

FINAL REPORT

Grant Agreement #14-017W

Grantee Name: Lee County Soil & Water Conservation District Natural Area, 319 South Mason, Amboy, IL 61310 (815) 857-3623

Time Frame: The grant period began upon notification and signed Agreement. The final project work was completed in March 2014. Reimbursement was requested in May 2014.

Name and telephone number of Grantee's representative completing the report: Debra Carey (815) 973-0401

Project Objective: 1. Restore historic turtle nesting grounds to pre-settlement condition; 2. Remove invasive woody brush and trees from nesting grounds, treat all cut stems and stumps with approved herbicide, and remove all cut debris from site; 3. Enhance habitat for native species listed as in greatest need of conservation

Completed Project Description: All three project objectives were successfully met.

a) At Ryan Wetland & Sand Prairie LWR, an area named Long Pond was the chosen parcel for restoration. This natural ephemeral wetland was invaded with aggressive *Acer saccharinum* and *Lonicera mackii*. Over 100 invasive trees were removed. All cut stumps and stems were treated with an approved herbicide. Removal of trees will allow more water to remain in the wetland thus providing habitat for native herpetological species. *L. mackii* shrubs were removed opening the wetland to sunlight which will stimulate regeneration of native vegetation. Disposal of all debris was completed.

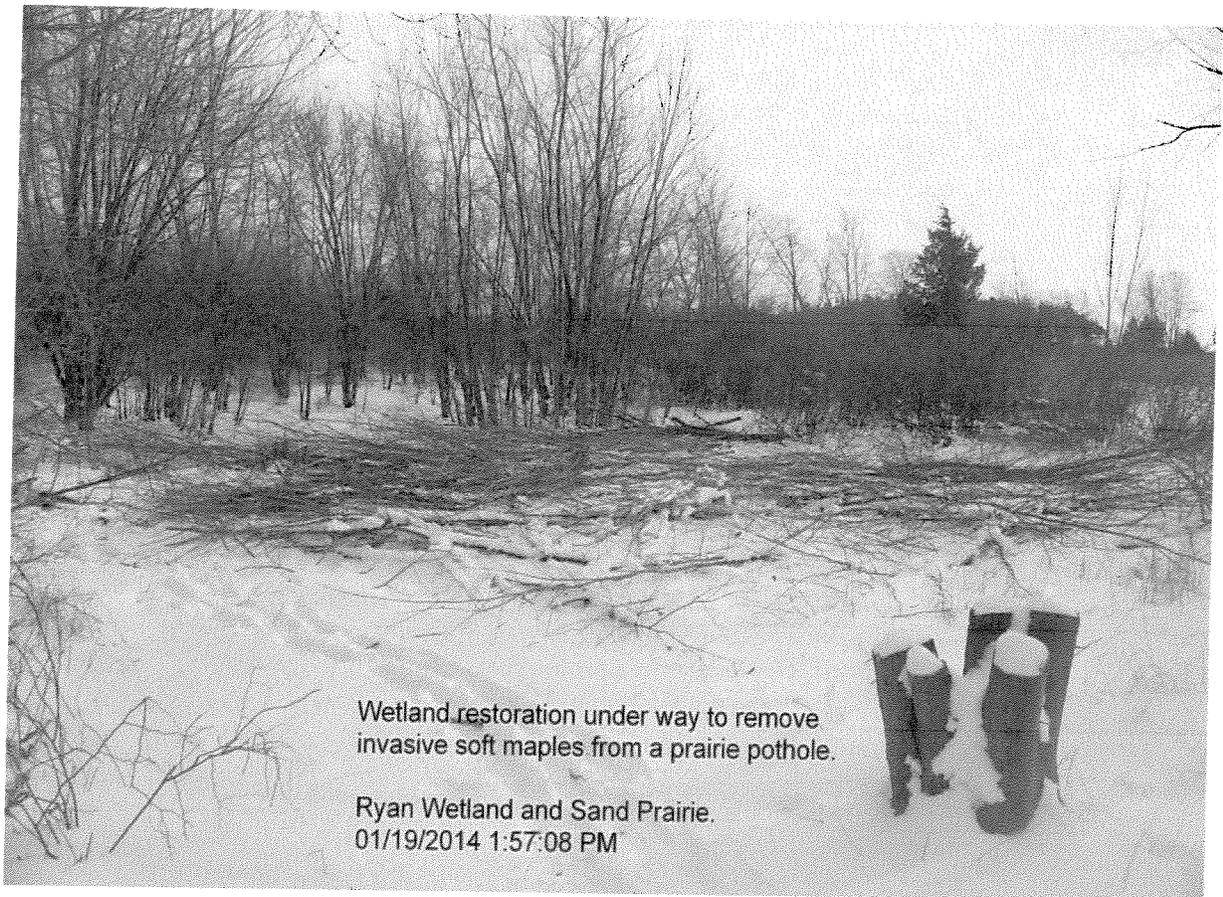
b) At IAS Amboy Marsh, the west portion of the south-facing bank of the Big Marsh was restored by the removal of over 700 invasive trees along with numerous invasive shrubs. All cut stumps and stems were treated with an approved herbicide. Disposal of all debris was completed. Restoration of the west portion was a priority in our Phase 1 Restoration Plan for the entire 302-acre site. We look forward to turtle nesting activity in June 2014. In addition to enhancing turtle nesting grounds, removal of invasive trees and brush will allow sunlight to penetrate and result in diversity of native vegetation. Prior to restoration, numerous high quality plant species were trying to survive while being smothered by shade and brush.

Summary of Project Accomplishments:

1. RYAN WETLAND & SAND PRAIRIE LAND AND WATER RESERVE

Photographs of Work Accomplished – Pre and Post Restoration





Wetland restoration under way to remove
invasive soft maples from a prairie pothole.

Ryan Wetland and Sand Prairie.
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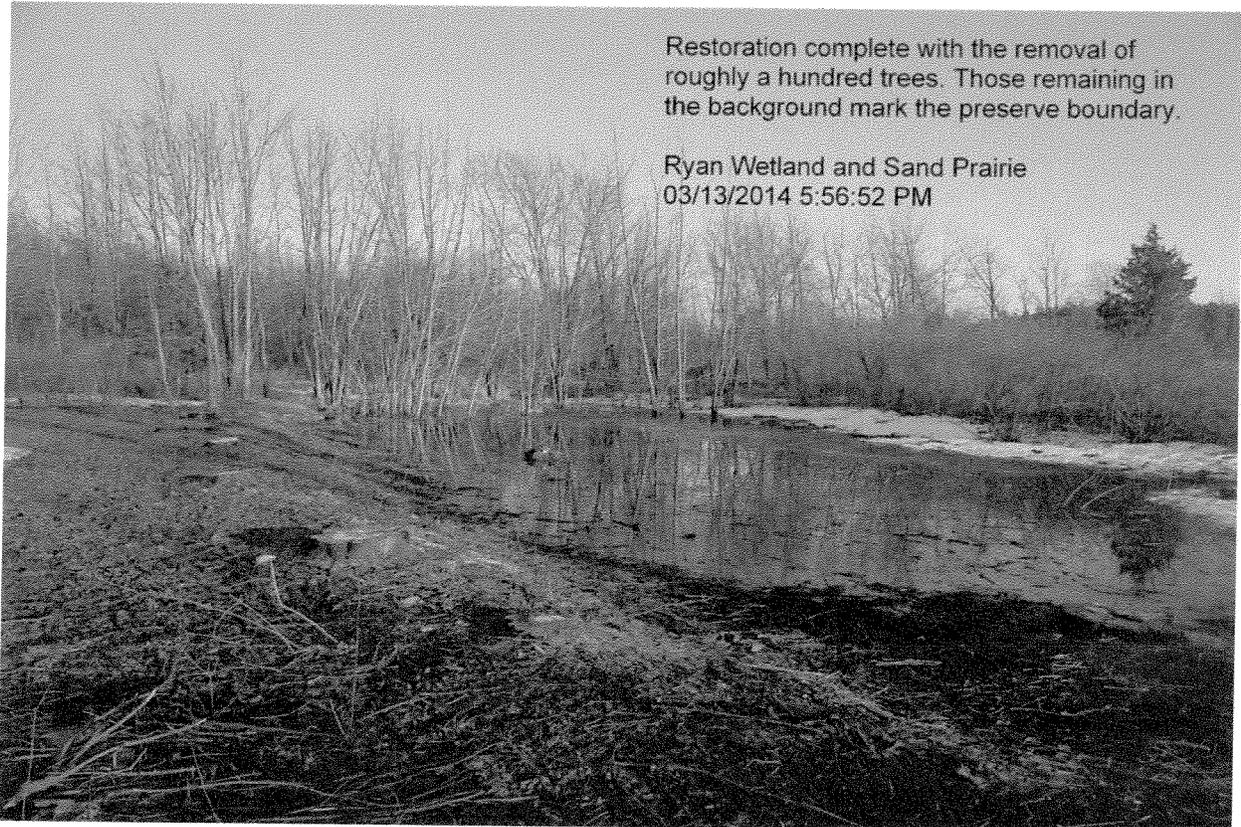


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Soft maple stumps treated to prevent resprouting.

Ryan Wetland and Sand Prairie
03/13/2014 5:58:03 PM



Restoration complete with the removal of roughly a hundred trees. Those remaining in the background mark the preserve boundary.

Ryan Wetland and Sand Prairie
03/13/2014 5:56:52 PM

Ryan Wetland & Sand Prairie LWR, at 45 acres, is a small complex but high in quality. The site is owned and managed by Lee County SWCD. Acquired in 2003, the site was in a family trust for over 100 years. Funds were granted from the Illinois Clean Energy Community Foundation to purchase the land.

The site is a complex of low wet areas interspersed with sand dunes. The wetlands are ephemeral; rarely holding water year round. This is a plus because it means there are no fish in any of the wetlands. Fish are a menace to amphibians and reptiles, eating eggs and hatchlings of all herpetological species.

The diversity of herps at Ryan is tremendous. Ryan hosts 22 species of herps comprising snakes, salamanders, turtles, frogs and lizards. Of turtles, the endangered Blanding's *Emydoidea blandingii* is the reason the site was first protected. This unusual turtle sports a chrome yellow neck and chin. Its dark, high-domed plastron is liberally sprinkled with yellow dots and its plastron, or bottom plate, is a striking collage of yellow and black designs. Blanding's turtles require shallow-bottomed sand ponds for foraging, breeding and hibernating; they require bare or sparsely-vegetated sand dunes for nest sites. Ryan has both habitats.

Rescued in degraded but restorable condition, the site was heavily impacted by forestation that occurred in the wake of decades of grazing. Black cherry had invaded most of the site while soft maple dominated the shores of wetlands, encroaching upon the wet/mesic prairie. Amur honeysuckle, planted in the 70s by well-meaning but misguided land managers, had quickly spread out of control and occupied much of the property. The prairie landscape was severely beaten and left for dead. The succession to forest was well underway but by no means complete, as evidenced by clearings still rich in prairie species. In these locations, and wherever trees and brush had not canopied, long absence of fire was the primary threat.

The potential of the new site was obvious in 2003. Now, eleven years later, the great majority of the site has been restored to its former pre-settlement condition. Prescribed fire is implemented on a rotational basis with only a quarter of the site burned each year. Mosaic burns optimize the success of over-wintering butterflies, moths and many other insect species. Successfully-mimicking natural fire is an art. Fire during a drought can be disastrous since sand areas are fragile.

The native plant species number over 200 with numerous listed as rare or unusual. Floral and faunal surveys are updated continually. All species are documented in writing, by photography and with a plant press. Every year something new is discovered. This past spring it was nesting hooded mergansers. In 2010, in a corner of the preserve, northern tubercled orchid, state-endangered, was uncovered during the mowing of a blackberry patch. In 2011 the full extent of the orchid colony was revealed with over 200 plants hiding among the sedges and ferns. Three-way sedge was discovered in 2011. Sandhill cranes nested successfully in 2012 and raised two crane colts. Accipiters join northern harriers in spring and fall. Several native sparrows raise their broods here. Woodcocks fly just before dark.

The high quality of the wetlands at Ryan are due to several reasons. First, the wetlands were never artificially deepened. The edges are on grade with surrounding land; there is no steep bank as found with constructed ponds. Secondly, the native vegetation is virgin; no seeds or plants were, or ever will be, added to Ryan. Restoration included the removal of invasive species like reed canary grass. The underlying matrix was intact; seeds and bulbs of plants many years old sprang to life when invasive were removed.

The hydric sand areas at Ryan are amazing. 60 years ago non-native red pines were planted in the southeast corner of the site. When the pines were cut and removed, the areas came to life with sand prairie on the ridges and wetland plants emerging from the long, long dead wetlands. Yes, 12 inches of pine needles were removed by hand from the soil surface. This allowed the soil to receive sunlight and the native species came back to life. To see rare flowers like Meadow Beauty *Rhexia virginica* where non-native red pine grew for 60 years is truly a credit to the ability of Nature to heal itself with a little help from stewards of our natural resources.

2. IAS AMBOY MARSH -

Photographs of Work Accomplished - Pre and Post Restoration







With only a very small portion (<0.10%) of Illinois' original landscape remaining, it is our goal to protect representative examples of intact native ecosystems and unique natural features that persist.

Acquisition of Amboy Marsh in December 2012 by the Illinois Audubon Society was the first step; now we, as stewards, have the opportunity and responsibility to identify, inventory, restore and maintain those components which contribute to the ecological integrity of the site. One survey with implications for the future sanctuary was a 1996 botanical survey carried out by John B. Taft. Two areas of present and former savanna occurred in his study area. He described Savanna Remnant #2 as: *bur oak and black oak savanna that has been degraded by lack of grazing and lack of fire. Microtopographical dune and swale relief provide conditions for the formation of small sand ponds within this woodland. Moist sands associated with open habitats that historically may have been present at this site would provide habitat for Calopogon tuberosus, grasspink orchid.* Savanna Remnant #2 is the Woodpecker Woods Unit of Amboy Marsh.

Taft searched for *C. tuberosus*, which earlier had been documented by respected Amboy botanist the late James Brady Long. In the degraded savanna, Taft was unsuccessful in his search. Removing invasives will increase the diversity and quality of flora throughout the site. Opening the savanna and wetlands to sunlight will stimulate native flora that has languished too long in the shade of the invasive shrubs and trees. We envision one day once again documenting the grasspink orchid in its original Lee County habitat. While much of the native floral regime remains intact, control of invasives will allow stunted flora to once again flower and set seed.

A Local Sanctuary Committee for Amboy Marsh was formed, and Phase 1 and 2 Restoration Plans were written and implemented. A floristic survey to gather baseline data was instituted with the 2013 growing season. Previous floristic surveys, ranging back many years, contribute to the history of the site and provide a window of what we may expect after control of invasives. On-going floristic surveys measure our progress on the way to success in increasing the number of plants of each species, and the natural quality of the flora. Pre-restoration and post-restoration photography documents activities.

Strategies for success in controlling invasives include physical removal of growing plants and trees during the dormant season using hand labor. Invasives are cut off flush with the soil, debris removed from the site, and all cut stems treated with an approved herbicide. In addition, prescribed fire is an important management tool.

Previous stewardship on natural areas in the Green River Lowlands has proven that removal of invasives greatly enhances the vigor of extant native floristic species. Diversity of native species increases when competition is reduced.

The first documented survey for Illinois Mud Turtle, *Kinosternon flavescens spooneri*, and Blanding's turtle, *Emydoidea blandingii*, at what is now Amboy Marsh, occurred in 1986. This in-depth survey documented the presence of Blanding's turtle; it was noted by the Illinois Department of Natural Resources that Amboy Marsh hosted one of the largest sustainable Blanding's populations naturally occurring in Illinois.

In 1986, sparsely-vegetated and bare sand dunes among the oak savanna provided excellent turtle nesting grounds. Cessation of grazing soon after that date, and lack of natural and prescribed fire, allowed invasive woody brush to degrade the historic nesting grounds. In the ensuing years, exotics and invasives choked the savannas, sand prairies and woodlands of the 302-acre Amboy Marsh property.

- Red-headed woodpecker, *Melanerpes erythrocephalus*, thrives in open black oak savanna habitat.
- The intriguing glass lizard, *Ophisaurus attenuatus*, Illinois' only legless lizard, is dependent upon sand prairie and forest; this species is noted in the herpetological survey.
- Western hognose snake, *Heterodon nasicus*, is yet another dependent species.
- Ornate Box Turtle, recently added to the Endangered and Threatened Species List in Illinois, devours spiderwort, a native black oak savanna plant.
- Six-lined racerunners, *Cnemidophorus sexlineatus*, skitter across the sand dunes.

Actively communicating the value and richness of natural areas to the public is vital. Education on the importance of controlling exotic and invasive species is an integral part of our restoration plan. Media releases are prepared and media contacts alerted to our restoration. Public tours and field trips are scheduled. Explanations of our restoration plan, and our progress, are posted regularly on our informational bulletin board.

Total Project Expenditures Paid by Special Wildlife Grant Funds

1. \$900.00 - Labor to remove and dispose of invasive vegetation: Bryon Walters, Illinois Natural Area Improvements, 3885 E 550th Rd. Mendota, IL 61342 Telephone: 815-539-9011 Email: inai1rbw@msn.com
2. \$900.00 - Labor to remove and dispose of invasive vegetation: Bill Rogers, 405 S. Franklin, Polo, IL 61064 Telephone (815) 590-3432
3. \$180.40 Rodeo Herbicide ACE Hardware, Dixon, IL 61021

Total Project Expenditures Paid by Others

1. Chainsaw Paid in Full by Bill Rogers from Frank's Small Engine Repair, 405 Ash Avenue, Sterling, IL 61081 Telephone (815) 622-9999

LEE COUNTY SOIL 10-71 & WATER CONSERVATION DISTRICT <small>319 S. MASON • PH (815) 857-3523 AMBOY, ILLINOIS 61310</small>	THE FIRST NATIONAL BANK <small>in Amoy</small> AMBOY, ILLINOIS <small>70-1136-719</small>	11046
PAY TO THE ORDER OF <u>Lee Natural Areas Improvements</u>		<u>2/5/14</u>
<u>nine hundred dollars & no/100</u>		<u>\$900⁰⁰</u>
MEMO DNR Bladings Turtle Grant		 <small>AUTHORIZED SIGNATURE</small>
011046 *071911364* *005894*		

5894 2/25/2014 11046 \$900.00

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PAY TO THE ORDER OF <u>Bill Rogers</u>		<u>2/5/14</u>
<u>nine hundred dollars & no/100</u>		<u>\$900⁰⁰</u>
MEMO DNR Bladings Turtle Grant		 <small>AUTHORIZED SIGNATURE</small>
011047 *071911364* *005894*		

5894 2/13/2014 11047 \$900.00

Lee County SWCD receives grant to restore turtle nesting grounds

AMBOY-Endangered Blanding's turtles (*Emydoidea blandingii*) will have a better chance of nesting success at two sites in Lee County this spring. The Lee County Soil and Water Conservation District Natural Area Guardian Committee received a Wildlife Preservation Fund Grant from the Illinois Department of Natural Resources to restore historic turtle nesting grounds at two permanently-protected natural areas. This grant program is funded through donations received from taxpayers who choose to check the Wildlife Preservation Fund box on their Illinois income tax returns.

Hundreds of invasive trees and woody brush grew up and covered the open sand

dunes that turtles require for optimum nesting success. The endangered Blanding's turtle is the reason the grant was proposed and the work carried out. This unusual turtle sports a chrome yellow neck and chin. Its dark, high-domed shell is sprinkled with yellow dots and its plastron, or bottom plate, is a collage of yellow and black designs. Blanding's turtles require shallow-bottomed sand ponds for foraging, breeding and hibernating; they require bare or sparsely vegetated sand dunes for nest sites. Both natural areas have these special habitats.

Invasive tree and woody brush removal was carried out

by contractors Byron Walters, Illinois Natural Areas Improvements, Inc., Brad Kessel/Tom May Tree Service, and Natural Area Site Manager Bill Rogers during the winter while the prairies and wetlands safely slumbered beneath the frost. All cut stems and stumps are treated with an approved herbicide to prevent resprouting.

Lee County SWCD appreciates the opportunity provided through this IDNR grant to successfully restore historic turtle nesting grounds in the county.

For more information, contact Lee County SWCD Natural Areas Deb Carey at (815) 973-0401.

The Amboy News

The Amboy News welcomes letters to the editor on public issues of local interest. Letters must be signed for publication; authors' names will not be withheld. Include your address and telephone number. The number will not be published but may be used to verify authenticity. Unsigned, anonymous letters are never published. Keep your letter as concise as possible. The editor reserves the right to edit letters for length and to withhold letters which do not meet The News' standards of taste and ethics. Correspondence in which thank you is included is considered a paid card of thanks, not a letter to the editor. The Amboy News reserves the right to accept or reject letters to the editor endorsing candidates for public office. The deadline is 10 a.m. Monday for Wednesday's issue. Send letters to: The Amboy News, P.O. Box 162, Amboy, IL 61310.

The Amboy News

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