# *Thank you for your commitment to green initiatives at the University of Illinois. One of the ongoing requirements listed in the terms of the funding agreement for your project is the submission of semesterly reports with key information about your project. In addition to this form, please provide additional financial documentation and/or progress photos if available.*

# *Please be as accurate as possible in describing the project (including possible setbacks or challenges in meeting the initial goals of the project). Not fully meeting your project's goals will not disqualify you from making future funding requests as long as your reports are as complete and accurate as possible. If you have any questions, please contact the Student Sustainability Committee, at* [*sustainability-committee@illinois.edu*](mailto:sustainability-committee@illinois.edu)*.*

**Project Name:** Enhancing Ecosystem Services in the Southern Arboretum Woodlands (SAW): Habitat Improvement and Reusing Lumber.

**Date of Report Submission:** September 19, 2021

**Project Purpose:**

The goal of the project is to create a diverse mosaic of mesic woodland and savanna communities in the Southern Arboretum Woodlands (SAW) through targeted transformation of the current block-like arrangement of similar aged trees originally planted as a research experiment. A 12-acre tract in the SAW encompassing moderately well drained Catlin soil and suitable for mesic native species has been selected for this project.

Ongoing suppression of invasive species will continue as needed during site preparation and establishment of native flora. Trees selected for milling will cut by professionally certified foresters and stored on site. A contractor will be hired to cut the lumber to specified architecturally suitable dimensions. The lumber will then be dried and made available for sustainable building projects.

Desired outcomes include:

* 1. Establishment of species rich mosaics of savanna and woodland communities with complex structure providing an array of habitats/niches for organisms (fungi,…..small mammals) that enhance ecosystem services.
  2. Aesthetic improvement of the existing plantation landscape by creating more diverse and architecturally complex structure through irregularly shaped woodland/savanna mosaics.
  3. Sustainable re-use of harvested wood for production of lumber for construction projects and reuse of woody debris for mulching projects.
  4. Opportunities for students to engage in the process of targeted landscape transformation and learn skills related to land management and production of lumber grade wood products.
  5. Establishment of an outdoor laboratory that is used by a broad cross-section of campus departments and other approved groups.

**Detailed Accounting of Expenditures to Date:**

Attachment: Accounting Spread Sheet

**Project Progress to Date:**

The first phase of enriching the site with native species has been accomplished through establishment of over 75 shrubs, which were selected to provide favorable habitat and food sources for birds, other fauna and insects.

A large tract in the SW portion of the SAW has been selectively logged and suitable lumber saved for subsequent milling. The remainder of the debris has been either been left on the soil as woody debris, burnt or processed into wood chips for mulching.

Efforts to control invasive species are on-going with principal targets addressing honeysuckle re-sprouts and garlic mustard.

Following the selective logging, a notable increase in pokeweed (a native plant) has been observed. We are consulting with colleagues about control measures, if needed.

Arrangements are being made by Professor Jay Hayak for an outreach demonstration at the SAW on use of a portable sawmill for production of construction and architectural grade lumber. Red Bison will use some of the lumber for construction of outdoor furniture for use adjacent to their shed located in the SAW along the Pollinatarium Rd.

**Student Involvement and Outreach to Date:**

To date, seven students have been employed using project funds. They have been involved in most aspects of on-site restoration planning and management and all have obtained by training and examination certification for pesticide application. Two of the students have obtained chain-saw safety certification and assisted in the first phase of selected tree harvesting.

NRES 420: Restoration Ecology. Students (22) in Professor James Miller’s Spring 2021 class conducted five afternoon field activities during the later half of the Spring 2021 that involved site preparation and planting of 55 native woodland shrubs in the SAW and observed/assisted with a controlled burn of the Pollinatarium Prairie.

NRES 285/499: Soils & Landscapes. Students (18) in two separate field lab sections in Professor McSweeney’s Spring 2021 used soil pits in SAW for soil-landscape investigations.

ROTC-Army: 25 students under supervision of Lt. Colonel Dan Johnson used the SAW for field exercises on 3 weekends during Spring 2021.

USDA-Natural Resource Conservation Service & Illinois Soil Classifiers Association use the SAW pits for professional training on a regular basis.

NRES 285/499: Soils & Landscapes. Students (23) in three separate field lab sections in Professor McSweeney’s Fall 2021 are using soil pits in SAW for soil-landscape investigations.

NRES 100: Introduction to Environmental Science. TA, Lauren Lynch has planned 6 field visits to the SAW for an overview of restoration ecology and management.

NRES Freshman Field Day ( 60+ students) planned for October 16, 2021.

Red Bison, a student RSO focused on restoration ecology has conducted a variety of restoration activities in the SAW during 2021 including, brush collection and burning, native seed collection, management of recently planted native shrubs (weeding/watering), extensive site clean up including collection and removal of abandoned research infrastructure, garbage etc. The Red Bison storage shed (SSC funded) has been upgraded with the addition of shelving and all the organizations equipment is now housed at this location. Red Bison is creating a gathering space around the shed that will include a fire pit and furniture constructed from lumber harvested from the SAW.

**Marketing and Promotion Efforts to Date:**

The following popular-press articles provide information about use of the SAW by student groups.

<https://www.news-gazette.com/toms-mailbag/toms-mailbag-march-19-2021/article_25fb4569-755e-5115-a561-457f423490db.html?utm_medium=social&utm_source=email&utm_campaign=user-share>

<https://aces.illinois.edu/news/outdoor-adventures-forge-connections-science-career-paths>

It is anticipated that the on-site milling of harvested wood will serve as another opportunity to cultivate press coverage focused on the utility of portable sawmills for small woodlot owners to improve management through selective logging and concomitantly develop an income stream based on marketable wood products.

**Additional Comments:**

The account for this project was not activated until January 2021. We anticipate that a request for a project extension (Scope Change) will be submitted at a later date in order to complete project objectives.