



STUDENT SUSTAINABILITY COMMITTEE

Funding Application – Small Projects (Under \$10K)

Please submit this completed application and any relevant supporting documentation by the deadline listed on the SSC website to Sustainability-Committee@Illinois.edu. The Working Group Chairs will be in contact with you regarding any questions about the application. If you have any questions about the application process, please contact the Student Sustainability Committee at <http://sustainability-committee@illinois.edu>.

General Information

Project Name: **Red Oak Rain Garden 2.0**

Total Amount Requested from SSC: **\$9,000**

Project Topic Areas: Land & Water Education Energy
 Transportation Food & Waste

Contact Information

Applicant Name: **Cameron D. Letterly**

Unit/Department or RSO/Organization: **Department of Landscape Architecture**

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Project Team

Name	Department/Organization	Email
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Financial Contact's Name: **Lisa Merrifield**

Faculty/Unit/Department: **University of Illinois Extension**

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(If Applicable)

Facilities Manager Name: N/A

Email: N/A

Phone: N/A

Project Information

Provide a brief background of the project, its goals, and the desired outcomes.

The Red Oak Rain Garden was established 10 years ago to address the problem of rainwater pooling on the busy campus sidewalk between McKinley Health Center and Allen Hall. This student-faculty project was a collaboration of many entities – Facilities and Services, the Environmental Council, Housing, and NRES professor Anton Endress, whose Restoration Ecology students designed, planned, and installed the garden.

This rain garden has since does its job – redirecting water away from the sidewalk and already taxed storm drains, to where it is naturally absorbed into the ground. While the amount of water diverted may not be dramatic, it keeps the sidewalk passable, helps improve the water quality of Boneyard Creek, and provides a real-life campus example of rain gardens and green infrastructure at work.

In recent years, many of the garden plants have not thrived. The possible reasons are many, including an increase in shade, trampling, or poorly-informed maintenance. The lack of plants makes it difficult for students to recognize the area as a rain garden, thus, losing an opportunity to learn about ecological stormwater management. Additionally, pollinators lost a vital source of foraging plants.

The goal for this project is to replant the Red Oak Rain Garden with several key outcomes in mind. First, the garden will continue to be effective – with expectations of increased infiltration (this may be measured by CEE students) – in its role of absorbing stormwater. The plantings will be hardy for their environment, salt-tolerant, and native when appropriate. Plus, they will be attractive to pollinators and birds, and visually appealing over several seasons. Finally, the garden will be an inspirational and educational resource for students (in and out of the classroom), faculty, visitors, and community members.

Replanting the rain garden means reimagining it, and heeding the lessons from the past. For example, the new garden design includes a permeable path that will allow those passing by to walk through the garden, but also encourage them to stay on the path. To ensure maintenance, two University Extension community volunteer groups have a Memorandum of Understanding with Facilities & Services to work on the garden (attached).

Over the summer, the Illinois Water Resources Center hosted two stakeholder meetings with 20 participants each to inform the design. Important themes resulting from these meetings included interpreted nature, identity signage, paths, and public education.

“Interpreted nature” was defined as a balance between a formal cultivated garden and a wild prairie. As such, the model and inspiration behind the plant choices is the work done by landscape designer Piet Oudolf at the Lurie Garden in Chicago’s Millennium Park. Oudolf prioritizes having points of interest in the garden in multiple seasons. He strikes a 70 to 30 percent balance of plants that can provide multi-season structure, and those that simply contribute their shape and color for a short time. Any non-natives are thoughtfully chosen as noninvasive that enhance the native plants’ aesthetics and increase their acceptance and sustainability.

The original rain garden planting was focused solely on natives. While non-native plants that can provide desired qualities – hardiness or proportion, for example – may well be included in the new garden, the emphasis, in fact, 70 percent, will be plants that are native to central Illinois and are well-suited to the location. While Oudolf’s design evokes naturalism, there is order to his efforts – plants are installed in clumps, which is pleasing to look at, but also makes weeding a simpler task. The Red Oak Rain Garden will be planted in this manner, making it easier for volunteers or F&S staffers to know what plants not to pull.

To establish identity and increase awareness, the garden will have signage that explains its purpose. Some students were not aware that this area was a rain garden at all! Also, there will be small signs that identify specific plants. Coupled with outreach materials and events (such as brochures and tours coordinated with Allen Hall and LAR), the signage will help those who will tend the garden, but it will also help educate visitors and potentially inspire some to plant a rain garden or to plant natives in their own yards.

This funding request is mainly to cover the cost of buying and installing the new rain garden plants, signage, and hardscape. The plants will be chosen carefully and going forward, their maintenance – implemented by university personnel or volunteers – will be thought through as well.

How will this project improve sustainability at UIUC?

Even today, the Red Oak Rain Garden improves the functioning of the Illinois campus. By reimagining and replanting it, the garden can become a shining example of how to successfully incorporate green infrastructure when addressing stormwater issues across campus.

The plants will include some that attract birds and pollinators, and are multi-seasonal, so the garden will foster the presence of campus wildlife. The garden will be managed through integrated pest management with little to no pesticides used in its care. Further, there will be no watering beyond the first two years of establishment.

The rain garden plantings will also open the door to new landscape styles and rhythms on campus while complying with university aesthetics. The introduction of the Piet Oudolf-Lurie Garden approach can help inform the identity standards of University of Illinois plantings, especially as landscapers look to introduce plants that are multi-functional.

The garden will create an intimate, rather than institutional landscape feature. While squares, triangles, and hedges have their place on campus, the Oudolf approach celebrates individual species working together to make something more powerful than if they were on their own.

Where will the project be located? Do you need special permissions to enact the project at this site? If so, please explain and attach a letter of support to your application.

The project is located just south of Allen Hall/LAR and west of McKinley Health Center (see map). Facilities & Services has been involved in the reimagining from the start (see attached letter). They have done an initial review of the submitted garden draft plan. F&S Architectural Review Committee is the authority that will issue final design approval. I am continuing to work with them on this process.

Other than the project team, who will have a stake in the project? Please list other individuals, groups, or departments indirectly or directly affiliated to this project. This includes any funding entities (immediate, future, ongoing, etc.) and any entities that will be benefiting from this project.

Facilities & Services (letter attached)

University of Illinois Extension (letter attached)

University Housing (letter attached)

Red Bison (letter attached)

Potential to also partner with Departments of Civil and Environmental Engineering, NRES, and Landscape Architecture.

Please indicate how this project will involve or impact students. What role will students play in the project?

The garden will provide a place of beauty and nature on campus – a place to inspire students to think outside the box, engage in science, learn about gardening, or just rest and restore themselves.

For starters, students are already involved in the garden planning. Currently, I'm a Masters candidate in MBA/Landscape Architecture. My design was informed, in part, by input through the aforementioned two stakeholder meetings that included current and prospective university students. Next, the rain garden will provide an opportunity for students to help construct and maintain it. In fact, they have a chance to help dig up

and rearrange part of the campus! The student organization Red Bison has pledged to assist with preparing the garden bed and planting (see attached letter). Later, these students can join with community volunteers (many of whom have 20 years gardening experience) on special workdays to help tend the garden offering all involved an opportunity for multi-generational learning.

In order to teach Red Bison about rain gardens, the Illinois Water Resources Center will provide educational training based on Purdue University's Rainscaping course. This application includes the material portion of the cost of this training. The educator's time will be provided in-kind. For more details about the Rainscaping program, see: <https://extension.purdue.edu/rainscaping/>

The garden will also be an outdoor learning laboratory, generating real-world data that instructors and students can use to teach and learn data aggregation. Professor Art Schmidt is using the garden for his CEE 458 Water Resources Field Methods class. Further, he has engaged CEE 398 students in a team project to design the technical aspects of measuring infiltration. Indeed, students can play a role in monitoring the health of the garden as they develop new skills.

Finally, the garden will provide a place for students to sit and restore themselves. Even bringing short nature breaks into one's day can prove beneficial. With its multi-season visual appeal, the garden will provide a lovely respite from the pressures of school. In fact, its nearness to McKinley Health Center may prove helpful as part of stress remedies.

Have you applied for funding with SSC previously? If so, for what project?

No

Scope, Schedule, and Budget verification

What is the plan for project implementation? Describe the key steps of the project including the start date, target completion date, target date for submitting a final report, and any significant tasks or milestones in the table below. Please be as detailed as possible.

Project Timeline (Sep 2017 – November 2018),

End of October 2017 – Brent Lewis, Campus Landscape Architect, provides feedback & approval on plans.

Thanksgiving Break, 2017 – A new design iteration, based upon his recommendations and feedback will be created.

End of December 2017 – Collect final notes from Brent Lewis in regards to final plan iteration

End of January 2018 – Plan is complete, along with planting diagrams and locations for spring

Early February 2018 – Red Bison Rainscaping Training

Early to mid-February 2018 – Pre-order plants for spring planting

Mid-March to Early April – Store plants in campus greenhouses until planting

Prep Day – Scheduled for mid-April, perhaps 16th

Planting Day – Scheduled for late April, perhaps 30th

Ribbon-Cutting Ceremony – Early-May

Final Report Submittal – November 2018

List all budget items for which funding is being requested. Include cost and total amount for each item requested. Please be as detailed as possible.

See attached Budget (RORG Excel sheet).

If the project is implemented, will there be any ongoing funding required? What is the strategy for supporting the project in order to cover replacement, operation, or renewal costs? (Note: SSC provides

funding on a case by case basis and should not be considered as an ongoing source of funding)

Ongoing funding needs are for replacement plants. Extension offers \$150 per year towards this (see attached letter). Any monitoring equipment costs are beyond the scope of this projects and are being obtained from other sources.

Please include any other sources of funding that have been obtained or applied for, and please attach any relevant letters of support.

See attached Extension letter.

What is the plan for publicizing the project on campus? In addition to SSC, where will information about this project get reported?

Publicity will be shared by F&S, Housing, and Extension via press releases, websites, and social media. When the garden is complete, a ribbon cutting ceremony will bring the partners together to celebrate and tell the story across campus and in the larger community.

Additionally, project information will be reported on the iCAP website.