Final Report

Wildlife Preservation Fund

Project Title: Creating a Nature Center

Grant Agreement Number: #12-002W

July 2011 – December 2012

Ballard Nature Center
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Report prepared by
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Promotion - Media Notification
Local Public Newspapers
(See Appendix A for Published Article)

Ballard Nature Center receives grant from the Illinois Department of Natural Resources Wildlife Preservation Fund
Article by Patty Gillespie

Ballard Nature Center receives IDNR Illinois Wildlife Preservation Fund Grant
By Patty Gillespie

Recently Ballard Nature Center received an Illinois Wildlife Preservation Fund Grant for the purpose of developing an interpretive nature trail on a 65 acre tract in Fayette County. Expanding environmental education and restoring natural communities are identified as goals and objectives in the Comprehensive State Wildlife Plan and in the Upper Little Wabash Watershed Plan. Having recognizing the excellence demonstrated at Ballard Nature Center (BNC) in achieving these goals, the Illinois Department of Natural Resources (IDNR) awarded $2000 from the Wildlife Preservation Fund to financially assist the center in the development of the nature center in Fayette County.

Because in Illinois the once vast prairies and the many forested areas of pre-settlement times have dwindled, restoration projects and natural community management projects are truly important in the effort to maintain our state's natural heritage. In addition, outdoor exploration has been found to afford us all significant benefits, both in terms of physical and mental health. Nature centers, with land designated for habitat restoration and with trail systems for public access, have become a means by which to satisfy a need for outdoor activity. For twelve years, Ballard Nature Center (BNC) near Altamont has provided a safe comfortable place for enjoying the outdoors and learning about nature. Also at BNC, environmental education is achieved through programming conducted by skilled naturalists and through interactive displays within a visitors' center.

The first step in the process of creating the new nature center was to develop a Master Plan with input from IDNR biologists and BNC's staff and board of directors. The plan included strategies for the construction of an interpretive trail system, possibly two to three miles of trails. Planned habitat development projects call for the eradication of exotic invasive species and the restoration of natural communities. The name of the nature center, Steffensen Woods, will reflect the donating family's name and the majority of the land's existing habitat.

Restoration projects will include the improvement of both upland and floodplain forest communities and the creation of prairie communities. Restoration efforts will focus upon the historically occurring wildlife communities of the Southern Till Plain Natural Division. The creation of vernal pools, temporary wetlands that fill with water during spring rains and dry out during summer, will provide excellent breeding sites for amphibians. Eventually after the completion of the restoration and trail projects, environmental education programming will be offered at Steffensen Woods Nature Center.

The Illinois Wildlife Preservation Funds will make possible the construction of footbridges and the posting of interpretive signs along the soon-to-be-developed trail system. The funds will also assist in the costs associated with eradication of invasive exotic plant species which threaten the diversity of the natural communities, being restored on the new nature center's lands.

Support through the Illinois Wildlife Preservation Fund is an indication that Ballard Nature Center has been successful in providing high-quality environmental education, in maintaining balanced natural communities, and in offering wonderful opportunities for recreation in the outdoors. The additional site, the Steffensen Woods, will allow for even greater successes.

Please remember to donate to the Wildlife Preservation Fund on your Illinois income tax returns. These donations effectively help preserve wildlife habitats and provide environmental education programming for the citizens of Illinois.

See Appendix A for newspaper copy of article
"Ballard Nature Center receives development grant"
Published by Effingham & Teutopolis News Report, Thursday, December 13, 2012

Item	Vendor	Quantity	Date	Cost
Interpretive Signs with frames (and handling)	Wilderness Graphics	10 Each sign- $30 Each frame- $50	11/14/2012	$875.00
Trailhead Sign Panel,plexiglass, and frame (lumber& labor)	CreativeDesigns Wakefield Mill AltamontLumber Mike Clagg	1 panel - $70 1plexiglass- $27 1frame- $16.11 & $50	12/4,5,&6/12	$153.11
Interpretive Sign Posts	Altamont Lumber	5 4x4x14 treated yp	12/4/12	$69.16
Materials for footbridge construction	Altamont Lumber	11 2x8x10 11 2x8x8 YP 62 2x4x8 YP 1 Box Screws	12/4/12	$464.56
Herbicide RoundUpWeathermax	Tri County Ag	15.6 gallons	11/30/12	$400.00
			Total	**$1961.83**
			Requested Total	**$1900.00**

Vendors' Addresses

Wilderness Graphics
324 G West Van Buren St.
Tallahassee, FL 32301

Tri County Ag, LLC
P.O. Box 4
Ingraham, IL 624434

Altamont Lumber
116 N. Third
Altamont, IL 62411

Creative Designs
814 E. Fayette Ave
Effingham, IL 62401

Mike Clagg
5150 E. US Hwy 40
Altamont, IL 62411

Wakefield Mill
7371 N. Wakefield Rd
Newton, IL 62448

Project Objective

Creating a Nature Center

Funding through the Wildlife Preservation Funds was awarded to Ballard Nature Center (BNC), to assist the center in creating a new nature center in Fayette County. BNC recently received a 65 acre tract, donated by the Steffensen family, stipulating that the site be developed as an environmental education center. BNC staff consulted with IDNR biologists and developed a Master Plan for the center's development. The WPF monies will be enabling the staff to purchase interpretive signs, materials for bridge construction, and herbicide for the control of invasive exotic plant species at the Fayette County site.

Completed restoration projects at the new center will be representative of prairies and forests that historically occurred in the Southern Till Plain Natural Division of Illinois. BNC staff and volunteers have restored approximately 100 total acres of prairie plots ranging from a few acres to 47 acres in size at the established Ballard Nature Center site and are ready to apply best practices in restoration at the Fayette County site. Also the BNC staff and volunteers have implemented timber stand improvement methodology for the purpose of improving forest habitat and plan to do so at the new site. Because BNC staff members have learned that the eradication of invasive exotic plant species is a process requiring constant vigilance and labor, application of herbicide has already begun at the new site.

Most significance also is the use of the restoration areas as outdoor classrooms for environmental education opportunities and as outdoor laboratories for biological research. The purchase of bridge building materials has allowed the construction and placement of bridges over waterways. Thus, the bridges have improved accessibility and enhanced the trails already present at the new center's site. Individuals exploring the new center's habitats will be able to educate themselves by reading the interpretive signs, which will punctuate the trails at the new center. Eventually, the new center's educators will be providing innovative learning activities which will be engaging, experiential, and enjoyable for the participants.

Project Description

The Ballard Nature Center is a 210-acre environmental education center located in Effingham County, Illinois. The center provides environmental education for a large portion of southeastern Illinois. Now BNC is being called upon to help create a new nature center in Fayette County. The BNC's WPF grant proposal included the purchase of 10 interpretive signs and a trailhead sign, the purchase of bridge building materials, and the purchase of herbicide. The grant has made possible the installment of the interpretive signs along a ½ mile trail system with the trailhead sign at the entry point. Control of invasive exotics which threaten the diversity of the plant community at the new center begins with herbicide treatment, both foliar and basal bark application. The invasives most prevalent are garlic mustard *Alliaria petiolata* , multiflora rose *Rosa multiflora,* Japanese honeysuckle *Lonicera japonica,* bush honeysuckle *Lonicera maackii,* autumn olive *Elaeagnus umbellata* and fescue *Fescue pratensis*. Some autumn

olive shrubs and bush honeysuckle occur. Improvements to the trail system have begun will the placement of bridges.

Expanding environmental education and restoring natural communities and wildlife management were identified as goals and objectives in the comprehensive State Wildlife plan for the Southern Till Plain Natural Division, in the C-2000 Upper Little Wabash Watershed Plan and as goals in the master plan for the Ballard Nature Center.

Summary of Project Accomplishments

Introduction

Upon recognizing the goals and objectives set forth in the Comprehensive State Wildlife plan for the Southern Till Plain Natural Division in the C-2000 Upper Little Wabash Watershed Plan, plans for a new nature center were developed by Ballard Nature Center's staff members Patty Gillespie and Karan Greuel and BNC volunteering site manager Mike Clagg, under advisement of IDNR natural heritage biologist Terry Esker. The team created a master plan for the development of a trail system, implementation of restoration projects, and expansion of environmental education at the donated site, Steffensen Woods, in Fayette County. The plan included installation of bridges and interpretive signs along trails as one of the first steps in the development of the new nature center. To begin the restoration projects which had been outlined in the master plan, strategies were developed to control invasive exotics.

Materials and Methods

Upon notification of Ballard Nature Center's being awarded the Illinois Wildlife Preservation Fund, the BNC staff felt the master plans for the creation of a new nature center were achievable. Survey of existing plants and animals in the degraded prairies and woodlands at the Fayette County tract had been executed as soon as the BNC staff members were notified of the land donation over two years ago. Delays in deed transfer occurred and caused a temporary postponement of the implementation of the plans. After a conservation easement was recorded and a life estate established, work toward the creation of the new nature center began during the fall of 2012. Immediately the herbicide glyphosate was applied to honeysuckle and garlic mustard plants and other exotics. In December, two bridges were built. Floor joises of 2x8 treated yellow pine were fastened upon 16 inch centers, resembling a small deck. These bridges were installed over narrow drainages in wooded areas in order to connect existing trails at Steffensen Woods. Also in December, interpretive signs were ordered and installed. The signs were placed adjacent to the trails according to an observable habitat element. For example, the "Nest Cavity" sign was placed where a hole in a tree was able to be seen from the trail. The large trailhead sign, placed at the trail entry site, was created by the naturalists at BNC and were generated by two local young artists, a painter and a graphic designer. Post holes were dug 30 inches deep and the posts of 7 foot 4x4 treated yellow pine were installed. The interpretive signs were fastened to the posts at eye level for adult hikers. Volunteers assisted with the placement of the bridges and signs, made possible by

the WPF grant. BNC's volunteers, as well as staff, have been working on trail improvements and habitat restoration.

Results

The improvement of trails, with the addition of bridges, has completed a major step toward making a wild area into an accessible site for environmental education and outdoor recreation. Self-guided tours have been enabled at the new nature center by the installation of the interpretive signs and a trailhead sign. Restoration projects, including the control of invasive exotics, are well underway. Such work will surely afford the enhancement of the area's plant diversity. As they work, BNC's staff and volunteers are glad to see the new nature center taking shape.

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Discussion and Summary

During the planning stages, a master plan was developed which will be of great benefit. Adherence to a plan assures efficiency. Lessons which the BNC staff members and the advising biologists have learned from restoration projects and public service projects at BNC have proved to be quite significant in the development and implementation of the new nature center's master plan. It is hoped that soon explorers (students on field trips, families on outings, adults on workshops, etc.) will soon be able to explore balanced and thriving natural communities and that these individuals will learn about nature while at Steffensen Woods Nature Center.

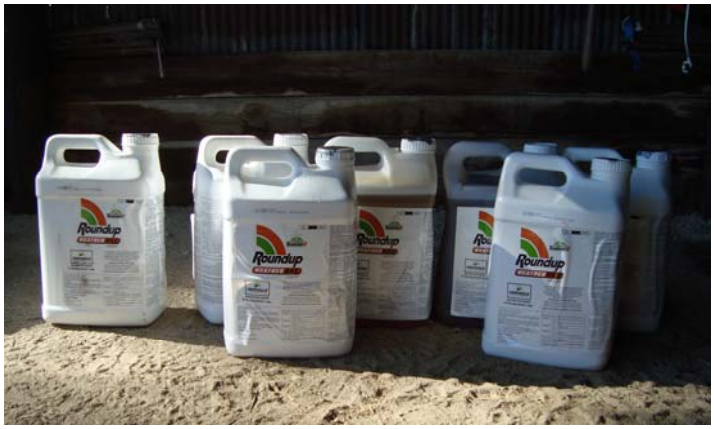
For Education of the General Public

Those benefiting: Plant species which will benefit from the eradication of exotic invasive species will include a great variety of woody species and forbs. Garlic mustard competes with understory wildflowers such as bluebells and Dutchman breeches for nutrients and water and sunlight; consequently stopping the spread of garlic mustard would enable the native woodland flora to proliferate. Likewise control of the woody invasives, such as the honeysuckles and autumn olive and multi-flora rose, would allow the emergence of tree saplings, such as oak and hickory trees, and the growth of native shrubs, such as serviceberry and the viburnums. Wildlife benefiting from restoration projects at the new center would be a very diverse group ranging from brown thrashers and mockingbirds feasting upon the berries of the serviceberry bushes to monarch butterflies' caterpillars eating milkweed.

Specific Audience: All patrons of the soon-to-be-opened Steffensen Woods Nature Center stand to benefit. They will be afforded easy access to natural communities. As a result of a decrease in invasive exotics and improvements in habitat, patrons will have greater opportunities to view a diversity of plant and animal species. They will be able to educate themselves as they walk the interpretive trails, by use of the signage made available through the Wildlife Preservation Funds.

Measurable Outcomes: An observable outcome is the increase in the existence of certain botanical species which were earlier absence or lacking in number at the Fayette County tract. Efforts to control exotics and restoration efforts will surely allow native species to proliferate . Since monitoring or surveying of the natural communities at this tract have been ongoing and will continue, an enhancement in the diversity of plants (and possibly animals) will be a noticeable outcome of the project. Public access to "wild areas" has been made possible and will be monitored in the near future when the nature center is further developed and when educational programming begins at the site. Understandings, developed through field observations and the use of educational materials, although difficult to assess, is a hoped-for outcome.

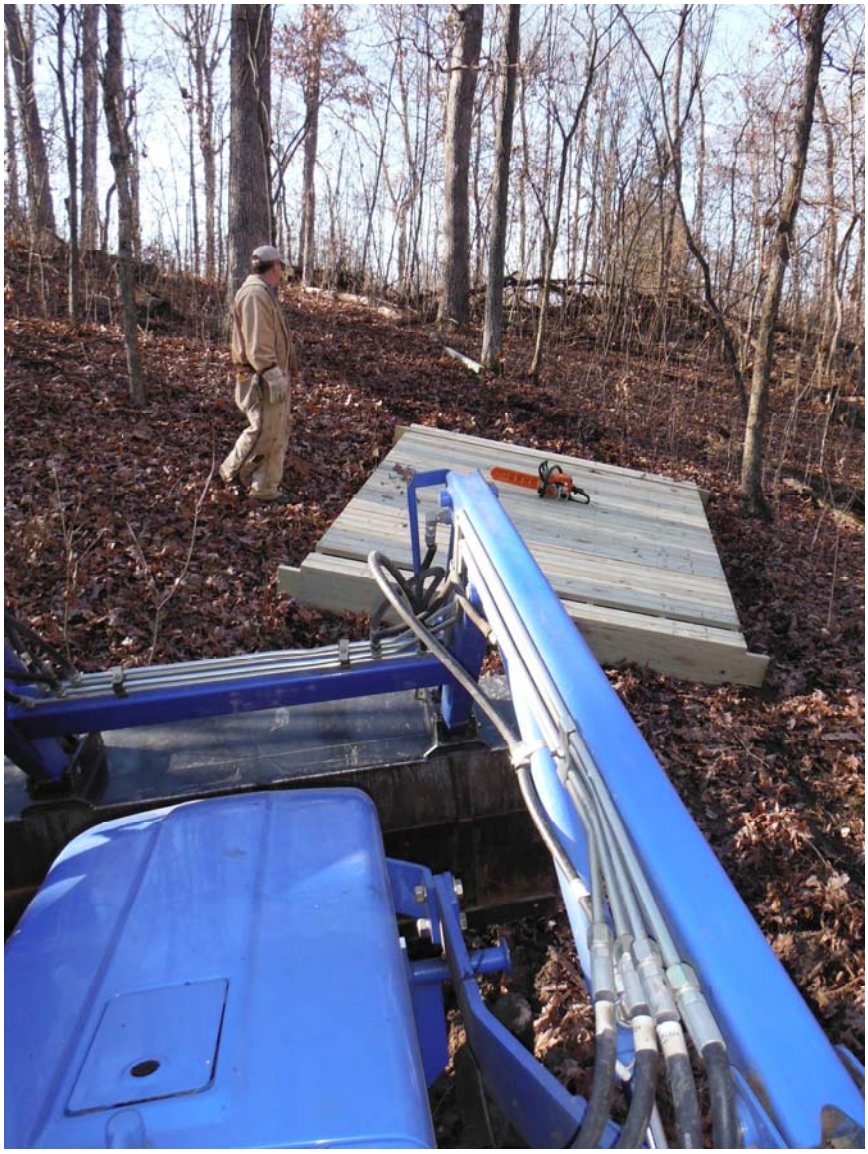
Products: Enhanced diversity in natural communities and greater understandings among the new center's explorers are expected.



Creating A Nature Center
WPF Grant #12-002W
Documentation of Activity
Habitat Restoration Project
Trail System Development

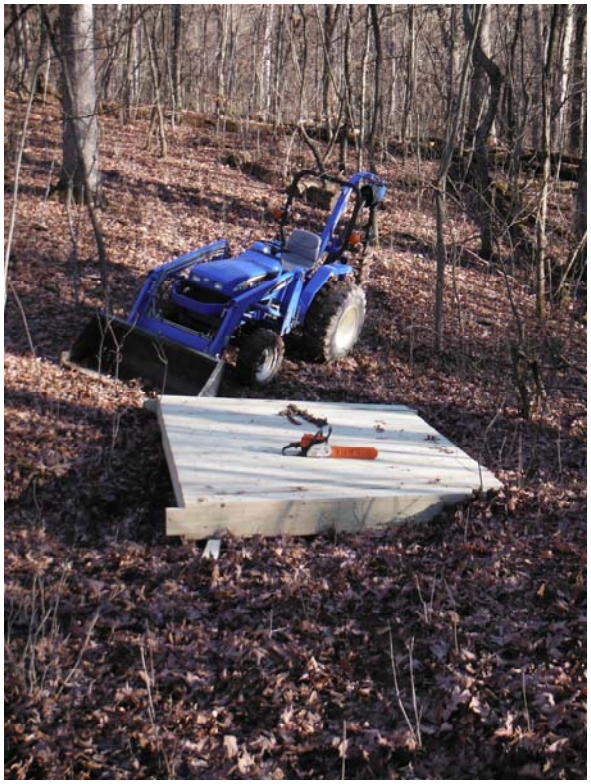
Glyphosate herbicide was purchased for use in control of exotic invasive species such as honeysuckles and garlic mustard.

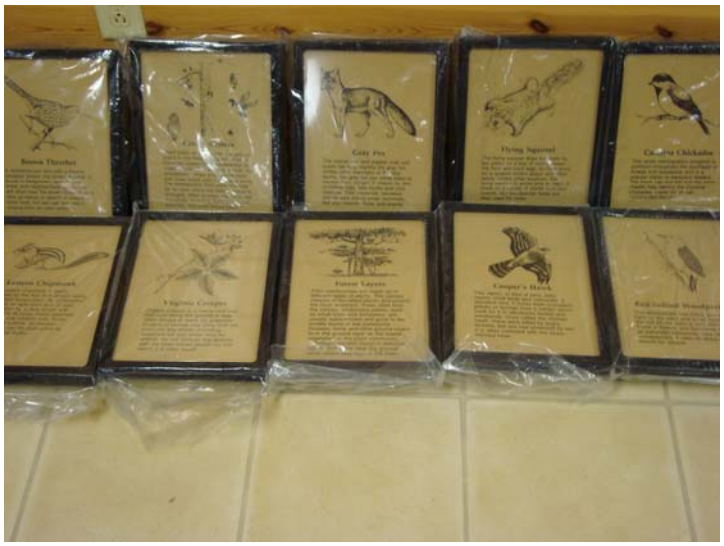
Construction of the bridges
by volunteer Mike Clagg



Dragging bridge along trail for placement at waterway

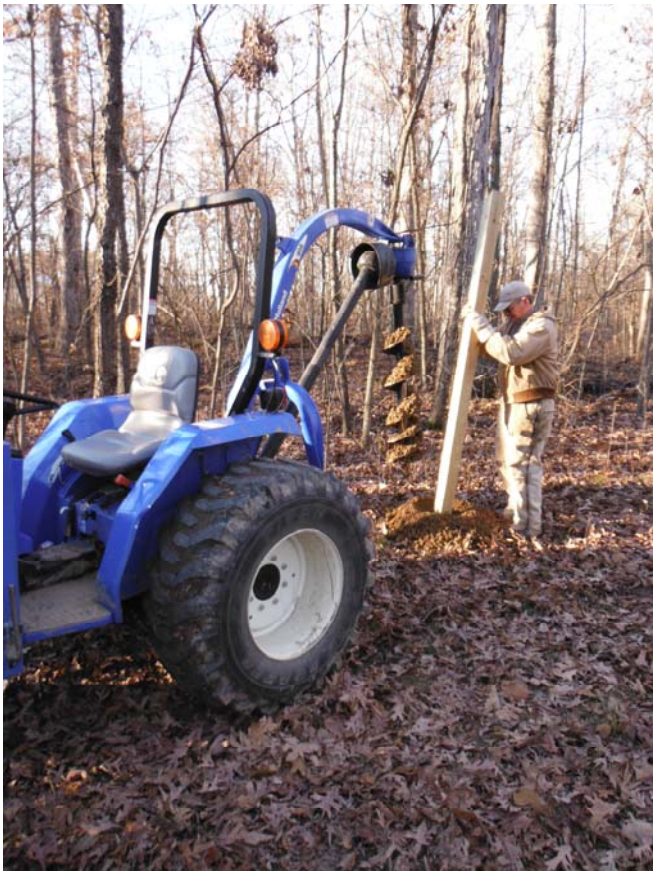
The eradication of invasive exotic plant species began with the application of glyphosate herbicide to bush honeysuckle. Other invasives discovered were garlic mustard and multi-flora rose. Application of herbicide purchased with WPF grant is ongoing.





Interpretive signs will allow hikers to educate themselves while exploring the woods along the trail system at Steffensen Woods

Enhancement of trail system included the placement of bridges situated for easy crossing of drainages in the woods



Interpretive signs were positioned on sturdy posts, inserted into 30 inch deep holes in the ground, and installed so that the sign would be at eye-level for an average height adult. Placement of the sign also reflected observable habitat elements.