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Goats, Turtles and WHIP Restore Rare Natural Area

In northern Illinois, an 80-acre piece of remnant land is being carefully managed to re-establish an oasis for wildlife and native plants. This unique area, called the Piscasaw Fen, will once again become a place where native species can flourish with the help from some unusual partners. The USDA Natural Resources Conservation Service (NRCS) with the Wildlife Habitat Incentive Program (WHIP) and the Boone County Conservation District (BCCD) with their goats. This includes a surprising discovery of a state endangered species - the Blanding's turtle.



Photos: NRCS

From left: Lewis Nichols (NRCS), Ellen Starr (NRCS), Joshua Sage (BCCD) and Aaron Minson (BCCD) review the map for the Piscasaw Fen.

The land is considered *remnant*, which means "it has never been plowed," said Ellen Starr, biologist for NRCS. "These types of areas are a rare find. They offer much in native plants and lend themselves to quality habitats for wildlife once restored." Savannas are the rarest type of habitat found in Illinois, even more rare than wetlands. This site is an excellent example of a historic landscape: a savanna/wetland complex.

The BCCD purchases land in Boone County when it becomes available and restores it back to its native state. NRCS District Conservationist Lewis Nichols said "this was one site where we started to work with the previous owner and continued with BCCD after they acquired the property. Once acquired, we just followed up with BCCD and enrolled them in WHIP."

Restoration Activities

The acreage includes 40 acres of savanna and 40 acres of wetlands which lies along the Piscasaw Creek. A native northern Illinois savanna would consist of white oak, bur oak and shagbark hickory with a prairie understory. To open the

canopy for those species to reproduce, undesirable and invasive trees and shrubs such as elms, cherry, bush honeysuckle and buckthorn must be removed.

Through the incredible labor of only two BCCD employees and some seasonal help, the area will gradually revert back to a native savanna with plants such as pointed tick trefoil, a staple for the savanna. Water seeps out from the savanna's hillside to feed the adjacent wetland. This unique type of wetland is called a *Fen*.

A Fen is an alkaline (high pH) wetland typically located at the base of a hill and is composed of a unique community of plants that thrive in high pH conditions. Plans for restoring the wet prairie include removal of trees like box elder and sugar maple along with some of the red-osier dogwood. "We want to keep the silky dogwood, also known as blue-fruited dogwood," said Joshua Sage, BCCD Restoration Project Manager. "They are a good food source for birds."

Photo: NRCS



Left: Take in fall



Photo: BCCD

Above: Sage and Minson stand in cleared savanna in winter.

The savanna (above) and wetland (below) are cleared of invasive trees and shrubs to encourage the growth of preferred native species.

Below: Take in fall



Photo: BCCD

Above: Wetland in winter with standing water.



Photo: NRCS

A portion of the fen is hayland consisting of non-native grasses; predominately timothy and brome. It is hayed every year after nesting season for ground-nesting birds like the bobolink and grasshopper sparrow. This area is left as pasture to accommodate their preferred habitat.

Photo: NRCS



Multiflora rose is an aggressive invasive plant that goats like to eat.

An old Piskasaw oxbow, a U-shaped body of water formed from a meander in the Piskasaw Creek, runs through portions of the fen providing deeper water habitat for many wetland-dependant species.

Blanding's Discovery

In 2010, the Illinois State Endangered Blanding's turtle was discovered in the

area. Aaron Minson, BCCD Restoration Technician, outfitted four turtles with transmitters and tracks their movements daily. The transmitters emit a signal that is picked up by an antennae/receiver. "We can track them to determine habitat availability and usage in their range and modify our restoration efforts accordingly," said Minson. "We know they have been nesting here. The fact we have so many varying ages of turtles is good news."

Photo: NRCS



Aaron Minson (BCCD) holds a Blanding's turtle that was found living in the wetland.

Photo: BCCD



State Endangered Blandings turtle.

WHIP Restoration Plan

The eight-year WHIP contract helps Sage and Minson remove unwanted brush and control invasive species. The first step in the process is removing the dense invasive shrubs by hand. Then goats are brought in and enclosed with a solar powered electric fence where they eat the remaining invasive species such as multiflora rose, thistle, and garlic mustard.

"It takes about two to three full growing seasons," said Sage, "for the goats to remove most of the unwanted vegetation." Afterwards, Sage and Minson, along with a few volunteers, come in with hand or mechanical brush removal techniques during the winter to finish the clearing. Goats prefer the thorny multiflora rose thistles – "go figure!" says Starr.

The WHIP contract includes a prescribed burn which is scheduled in 2014, followed by seeding of native plants such as bristly aster, sweet indian plantain, fen thistle, Michigan lily and other plants in areas as needed. "It is always nice to come out and see a native plant come up that wasn't there before," said Minson. "Especially one we didn't plant."

Future Projects

Another remnant savanna that is currently pastureland near the Piskasaw Fen is in a Land Trust, but the Boone County Conservation District will eventually acquire the land. "That land is a Plug & Play savanna with a little fire to help," said Sage. "That will be the next stop for the goats."

Photos: NRCS



Joshua Sage (BCCD) explains the role of the goats to a group of visitors.

Goats are enclosed in specific areas to eat invasive species.

The BCCD looks forward to using conservation and best management practices within the watershed of the Piskasaw Creek to help provide needed habitat for many species including the State Listed Blanding's turtle whose largest threat is habitat fragmentation. "WHIP really just landed in our lap. Our working relationship with NRCS has been outstanding," Sage continued.

"The BCCD is doing an excellent job on restoring the remnant savanna and wetland," said Starr. This past summer Starr organized a field day at Piskasaw Fen with BCCD's assistance for NRCS and SWCD field office personnel so they have a better understanding of what all is involved with restoring these rare habitats. "They got to see firsthand the beginning stages of the restoration process," she continued. "In subsequent years we will revisit the site as the restoration progresses for more training opportunities."



Map of Piskasaw Fen enrolled in WHIP (blue box) and future BCCD land (red box). Courtesy of BCCD.

For more information on the Wildlife Habitat Incentives Program and other NRCS programs and assistance, visit your local USDA Service Center or go to www.il.nrcs.usda.gov.