

Green Fund Project Final Report

This report may be published on the SIU Sustainability website.

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Project Title: Elkay Filling Stations at the TEC
Project ID #: 19SP120
Award Date: May 10th, 2019
Completion Date: fully installed August 5th, 2020
Total Funds Used:

1. Provide a summary of your project/project experience.

When Madeleine and I, both environmentally conscious women in automotive, initially wrote the water filler proposal because of its potential significant impact at the Transportation Education Center. The proposal process was straight-forward and we were delighted when we received notification that our proposal would be funded! This great news came just in time for Madeleine's graduation.

For the duration of my employment and Madeleine's academics at the TEC, we (and others) noticed a stinky taste to the water-fountain water. Many people (faculty/staff/students) would comment on the unpleasant taste and end up bringing single-use water bottles to the TEC instead of bringing a refillable container. Setting up filtered water-filler stations at the TEC seemed to be the easiest way to cut down on single-use water bottles.

However, getting to the end-goal of installing 2 filtered water filling stations was far from easy. After Madeleine had graduated, I took on sole responsibility of the project. Early in the Fall 2019 semester, I was told by Scott Keith at physical plant operations that, "[Nonfiltered fillers and fountains are the University standards. While the you may have fundng for the installation of these units we receive no additional funding to maintain them. The units installed will need to be nonfiltered.](#)" I knew, from my experience at SIUC, that there are filtered water filling units throughout campus. Additionally, I knew that the water filler stations would not be used unless the water taste issue was resolved.

Before committing to the non-filtered that was suggested, I contacted the Murdale Water District in October 2019 to discuss the taste issue. I was met with resistance- that there was no way that their water could taste bad, supposedly. I made it clear to Mr. Curtis Mezo at the water district that I did not think their water was bad, but the water at the TEC was stagnant- possibly needing a flush? Mr. Mezo mentioned that, despite us using approximately 20,000 gallons of water per month, we need to use more water at the TEC for a fresher taste, but said that he could not perform the flushing- PSO would have to do so. In the meantime, he said he would perform a bacteriological test on the TEC water.

December 2019, the bacteriological test was still not performed. I contacted PSO and CEHS to seek advice after not hearing back from the water district. Leslie Korando at CEHS phoned Mr. Mezo directly, inquiring about the water testing delay. He finally came out to test the water in January 2020. Results indicated that there was sufficient chlorine residual in the drinking water and bacteria was not found within the water... at least after you let the faucet run for 15 minutes prior. As Mr. Mezo put in an email,

“...Carbondale Central Lab which indicates NO BACTERIA present in the water sample at the SIU TEC facility Room 162-B sink.

The interesting thing to note as Jessica witnessed, was that after a 15 minute flush of the sink's cold water faucet. Total Chlorine Residuals climbed from 0 to 1.0 mg/L.

It is my opinion that the District's water in the 6" Flighline Road water main is above the standard of 1.0 mg/L residual and that an internal flush of the water lines at their South building terminus, would bring an improvement to disinfectant availability, and taste issues.”

PSO flushed the water at the TEC there-after.

Faculty and staff at the TEC continued to be dissatisfied with the drinking water taste- myself included. I spoke with the chair of Automotive Technology, Mike Behrmann, about still wanting to follow through with the filtered water filler option. I was told the filtered option wasn't possible- there wasn't enough money in the budget to pay for the filters (\$50/ea) or labor of replacement (\$50 for both units). I suggested, since we have many industry contacts in automotive, why not reach out to them to sponsor the yearly filter change? I resorted to offering to pay out of pocket for the filter service if I was not able to raise the money from industry...

February/March 2020, filtered water filler units were then ordered :)

...Not without some dismay from PSO, for whatever reason...

“Please confirm that you want filtered units.

Replacing filters takes resources and does not appear to us to be sustainable in practice.

In February we took a dozen water samples which were tested by the Carbondale Central Laboratory. One of the twelve was invalid due to the testing port and none of the other eleven samples, taken at various locations throughout the facility, showed a concern except for diminishing chlorine levels at a few of the locations. These few locations showed a systematic decrease in chlorine level since we flushed the lines in late January. Based on the results we have put into place a flushing plan for these areas. Which is somewhat ironic since the filter will be removing chlorine.”

I replied: “The purpose of chlorine in a water system is to create an environment in which bacteria cannot thrive, since the water may sit in pipes for days/weeks+- having the correct chlorine residual ensures this. However, the chlorine serves no purpose at the end-user (immediately post-filter), since the water is consumed in the immediate (within hours)- posing no risk of bacteria growth. There are upper and lower limits for chlorine consumption, and this filter will aid with not only this, but with any possible bacteria, lead, possible pesticide run-off, etc. getting to the end-user. Not really ironic, if you think about it.

It is good to know about the flushing plan- this helps. Mr. Behrmann and I have already worked out a plan for the extra cost of the filtered units, so let us continue with the filter option.”

Then, mid-March 2020, the COVID-19 pandemic hit. All in-person activity came to a stand-still. After not hearing anything on the water fillers by May 2020, I contacted PSO for an update. Understandably, I was told “Currently my staff is only allowed to respond to emergency or essential items. Once we are able to return to work we will have to prioritize all of the maintenance issues and address them accordingly.”

After Illinois reached Phase 4 in the re-opening plan in July 2020, I contacted PSO again. I was updated, “Yes, we do plan to install the bottle fillers this summer. I spoke with my plumber foreman this morning about getting them worked into their schedule.”

Finally, August 2020... the water filler stations were officially installed at the TEC! It has been a frustrating process, but I have learned a lot about patience and persistence from this experience.

2. Provide a summary of your results (environmental, social, and/or economic) including quantifiable data as appropriate (ex. # of individuals reached, lbs. diverted from landfill, energy saved, etc.).

Accumulatively, in the past month, the water filler stations have helped eliminate waste from **1,284** disposable plastic bottles at the Transportation Education Center! This is beyond incredible!

3. Summarize how your project promoted the Green Fee/Sustainability on campus including, but not limited to, flyers created, screenshots of website, signage, etc. Please include website links, if applicable. (Reminder: you are required to promote your project using at least 2 items from the awardee website promotion list.)
 1. I was provided 2 Green Fund stickers, in which I adhered one to each of the water filler stations.
 2. I asked the Automotive Technology department to post about it on FaceBook:
 - i. <https://www.facebook.com/SIUCAutomotive/>

4. Provide evidence of how you used the Green Fund Marker in your project.



5. Is there anything you would do differently if you were to do a similar project in the future? If so, please describe.

There are potential difficulties associated with any project. Although things did not go as planned, I am pleased with the outcome and the learning process. I am thankful that there are means to help improve daily life at SIUC via the Green Fund Grant.

6. Provide as an attachment to the email (see email address below) a minimum of 5 digital images. A minimum of one of the five images should include a person. Images should be of high a quality as possible and be attached in jpg format, if available. Images will be used to promote interest in sustainability projects on campus and may be used on our website and in other promotional material. These can be photos of the progress of the project or the completed project. Provide captions for photos here.

1. IMG_8384: north water filler station days after installation (August 2020)- 78 bottles saved already!
 2. IMG_8677: Action shot of Ms. Jessica Suda filling up at the south water filler station.
 3. IMG_8682: Professor Suda proudly filling up her Subaru water bottle at the south station. She received the Subaru water bottle from Madeleine's at her current place of employment.
 4. IMG_8696: Screenshot of the SIU Automotive Technology Facebook page.
 5. IMG_8700: Latest north entrance water filler snapshot.
 6. IMG_8701: Latest south entrance water filler snapshot.
7. In 2-5 sentences, describe what you learned from completing the Green Fund grant process. Include a detailed response (Do not simply respond "yes" or "no.") to at least one of the following questions to help us understand how this project has impacted your overall university experience.
- Do you have a different understanding of sustainability now than you did at the beginning of the process?

- i. I realize that doing the right thing is not easy. Cheap, easy solutions don't benefit society in the long-haul. I find that, to make a positive difference, you must be prepared and determined to (professionally) face all challenges that arise along the journey. This is why pursuing what we know as "sustainable" is so difficult- not everyone has this mindset. We must lead by example to influence current and future generations to take care of, and not advantage of, what we take for granted.
 - Did you apply knowledge or skills learned from courses at SIU?
 - Did the completion of the Green Fund grant process help to prepare you for your future career opportunities?
8. List suggestions for the SIU Sustainability Council to improve the Green Fund Award Process here:
- The Green Fund award process was probably the easiest part of this project! No complaints here- I appreciate everything!

Final Report forms should be sent electronically, in editable Microsoft Word format, to greenfund@siu.edu. This should be completed before requesting final reimbursement. A Sustainability Council designate will review final reports before releasing funds.