



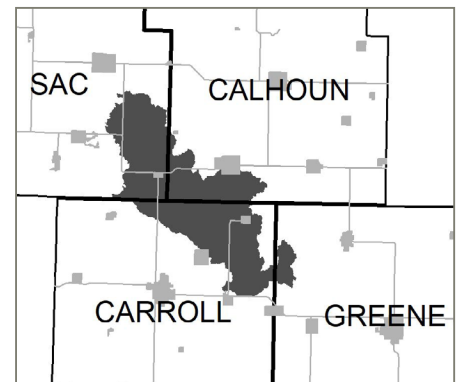
# North Raccoon Farm to River Partnership Project



The North Raccoon Farm to River Partnership is a Water Quality Initiative (WQI) project through the Iowa Department of Agriculture and Land Stewardship (IDALS) supporting the Iowa Nutrient Reduction Strategy (NRS).

Agriculture's Clean Water Alliance (ACWA) is leading the three-year, \$2.6 million project. It is focused in five sub-watersheds of the North Raccoon River watershed to help farmers and landowners select and implement suitable water quality enhancements for their farms.

The project will help farmers and landowners implement in-field and edge-of-field practices that keep nitrogen and phosphorus in fields to achieve the Iowa NRS goal of 45 percent reduction of nitrogen and phosphorus in Iowa waters before entering the Mississippi River and eventually the Gulf of Mexico.



## BIOREACTORS

Funding = 100% paid  
Project goal = 15 installed

Bioreactors are edge-of-field structures that reduce nitrogen leaving the field through a tile line. The tile line is redirected into an underground bed of woodchips where nitrate is removed naturally by microbes on the wood chips. On average, bioreactors reduce nitrogen leaving the tile lines by 43 percent.

## COVER CROPS

Funding = \$25/acre  
Project goal = 11,500 acres

Cover crops are grown between the harvest of cash crops and planting of following year's crop. These plants cover the soil surface, suppress weeds, increase soil organic matter, reduce nitrogen loss through plant uptake and reduce phosphorus loss through erosion control. Cover crops can reduce nitrogen and phosphorus losses by 30 percent, keeping valuable soil and nutrients in the field.

## SATURATED BUFFERS

Funding = 100% paid  
Project goal = 15 installed

A saturated buffer consists of a water level control structure installed at a tile line outlet near a streambank buffer. Additional tile lines are installed parallel to the stream and field tile water is diverted through these lines into the streambank buffer. The microbes in the soil remove the nitrate before entering the stream. Saturated buffers can reduce nitrogen by up to 50 percent.

## TARGETED WETLANDS

Funding = Construction 100%  
+ CRP payments 10-15 yrs  
Project goal = 2 installed

A water catchment basin is constructed at the end of a tile line and adjacent to a stream. Nitrate in the tile-drained water is converted to nitrogen gas naturally in the wetland before entering the stream. In addition to removing an average of 50 percent nitrogen, wetlands also help in flood mitigation and create wildlife habitat.

# OTHER OPPORTUNITIES

- Tile water monitoring at no expense to farmers
- Whole farm conservation assessments: identifies ideal choices for conservation practices per field including practices not covered by the Farm to River Partnership including nutrient management.
- Nutrient management: through soil, tile water and plant tissue analyses, farmers will have additional data to make informed nutrient management decisions. ACWA members align with the 4R Plus program, a campaign for enhancing nutrient management. The 4 Rs – the Right Source, Right Time, Right Rate and Right Place – support nutrient application management. The Plus indicates the conservation practices that reduce erosion and treat runoff for improving and preserving soil health as well as water quality.

## North Raccoon Farm to River Partnership – 2019-2021

115,000 ACRES

FIVE WATERSHEDS  
FOUR COUNTIES

\$2.6 MILLION TOTAL FUNDING



### Financial assistance

To find out what will work best for you and your farm, contact project coordinator Chance McDonald. He can discuss options with you that will fit with your operation. McDonald is working in tandem with area agriculture retailers and is dedicated to help farmers implement conservation practices on their farm for environmental improvement.

Project Coordinator: Chance McDonald  
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## Project Partners



ACWA is a non-profit organization of 11 ag retailers in the Des Moines and Raccoon River watersheds, 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.acwa-rrws.org](http://www.acwa-rrws.org) Twitter: @ToPartnership

