

The Prospect Hall Greenhouse: A Sustainable Makeover for Underutilized Space

With Super Blanch close to completion, Mount Holyoke is facing a lack of creativity in implementing initiatives to utilize large indoor spaces where dining halls currently are. To combat the loss of on-campus work-study dining staff jobs, and to put these gutted spaces to use in a green campus initiative, we propose that the Prospect Dining Hall be repurposed into an indoor greenhouse. Maintaining this space will resolve the issue of work-study job loss. Building the greenhouse and community surrounding it will be a job for Residential Life staff, using this space to generate conversation and student activism in an already-enthused group of residents. By combining sustainability, aesthetic appeal, and educational value, Mount Holyoke College will create a space which will improve the quality of life of students, faculty, and staff.

Why Prospect?

- The dining hall at Prospect is a single-story building with plenty of sun exposure, making it an ideal location to convert into a greenhouse by replacing the roof with a skylight structure (Fig.1)
- Installing green house in Prospect would incentivise unenthusiastic students to live in a generally lesser-preferred residence hall.



Figure 1. A vision of the transformation of Prospect dining hall.

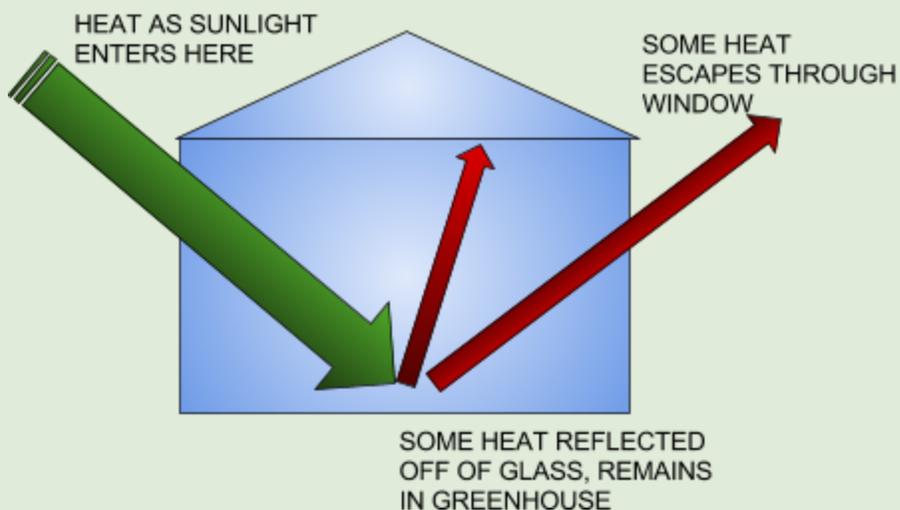


Figure 2: The Greenhouse Effect, illustrated

which would be the space used for the greenhouse, is approximately 1,800 square feet. Therefore, it would cost \$3,600 to \$7,200 to install the fiberglass roof panels for Prospect.

How it works: is it feasible?

- Greenhouses operate on the principle of the greenhouse effect. When sunlight passes through transparent materials, such as glass and strikes the plants, the energy is changed to heat. Greenhouse panels can transmit light easily, but not the heat coming off of the plants. This means that the heat stays trapped inside of the greenhouse.

- Fiberglass roof panels are extremely low maintenance, cheap to buy, and work perfectly for a greenhouse.¹

- Fiberglass roof panels cost \$2 to \$4 per square foot to be installed. The current dining area,

¹ "Fiberglass Roofing," last modified 2012, <http://www.homeimprovementeducator.com/roofing/fiberglass-roofing.html>

How Will We Pay For This?

- Living Learning Communities (LLCs) on Mount Holyoke’s campus have been rapidly growing in popularity and financial support since their recent revival.
- A “Living Green” ecology floor, which aims to teach students “how to personally live in a manner that reduces an individual's or society's use of the Earth's natural resources and personal resources” was placed initially in 1837, the residence hall with the closest proximity to the currently non-functioning outdoors student garden.
- Funding per-floor is around \$150, and each LLC has an additional \$500-1000 in funding to support the additional special interests of the themed communities. This is a total of \$650-1150 per floor per year to spend on events and programming.
- An LLC-run greenhouse would utilize Residential Life funding for programs such as vegetable planting, renewable energy information sessions, and harvests. After the first year of building, subsequent years will focus on planting and harvesting rather than building the infrastructure.

Month	Event Title	Goal	Cost
September	Getting to GROW You!	Meet community, establish expectations, plan task groups	Minimal (\$30 for snacks)
October	Getting Down and DRRRTY	Learn how to build planter boxes and set up a watering system while listening to funky fresh throwback tunes!	\$400-Wood for planters, toolbox, hoses, professional help compensation
Early January	Planting the Seeds of Friendship	Learn about sustainable and biodynamic planting, how to care for agriculture, plant seeds and establish a schedule	Cost of seeds (\$200)
April	Harvest Festival	Everyone harvests plants and donates them to Blanchard for a featured Sustainable Meal!	Free

Figure 3: A hypothetical course of hall events for the “Livin Green” LLC, year 1.

Solving Dining Services Employment Cuts

- Due to the centralized dining project facing completion in 2018, student work study opportunities on campus are likely to see decreases, as every first-year student on work study must fulfill their work obligations in dining services. In fact, Prospect dining hall employs roughly 65 workers, as opposed to the 29 total non-dining services work study positions currently available on the Mount Holyoke jobX portal.^{2 3}
- Converting the Prospect dining space to an indoor greenhouse would require installation as well as regular maintenance, a necessity that would maintain a substantial amount of the roughly 275 employment opportunities facing disruption and displacement under the construction of “Super Blanch.” These new jobs would add to the available number of work study positions after dining is centralized, and would lessen the burden of the college to re-distribute employment opportunities.⁴
- Research shows that working in an environment with plants can reduce stress and increase productivity, benefits that work study students employed in the Prospect greenhouse would receive.⁵

² Mount Holyoke College Career Development Center (2017) “On Campus--Level 1 Jobs.”

³ Richard Rigali, e-mail message to author, April 10, 2017.

⁴ Mount Holyoke College (2017) “Student Employment FAQs.”

⁵ “Prove It: Plants In The Workplace Show Major Benefits,” last modified March 27, 2014, <http://www.goodearthplants.com/prove-plants-workplace-show-major-benefits/>