Green Fund Project
Final Report
This report may be published on the SIU Sustainability website.

Name of person(s) completing report: Karen Midden & Jennifer Matthews
Identify if the person completing report is a student, faculty, and/or staff: Faculty
Department: Forestry and Horticulture
Contact Phone and email address: 618 453-3341. kmidden@siu.edu
Faculty Advisor (if applicable): NA
Project Title: *Next Generation: Living Wall Regeneration*
Project ID #: 24SP101
Award Date: April 18, 2024
Completion Date: September 26, 2024
Total Funds Used: $15,800

1. Provide a summary of your project/project experience.

   Next Generation: Living Wall Regeneration replaced the worn planting system of the Living Wall located in the Agriculture Building with a simpler, newer type of system. The new replacement is a modular grid-based tray system that is less complicated to maintain (https://architecturalsupplements.com/living-walls/). Classes taught by Karen Midden in Horticulture and Jennifer Matthews in Interior Design, and students interested from numerous disciplines assisted in the removal of the old system and the installation of the new one under the guidance of three professional from Growing Green Inc, St Louis, MO (https://growinggreen.com/). Jodi Stumpf, SIU Horticulture Alumni and co-owner of Growing Green, assisted with system selection and plant choices as well as project organization. Larry Bulawsky and Keith Roberts facilitated the students with the structure installation and the 'planting'. Mark Owens, SIU Plant Services Director, provided plumbers and electricians to assist in minor aspects of the installation. The project installation involved 1 ½ days. Approximately 50 students were involved in various aspects (with many more observing). This included the grantee's classes in Interior Design and Horticulture.

2. Provide a summary of your results (environmental, social, and/or economic) including quantifiable data as appropriate (ex. # of individuals reached, lbs. diverted from landfill, energy saved, etc.).

Living walls bring plant life to the built environment on vertical surfaces transforming that environment to a living, aesthetically beautiful and softened wall with added environmental and psychological benefits. This was truly the case when we replaced the old living wall, both during the installation and now on-going. It is a welcome burst of fresh and calmness to those who see it. The administrator person who can view the living wall from her desk through a window talks about the number of people who slow down their pace as they pass it, stop and look at it or sit down on a nearby bench to enjoy it. The regenerated living wall attracts and fascinates people. On an estimate, 30 – 50 people see the living wall daily. It is also included on many of the perspective student visit tours, classes use it

(recently the Plant Propagation class took cuttings which also aided in maintenance). The wall is a wonderful example of biophilic design for all students. They can experience the power of plants and nature in an interior space and not just read or hear about it.

Green Roofs for Healthy Cities reports that interior living walls offer health benefits by improving interior air circulation. It has been estimated poor interior air quality negatively affect workplace production by an approximate $60 billion dollars in the United States. Given that most North Americans spend 80 -90 % of their time indoors, improving interior air quality is of high value both health wise and economically. Additionally, air circulated through a building is noted to be cleaner if a living wall is located to the air intake vent. A living wall can aid thermal wall insolation resulting in improved energy efficiency and less demand on power. Exterior living walls can reduce surface wall fluctuations ranging from 50F-86F by reducing heat movement. It has also been noted that, through sound absorption, plants reduce noise. Environmentally, reduced noise is welcoming and healthy in offices, restaurants, airports and other settings. Plants in a living wall improve air quality by photosynthesis, absorbing carbon dioxide and releasing oxygen. They also passively absorb pollutants, gases and dust allergens on leaf surfaces. The system traps air within the plant mass, reduces temperatures by evapotranspiration and shading the walls. It also buffers winter winds and helps lower summer temperatures, thus improving a buildings Energy Star rating.

It is difficult to measure how the mentioned environmental features are improved given the small size of our wall relative to the agriculture building. However, it is an excellent demonstration and teaching tool for students as they learn about or get exposure to this valuable sustainable practice.

It was an exceptional learning opportunity for the students, faculty and physical plant personnel engaged in the design and installation of this wall. This is especially true for the horticulture and interior design students who gained experience with the construction, installation and maintenance of the system and for others who will observe the 'growing' art and the technology. As a follow up to the installation, we have selected an Interior Design student's journal. Aimee has a copy of all of the reports, if interested.

3. Summarize how your project promoted the Green Fee/Sustainability on campus including, but not limited to, flyers created, screenshots of website, signage, etc. Please include website links, if applicable. (Reminder: you are required to promote your project using at least 2 items from the awardee website promotion list.)

The regeneration of the Living Wall was promoted through social media by Interior Design and Horticulture. (see Save the Date attachment). Flyers were posted in the Agriculture Building, Quigley and shared with faculty such as Leslie Duram and the Sustainable Council. The installation event was announced in numerous Interior Design, Horticulture, Agriculture Education, Forestry and Architecture classes inviting students to observe or participate.

I apologize but I cannot find the images to take screenshots of our Facebook announcements, but we did use Facebook to promote.

4. Provide evidence of how you used the Green Fund Marker in your project. See photo attached

This project is a culmination of the campus sustainability mission. It is representative of a system that aids in climate change management, air quality, biophilic design, human health, art, plant management and simply a pleasant, growing vertical garden. The project will engage students and faculty in the collaborative installation, providing hands-on learning and so important, working with students and professionals from other disciplines to gain and understand of why a living wall touches into many professions and careers.

5. Is there anything you would do differently if you were to do a similar project in the future? If so, please describe.

   No, I think the planning and installation was very smooth. The involvement of students and physical plant services was fantastic. I appreciate all the cooperation, support and excitement generated from this project.

6. Provide as an attachment to the email (see email address below) a minimum of 5 digital images. A minimum of one of the five images should include a person. Images should be of high a quality as possible and be attached in jpg format, if available. Images will be used to promote interest in sustainability projects on campus and may be used on our website and in other promotional material. These can be photos of the progress of the project or the completed project. Provide captions for photos here.
   See separate email and captions with photos

7. In 2-5 sentences, describe what you learned from completing the Green Fund grant process. Include a detailed response (Do not simply respond "yes" or "no.") to at least one of the following questions to help us understand how this project has impacted your overall university experience.

   Personally, given that I have proposed and received several wonderful Green Fund Grants, it was not a new experience for me. I did learn about the different type of living wall system which was extremely valuable since I teach Sustainable Landscape Practices

   Speaking for Jennifer Matthews, this was her first Green Fund Grant and first involvement with a living wall. She noted that she gained a greater understanding of the biophilic value along with her Interior Design students as well as how living walls can be incorporated in an interiorscape. One key thing we discussed in writing the grant is how critical it is to look at what's asked for and respond to that clearly.

8. List suggestions for the SIU Sustainability Council to improve the Green Fund Award Process here:
   Quite Frankly, the process and instructions are accessible and direct. I have no suggestions.

Final Report forms should be sent electronically, in editable Microsoft Word format, to greenfund@siu.edu. This should be completed before requesting final reimbursement. A Sustainability Council designate will review final reports before releasing funds.