View results

Respondent

4 Daphne Hulse

39:56
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 a working group meeting and presented your project to the committee before this application? The SSC requires attendance at a working group meeting to remain eligible for SSC funding. If you have not attended a working group meeting, please do so and then continue the application.

   Linked below is our calendar with all of our working group meetings
   https://studentengagement.illinois.edu/student-sustainability/ssc/calendar/

   *

   - (●) Yes
   - ( ) No

2. Please enter the dates of the working group meetings you attended. As a reminder, the working group meetings are structured as followed:

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

   *

   Wednesday, October 4th Last Call Working Group

3. Project Name: *

   Greening the Garage: Oil Filter Crusher

4. Total Funding Requested From the SSC. *

   $4,455.00

5. Date of application. *

November 2, 2023

6. Project Lead Full Name: *

Daphne Hulse

7. Project Lead University Email Address. *

dlhulse2@illinois.edu

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

The Facilities & Services (F&S) Transportation & Automotive Services (TAS) department manages fleet services for the entirety of campus including maintenance and repair at the garage, vehicle rental at the carpool, and oversight of all vehicle purchases. Metal oil filters are regularly used at the garage to remove solid contaminants such as dirt, debris, and metal fragments from a vehicle's oil. Approximately 1500 oil filters are used per year. Currently, the oil filters are punctured and drained for 24 hours before disposal via landfill. A crusher will remove up to 95% of the residual oil, allowing the filter to be recycled via a metal recycler in Urbana and the residual oil to be reused.

9. Project Category *

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

10. Do you have a change in team members? *

- ○ Yes
- ◉ No

Project Questionnaire:

11. Any press releases or educational/promotional materials involving the project must acknowledge SSC funding. How will you bring awareness and publicize the project on campus? In addition to SSC, where will information about this project be reported? *

Facilities & Services operates several news and media sites as part of its outreach efforts. F&S Insider is a quarterly external magazine (also published online) produced by the department highlighting projects, employees, and research. Sustainability is a topic often featured in these issues - a story can be released covering the purpose of the oil filter crusher and the contribution that SSC provided. F&S Dispatch is a monthly internal magazine to inform F&S employees about current happenings. F&S also runs Facebook, Twitter, and Instagram accounts. A post on each platform can be made to publicize the project. Most importantly, the garage offers tours to the campus and local community. Highlighting sustainability on the tour is a way to bring awareness to both how garages can implement sustainability, as well as SSC's funding contribution.

12. Other than the project team, who will have a stake in the project? Please list other individuals, groups, or departments affiliated directly or indirectly by the project. This includes any entity providing funding (immediate, future, ongoing, matching, in-kind, etc.) and any entities that benefit from this project.

Please attach letters of commitment or support below *

The Facilities & Services Garage and Carpool is the primary stakeholder on this project. The installation of an oil filter crusher means that employees of the garage will need to absorb a new process for draining oil filters. Shawn Patterson, the other project member, is the lead of the garage and has the authority to oversee this change.

13. Please attach any letters of commitment or support here along with any other supplemental media that will support your application (presentations, pictures, etc.)

Requested oil filter crusher machine_Daphne Hulse.jpg

Current draining process_Daphne Hulse.png

14. How does this project impact environmental and social justice? 250 word max *

Landfills are both social and environmental justice issues, and the reduction of material that ends up in them contributes to healthier communities. Landfills directly contribute to the release of greenhouse gases into the atmosphere – carbon dioxide and methane are two of the most prominent gases emitted. Additionally, materials can leach into the soil and groundwater, leading to the contamination of nearby natural resources. The global waste crisis is a social justice issue: a large majority of dumps, landfills, and incinerators are situated nearby low-income communities. This project aims to address a small contributor to the Clinton, IL landfill. If approved, all oil filters under this program would be recycled.

15. Where is the project located, does it require Facilities and Services permissions? *

The project is located at the garage (1701 S. Oak St, Champaign, IL 61820). It received Facilities & Services permission.

16. Is this project student led? *

- ○ Yes
- ◉ No

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

- ◉ Yes
- ○ No
- ○ N/A

18. Do you have a plan for ongoing funding beyond SSC? (SSC does not guarantee ongoing financial support) *

- ○ Yes
- ◉ No

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

- ◉ Yes
- ○ No

20. Have you applied for SSC funding previously? *

- ◉ Yes
- ○ No

21. Project Timeline:
(SSC funding agreements remain active for two years. List your project's proposed end date.) *

March 2024.

22. Provide a detailed project description:
(In 400 words or less, describe your project. What does your project hope to accomplish? What are your project's deliverables?) *

F&S' TAS department manages fleet services for the entirety of campus including maintenance and repair at the garage, vehicle rental at the carpool, and oversight of all vehicle purchases. The university fleet of roughly 1200 vehicles is the life force behind critical operations on and off of the Urbana campus: the carpool fleet of more than 200 vehicles provides full-service car rental for university employees, and the remainder of the vehicles support the daily work of the F&S trades (e.g. laborers, electricians, plumbers) and auxiliaries (e.g. Housing, Dining, Athletics). Oil filters are regularly used at the garage to remove solid contaminants such as dirt, debris, and metal fragments from a vehicle's engine, transmission, lubricating, and/or hydraulic oils. Approximately 1500 filters are used per year. The Environmental Protection Agency regulates the disposal of oil filters. Currently, the oil filters are punctured and drained for 24 hours before disposal via landfill in Clinton, Illinois. A crusher will remove up to 95% of the residual oil, allowing the filter to be recycled via a metal recycler in Urbana (Mervis) and the residual oil to be reused. The crusher would be a step forward in creating a less wasteful garage – through the crusher, no more filters would be disposed of in the landfill.

23. 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?) *

Currently, oil filters cannot be recycled because of the residual oil leftover after the puncturing and draining process. Approximately 1500 filters are used per year and these are disposed of via the landfill. The hydraulic crusher would facilitate the process becoming zero waste: the crusher would remove up to 95% of the residual oil, allowing the filter to be recycled via a metal recycler in Urbana (Mervis) and the residual oil to be reused at the garage. Facilities & Services aims to not only promote sustainability on campus, but also through its own operations and processes behind the scenes. The act of repairing and maintaining university vehicles would become a more sustainable process with the addition of an oil filter crusher.

24. 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

The purchase and implementation of an oil filter crusher into the garage directly impacts iCAP Objective 5.2, "Reduce the total campus waste going to landfills from 5,049 tons in FY19 to 4,544 tons or less in FY24, which is a decrease of at least 10%." Oil filters are made of metal and contribute to this total landfilled waste each year. Completely eliminating the stream of oil filters going to the landfill, and diverting them to metal recycling, is a way that the garage can contribute to this iCAP objective.

25. 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?) *

The garage supports U of I student employment throughout the year: six students currently work at the garage part-time during the academic year and are offered temporary full-time positions during the summer. The garage has been a consistent participant in the Chancellor's Summer Youth Program, and has hired two youth apprentices each summer since its inception. This program empowers youth interested in gaining experience the skilled trades to participate in a summer program over a seven-week period. The garage also regularly engages with Parkland College, offering internships to interested students. Implementation of an oil crusher into the operations of the garage is a way to engage and educate the existing student employees on sustainable practices within the automotive industry, and it is a skill they can take beyond the university upon graduation. Additionally, the garage regularly offers tours to interested parties – acknowledging efforts toward sustainability during the tours is another way to engage an automotive-oriented audience on sustainable practices.

Project Finances

26. See attached file, please be very descriptive and fill out the finalized budget and timeline Excel sheet, and submit it below.

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

SSC-Supplemental-Budget-Timeline Step 2_Daphne Hulse.xlsx

27. Project Finance Manager.
Must be a fulltime UIUC faculty or staff member** *

Mike Alsip

28. Finance Project Manager Department *

Facilities & Services

29. Project Finance Manager University Email *

alsip@illinois.edu