



North Raccoon Farm to River Partnership Project



The North Raccoon Farm to River Partnership: an Iowa Water Quality Initiative to implement in-field and edge-of-field practices that keep nitrogen and phosphorus out of Iowa waters.

Farm to River Partnership Renewal

The Farm to River Partnership recently received approval from the Iowa Department of Agriculture and Land Stewardship (IDALS) to continue work through 2024.

What began in 2015 as a three-year Water Quality Initiative (WQI) demonstration project in the Elk Run watershed, the Farm to River Partnership expanded to a larger sub-watershed within the North Raccoon watershed covering Sac, Calhoun, Carroll and Greene counties. Because of the positive progress toward healthier soils and cleaner water over the past six years, IDALS approved \$1.3 million funding over an additional three years.

Conservation Agronomist Joe Wuebker oversees the ACWA-administered project and is partnering with ag retailers and their customers to achieve these goals.

“The project’s goals are the installation of 20 edge-of-field practices, such as bioreactors and saturated buffers, and 7,000 new acres of cover crops,” says Wuebker. “I’m excited to continue the progress, and now with the new RCPP, I can help farmers who have land outside the Farm to River Partnership boundaries.”

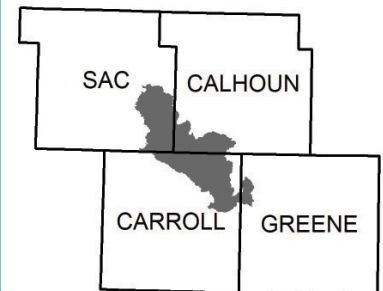
The Regional Conservation Partnership Program (RCPP) is a five-year, federally funded water quality project getting underway in the larger North Raccoon Watershed, of which the Farm to River Partnership is included (see page 3). Agriculture’s Clean Water Alliance (ACWA) is one of the partners in this project, so Wuebker now has more flexibility with his farmers and their needs.

“With the Farm to River Partnership and the RCPP, we can make even more of an impact,” he says. “IDALS is also an RCPP partner and the Farm to River Partnership goals reflect this collaboration. For example, the 7,000-acre cover crop goal is funded through both Farm to River and the RCPP.”

The two projects are helping farmers and landowners to increase conservation practices that reduce nutrient and sediment loading into Iowa’s waterbodies. The waters in the project area flow through the Des Moines metro and on to the Mississippi River. These two projects help contribute to Iowa’s Nutrient Reduction Strategy as well as the strategies of other states bordering the Mississippi River.

Winter 2022

Farm to River Partnership Area



GOALS:

20
EDGE-OF-FIELD
PRACTICES
including
BIOREACTORS,
SATURATED
BUFFERS

7,000
COVER CROP
ACRES

Water Monitoring in the North Raccoon watershed

In 2000, ACWA began monitoring the Raccoon and Des Moines rivers to establish a benchmark of nutrient levels and to gain insight into where efforts should be focused to reduce nutrients in the waterbodies. The outcome from these measurements led to Elk Run and Farm to River Partnership Water Quality Initiatives. Rivers and their tributaries as well as private farm edge-of-field tile drains in the project area are monitored annually.

The conservation practices that continue to be added can be attributed to nutrient loss reductions within the watershed. Between Fall 2019 and Fall 2021, the Partnership concluded annual totals of 181,871 pounds of nitrogen loss reduced, and 7,435 pounds of phosphorus reduced from six edge-of-field practices and 21,300 acres of cover crops.

But measurements from the river water sampling don't match up with these calculations as cleanly as one would like. For the past two years, much of Iowa experienced drought conditions. As Figure 1 illustrates, the levels of exported nitrogen from the Raccoon River was very low. This year ranked the lowest for nitrate-N concentration and estimated loads since 2007 for the Raccoon River.

Figure 2 focuses on annual nitrate levels in the North and South Raccoon rivers. The levels for 2021 are similar to 2000 and 2012, also drought years. Without adequate moisture, the nitrate-N cannot migrate into the crop or down to the groundwater and accumulates in the soil profile, leaving it vulnerable to being lost later. The lingering effects of a drought can impact subsequent years after drought conditions are eased with normal rainfall amounts. Waterbodies can contain high levels of nitrate-N in the years

following a drought as recorded in 2001, 2013, and 2015, and illustrated in Figure 2.

If spring rains come before crops are planted and growing, the residual nitrate will be vulnerable to leaching into streams and rivers. However, in 2021 the crops in many of these fields saw above-average yield, so it is promising that nitrogen was utilized by the crops.

	Upper North Raccoon River	North Raccoon River	Middle Raccoon River	South Raccoon River
Acres	1,030,905	1,462,636	384,544	240,291
2021	.04	0.3	0.3	0.9
2007-2020 Average	17.7	18.1	10.7	15.1

Figure 1. Average export of nitrogen in pounds per acre April-August 2021; estimated load divided by total acres.

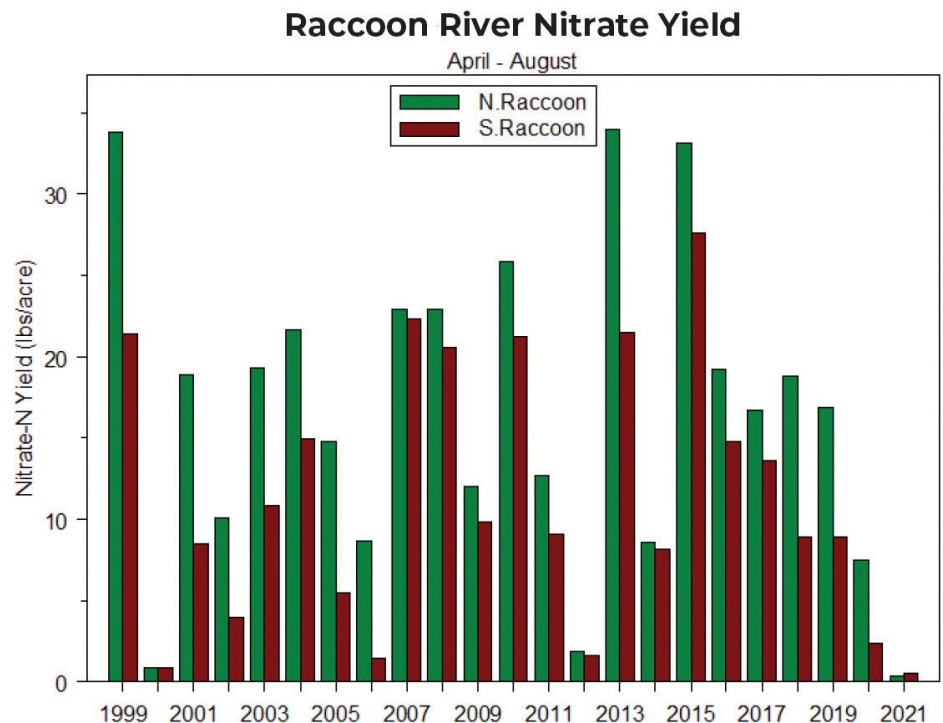


Figure 2. North and South Raccoon River nitrate yield in pounds per acre between 1999 and 2021.

Regional Conservation Partnership Program

Agriculture's Clean Water Alliance is one of 12 organizations and agencies that are partnering with the USDA Natural Resources Conservation Service (NRCS) in the North Raccoon Soil and Water Outcomes Regional Conservation Partnership Program (RCPP). This federally funded program totals nearly \$26 million, which is comprised of \$9.8 million from the NRCS and \$16 million from partnering organizations.

The five-year project is in the North Raccoon watershed, which extends from about 160 miles north and west of Des Moines to Buena Vista County. It touches 12 counties, of which 85 percent of the land area is in corn and soybean production. The Farm to River Partnership is included in the RCPP focus area.

The RCPP goals include:

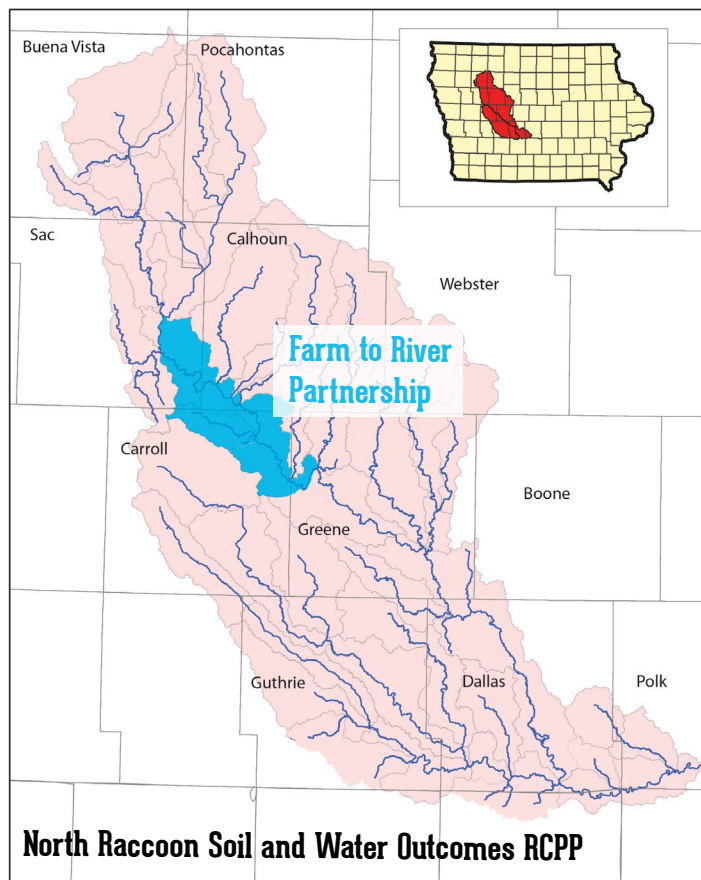
- 50,000 new acres of cover crops
- 19,200 acres of reduced or no-till management
- 22 bioreactors and 25 saturated buffers
- construction of 5 wetlands in tile-drained streams
- restoration of 20 oxbow wetlands.

The RCPP allows Conservation Agronomist Joe Wuebker to expand acres and help more farmers use the cost-share funding to make positive changes on their land. He is seeing attitudes and outlooks change with the land.

"Many people in the area are more conscious about soil quality," Wuebker says. "As property and land values increase, potential buyers are now asking to see crop field soil testing results. If the soil organic matter values are low, that can negatively affect the value of the land."

Ryan and Tarin Tiefenthaler, who farm near Carroll, use a range of conservation practices on their farm including no-till, cover crops, and grassed waterways. They have utilized the Farm to River Partnership funding to expand their practices.

"We have ramped up our use of cover crops on the acres within the project's targeted areas on our farm," says Ryan. "With the Partnership's conservation message coupled with the available funding, farmers may be more accepting to try cover crops and other practices on their farms."



Mark Schleisman, who farms near Lake City, fully believes one can farm profitably while remaining conscious of water quality and soil health. He and his family use no-till and strip-till, cover crops, grassed waterways, terraces, and habitat for birds and pollinators. They used cost-share funding through the original Elk Run project and installed their first saturated buffer and bioreactor.

"Since Elk Run, we've added three more bioreactors through the Farm to River Partnership and have increased our cover crop usage," says Schleisman. "We are seeing more cover crops and more edge-of-field practices added in our area. Of course, these conservation practices are being adopted slower than I would like to see, but I believe we are going in the right direction."

Between the Farm to River Partnership and the RCPP, Wuebker hopes the goals will make a lasting impact on farmland, water quality and soil productivity, which benefits everyone.



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The Time is Now!

If you are thinking about trying cover crops or wondering how an edge-of-field practice would fit on your farm, now is the time to act. Cost-share funding is available through the Farm to River Partnership and the RCPP for these practices:

- Bioreactors, saturated buffers
- Cover crops
- Targeted wetlands and oxbow wetland restoration

Other opportunities available at no cost:

- Tile water monitoring
- Whole farm conservation assessments to identify ideal choices for conservation practices
- Replicated strip trials to test practices and products on your farm with your management systems.

Contact **Joe Wuebker** to discuss any of these options.
cell: **712-790-1415** email: jwuebker@iasoybeans.com



ACWA is a non-profit organization of Iowa ag retailers that agree water quality is vital to the future of farming. By helping their farmer clients with management options, adopt conservation practices, ACWA members are making strides toward the alliance's goals of farmer profitability combined with improving water quality.

www.acwaiowa.com

