

# CITY PARTNERS WITH FARMERS FOR WATER QUALITY

## Teamwork reduces need for water treatment upgrades

Just 18 miles south of Waterloo, Iowa, and just north of Cedar Rapids, Jack Boyer's farm eventually drains into the Cedar River. It's in one of nine priority watersheds in the Hawkeye State, where nitrate concentrations are a water quality concern.

How do you avoid a catastrophe such as poor water quality? Stop the problem before it starts.

Five years ago, Cedar Rapids officials and farmers began working together to use best practices to reduce nutrient loss into waterways.

"Instead of just pointing fingers at us, they worked with us hand-in-hand," Boyer says. "I appreciate the approach Cedar Rapids has taken; it's certainly better than what happened with Des Moines Water Works."

### FARMER VERSUS CITY

For reference, Des Moines Water Works (DMWW) sued three counties in Iowa for nitrate loading into the Raccoon River, one of the city's main water sources. The lawsuit claimed farmers and runoff from tile was directly responsible for nitrate

loading and, subsequently, the need for a new filtration system. The lawsuit ended because it's not constitutional to sue counties.

However, the precedent was set. Would similar cases in the future be farmer versus city?

### INNOVATIVE SOLUTION

The same year DMWW sued Buena Vista, Calhoun and Sac counties, Cedar Rapids found an alternative to improve water quality through the 2014 farm bill. Entities such as a city could submit proposals for funding for conservation and water quality. So far, the city has received \$1.6 million from grants and \$1.4 million from partners or city funds.

"This was the first time we worked with agriculture outside of city limits," says Tariq Baloch, Cedar Rapids water utility plant manager.

Their upstream focus was because those watersheds feed the Cedar River, the city's main water source. To achieve its goal, the city worked with farmers in Black Hawk, Tama and Benton counties to provide funding,

education and support for conservation practices through the Middle Cedar Partnership Project (MCCPP).

To date, MCCPP has 54 contracts with farmers and landowners to implement conservation practices that preserve soil and water. This accounts for 10,297 acres or 9% of the total watershed.

"For us, it was about finding existing successful projects upstream of us in the watershed and asking to join in," says Mike Kuntz, Cedar Rapids Utilities environmental manager.

MCCPP has provided funding for six types of conservation projects:

#### ► Nutrient management plans:

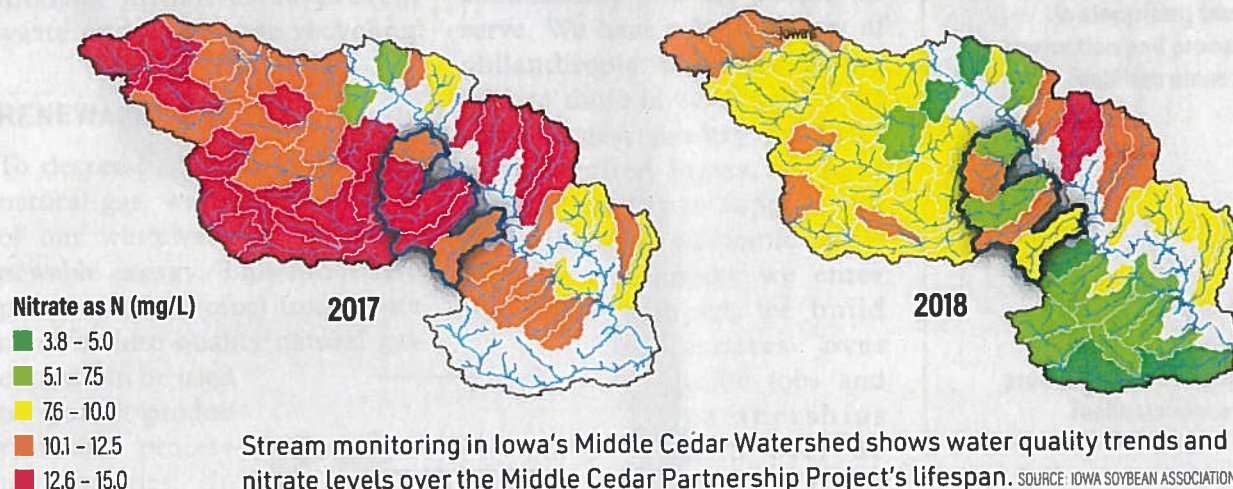
Currently, 357 acres are in this program, which has reduced nitrogen loss by 1,040 lb. per year.

► **Cover crops:** The 17,382 acres with cover crops have 32% lower nitrate concentrations.

► **Saturated buffers:** Five farmers have installed saturated buffers, reducing their nitrate loading by 39%.



## Practices Protect Soil and Drinking Water By Reducing Nitrate Concentrations



► **No-till and strip-till:** This is the most popular option for farmers, and many employed the practice prior to MCPP. As of 2017, 37,518 acres of no-till and 12,260 acres of strip-till are in the project area.

► **Bioreactors:** The two bioreactors have reduced nitrate concentration by 42% on tile water from the fields.

► **Wetlands:** Nitrate concentrations in streams connected to wetlands are 84% lower than streams without wetlands. To date, no wetlands have been installed through MCPP.

For Boyer, the benefits of putting conservation practices into play extend beyond just water quality.

"I want to leave my farm better than how I got it," he says. "The organic matter in my soil was 5% when my father-in-law first started farming. When I got it, it was down to 2.5%, and in the 10 years I've used cover crops, I've increased it by 0.1% each year."

### A PROACTIVE PARTNERSHIP

Cover crops provide farmers with greater water-holding capacity through better infiltration. It's a benefit for Cedar Rapids, too, as it means less flooding after heavy rain.

"Cover crops are a good introductory practice farmers in the area can try," Kuntz says. "You get a three-year contract to get cover crops on your land. It's one of the easier cost-share strategies."

Cedar Rapids' grant funding from USDA expired at the end of 2019, but they plan to continue partnering with farmers. The city will apply for grants, and regardless of the outcome, their commitment to working with farmers is unwavering.

USDA's grant program facilitated education for farmers and urban dwellers around Cedar Rapids.

"We've learned so much about what it means for the ground, how farmers make a living from the land and how complex it is for farmers," Kuntz says. "And we've been able to share how city operations work and how much Cedar Rapids' economy depends on those crops." FJ

By Sonja Begemann  
sbegemann@farmjournal.com

