**SECS Native Prairie Planting Project Final Report**

**By John C. Marlin and Nate Lawrence**

**Project Purpose**

 In the winter of 2012, the Student Sustainability Committee awarded $4,806 to the Students for Environmental Concerns Sustainable Planting Committee and Project Leader John C. Marlin. The purpose of the project was to support the establishment of prairie plantings on campus, especially the existing Florida and Orchard Prairie (FLOR). The funding was specifically intended to hire student restoration technicians and retain greenhouse space as well as purchase supplies and equipment necessary to accomplish the project. This not only required the efforts of the technicians, but also countless hours of volunteer work from SECS, Red Bison, Grand Prairie Friends, and members of the local and campus communities.

**Project Summary**

Native prairie seeds were purchased from Prairie Moon Nursery in January of 2013. With the help of students, the seed was mixed with wet sand and placed in cool storage to simulate a natural winter. After this initial seed treatment, volunteers from SECS and Red Bison planted the seeds into flats in a campus greenhouse. The student technicians assisted with planting and tending the young plants. Eventually, the seedlings were transplanted into small pots before transplanting into the field. In April and May, the plants were removed from the greenhouse and installed in two campus locations (one located south of the Natural Resources Building (NRB) and the other on the Corner of Florida and Orchard Streets). Over the course of the summer both technicians and volunteers watered and weeded the sites to encourage establishment. By the fall of 2013, many species were in bloom and the Natural Resources Building planting only required occasional maintenance. The Florida and Orchard site has a weed problem due to its history and requires more attention. This project supported two other SSC native planting projects, at FLOR and NRB. The technicians and some resources (such as tools) were shared across the projects as was envisioned in the grants.

**Problems Encountered**

 As with any restoration project challenges were very common. These problems created realistic and valuable experience for all the students who worked on the project. In the greenhouse, a small number of species suffered from poor germination or low survival. Despite this annoyance, most of the species were grown successfully and the project was not threatened. Once plants were in the ground, constant effort was required to keep the plants from being out competed from weeds or succumbing to drought.

During the dry summer of 2013 seedlings were selectively watered at the FLOR site. More established plants at FLOR and the NRB did not need watering. The NRB site was heavily mulched when planted in 2012. This greatly reduced the need for watering and suppressed weeds to the point where only a few hours of weeding were required during the 2013 growing season.

Some animal, probably squirrels or ground hogs, dug out and removed many of the plants in some areas of the FLOR site. To address this issue soil was removed from plant roots before the plants went into the ground, on the assumption that something in the greenhouse soil mix attracted pests. This reduced the damage.

In order to address the weed issue at FLOR, selective herbicide applications and mowing by Facilities and Services and the Crop Science Department have been helpful. This in conjunction with selective hand weeding during past two growing seasons has greatly reduced the weed pressure. Prairie species now dominate most of the site.

**Financial Statement**

 The rental of campus greenhouse space and services was the main expenditure (contractual) of the funds. Personnel costs (including fringe benefits) for student restoration technicians comprised the other main cost. Supplies including tools, labels were a minor expense.

Personnel $1454.93

Contractual 2849.45

Supplies 500.08

TOTAL $4804.46

**Resources/Money Saved**

 Among other things the campus prairies provide an educational tool to the campus and local community, field experience to students and ecological services. However, the projects also hold physical and monetary advantages over the lawn they replaced. Due to the nature of prairies, the sites do not require frequent mowing and maintenance once established. Long term this saves the University fiscal resources and reduces the carbon footprint of campus.

More importantly, these prairies provide ecosystem services far greater than the former turf. Prairies provide habitat for thousands of species, including many pollinators and predator insects that benefit food production. Many of these beneficial insects are in decline due to pesticides and habitat loss. Native plantings help maintain local populations of these insects that may someday expand to reclaim their former ranges. The extensive root systems of prairie plants are highly effective at removing carbon from the atmosphere. In future climate assessments of campus, prairies could be incorporated as an offset to carbon emissions.

As the prairies and related woodland wildflower plantings have become established, dozens of community members have expressed gratitude for the aesthetic appeal provided by the prairies. Many have also inquired about specific plants that they would like to use in personal gardens. Several professors have used FLOR for lectures or field trips. It is anticipated that it will be regularly used by natural science classes, which will be able to avoid the cost of traveling to a remote site. Given its campus location it will be possible for students to visit it throughout the year and observe the seasonal variations experienced by plants, insects and other biota.

**Student involvement/outreach**

Seven students were employed at various times as restoration technicians on the native planting projects. Some were work-study participants. Several dozen students volunteered at the FLOR prairie, some once others many times. SECS and Red Bison provided a number of regular volunteers while other RSOs like Alternate Spring Break attended a work day. Members of the Community organizations East Central Illinois Master Naturalists and Grand Prairie Friends frequently helped in the field. Several local high school students and members of the community at large volunteer in addition to faculty, staff and students.

This year the FLOR prairie has been the subject of two stories in the News Gazette, a story and entire front page photo in the Daily Illini, and two segments on the WCIA TV morning show. Additionally it has been featured in local organization’s newsletters. Posters on the project were presented at campus Earth Day events in 2013 and 2014. It has been to topic of several presentations on campus as well as before the Urbana Rotary Club and Champaign County Design and Conservation Foundation.