

2023 Sustainable Solutions Challenge  
University of Richmond

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## Creating Cultures of Caring

### **Introduction**

To care about sustainability is to care about our local and global community, and an understanding of this is essential in planning for the future of the University of Richmond.

As President Crutcher shared in the [University of Richmond Sustainability Plan 2019-2025](#), “Our ability to thrive as a community and endure as an institution of higher education rests upon a shared commitment to act as responsible stewards of our resources. The unprecedented challenges of changing environmental, social, and political conditions require equally creative approaches to generating solutions.”

The Sustainable Solutions Challenge works to generate ideas for creating a more sustainable campus for years to come. ***For this year’s challenge, we invite you to propose an initiative of your choice that would work to create a culture around sustainability at the University of Richmond.***

Students are encouraged to think collaboratively across disciplines to come up with sustainable solutions that will work to influence the culture around sustainability at the university. In order to tackle these issues as a campus community, we first have to be willing to take part as a collective and to make sustainability visible, shared, embodied, and known.

Campus stakeholders have expressed the importance of students embracing sustainable solutions as part of their lives and the campus culture. University operations can do everything possible to provide sustainable alternatives such as composting, but at the end of the day if it isn’t woven into the fabric of campus culture and carried forward into future years, then the impact isn’t as meaningful on a student-level. They also recognize one of the biggest challenges to sustainability initiatives at the university is to keep the momentum and student buy-in going after the students who brought forth the idea graduate. This is why this year’s challenge proposals should address how your idea could influence the culture at UR for years to come.

As a result of interviewing members of University Facilities, the Office of Sustainability, and Dining Services offices, the following prompts provide guidance and structure for thinking about your solution to this challenge. ***Though we encourage submissions responding to these issues relevant to stakeholders, you are welcome to pitch an idea of your own choosing.***

### **Reusables**

The University has a goal of 75% Waste Diversion from the landfill by 2025. With reliance on single-use packaging across retail dining locations and mobile ordering through GrubHub, this is a challenge. Composting at UR was expedited as a result of the pandemic in 2020 due to concerns surrounding increased food waste as the dining hall switched to serviced take-out containers. The 2021 Sustainable Solutions Challenge winner worked to increase composting rates on campus. Composting is now available at all retail dining locations and the HDC dining hall; in the 2021-2022 academic year, 80 tons of food waste was composted and cycled into nutrient-rich soil. Prior to the composting program, this organic matter would have gone to the landfill where it would go on to create methane emissions. To make this happen, it took massive collaboration in operations between Dining Services, the Purchasing Department, and Custodial and Environmental Services.

Manager of Rethink Waste, David Donaldson, shared that while the switch to compostable packaging is underway, providing a better alternative than landfilling, compostable packaging still generates more emissions and uses more water in transportation and production than *reusable* packaging. The switch to reusables is essential for creating a circular economy. Donaldson shares that the efforts that will be most worthwhile in sustainable to-go food service will be solutions that provide the operational framework for cost-effective reusable takeout containers and cups.

Prior to March of 2020, there was a reusable cup program in place at retail dining locations such as Eight-Fifteen Café and Passport Café where individuals could bring in their own reusable cup for staff members to fill instead of filling their beverage in a single-use cup. Terry Baker, Executive Director of Dining Services, reports there was also an economic incentive to this program, offering a small discount to consumers for bringing their own cup. Baker shares that this program ended in 2020 as fear grew about the risk of contamination of COVID-19 through reusable cups. Additionally, GrubHub has replaced all ordering systems at retail dining locations and most orders are now placed through the mobile app. The Grubhub mobile ordering system complicates integrating reusable products. How would the price reduction work and how would reusable items be supplied?

Nia Williams is the manager of Eight-Fifteen Café, a main campus coffee shop located at the entrance of Boatwright Library. She encourages ideation of how a reusable cup program can be introduced in a safer, cleaner way. A problem with the past program was some people brought in cups that were soiled or not well-cleaned. It's important to consider how reusable could be offered while simultaneously maintaining quality standards of service and strict sanitation practices.

In considering a possible solution to reincorporating and increasing the use of reusable cups, Williams notes it will be important to consider where a pour-out station would be for using

reusable cups, where the dishwashers are and what the dishwashing capacity is and the labor involved, as well as the incorporation of more accessible cleaning sinks for students to wash out their items. There is a current problem of standardizing compostable products across all dining locations: it can be difficult to source all of the sizes the locations provide. For example, at Eight-Fifteen, it's 12, 16, and 20 oz sizes. There once was an in-house program at Eight-Fifteen Café with mugs provided in the shop. Spider cards were collected as collateral to ensure they were returned after the student finished their drink in-house. While on a small scale this may be possible again, Williams describes they do not have the ability to clean all of the cups handed out in a day.

DINING RETAIL LOCATION	ANNUAL DISPOSABLE CUP USAGE
Tyler's Grill	105,000
Eight15 Café	49,500
Cellar	22,000
Lou's Café	8,000
Organic Krush	34,000
Passport	37,000
ETC	2,000
<b>TOTAL</b>	<b>257,500</b>

*Table 1: Data on campus disposable cup usage, provided by the Purchasing Department. \*Does not include data on Catering and Events purchases.*

Another barrier to the implementation of reusable items across retail dining locations is the financial risk of the items being stolen. Rob Andrejewski, Director of the Office for Sustainability, reports that an in-house reusable plate and cup program at Passport once resulted in approximately 200 items being stolen. While the upfront cost of reusable items is often cheaper than paying for single-use items indefinitely, this is a risk if the items will be stolen and not properly returned. Ozzi, a patented process to collect and redeem reusable containers, is an example of a system that could be implemented on campus, statistically proven to reduce operations costs and place accountability within the exchange. Many retail operations do not have the capacity for washing quantities of reusable containers following sanitation practices. Considerations also need to be made for labor and time required.

**Sustainable Purchasing**

The University of Richmond is responsible for maintaining and purchasing products to be bought by its community, from SpiderShop gear and the practices that go into the production of sold items to food sold in dining locations. To assist university operations to increase the ratio of sustainably procured products sold on campus, you could propose a plan for the distribution of sustainable purchasing practices across campus.

Terry Baker shared that it's essential to have student buy-in in order to provide sustainable options to students. For example, plastic water bottles are the number 1 item sold at the campus convenience store, ETC. If ETC doesn't stock plastic water bottles, then many people might drive to Publix to purchase them. Dining also has contractual obligations to consider with vendors for the sale of beverages that involve single use plastic bottles. How can change be enacted through a campus culture of choosing alternatives to single-use plastic? An educational campaign might help to make more apparent the benefits of buying one product over another at locations like ETC and ethical sourcing standards in the SpiderShop. Proposals may also point towards sustainable and ethical purchasing practices guidelines such as Good Food, or come up with their own.

Additionally, while many retail dining locations are now serving compostable products, an ongoing concern many interviewees mentioned is the material of customer receipts. Despite popular belief, these receipts are not recyclable or compostable and must be placed in landfill bins. In order to achieve our goal of 75% waste diversion from landfills by 2025, ideas for alternative customer receipt forms may be considered. Sticky paper options placed on to-go items such as coffee cups are also currently used in high volume, and an alternative with quick turnaround capacity is needed.

## **Energy Usage**

According to our STARS report on energy, in 2021 the university had a total site energy consumption of 299,068.36 MMBtu. According to the U.S. Energy Information Administration, the average Virginian household uses 86 MMBtu. With a student population of 3,164 undergraduates, that's equivalent to 1.1 households worth of energy per student. While the university matches 100% of its electricity usage with fossil-free electricity to the local electrical grid through the Spotsylvania Solar Project, reducing our energy consumption is essential in creating a sustainable future. While Spider Solar matches *electricity* usage with clean energy, the university also uses other forms of energy through heating, cooling, and hot water and there is not a tool in place to reduce the university's impact of the gas, oil, and propane involved. Though it's unknown what percentage of UR's energy use goes where, across college campuses most energy is consumed through ventilation, computer usage, cooling, refrigeration, and lighting. How can energy usage be reduced through campus building management? You may refer to the

Business Energy Advisor when searching for ways to cut down on consumption within a university setting.

Additionally, on-campus renewable energy holds much potential to educate the community about the benefits of renewable energy and create a culture around renewable energy. Spring of 2016, a 204.8 kW bifacial solar array was installed on the roof of the Weinstein Center for Recreation, generating 19% more electricity than predicted due to its bifacial and inverter design. This project shows the success of generating on-campus renewable energy and Rob Andrejewski, Director of the Office for Sustainability, shows great enthusiasm for student ideas on the expansion of renewable energy projects across campus.

### **Landscape**

If a team is interested in generating a sustainable solution to campus landscaping practices, refer to STARS reports on UR's biodiversity and landscape management as well as guides to ecological landscaping taking place at other schools such as Lafayette College. The Landscaping Services Department puts in great effort into maintaining the 378 acres of campus. They are responsible for overseeing 170 acres of turf, 21 acres of parking lots, and 16 flower beds. In generating a viable solution to sustainable landscaping, it will be important to consider the university's campus beautification standards and the feasibility of a project involving strong student and faculty support to allow it to run.

Rob Andrejewski, Director of the Office for Sustainability, suggests looking into the feasibility of the electrification of golf carts on campus for a possible proposal. Between 2017-2019, there was talk among the Office for Sustainability and University of Facilities to replace old golf carts with electric models. Currently, about half of the campus carts are electric while the other half are fueled by gasoline. A proposal for the procurement of electric vehicles on campus with the cost and benefits laid out would make an impact on campus operations for years to come.

Often solutions will be tossed around in university facilities and operations, but as Scott Lincoln at Custodial and Environmental Services points out, "lack of follow through commitment can erode support." For example, the 2022 Sustainable Solutions Challenge winner proposed the addition of a green roof on top of a building such as Gottwald. This student idea breathed a second life into a conversation that had already taken place years ago and was helpful in implementing it. A large part of the follow-through process is determining the feasibility of the project and analyzing the obstacles.

### **Public Art and Environmental Education**

Public art works to enhance our relationship to the physical environment, instills community cohesion, and can encourage social health and wellbeing. It creates a unique sense of place and distinctiveness, with increased pride in our local area.

Creating spaces for environmental art encourages community interactions with topics surrounding our relationship to the web of life and can inspire geographic awareness of our connection to the world at large. Through this, art can help save the planet. Students might consider proposing a plan for a public artwork on campus that will get the campus community thinking and talking about sustainability. What does sustainability mean to you?

Other environmental education efforts may work to influence the culture surrounding sustainability at UR. In terms of waste reduction, Scott Lincoln's team at Custodial and Environmental Services is currently working to move waste bins out of individual offices and towards a centralized location. This tactic has been demonstrated at other universities to decrease waste, labor, and the number of plastic liners used. When these bin-centralization efforts have been made at UR, there has been much push-back from faculty and staff. Additionally, the environmental cost of the damage and replacement of property such as walls, ceiling tiles, and exit signs exhibited in residence halls calls for a change in culture around how items in our campus community are treated. A student solution may consider incorporating educational tactics to make such efforts more successful.

Interviewees:

David Donaldson, Manager of Rethink Waste

Terry Baker, Executive Director of Dining Services

Nia Williams, Manager of Eight-Fifteen Café

Rob Andrejewski, Director of the Office for Sustainability

Scott Lincoln, Associate Director of Custodial and Environmental Services

### **Guidelines:**

Each proposal will include a description of the problem you seek to address, your team's solution, budget, and a dissemination plan of the timeline and activities to be completed following selection as a winning solution. See rubric for scoring criteria.

Note: A Sustainable Solutions Summer Intern will work to implement the past years winning solutions and to create a framework for the fall semester challenge. 1 member of the winning team will be invited to be a paid undergraduate intern to complete their work in the following semester. Winners will be expected to follow through with their plans and engage with campus stakeholders such as University Facilities to implement the solution.

Rubric for assessment (scored out of 50)

<b>Assessing</b>	<b>Strong Proposals will:</b>	<b>Score</b>
Overview	The problem is accurately analyzed for a strategy to be put forth to implement a relevant solution.	__ / 5
Creativity and Innovation	Students propose unique ideas to relate the proposal to the context of UR.	__ / 5
Campus Partnerships	Strong proposals work to solve problems that are important to stakeholders and understand the complexities of the issue. Demonstrable support is essential for the success of an initiative and stakeholder buy-in is necessary for pushing a project beyond the idea-phase.	__ / 10
Culture and significance	The proposal includes adequate methods to influence the culture surrounding sustainability at UR. It has statistical analysis to back up its potential for success using metrics such as GHG Accounting, Cost-Benefit Analysis, and/or Other relevant frameworks.	__ / 10
Budget	Strong proposals must include a budget clearly describing the cost of the project. Consider staff resources and	__ / 10



	time as well as the cost of purchasing materials.	
Implementation Feasibility	<p>The project is realistic given the provided strategy. From a student's proposal, the relevant department should have all the information needed to execute the plan into action by May of 2024.</p> <p>Strong proposals will consider the timeline of the solution from a business operations standpoint, recognizing that summer is when there is the most time at the university to propel ideas forward and proposing to start immediately in one of the busiest months of the year such as April is not feasible.</p>	___ / 10