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Boone River Watershed project receives three-year extension

By Jordan Kolarik, Soil and Water Conservation District project coordinator

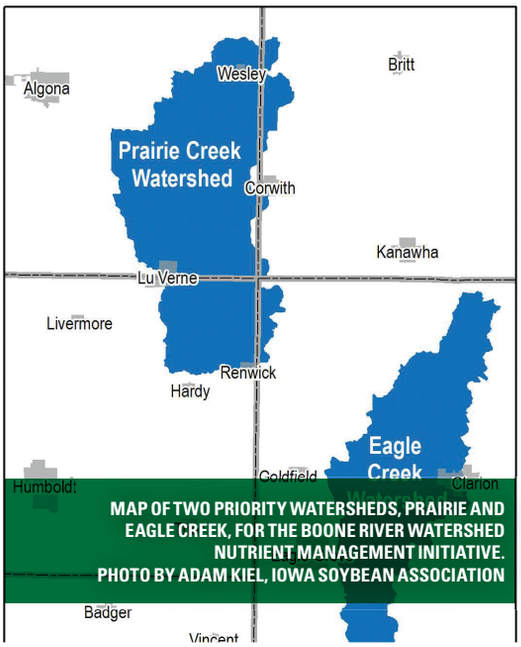
The Boone River Watershed Nutrient Management Initiative is excited to announce that the Water Quality Initiative Project will continue for another three-year period. This project extension will allow for even more productive field days, workshops and conservation practices in the Eagle and Prairie Creek Watersheds.

The project began in 2014 as one of eight watersheds across Iowa to receive funding from Iowa's Water Quality Initiative. These demonstration watersheds show the progress that can be made to improve water quality using the voluntary science based approach outlined by Iowa's Nutrient Reduction Strategy for nonpoint nutrient pollution.

The foundation of this project, which will continue into the next three years, is partnership. The Wright County Soil and Water Conservation District (SWCD) is the project leader, with a large range of both public and private partners, including the Kossuth County and Humboldt County SWCD, United States Department of Agriculture (USDA) Natural Resource Conservation Service, Iowa Soybean Association, Hagie Manufacturing, The Nature Conservancy in Iowa, Iowa State University Extension and many others. The project extension has added several new partners, such as DuPont Pioneer and Iowa Corn, with many more to come. Getting conservation on the ground is key to making this project a success.

Since the project began, the conservation practice goals set for acres of cover crops, strip-till/no-till and nitrification inhibitor have been met or exceeded. In the last three years, 12,000 acres of cover crops have been seeded in the project area. In addition, a drainage water management system and a Conservation Reserve Enhancement Program (CREP) wetland have been constructed. Not only will promotion and cost-share assistance for these practices continue, additional practices will also be added to the project, including bioreactors, saturated buffers, filter strips and oxbows.

Another goal of the project has been to research these conservation practices and their effects on crop production and water quality. These efforts have included replicated strip trials, guided stalk samples and water quality monitoring throughout the watershed. These efforts will continue throughout the watershed and will be supported either from within our project or directly through project partners.



MAP OF TWO PRIORITY WATERSHEDS, PRAIRIE AND EAGLE CREEK, FOR THE BOONE RIVER WATERSHED NUTRIENT MANAGEMENT INITIATIVE. PHOTO BY ADAM KIEL, IOWA SOYBEAN ASSOCIATION

The importance of educating the public on both water and soil quality, as well as the need for conservation, cannot be emphasized enough. The project will continue collaborating with partners to promote water quality improvement practices by emphasizing education, outreach and "Farmer Champions" – advocates who implement these conservation practices and serve as an example to others.

In the coming year, the project will form several new community groups. The Boone River Watershed Conservation Farmer Advisory Group will consist of watershed Farmer Champions who will have regularly scheduled meetings with the project coordinator and partners. These meetings will be open to the public and provide an opportunity to discuss activities within the watershed. Another community group, Friends of the Boone River, will also be formed. This group will provide a great opportunity for all community members and organizations not directly involved in agriculture to learn more about the project and water quality in their area.

Great things are anticipated with this project moving forward. A great foundation of partners, farmers and landowners working towards improving water quality has been developed. Now the larger task of expanding and retaining these practices begins. This will be necessary if we, as a community of good neighbors and good stewards of the land, are going to meet the nutrient reduction goals set by the State of Iowa to provide safe drinking water and a healthy ecosystem for not only Iowans, but for all of those living downstream, as far as the Gulf of Mexico.

If you would like to learn more about the project, please contact Jordan Kolarik at 515-295-5156 ext. 303, or jordan.kolarik@ia.nacdnet.net.

TWO MALE TOPEKA SHINER MINNOWS CAUGHT DURING A FISH SURVEY OF A RESTORED OXBOW IN THE BOONE RIVER WATERSHED. PHOTO BY NICK SIMPSON

Working with an endangered Iowa fish

By Nick Simpson, Iowa State University

The Topeka shiner (*Notropis topeka*) is a federally endangered minnow that has been in decline for decades. The Boone River Watershed is one of just three watersheds in Iowa known to still hold populations of this exceptional species.

Topeka shiners are most commonly found in slow moving portions of small, clear headwater streams and nearby standing water. A key reason for their decline is the alteration and channelization of naturally flowing streams over the past century to better suit agriculture.

Channelizing often removes habitats with slow or no current and increases stream velocity and sedimentation, which decreases habitat where Topeka shiners are commonly found. Channelization also removes, or makes inaccessible, off-channel oxbow habitats and reduces the likelihood of new oxbows forming through a stream's natural meandering process.

Oxbows are small, standing water habitats that are disconnected from the stream except during flooding events. Because Topeka shiners are more commonly found in oxbows than streams, these habitats are considered important for the species' recovery and removal from the endangered species list.

The Nature Conservancy, US Fish and Wildlife Service and other collaborators have cost-share programs available to help landowners restore oxbows by removing sediment, resulting in deeper oxbows with improved stream connectivity and a lower likelihood of drying up in the summer months.

The Topeka shiner team at Iowa State University completed their 2016 summer field season by sampling 27 stream reaches and 17 oxbows throughout the Boone River Watershed. To sample fish at stream sites, a barge electrofisher was used to produce an electrical current in the water, stunning fish long enough to be netted but doing no further harm. Large seine nets were used to capture fish at oxbow sites.

Along with fish sampling, dozens of habitat characteristics were measured at each site. Topeka shiners were sampled at 14 of our 44 total sampling sites (32 percent), including eight stream reaches and six oxbows. Although several streams were sampled, Topeka shiners were only found in Prairie Creek and Eagle Creek and their associated oxbows in 2016.

In summer 2017, our team will once again be sampling in the watershed in search of the small, elusive species. Our objective is to update the status and distribution of this species in the watershed and use fish and habitat data to learn what habitat characteristics are associated with the presence of Topeka shiners. This study will provide information to our Boone River Watershed research partners to aid in restoring Topeka shiners to the area.

If you have land in the Boone River Watershed and would like to grant Iowa State University graduate students permission to sample fish populations there, please contact Nick Simpson, graduate research assistant, at 812-650-6078 or simpson9@iastate.edu.

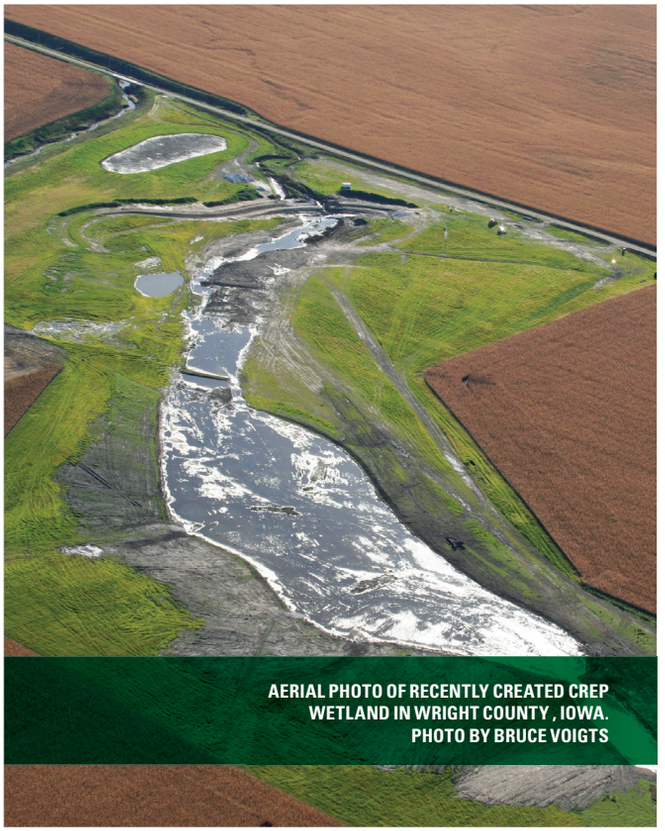
CREP wetland created in Wright County's Eagle Creek

By Bruce Voigts, Soil and Water Conservation District Watershed coordinator

After three years of planning and construction, the Conservation Reserve Enhancement Program (CREP) wetland in Wright County is finished. This wetland is part of the Boone River Watershed Nutrient Management Initiative, funded through the Iowa Department of Agriculture and Land Stewardship.

Located in Norway township and section 34 on Jackson Ave and 150th Street, the 55-acre site has a 13-acre pool that captures drainage from a 1,023-acre area. The deepest water is 13 feet and the average depth is around two feet. The shallow depths allow the aquatic microbes and vegetation a chance to reduce the nitrates leaving the site, with research from Iowa State University indicating a nitrate removal of between 40 to 90 percent.

In addition, wetlands provide some flood control for downstream communities and valuable habitat for aquatic wildlife, such as birds, fish, amphibians, reptiles, aquatic insects and plants. It is worth slowly driving by the site to enjoy this wetland.



AERIAL PHOTO OF RECENTLY CREATED CREP WETLAND IN WRIGHT COUNTY, IOWA. PHOTO BY BRUCE VOIGTS

Upcoming events

Join us on February 23, 2017, to learn more about what is going on in the Boone River Watershed and what opportunities will be available over the next three years. More details coming soon on BooneRiver.org.

Save the date for a Spring Field Day on April 10, 2017, in Prairie Creek Watershed. More details coming soon on BooneRiver.org.

Join us for the 10th Annual Boone River Cleanup on Saturday, August 5, 2017, from 7:00 a.m. to 1:00 p.m. at Briggs Woods. For more information visit the "Boone River Cleanup" Facebook page.

To learn more about the Boone River Watershed Project, visit BooneRiver.org, follow us on the "Boone River Watershed" Facebook page and check us out on Twitter at @BooneRiver.

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