

## **Green Fund Project Final Report**

This report may be published on the SIU sustainability website.

Name of person(s) completing report: John Groninger  
Department: Forestry  
Contact Phone and email address: 3-7462  
Faculty Advisor (if applicable):  
Project Title: Sustainable Agroforestry Practices for SIU Farms  
Project ID #: 17SP125  
Award Date: 2017-18  
Completion Award:  
Total Funds Used: \$1,200

1. Please provide a write up of your project/project experience.

The project focused on repurposing the tree improvement center on SIU farms toward a demonstration area for sustainable agroforestry practices. Work commenced in August 2017 with removal of autumn olive and Amur honeysuckle, non-native invasive plants by student volunteers organized by Society of American Foresters and Forestry Club. Both organizations took ownership of the project and continued the work during at least 25 occasions for a duration of three hours each while the university was in session during the 2017-2018 academic year. Each session typically engaged 6 to 10 volunteers. Once the outer layers of autumn olive were cleared, it became apparent that the honeysuckle infestation was far more extensive than I had thought when originally preparing the proposal. In short, we cleared fewer acres than I had first hoped but we engaged, trained, and retained many more students than I had expected in pursuing this first phase of the agroforestry center. Over the next several month, volunteers will continue to prepare the site for tree planting (bringing in composted manure from the SIU composting facility), germplasm will be identified for establishing new native nut tree varieties for food production, and timber stand improvement will continue to enhance vigor of the maturing nut trees already present. A second phase is being proposed to use the trained students to continue invasive plant removal and establishment of species with especially high wildlife value by a student leader who was trained through this Green Fund project.

2. Please 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.).

Thirty students received hands-on training in the safe and effective removal of invasive woody plant species. This work represents professional development for these individuals, making them able to lead invasive plant removal projects of their own. This has already happened via the SIU Earth Month Timber Stand Improvement Day led by project leaders.

Approximately 600 student volunteer hours were generated.

Approximately four and a half acres of autumn olive infestation were removed, reducing nitrogen loading of the Little Crab Orchard Creek and ultimately reducing SIU lands contribution to the eutrophication associated with the Gulf of Mexico Hypoxia.

We liberated approximately five acres of established trees and potential planting locations. The first planting includes 10 donated bur oak trees.

Tools were purchased that are kept in a locked cache on SIU property for continued use on the agroforestry center site. These tools were used for the Timber Stand Improvement Day during the SIU Earth Month Celebration. Most notably, a battery-powered chainsaw was purchased allowing individuals with little upper body strength to participate fully, safely, and for a long duration in the autumn olive felling and disassembly component of the project. An additional battery-powered saw was donated by an employer of our graduates when we explained the project and its goal of expanding the pool of potential woods workers and leaders.

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.

Makenna Baxter, a student leader, produced a brochure, explaining the project. This was distributed at a Audubon Society-sponsored event, at RSO recruiting events, and also at the forestry department office.

Student leaders who gained experience in invasive species management and supervision organized a Timber Stand Improvement day as part of the SIU Earth Month celebration. This project removed invasive species near the west end of Campus Lake. Volunteer were given the use of tools, some of which were purchased through the Agroforestry project.

Andrew Dropik, a student leader, identified a herbicide application of very low cost and high precision that greatly increased the speed of stump treatments while reducing the amount of chemical needed.

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

I would more carefully considered the scope of the project and the motivations of students engaged in this work. This would have drastically changed the amount and allocation of funding I had originally sought. The support I did receive from the Green Fund was absolutely critical and leveraged additional resources not reported here the value of which far exceeded the \$1200 received from the Green Fund.

5. Please attach a minimum of 5 digital images –these will be images used to promote interest in sustainability projects on campus. These can be photos of the progress of the project or the completed project.



Project leaders (Makenna Baxter and Gail Plecki displaying the brochure as a means of encouraging student participation in the project and a registered RSO.



This map shows the rough extent of the area undergoing invasive plant species removal





A portion of the agroforestry center following autumn olive and honeysuckle treatment





Carefully applying herbicide to prevent stump sprouting in an autumn olive root stock





So much woody slash was generated that it was necessary to burn honeysuckle and autumn olive tops in order to gain access deeper into the infested areas. Burning will continue through the rest of the semester as weather conditions, and stem drying, permit





Student volunteers displaying tools used to execute invasive plant removal (herbicide spray bottle, conventional chainsaw, battery powered chainsaw, and hand saw for honeysuckle)

6. Optional: Do you have any suggestions for the SIU Sustainability Council to improve the Green Fund Award Process?

Consider developing an organizational mechanism that can quickly field and consider requests for funding re-allocation during the course of the project. Complex and innovative projects require flexibility since not all eventualities can be anticipated during proposal preparation. Also, the short time-frame of green fund projects does not square with the strict guidelines and monthly meeting cycles of the council.

Also, I have been told that the lengthiness and thoroughness of the application has also discouraged many action-oriented individuals from proposing some potentially outstanding projects.