

SIUC SUSTAINABILITY COUNCIL'S FIRST ANNUAL REPORT to the CHANCELLOR

Winter 2010

SIUC Sustainability Council Members

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Associate Professor - Speech Communication

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Undergraduate junior - Geography & Environmental Resources

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Introduction

The Sustainability Council was created in July 2009. Since that time they have developed their operating papers, and worked to improve the sustainability of critical University activities. To date a Curriculum Committee, an Assessment Committee, a Sustainability Council Advisory Panel, and the Green Fund Committee have been created. In February 2010, the Green Fund Committee funded 17 project proposals with a total of \$151,175 from the Green Fee. The Committee provided funding rationale and constructive feedback to all project proposals. Of those 17 funded projects, nine have been completed, and eight are still in progress. In May 2010 the Green Fund Committee funded nine project proposals with \$125,677 from the Green Fee. One of those projects has been completed, and the remaining eight are in progress. Cumulatively, \$276,852 of green fund monies have been committed (Figure 1). In October 2010, 21 new project proposals requesting a total of \$426,679.96 were submitted, and are currently undergoing review by the Green Fund Committee. Funding decisions will be made before the end of the Fall 2010 semester.

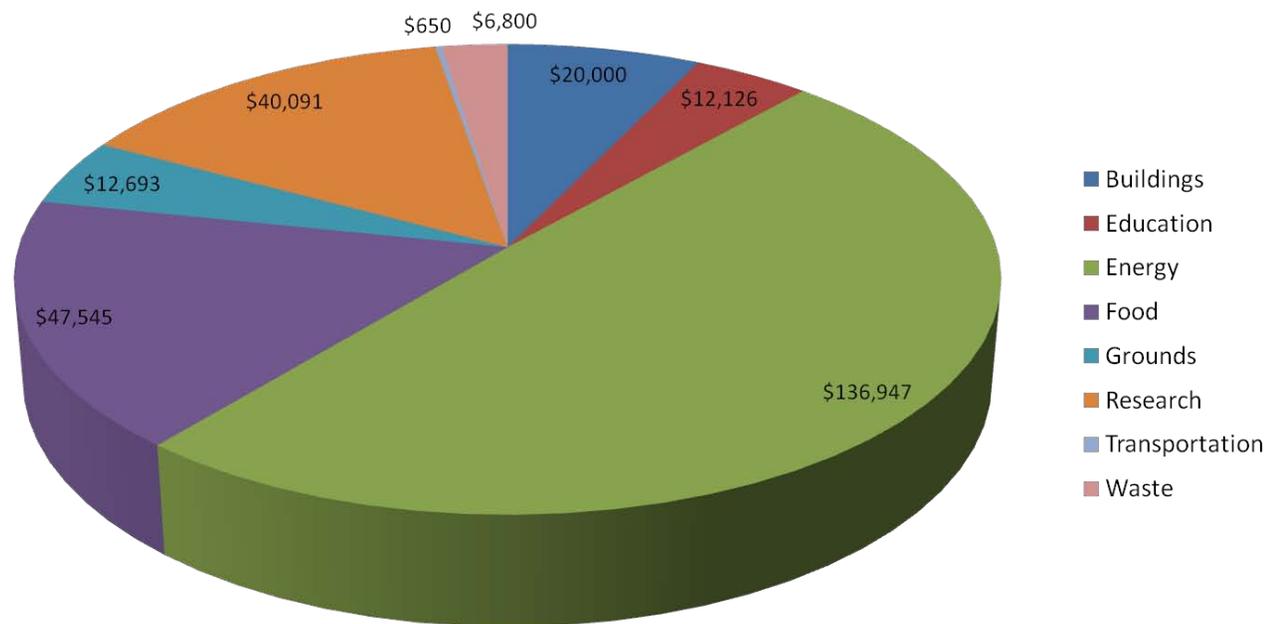


Figure 1. Green fund distribution by main project focus since February 2010.

What has been achieved by the Green Fund supported Sustainability Projects funded in February 2010?

In project number 100204 an unused and dilapidated outdoor patio on the east side of the Agriculture building was renovated by PSAS faculty and student volunteers using bricks made from recycled coal fly ash. Using these materials rather than conventional bricks for the project diverted eight tons of materials from landfills and avoided 3 tons of CO₂ emissions. The new patio also improved drainage of runoff away from the Agriculture building foundation (Figure 2).

Project 100205, created and conducted by students, collected the first geographic transportation data and assessed impediments to sustainable transportation using survey data from over 4000 students, faculty, and staff. The survey consisted of 54 questions on topics vital to improving transportation sustainability at SIUC. Respondents identified travel time as the most important factor in determining how they get to campus. Driving alone is currently the primary commuting mode for 40%, 76%, and 85% of students, faculty, and staff respectively. The most popular means of improving campus bicycle accommodations were improved bicycle lanes and covered bicycle parking.



Figure 2. Patio on east side of the Agriculture building constructed of recycled fly ash bricks.

Project 100207, the wind power project will consume 50% of the green fund for 10 semesters (Spring 2015 will be the final semester of green fund support). Much progress has been made in wind resource assessment, design development, environmental studies, and obtaining permits from federal, state, and local governments. Additionally, engineering students are working on a design project related to the wind turbine, and meetings have occurred with professors from Zoology, Finance, and the School of Law to create class projects related to the wind turbine project. Once functional, the wind turbine is projected to reduce annual University CO₂ emissions 5.7 million pounds, nitrous oxide emissions 8,500 pounds, and sulfur oxide emissions 29,000 pounds. These chemicals contribute to environmental problems including global warming, acid rain, and tropospheric ozone pollution.

Project 100209, Touch of Nature (TON) energy and water reduction, funded building upgrades to reduce electricity and water usage at TON. Additionally, pre- and post renovation electricity and water data are being used to quantify the economic value of these upgrades. Environmental education fliers were also posted alongside the upgrades to inform the public of their benefits and promote sustainable behavior with regards to the use of water and other resources.

Construction on the variable speed drives for chilled water pumps (project 100211) will begin in December and the energy savings will begin to manifest before May 2011. Once operational, this project will reduce electricity consumption in the Communications Building chiller plant 536,000 kWh, saving \$44,493 in electricity costs annually. Additionally, students, faculty, and staff working in Lesar Law, Rehn Hall, Lawson Hall, Life Sciences II, Agriculture, Lindegren Hall, Faner Hall B and C wings, Shryock Auditorium, and Allyn Hall will experience greater indoor comfort with regards to climate control.

The Green Fund also supported the 40th Anniversary of Earth Day celebration (project 100201) in the Student Center. The goals of the event were to educate people about sustainability efforts currently underway at SIUC and to show people how simple changes can have large collective impacts. Earth Day events included the planting of an herb and vegetable garden in planters, which had been previously abandoned. There was also a student art, video, and photo contest, a hybrid and electric car show, a live band, a green fair, and an educational panel.

The Campus Sustainability Project (CSP) Intern Program has supported the work of three dedicated, enthusiastic, and productive SIUC students. The first intern, Kim Rowan, has expanded and improved the sustainability webpage (sustainability.siuc.edu). Another internship was awarded to Brooke Lopeman who is the advisor for the “Going Green” program of the “Living Learning Community” on the 9th floor of Neely Hall. Brooke has organized a weekly dinner speaker or movie viewing with a sustainability theme. One of the speakers was another Green Fund supported student, Makayla Trotter (Project 100221). Brooke is also measuring

the attitudes and behavior of undergraduates towards recycling in residence halls. Together, Brooke and Kim are also developing an Environmental Ambassadors program, in a manner similar to the Saluki Ambassadors program.



Figure 3. Greenhouse to grow more organic produce for SIUC dining halls.

Laura Williams has been managing the student organic farm, which provides fresh, organic foods to Dining Services. Production recently increased when another green fund project (100222) constructed a greenhouse on the west side of campus, which now supplements the extant garden beds, and will extend the effective growing season (Figure 3).

The Green Fund also supported the Gaia House's Interveg program (Project 100213). Interveg is a weekly free dinner and discussion. The food for the dinner is local, and the discussions often have a guest speaker and address sustainability issues including nutrition, agriculture, and anthropology. Approximately 30 students and other members of the community attend this weekly event.

The Green Meetings Initiative (Project 100215) built upon the University's recycling program by reducing waste generated from meetings and events held at the Dunn-Richmond Economic Development Center. Data on waste reduction resultant from the Initiative will be available in May 2011.

Project 100216 purchased two rain barrels for the Gaia House Interfaith Center. These barrels collect runoff from the roof for maintaining the Labyrinth Garden and its fountain pond. This reduces the consumption of treated municipal water and is a highly visible educational demonstration of a sustainable practice.

Project 100218 helped the Department of Public Safety purchase an electric patrol vehicle, which they use instead of a conventional patrol car on fair weather days (Figure 4). The electric T-3 costs ~\$0.10 per day to operate, while a conventional patrol vehicle costs \$21.67 to operate. As of October 2010, the T-3 electric patrol vehicle had been driven 827 miles. Both money and gasoline are conserved by this project.

In project 100221, an undergraduate student created a local foods database to identify 412 local and state food producers for University Dining to use in food purchasing. This will help SIUC satisfy IL HB 3990, which stipulates that 20% of all institutional food must come from Illinois sources by 2020. Purchasing local foods also reduces the energy required to transport food. For example, purchasing enough potatoes for one meal from Idaho costs 52.7 lbs. of CO₂, while purchasing the same quantity of potatoes from Black Gold Potatoes in Charleston, MO costs just 2.2 lbs of CO₂.



Figure 4. A campus police officer patrols outside the Rec Center on a vehicle that reduces fossil fuel consumption and saves \$21.57/day.

Project 100224 expanded a native habitat restoration project begun by the SIUC Restoration Club, and previously supported by an Illinois Rain Garden Grant. This ~1 acre landscape of former lawn by the Center for Environmental Health and Safety contains over 100 native species of plants and improves infiltration and mobile nutrient uptake in the Campus Lake watershed (Figure 5).



Figure 5. Native grasses and forbs create habitat, improve water management, and eliminate mowing needs.



Figure 6. Forestry students manage invasive species and build trails at the Teaching and Research Forest

The on-going creation and management of the SIUC Teaching and Research Forest supported by project 100206 will teach students and southern Illinois landowners how to ecologically manage the forests of southern Illinois using invasive species management and prescribed fire techniques (Figure 6).

Goals and Accomplishments of the Sustainability Curriculum Committee

The Sustainability Council formed the curriculum committee in spring 2010, with the three Council faculty members serving on this committee. The Sustainability Curriculum Committee's priority is to integrate sustainability across the SIUC curriculum. In February 2010, the Vice Chancellor for Academic Affairs funded the committee's chair to attend an Association for the Advancement of Sustainability in Higher Education (AASHE) conference at Wake Forest University entitled: *Taking it to the next level: Strategies for adaption across the sustainability curriculum*. An action plan for the committee was developed during a conference workshop, which was approved by the committee. The action plan is as follows:

Goal 1: Define sustainability in the context of university curriculum

Sub-goal 1.1: Select criteria of sustainability based on that definition

Goal 2: Assess the extent to which sustainability is currently present in the SIUC curriculum

Sub-goal 2.1: Identify criteria that are underrepresented in the curriculum

Sub-goal 2.2: Assess faculty interest in incorporating sustainability into current course offerings

Sub-goal 2.3: Provide faculty development opportunities for incorporating sustainability into current course offerings.

Goal 3: Assess sustainability student, staff & faculty literacy

Sub-goal 3.1: Develop targeted strategies to increase campus sustainability literacy

Sub-goal 3.2: Monitor sustainability literacy

Sub-goal 3.3: Assess impact of strategies (including opportunities resulting from sub-goal 2.3) on sustainability literacy

Goal 1 was met in Fall 2010 when the committee voted on adopting the following definition of sustainability: A transdisciplinary approach to ecological systems, cultural systems, energy systems, and food systems, with integrity of individuals and all systems as the goal. The criteria focused on integrity (individual and systematic) and systems (ecological, cultural, energy and food) are currently being refined (Sub-goal 1.1). Actions to meet Goal 2 are currently being taken. Specifically, the Green Fund sponsored a graduate student research project; the student has developed and is currently administering an on-line survey of faculty to assess the current

integration of sustainability in the curriculum and faculty interest in integrating sustainability into the curriculum. The survey will enable interested faculty to join the Sustainability Curriculum Committee.

Goals and Accomplishments of the Sustainability Assessment Committee

The Council formed an Assessment Committee, chaired by Justin Harrell, in order to evaluate the current state of sustainability on the SIUC campus so that the Council can use that evaluation to inform its recommendations to the Chancellor. The primary task of the committee is to establish a set of metrics to use to evaluate the state of University sustainability by capturing all significant impacts, providing a benchmark for comparison to other universities and organizations, and allowing the Council to recommend goals and track progress over time. The committee has decided to use the Sustainability Reporting Guidelines provided by the Global Reporting Initiative and the specific metrics of STARS (Sustainability Tracking And Rating System) published by AASHE. The next task of the committee is to collect and compile performance data relevant to all significant sustainability impacts of the University. Finally, the committee plans to prepare its first assessment report by the end of fiscal year 2011. The report will establish the framework for future sustainability reporting, present the collected performance data, and set out goals and a roadmap to improve future reporting.

Recommendations of the Sustainability Council

Short term goals (> 2 years)

1. The Council's operating papers anticipate the need for a Sustainability Coordinator in the university administration. We remain committed to this objective. We are currently developing a job description, rationale, and supporting documentation for the formation of this position.
2. Create leadership and networking opportunities for students with an interest in sustainability by 16, March 2011.
 - a. e.g., Sustainability Ambassadors
3. Promote and advertise campus sustainability initiatives and programs better.
4. Complete our first STARS assessment by 30, June 2011.
5. Bring sustainability initiatives to the forefront of recruiting efforts.
6. Enhance sustainability course offerings in the curriculum.
7. Increase student, faculty, and staff interest in sustainability.
8. Create a 4-year freshman class sustainability project by August 2011.
9. Create a liaison position between the Undergraduate Student Government and the Sustainability Council.

10. Create and award a Green Fund Project of the Year Award by April 2011.
11. Sustainability training of PSO staff.

Medium term goals (2-5years)

12. Implement aggressive campus design standards for new and renovated facilities.
13. Develop and publish sustainable departmental purchasing guidelines.
14. Achieve 50% waste diversion (currently 20%).
15. Increase availability of e-textbooks.
16. Introduce sustainability concepts into K-12 curriculum.

Long term goals (> 5 years)

17. Develop a closed water system for SIUC by 2050.
18. 50% renewable energy by 2030.
19. Zero landfill waste by 2050.
20. Convert the campus vehicle fleet to 50% alternative fuel by 2019.
21. Decrease the proportion of drive alone commuters to campus.

Acknowledgements

We would like to thank all of the students, faculty, and staff who have made SIUC a more sustainable University through their green fund projects, or contributions to other Council activities. The achievements and goals of the Sustainability Council were greatly facilitated both by two former student members of the Council, Jon Dyer and Megan Pulliam. Also, thanks goes to Kim Rowan for her help formatting this document and improving the SIUC Sustainability website. Finally, the Sustainability Council and the Green Fund appreciate the support of the University and the student green fee.

