

The Sustainability Fund Project Application

Background and Context:

The NCSU Sustainability Fund Advisory Board announces the second annual request for proposals to advance sustainability on campus. This RFP is for projects that have high immediate impact or for longer-term projects that have significant potential for high impact. Projects can focus on education, outreach, infrastructure or any other component of campus sustainability. Examples include workshop development and sponsorship, symposium development, projects aimed at some aspect of sustainability, pilot projects to demonstrate potential for successful use of longer-term funding, large-scale infrastructure improvements, or other creative uses of these student-fee derived funds. Faculty or staff directed projects are appropriate if accompanied by a statement indicating how students will participate in the project or how students will benefit from project completion. Students are encouraged (but not required) to develop projects in conjunction with a faculty mentor or advisor. Priority will be given to projects with matching funds from other public or private sources. Letters of support from advisors and partners are strongly encouraged (letters of support from additional funding partners are required).

Proposals are due February 27, 2015. Funding decisions will be made by May 1, 2015. Projects begin July 1, 2015. Mid-year reports are Due December 1, 2015 and final reports are due by June 15, 2016.

All materials must be submitted electronically. Please complete the following information:

Application Date: 2/26/15

Project Title: Bigbelly Waste and Recycling at University Recreation

Total Requested Amount:

*Total available for funding is \$120,000 for all projects in the current funding cycle. Individual project funding amounts will vary depending on number and scope of projects funded. In exceptional cases, funding renewal will be considered with re-application.

Applicant Information

Name of Primary Contact:

Please mark your status with an "X": Student Staff Faculty

Campus Affiliation(Name of Organization, Department, or Office):

Email Address:

Cell and/or Work Phone:

Campus Mailing Address:

If you are a student, please provide the following information:

This project is solely my own *OR*

X This project is proposed on behalf of (student org., campus dept., etc.):

Name of Faculty or Staff Project Advisor (if applicable):

Faculty or Staff Project Advisor Contact Information:

Email Address:

Campus Address:

Phone Number: Day-time/Work:

Cell Phone:

Please organize your proposal into the following 8 sections and answer the prompting questions where applicable. Total proposal length should not exceed 6 pages (1 inch margins, 11 point font). Additional documentation (e.g., letters of support, maps, drawings, etc.) should be submitted as appendices and clearly labeled to aid committee review (does not count toward 6 page limit).

Please include a bulleted list of any attachments (including file names) here:

Please email your application materials to dasa-sfab-chair@ncsu.edu. Please include “Sustainability Fund Application” in the subject line. You will receive electronic confirmation that your materials have been received.

Please review the application materials and online content carefully. If you still have questions, please email the Fund Advisory Board Chair at dasa-sfab-chair@ncsu.edu with your specific question, or feel free to call 248-417-8343 with any questions.

1) Project Description

Large amounts of waste and recyclables are produced on NC State's campus each day. NC State does a great job of handling the waste and recyclables by equipping the campus with many waste and recycling bins. However, some bins on the campus receive more waste and recyclables than others. This causes bins to overflow which is aesthetically displeasing, potential safety problem and bad for the environment. Two solutions to overflows are to empty bins more frequently or to increase the size/number of the bins. Three particular sets of waste and recycling bins that often overflow are the ones located at Carmichael Complex. Specifically, in front of the Casey Aquatics Center, near Carmichael Gymnasium's outdoor basketball courts, and on the breezeway between the Carmichael East Wing and Carmichael Gym. During the weekend, when the trash is not emptied, there is constant overflow of these bins due to the many events and amount of us at Carmichael Gym. Because of full and overflowing bins, people put trash in the recycling bin and debris from the bins blow away in the wind, leaving trash and recycling scattered about on Monday mornings.

Bigbelly was founded in 2003 with the goal of improving waste collection. As is, waste collection is one of the least efficient and resource intensive industries on the planet. Since creation, Bigbelly has evolved to offer unique solutions for the public space by leveraging renewable solar energy and information technology. Today, Bigbelly has won numerous awards and their solutions have been deployed in every state and more than 45 countries worldwide. NC State is a customer of Bigbelly and

has implemented their technologies on campus already. More information about Bigbelly can be found at their website, <http://bigbelly.com/homepage-static/about-us/>.

Bigbelly's most popular product is the Bigbelly compacting bin. The Bigbelly compacting bin compacts its contents, with forces of up to 1,250 pounds, which increases its capacity to over 150 gallons. The bins are also fully enclosed which helps to prevent waste and recyclables from leaving or being scavenged by animals. And to top it off, Bigbelly compacting bins receive all of their power from the sun using solar panels. There are different types of compacting bins made to collect both trash and recyclables.

The frequent overflows at some of the waste and recycling bins around NC State Carmichael Complex can be easily corrected by implementing Bigbelly compacting bins. The Bigbelly compacting bins will provide NC State University with aesthetic benefits, safety benefits, cost savings and help campus be even more environmentally friendly.

2) Anticipated Outcomes/Impact

Implementing Bigbelly compacting bins around Carmichael Complex would result in many benefits. The first benefit is that the waste and recycling bins will have a higher capacity. This means that the bins will require less emptying by employees which saves on employee costs. Having a larger capacity for trash will also keep the bins from overflowing on the weekends, keeping campus aesthetically pleasing and reducing litter. Compacting trash and recyclables will reduce the carbon footprint and conserve fuel, since trash will not have to be collected as often.

The enclosed top of the bin offers many benefits as well. It keeps trash from blowing away in the wind, again, reducing litter. The enclosed bin also eliminates odors. It also reduces animal interaction with trash and recycling.

Another benefit of implementing Bigbelly compacting bins is that it will promote sustainability on NC State's campus. Bigbelly compacting bins are physical displays of NC State's commitment to sustainability. The recycling bins show images of recyclable material, educating users on what is recyclable. Information about the Bigbelly compacting bins will be posted beside the bins to educate people about the benefits of the bins and how they got there. Sustainability-focused projects inspire students, faculty, visiting scholars, and many others to live more sustainable lives.

3) Project Benchmarking & Innovation

Not only are Bigbelly bins on other campuses in the United States, but there are also already two bins on NC State's campus. Students for Solar sponsored the first installation of Bigbelly bins by the covered bus stop on Morrill Drive. There is one trash compacting bin and one recycling bin.

45 Bigbelly bins are also installed around Downtown Raleigh, Glenwood Avenue and Hillsborough Street. Sustainable Raleigh from the City of Raleigh government led the initiative to install these bins in pedestrian friendly areas around Raleigh.

Adding more Bigbelly bins to NC State's campus will promote sustainability, while connecting NC State with the larger Raleigh community. NC State is known for leading the way through technology ventures, and the Bigbelly bins would be another way that NC State embodies the Think and Do principle. With an easy switch from regular, open top trash and recycling containers to solar powered, enclosed, compacting bins, NC State accepts responsibility to take care of the environment.

4) Metrics for Assessment

The success of implementing the Bigbelly compacting bins will be measured by comparing waste management costs pre and post installation of the new bins. In addition to assessing cost, general observation of litter around our complex is another method of assessment. On Sunday afternoons when trash typically accumulates, our committee can take pictures of the current trash and recycling bins, as well as the complex grounds. After installation, we can take the pictures at the same time of the day in order to measure success.

5) Cost Savings

It is estimated that it takes about 4 years to payback the cost of the Bigbelly compacting bins. Before Bigbelly compacting bins were installed, the City of Raleigh was spending about \$53,000 a year on waste management. After installation of the compacting bins, the waste management costs were down to \$1,700 a year. By implementing these new bins at specific sites around Carmichael, it will help eliminate the need for additional staffing weekends and during large events at Carmichael.

6) Broader Vision

Along with major cost savings and reduction of litter, Bigbelly bins will educate the campus community about sustainable options via their informative signage. They show commitment to sustainability and can be used as an example for the campus.

Bigbelly compacting bins can be implemented almost anywhere outside on campus where there are trash and recycling bins. Whether there is a need from overflowing trash, or if there is the goal to cut costs and lessen the space waste takes up, Bigbelly bins can easily be implemented. Adding more Bigbelly bins to NC State's campus would only reinforce NC State's commitment to a sustainable future.

7) Project Milestone

With approval of this project, University Recreation will begin working with NC State Waste Reduction and Recycling to help implement the new compactors. In order to help make sure all campus partners that need to be involved with the process are involved a Facility Modification Form will be filled out. Once the bins have been ordered and received they can be installed very quickly and easily. The anticipated completion should be done by early August or mid semester depending on how long it takes for the bins to be ordered and delivered.

8) Project Budget & Justification