

Michaela Rogers

Internship Report

5/10/16

I worked in the UK Recycling Office as the recycling and waste reduction intern. My mentor was the university's Waste and Recycling Management Manager, Mari Long. My year long task was to work towards increasing waste diversion on UK's campus, primarily through recycling initiatives. This also included reuse projects, among others that promoted conservative resource use. In giving students the opportunity to improve their disposal habits, these projects and outreach events were important steps towards improving the sustainability culture on campus. I will highlight the most significant of these that I was involved in during the school year throughout this paper, in addition to detailing my independent project and its potential impacts.

Tabling Events

Tabling served as a way for us to reach out to students in passing, who may not have had much exposure to recycling, or do not actively seek out this information. I tabled for America Recycles Day to increase awareness of the event. Students could interact with the table by playing a game about the life cycle of a recycled product. If they played the game and got the order correct (or allowed me to help them figure out the right order if incorrect), they won a t-shirt. Recycling information and water bottles were also available for handout. This event was similar to all other tabling events I participated in, including those for Recyclemania, which will be further discussed in this paper. For these events, however, I used a game where students

sorted out which items were landfilled/recycled, allowing me to provide education to a student based on the choices they made.

Caught Blue Handed Campaign

One of the first issues that was brought to my attention upon beginning at the Recycling Office was the routine of dormitory students abusing the recycling and trash compactors by piling their trash outside of them. After I found that we were unable to fine students to pay for the fees that this extra load created, I helped to develop a social media campaign called “Caught Blue-Handed”, to bring awareness to the benefits of doing the right thing. Prize packages with \$5 dining cards, water bottles and t-shirts were distributed to the halls. RAs were instructed to distribute these to and take photos of those who were properly using the compactors. The photos were posted on the UK Recycling Facebook page and Instagram account, to thank the students who were doing the right thing, and to show others how important it is that everyone does their part. Pictured below is an example of one of the Caught Blue-Handed students. Each was featured on our accounts with a statement from them about campus sustainability.



Pictured: Example of a Caught Blue-Handed social media feature.

Sustainability Scavenger Hunt

Partnering with the Office of Sustainability, UK Recycling helped to sponsor a scavenger hunt, encouraging students to find items on campus that were related to sustainability, such as solar panels and the recycling truck, “Chompy.” The hunt also rewarded students for photographing their own actions, like picking up a piece of garbage or filling up a reusable water bottle. The two-week event helped bring attention to the spread of sustainability across campus, while giving a few ideas of simple things students can do every day to live more sustainably. Even those who did not participate but are followers of the page may have seen posts about solar panels or the recycling truck, and become more aware of the different ways that sustainability is represented at UK. I had many people say things to me like “I didn’t know there were solar panels on campus,” which was exciting to hear we were exposing students to these items.



Pictured: Erin Klamic picks up litter on campus as part of the scavenger hunt.

Recyclemania

Entering the university in a two-month long recycling competition, Recyclemania, the office worked to encourage students to recycle more through several tabling events in different locations (Whitehall, Bowman's Den, The Fresh Food Co.). I helped to advertise a Lunch & Learn that Esther was hosting through postering, and made social media posts throughout the length of the competition. During the 8 weeks, 376,727 lbs. (188 tons) of recycling was collected. During this time, UK threw away a total of 1,395,154 lbs. (698 tons) of trash, giving us a diversion rate of 21%. We did manage to make a 3% improvement during those 8 weeks in comparison to last year. Although only a very small improvement, this does serve as a good base line to work from in the future.

Social Media/Collections

I was responsible for a variety of social media tasks, including making interesting posts to catch the attention of students through Twitter, Instagram and Facebook. I also used Pinterest to pin recycling ideas or information about recycling. Starting in February, at the end of each month I looked at how much our page had grown from the previous month in followers, comments and likes. Each month, we showed an increase in followers, proving that we were improving our social media presence. Social media also became our platform for advertising our donation programs at the end of each semester, giving students the option to donate their unwanted clothes, home items and non perishable goods. I helped to prepare bike key donation boxes for placement in the lobby of each of the halls. These enabled students to donate their bikes with ease and convenience for reuse at Wildcat Wheels, instead of being stuck on campus until UK police remove them.

AASHEE

Having had the privilege of attending the AASHE conference early on in my internship, I was able to learn about what other schools are doing to improve the sustainability culture on their campuses. This helped me to gain an awareness of how UK compared to other schools, as well as steps that can be taken to get our university closer to being on par with them. The conference was both overwhelming and inspiring. Although it showed me how far our school has to go in terms of achieving a sustainable campus, seeing other schools that have achieved 80% waste diversion or more proved to me that these challenges can be met, even on the scale of a college campus. Attending AASHE helped to inspire my projects throughout the year, allowing me to

gain momentum and encouragement early on, as well as setting my expectations high as to what can be achieved.

Rain barrel Project

For my independent project, I have been working to get a rain barrel installed on campus. Rain barrels collect rainwater that would normally be lost as rooftop runoff from a downspout, and allow the user to water their garden with the conserved water, instead of turning on a hose. The rain barrel had been sitting in Mari's office for a long time since its purchase, and we both agreed that it would serve as an excellent symbol of reuse and resource conservation on campus. This project's process has included planning for the barrel's installment, researching similar initiatives at other universities, gaining funding for and designing educational signage, and writing to President Capilouto for installation permission at Maxwell Place.

The location of the rain barrel was partially inspired by the rain barrel project at Western Kentucky University. Students in a graduate project course created rain barrels, with one of the first ones being installed at university President Gary Ransdell's home. This location not only presents an iconic endorsement from one of the most important members of campus, but also displays the rain barrel at the location where it is meant to be utilized, on the downspout of a house. In working to inspire members of the community to install their own barrel, it is important that a local community leader, such as a university president, sets an example of this. The WKU class initially decided to work with rain barrels after researching how much energy is used to purify water to drinking water standards. This is then used just to flush toilets, wash cars and irrigate gardens, which could all be done with lower quality water (WKU Sustainability). The class also made an important cost comparison for the feasibility of in-home installation. While

rain barrels at a garden store can amount to over \$100, all the materials needed to construct one on your own (spigot, overflow connectors and screen) can be bought for \$20 to \$40 at a hardware store (WKU Sustainability). They recommend using recycled food grade barrels if accessible, which they asked Pepsi Co. to donate. WKU's rain barrel project seems to have been highly successful, as they were able to extend the use of these barrels out into the community, by making them for distribution and providing an example of on campus use for community members.

The College of Charleston, SC, installed a rain barrel on their campus for both the cost savings and environmental benefits, as well as to serve an educational purpose. The barrels were installed in a learning garden to teach children at the Early Childhood Development Center about the importance of water collection (College of Charleston, 2016). By also placing barrels in their Political Science Urban Garden, the university furthered the educational versatility of the rain barrels. Using the rain barrels as an educational tool is a successful way to increase campus awareness of them, making the project more accessible as it works toward environmental and social inclusion goals. At UK, another rain barrel could potentially be installed on the building near Matthews Garden, as the garden is used as an outdoor classroom for certain courses. This would expose more students to the use of the barrels for water conservation, and could be integrated into curriculum where appropriate.

Although UK's campus does not often experience extended periods of drought, a California university, California State University Channel Islands (CSUCI) is a school that has examined the use of rain barrels to combat this problem. CSUCI performed a study with 6 rain barrels, to determine feasibility of installing them campus wide. As the most water use occurs during times of drought, the rain barrels become important during these periods to combat the

overuse of the scarce resource. Although the study stated that university did not have enough rain events to secure concrete data, they decided that rain barrel use should continue due to its cost efficiency. They plan to install around three barrels per building (CSUCI, 2016). The University of Kentucky could benefit from this model, especially during the hot summer months when higher intensity watering must occur to keep gardens green.

The price breakdown for the rain barrel that was originally presented to the Student Sustainability Council (SSC) can be found below. The council was only asked to provide funding for the educational signage for the barrel. Although the funding was approved in full, the amount used will likely be lower than initially requested. I decided to compile the barrel and artist information onto one sign after talking with Ed Steverson who is creating the signs, allowing for a simpler display and less cluttered appearance around the barrel.

Item	Amount
Painted Rain Barrel	\$200
Automatic Timer	\$750 (approx.)
Signage Artist/Bluegrass Greensource*	\$414.72
Signage Barrel Education*	\$396.82
Labor for Installation Assistance	(Covered in UK Grounds Pay)
Total	1761.54

Project Cost Breakdown

*Indicates item that will likely be reduced in cost.

With all sustainability projects, it is important to refer to the three pillars of sustainability to measure the total economic, social and environmental impact of each. As can be referenced in the total cost row, the barrel will cost about \$1,761.54 to install, minus the deduction for the

compilation of text onto one larger sign (not yet quoted). The installation will be performed by UK Grounds workers, but as this will be done throughout their normal workday, it will not cost the university anything extra. Although this is more than the average person would spend when implementing a rain barrel at their house, it is important to note that this barrel serves as more of an exhibit to attract attention and give others inspiration. The costliest portion of this project is the signage, which the ordinary homeowner will not need, as well as the automatic timer, which is also unnecessary in a small scale garden where a resident will water their flowers as normal using a hose.

Rain barrels carry the potential for a very positive environmental impact. By collecting water from the downspout of a home, the barrel decreases the amount of runoff from an individual's property. Water that is unabsorbed during a storm event (common in compacted lawns) collects pollutants such as automotive fluids, pet waste and fertilizer (BGGs, 2016). This moves into storm drains and carries the pollutants directly into the local watershed, where it can harm the natural environment and its inhabitants. By minimizing runoff, rain barrels can also help to reduce flooding in residential areas (BGGs, 2016). Through reduced reliance on treated water, an individual can lower energy costs by utilizing this free, sustainable water source to care for their plants. This will result in conserving water, saving energy that is used to treat the water, and as a result, saving money while helping the environment.

Although a fairly simple idea, rain barrels offer a social connection to sustainability on a small scale. It is easy for people to look at advanced sustainability initiatives like solar panels or geothermal systems and feel that they would never be able to play much of a role in the sustainability movement. Rain barrels have a high level of personal implementation, allowing an individual to use one at home every day to make an impact. This particular rain barrel was put

together by Bluegrass GreenSource (BGGGS), a non-profit organization that aims to empower the Bluegrass to create a sustainable environment. The organization offers workshops where community members can learn to make their own rain barrels. I have listed this information and their website on the sign accompanying the rain barrel, in hopes that people will be inspired to make a rain barrel of their own. This will also help to connect those that are interested in making a change in the local environment with the resources to do so through the BGGGS network. The barrel offers exposure to a local Lexington based artist, Agustín Zárate, who painted the barrel's beautiful natural scenery. Zárate finds inspiration in the natural world and expresses this through his artwork. By acknowledging his work on the signage of the rain barrel, the university shows its support for local artists and exemplifies the importance of purchasing from those in our own community.

Campus partners of the project include Jerry Hart and other grounds staff members who have helped to plan for the installment of and made recommendations for the proper equipment for the barrel. This will ensure that the barrel can run properly and efficiently on a drip timer, with as little maintenance as possible. President Capilouto and his wife, Mary Lynne Capilouto, are also important partners, for agreeing to give the rain barrel a space at Maxwell Place.

Another crucial partner was the Student Sustainability Council, for approving my request to sponsor the rain barrel's signage, which will provide education to passerby about the purpose of the barrel. The primary challenge to the project's implementation was the wait time experienced on the reply for approval. Due to the process being lengthier than expected, the rain barrel could not be put in while students were still on campus. The installment will also be occurring after my time as an intern has ended, but as I am still around Lexington for the summer, I will be continuing to help with the final tasks. This is why I believe the proper time to implement the

barrel is now, as I will be around to see the project through, and can still use the funding that was granted. Funding was also an initial challenge of the project, but I was able to resolve this through my presentation and request for funding from the SSC.

Having worked on a variety of projects throughout this internship, I felt that I was able to contribute to the exposure of sustainability through recycling and waste reduction initiatives. There are endless possibilities for encouraging recycling and reuse in a campus setting, as the subject is both broad and very relevant to the amount of waste that has been normalized for people to create in their daily lives. As students continue to become better educated about the benefits and importance of recycling, I believe the program at UK will expand to rival the diversion rate at other universities. I am looking forward to the finalization of the rain barrel project and its addition to the campus as an icon of conservation. I hope that it will serve as an example to the community and represent the university's progress towards a more sustainable campus.

Works Cited

Bluegrass Greensource. (2016). Rain Barrels. Retrieved May 13, 2016, from <http://www.bggreensource.org/what-you-can-do/water-quality-conservation/rain-barrels/>

California State University Channel Islands. (2016). Certo: Channel Islands Environmental Rain Technology Options. Retrieved May 13, 2016, from <http://www.csuci.edu/fs/sustainability/water-conservation/rain-barrel-system.htm>

College of Charleston. (2016). Waste and Water Systems. Retrieved May 13, 2016, from <http://sustainability.cofc.edu/initiatives/waste-and-water-systems/index.php>

WKU Sustainability. (2011). Rain Barrel Construction 101. Retrieved May 13, 2016, from <https://www.wku.edu/sustainability/documents/rainbarrelconstruction101.pdf>