1.63 oz/student. This trend is predictable, with Fall quarters having a high number of newly admitted students, who are not yet educated about waste reduction practices. Results from the most recent event display positive outcomes. Student education has contributed to a reduction

in average food waste per student. Winter quarter rates for the Anteatory are at 1.15 oz/student, a noticeable positive decrease from the Fall 2023 amounts that we have calculated within our data results.

Furthermore, this is the first time we recorded a direct focus on recycling and landfill waste data as part of our Wiping Out Waste event within the dining hall. Landfill results from the back of the house were found to be 32.5 pounds. Recycling waste data showed that 10.5 pounds of waste were generated throughout the event. Since this is the first time the back of house kitchen waste data was recorded, there is not any basis for comparison. Future recordings of this will hopefully display where improvements in the food preparation process of waste management are possible.

### **What would you do differently in the future?**

In the future, it would be beneficial to include signage on the clear food waste collection bins to help direct students to place their waste in the correct bins. We also noticed that the lines at the dish drop became long during rushes, so implementing signage can help speed up the waste sorting process of the event.

Another challenge arose because one of the meal options was dumplings with broth. The disposing of the broth in the waste bucket would create a mess for the dining employees in the sinks of the dish room with the bits of vegetables that we do not want to have them to try to clean up. Therefore, any leftover broth was placed on the dish drop conveyor and thus was not recorded for this event. While we cannot control all variables of these events, we can take the necessary steps to set some clear guidelines by discussing the menu options prior to the event with the dining hall team to avoid foods that we cannot record or look at finding a new way to record such items. This way, our data results will be comprehensive on what food items most students like on the daily menu.

### **What advice would you give to another college that wanted to do a similar effort?**

This event is highly interactive, so make sure to maintain a positive environment for all students. Avoid the instance of shaming those who have excessive food waste. Instead, there should be a focus on working to proactively teach them methods of preventing future waste, such as asking for smaller portions and going back for seconds if they are still hungry afterwards. It is also important to keep track of commonly thrown out items. These are valuable results for the dining teams, so they have tangible evidence to base adjustments to their service operations.

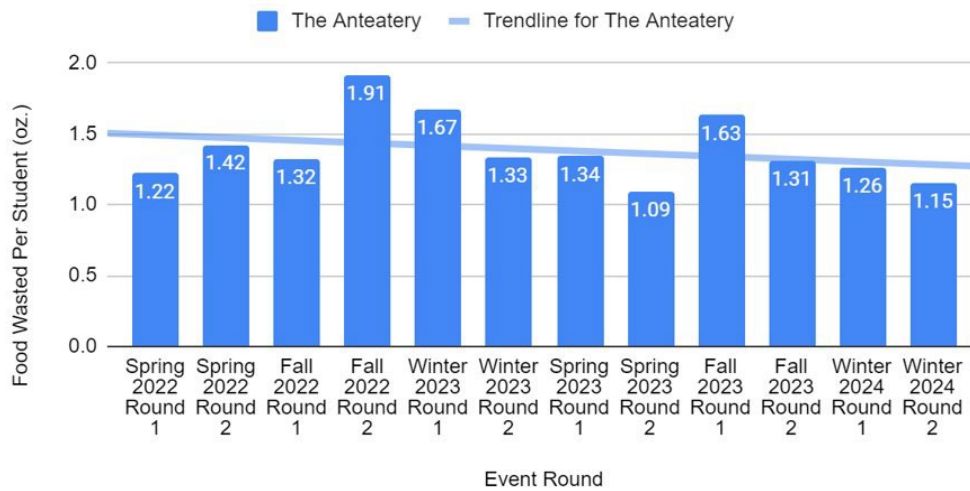
Additionally, attempt to limit the occurrence of confounding variables. As mentioned, the broth served with the dumplings was not measurable in the aspect of how it creates a mess within the sinks of the dish room that we do not want to leave for our dining hall employees to have to try in cleaning it up. Also, for the first hour of the event, the dining hall used cardboard fry cartons instead of the regular reusable containers. This factor attributed to an outlier of a higher amount of landfill waste than usual at these dining hall events. As a result, we found that limiting confounding variables will help in making the data more reliable and consistent.

Finally, we found that it is important to partake in this event more than once to thoroughly analyze trends of food waste throughout the school year. This event provides feedback on food waste education guidelines and insights on which type of items students may or may not be enjoying. By cataloging this multiple times throughout the year, many improvements to our dining location can be made in how we portray our sustainable initiatives.

**Photos and Graphics**

**Quarterly WOW Results for The Anteatory**

Data collected from April 2022 - March 2024



Wiping Out Waste Data Graph – Displays the average food waste results from some of our previous sustainable dining hall events that we have conducted at the Anteatory from Spring 2022 to Winter 2024.



Food Waste Collection Area – Our Green Captain Sustainability Interns stand in front of the dish drop to collect post-consumer food waste that we use to calculate the average amount of food waste per person throughout the event.



Wiping Out Waste Educational Signage – We display this signage to help educate students about the importance of food waste reduction methods and how we can each do it on an individual level with better dining habits.

Back of House Kitchen Compost Chute – The process of disposing the compost waste down the compost chute into the lower loading dock level food waste bins where it is frequently taken to a local processing center to be pulverized by Centralized Organic Recycling systems.