View results

Respondent

33 Katie Zobus

01:07
Time to complete

Instructions:

Please adhere to the session word counts. Project leads must attend one SSC working group meeting post step 1 application submission. If you have any questions about the application process, please contact the SSC at Sustainability-Committee@illinois.edu.

1. Have you attended an SSC working group meeting? If not, please attend an SSC Working Group and present your project. Once working group attendance is complete, please return to complete your application.

   https://studentengagement.illinois.edu/student-sustainability/ssc/calendar/ *

   - (●) Yes
   - ( ) No

2. Please enter the date of the working group meeting you attended. As a reminder, the working group meetings are structured as follows

   - Energy + Transportation and Infrastructure working group.
   - Food & Waste + Land, Air, and Water working group.
   - Education and Justice working group.

   *

   Tue 2/6/2024 6:00 PM - 7:00 PM (Food & Waste + Land, Air, and Water working group)

3. Date of Application *

   2/26/2024

4. Project Name: *

   Addressing Sustainability in Research: Pipette Tip Box Waste

5. Total Funding Requested From the SSC. *

   1818

   Please enter a number less than or equal to 10000

6. Project Lead Full Name: *

   Katie Zobus

7. Project Lead University Email Address *

   kzobus2@illinois.edu

8. Project Abstract: (In less than 100 words, briefly describe the project.) *

   Research is often wasteful to maintain the integrity of aseptic technique, and many of the plastics used are unable to be recycled at a curbside recycling program. Although we cannot recycle pipette tips, there are opportunities to reduce waste across wet lab research. I aim to provide labs in Everitt Laboratory with recycling boxes for pipette tip box waste. This recycling program is supplied by TerraCycle, which takes plastic waste from labs and converts it into recycled resin for park benches and other eco-friendly products. I hope to use this project as a platform to instill sustainability practices across campus.

9. Project Category *

- ○ Education & Justice
- ○ Energy
- ◉ Food & Waste
- ○ Land, Air & Water
- ○ Transportation & Infrastructure

All rolling application require a faculty/staff advisor.

Faculty and Staff Advisor

10. Full Name: *

Caroline Cvetkovic

11. RSO/Department *

Bioengineering

12. University Email Address: *

ccvetko@illinois.edu

13. Do you have additional members? *

- ○ Yes
- ◉ No

UIUC Financial Contact

Financial Contact (Must be full-time UIUC employee)

14. Full Name: *

Caroline Cvetkovic

15. RSO/Department *

Bioengineering

16. University Email Address: *

ccvetko@illinois.edu

Project Questionnaire:

17. Is this project student led? *

- (●) Yes
- ( ) No

18. If applicable, have you received approval from Facilities & Services and/or site manager? *

- (●) Yes
- ( ) No
- ( ) N/A

19. If additional funding is required, do you have a plan for ongoing funding beyond SSC? (SSC cannot guarantee ongoing financial support) *

- (●) Yes
- ( ) No

20. Beyond SSC, do you have sources contributing funding or support (ex. staff time, external grants, etc.) to this project? *

- ( ) Yes
- (●) No

21. Have you applied for SSC funding previously? *

- ( ) Yes
- (●) No

22. Project Timeline:
(SSC funding agreements remain active for two years. List your project's timeline and major milestones.) *

March 2024: Begin the project, purchase and hand out boxes
May-October 2024: Check in with labs every 2 months for feedback
December 2024: Submit the final report and collect feedback from labs

23. Project Description:
(In 250 words or less, describe your project. What does your project hope to accomplish? What are your project's deliverables?) *

Many bioengineering labs utilize aseptic technique, which often requires one-time use plastics. Since biological waste-contaminated products cannot be recycled, we must look to other avenues to promote sustainability in research. The TerraCycle pipette tip box recycling program recycles Plastic #5, a plastic that cannot be recycled in a typical program, and holds about 113 empty pipette tip boxes. Within the purchase of these boxes, every box comes with a pre-paid shipping label through UPS, so this is a one-time purchase. These boxes will be purchased through the University of Illinois's system marketplace: iBuy. When a lab receives a box, their only responsibility is to bring the full box of decontaminated pipette tip boxes or trays to the receiving room with the shipping label attached. As every lab does different work with varying fields of research, it is estimated that it will take 6 months to 1.5 years for a group to fill a box. I hope that the implementation of this practice, as well as the ease of the process, will encourage the labs to continue this practice by themselves. I aim for this project to begin spreading throughout the Bioengineering department in other facilities and classrooms at UIUC, leading to a widespread campus initiative. Other institutions have already begun to implement this practice, such as the University of Michigan and the Massachusetts Institute of Technology (Mlady, 2023).
Mlady, G. (2023, April 18). Recycling Plastics from research labs. MIT News | Massachusetts Institute of Technology. https://news.mit.edu/2023/recycling-plastics-research-labs-0418

24. Environmental Impact:
(In 200 words or less, how does your project increase environmental stewardship at UIUC? If applicable, what is the carbon, water, waste, and/or energy savings?) *

This project significantly enhances environmental stewardship at UIUC by directly addressing the substantial environmental impact associated with research laboratory waste, particularly plastic waste. By implementing a recycling program for pipette tip boxes, the project targets a specific and substantial source of laboratory waste. The conversion of this waste into recycled resin for the manufacture of eco-friendly products not only reduces the volume of waste sent to landfills but also decreases the demand for new plastic production, which in turn lowers carbon emissions associated with plastic manufacturing. The initiative aligns with broader environmental stewardship goals by promoting a culture of sustainability on campus, encouraging other departments and universities to consider similar waste reduction strategies.

25. iCAP Objective Correspondence:
(In 200 words or less, does your project aim to advance one or more of the Illinois Climate Action Plan's (iCAP) objectives? If so, how?)

A full list can be found here: https://icap.sustainability.illinois.edu/objectives

This project is a stride towards achieving the goals laid out in the Illinois Climate Action Plan (iCAP), particularly focusing on Objective 5.2: Reduce Landfilled Waste. Notably, in 2023, the university's waste levels exceeded the targets set for fiscal year 2024 by an unprecedented margin, somewhat explanatory of the COVID-19 lockdown. To get back on track, setting up a dedicated recycling effort for pipette tip boxes in our labs directly cuts down the volume of plastic waste that ends up in landfills. This initiative not only diminishes our environmental footprint by repurposing hard-to-recycle plastics into useful, eco-friendly products but also champions the broader ethos of waste reduction and sustainability that iCAP encourages. Through this endeavor, we're hoping to inspire a ripple effect of sustainable practices across campus, making a tangible impact on our collective journey toward a more sustainable future at UIUC.

26. Student Impact:
(In 200 words or less, how will this project benefit students? How will students be involved with this project? What educational components are in your project?)
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Beyond promoting sustainability within the research labs at UIUC, much of the work being done across the Grainger College of Engineering and Life Sciences research seldom reminds students about the excessive use of plastics. In many research labs, the lab culture is a culmination of prior experiences of the lab members, especially from their undergraduate research careers. By embedding sustainability into the fabric of student research experiences early on, I aim to cultivate a culture of environmental responsibility that students will carry with them, spreading the initiative beyond the university. This approach ensures that the project not only benefits the campus today but also equips the next generation of scientists and engineers with the mindset and skills needed for a more sustainable future.

27. Please see attached file, please be very descriptive and fill out the budget and timeline Excel sheet, and submit it below.

https://studentengagement.illinois.edu/student-sustainability/ssc/docs/SSC-Supplemental-Budget-Timeline.xlsx

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SSC Pipette Tip Waste Budget Timeline_Katie Zobus.xlsx