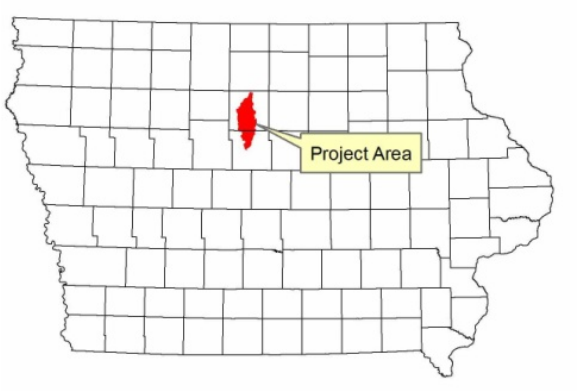
BOONE RIVER WATERSHED



Iowa's Boone River watershed once boasted vast expanses of lush wetlands that stored and slowly filtered water flowing into the river. It's a natural process that resulted in cool, clean freshwater and healthy populations of unique fish, bird and mussel species. After being released into the Boone, these waters followed a journey that included feeding into the Des Moines and Mississippi rivers before emptying into the Gulf of Mexico.

Like in many places throughout the Midwest, over the years the 580,000 acre watershed has transformed into a highly productive agricultural landscape (85% corn and soybeans) to meet a demand for more food production. This has led to draining and converting the wetlands and even redirecting portions of the river to make room for rows of corn, soybeans and other crops. These modifications have led to increasing amounts of nitrogen, phosphorous and other pollutants entering the Boone River and waters beyond.

BOONE RIVER WATERSHED PARTNERSHIP

In 2004, the convergence of environmental and agricultural interests in the Boone River Watershed brought The Nature Conservancy (the Conservancy), Iowa Soybean Association (ISA), and Prairie Rivers of Iowa RC&D together to initiate a fresh approach to watershed improvement and management. Watershed meetings with local stakeholders were held and questions about the current state of water quality in the Boone arose. At that time there was just one long-term water quality monitoring site along the Boone River. The Iowa Soybean Association, with financial assistance from the Conservancy, initiated biweekly sampling at the base of all 30 HUC-12 watersheds within the greater Boone River. This effort coupled along with on-the-ground stream assessments enabled the partnership to target portions of the watershed most in need of conservation practices to prevent erosion and leaching of nitrogen. Three subwatersheds were identified for more intensive monitoring, planning, and implementation and a paired watershed study was set-up in Lyons Creek to quantify the effectiveness of practices such as strip tillage and cover crops to improve water quality.

To increase adoption of continuous living cover and other conservation practices, Iowa Soybean Association worked one-on-one with producers to put together holistic farm management plans.

Partners including ISA, Practical Farmers of Iowa, Iowa State University Extension, Natural Resources Conservation Service, Wright and Hamilton County Soil & Water Conservation Districts, Women, Food, & Agriculture Network, and the Conservancy continue to organize field days and workshops to provide information and hands-on demonstration of various conservation practices.

STRATEGIES TO PROTECT THE BOONE RIVER WHILE SUSTAINING AGRICULTURE

Cover Crops – A form of continuous living cover –more than twenty producers in Wright and Hamilton counties have dedicated about 3,500 acres to trying cover crops, which help prevent the erosion of soil and fertilizer from washing away with rain. Boone River partners have held field days, workshops, and demonstrations to highlight both the benefits of cover crops and the logistics of implementing this practice

Strip Tillage – Tilling only a small strip of soil 6-10 inches wide requires fewer passes over a field, resulting in less erosion, lower fuel costs and reduced soil compaction from driving as well as more residue left on the field. A farmer leader in the Boone is encouraging neighbors to try this practice.

Oxbow Restoration – ISA, the Conservancy, Iowa Department of Natural Resources, US Fish & Wildlife Service, and Sand County Foundation inventoried and assessed oxbows in the watershed and recently completed the first restoration at White Fox Creek with plans to do more. Three more restorations are planned for fall 2012.

Bioreactors – Thanks to funding from the Iowa Soybean Association and the federal MRBI program, farmers in the Boone River watershed can receive assistance with implementing these underground trenches filled with woodchips to redirect nitrate-laden tile water away from waterways.

MISSISSIPPI RIVER BASIN HEALTHY WATERSHEDS INITIATIVE (MRBI) AND MONITORING

The Boone River Watershed partners' work in the Boone River watershed advances a federal initiative aimed at conserving the Mississippi River Basin. Farmers in eight subwatersheds covering sections of Wright and Hamilton counties within the Boone River watershed are eligible to receive MRBI cost-share to support conservation practices that help avoid, control and trap nutrient runoff, improve wildlife habitat and maintain local agricultural productivity. Farmers participating in this new initiative have the opportunity to monitor the effectiveness of practices at improving water and soil quality. Long-term monitoring locations have been set up to quantify improvement in soil quality over time, due to the implementation of practices such as cover crops. This will help farmers recognize the economic benefit that continuous living cover practices, such as cover crops, can provide to their operation.

PARTNERS IN CONSERVATION

Iowa Soybean Association
Iowa State University
Local landowners & farmers
Iowa Department of Natural Resources
Fishers & Farmers Partnership
Wright and Hamilton County Soil & Water Conservation Districts
Natural Resources Conservation Service
U.S. Geologic Survey
U.S. Fish and Wildlife Service
Practical Farmers of Iowa
Iowa Department of Natural Resources
Center for Agriculture & Rural Development
Leopold Center
The Nature Coonservancy