

## ENVIR 480 MEMORANDUM

To: Emily Newcomer (UW Recycling)

From: Terra Miller-Cassman, Shannon Cloud, Gillian Kenagy, and Byron Wenning

Date: March 15, 2013

Subject: ENVIR 480: Inventory Team Memorandum

The purpose of this memo is to inform UW Recycling of the results of our campus compost inventory. We hope that this information will assist UW Recycling's efforts to reach the University of Washington's waste diversion goals.

### Methods:

The methods used to complete this project are simple and repeatable so that as more buildings on campus are surveyed there will be consistent structure and comparable data. The methods were designed to support data entry into a GIS map making the data updatable and accessible.

### **Outdoor GPS:**

When gathering the GPS coordinates of outside compost bins, handheld GPS devices supplied by the Archeology Department were used and standard procedures were followed. Jay Flaming, the Archaeology GSA, assisted us in the GPS training and synchronizing our settings.

### **Indoor Inventory:**

For the inventory of indoor waste infrastructure, a comprehensive excel spreadsheet was used. The categories addressed in this inventory survey were designed to provide accurate information about the location, physical characteristics, and inconsistencies of waste receptacles in buildings (attached). Using these preformed categories will create consistency and comparable data between buildings, but additional categories may be added to supply useful information for any parties or departments that may require further data.

### **Survey:**

The survey was created to determine the waste and compost behavior of students, faculty, staff, and community members in given buildings and to learn how they perceive and use the waste receptacles (attached). The survey consists of twelve questions on one page that requires less than five minutes to complete. Roughly ten surveys were administered in each building we inventoried and a diversity of participants were sought, however our own bias in selecting survey participants may influence the data.

### **GIS Mapping:**

Aaron Chevront and Anthony Nguyen from the UW Capitol Projects Office helped modify the GIS program to provide us easy access to building floor plans and the information necessary to input our data into an interactive map. Both the instructions and software links are connected to this document. *Important: Use ESRI 10.0 NOT 10.1.* The domains have already been established and all of the fields were created to represent the information gathered during our physical inventory. To further this project, assistance may be required to include additional building floor plans to the program. Once the floor plans are added, point locations for the bins can be implemented and the correct descriptions for each field can be entered into the attribute data table. All data can then be uploaded to the UW Capitol Projects campus website which allows the information to be accessed by the public.

### Recommendations:

Overall, we found that there was a lack of compost bins in every building we surveyed. The buildings we surveyed are listed below. Only Padelford has a compost bin present, located on the first floor.

1. Art/Music (café)
2. Bagley (café)
3. Physics/Astronomy (café)
4. Electrical Engineering
5. Computer Science and Engineering (café)
6. Savery
7. Smith
8. Padelford

*The buildings which require the most immediate attention are:* Bagley, Physics/Astronomy, Electrical Engineering, and Computer Science and Engineering. These buildings do not have any compost bins inside, and are located more than 300 feet away from any outdoor compost bins.

According to a survey we distributed randomly to staff and students inside these buildings, 45% of responders said the the farthest distance they are willing to walk to compost their items is 50 feet. Only 23% of people said they would walk further than this, either to another floor, outside, or to another building. We also found from our surveys, that 68% of responders would like more compost bins available. One person wrote, "I have talked to multiple people who express interest in compost in this building, lots of us are here a lot."

Ideally, we recommend that at least one compost bin be located with each waste receptacle set on campus. If funds do not allow this, we recommend beginning with one compost bin at every

entrance of every building, followed by placing one compost bin on every floor. Once survey responder wrote that, "Compost bins on every floor would be helpful".

We also recommend increasing signage with every compost and recycling bin. During our inventory, we found only one recycling sign located with a bin set, and this sign was out of date and inaccurate. The signs located with the sets around the HUB are clear and helpful, and could be used in other buildings as well. Many survey responses expressed a desire for clear instructions/signage. For example, responses included statements such as:

"More knowledge on what's compostable and how this concept differs from recyclable."

"Further signage"

"Make the bins informational (like in the HUB) where it classifies types of waste to the specific bin"

Finally, by incorporating our data into GIS there can continue to be inventories and updates to the composting data we have collected. We hope that UW Recycling will continue to inventory the compost infrastructure in all buildings on campus. If this is not a suitable job for staff, there could be opportunity in hiring interns from the College of the Environment to assist with the data collection. We worked closely with the Aaron Chevront and Anthony Nguyen from the UW Capitol Projects Office to incorporate the data into GIS, as well as to make this data available online at: [https://gis.cpo.washington.edu/compost\\_tracker/](https://gis.cpo.washington.edu/compost_tracker/). It would be helpful to keep in touch with this team if future updates to the compost data need to be made.

Thank you, we hope that these recommendations are helpful.

Sincerely,

Shannon Cloud, Gillian Kenagy, Byron Wennig, and Terra Miller-Cassman