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"Pain is inevitable; suffering is optional."

~Unknown

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Working to Improve Water Quality

Miller Creek Watershed Project to Support Iowa Nutrient Reduction Strategy

As farmers prepare for spring planting with hopeful anticipation of a yield bump in 2014, three words summarize a growing movement among producers and stewards of the land: nutrient reduction strategy. Working together, the Iowa

Department of Agriculture and Land Stewardship, the Iowa Department of Natural Resources, and the Iowa State University

College of Agriculture and Life Sciences have developed a science and technology-based approach to assess and reduce the number of nutrients delivered to Iowa waterways and ultimately, the Gulf of Mexico.

The Iowa Nutrient Reduction Strategy was developed in response to the 2008 Gulf Hypoxia Action Plan that calls for 12 states along the Mississippi River to reduce nutrients in surface water from both point and nonpoint sources in a scientific, reasonable and cost effective manner. This pragmatic approach seeks to reduce nutrient loads from both industrial and agricultural sources. This is the first time such an integrated approach involving both point sources, nutrients discharged from the state's largest wastewater treatment plants, for example, and nonpoint sources such as farm fields, has been attempted.

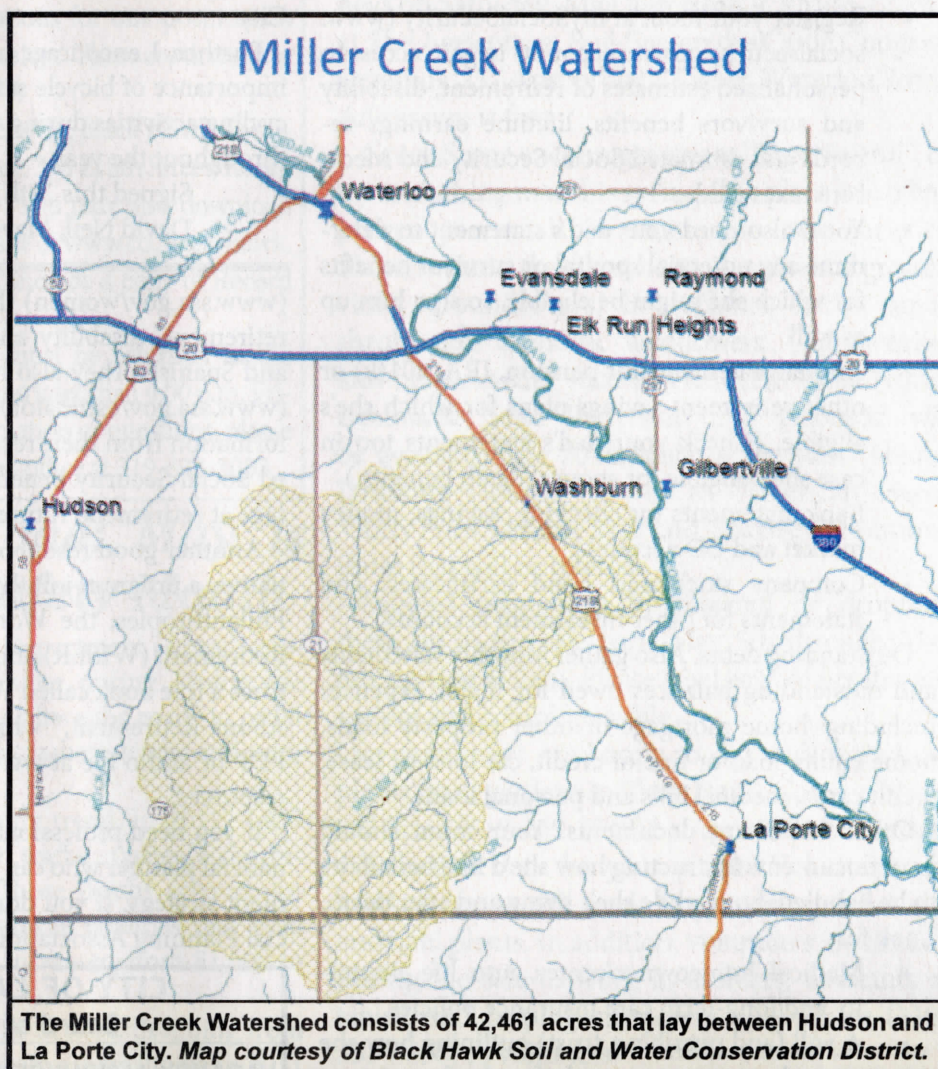
A "dead zone" is the indirect result of nutrients running off into rivers and then into bodies of water, such as the Gulf of Mexico. Once these excess nutrients reach the ocean, they fuel algae blooms. The algae then die and decompose in a process that consumes oxygen and creates oxygen-free areas where fish and other aquatic creatures can't survive. This zone can have serious impacts on commercial and recreational fisheries on the Gulf Coast, causing fish kills. Last summer, the Gulf's dead zone covered some 5,840 square miles, spanning an area roughly the size of Connecticut.

The Miller Creek Water Quality Improvement Project was created in support of the Iowa Nutrient Reduction Strategy and Iowa Water Quality Initiative. The final version of the Nutrient Reduction Strategy was released on May 29, 2013. The end goal is to have an overall load reduction of Phosphorous and Nitrogen by 45%. The Iowa Water Quality Initiative is the funding source of the Iowa Nutrient Reduction Strategy.

The Miller Creek Water Quality Improvement Project will support the Iowa Nutrient Reduction Strategy by working with Black Hawk and Tama County Producers located within the watershed to install demonstration practices to improve water quality and for educational purposes. Producers' involvement in this education-based project is strictly voluntary. Participants will enjoy increased opportunities for hands-on learning and networking opportunities by way of a digital learning commons, quarterly

"As farmers, we can make changes one farm at a time that, together, can have a big impact on water quality."

~Bill Northey, Iowa Secretary of Agriculture



webinars, biannual workshops and other informal networking events. The Black Hawk Soil and Water Conservation District and the Iowa Soybean Association are partnering to offer a free to the producer edge-of-field performance evaluation to ten different producers within the Miller Creek Boundary. For more information, contact Shane Wulf of the Black Hawk Soil and Water Conservation District at 319-296-3262, ext. 305.

Miller Creek Water Quality Improvement Project Goals

Demonstration Practice	Target Level
Cover crops	4,500 acres
Strip- or no -tillage	4,000 acres
Buffer strips	18 acres
Drainage water management	3 systems
Nitrification inhibitors	2,500 acres
Nitrogen application rate management.....	1,000 acres
Denitrification bioreactors	4 installed