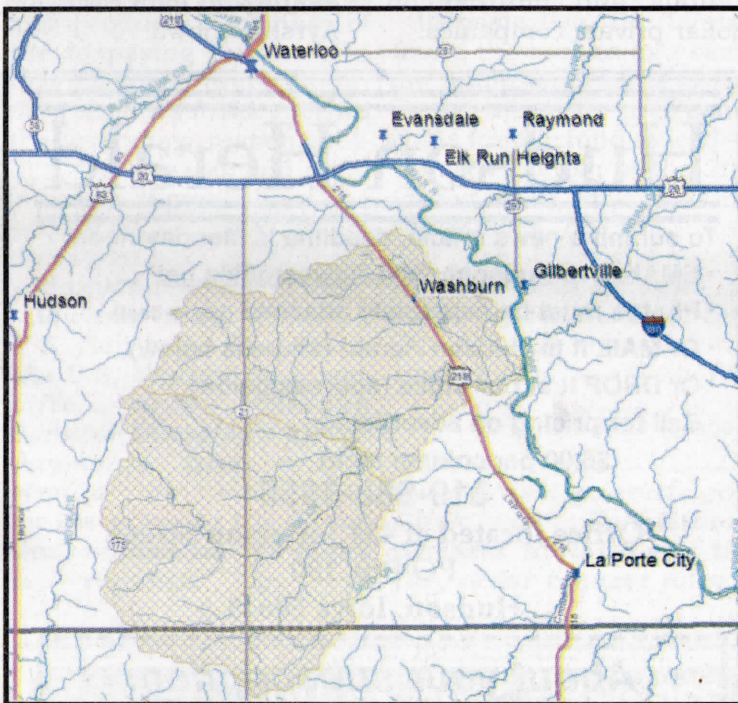




Demonstration Practice	Target Level
Cover crops	4,500 acres
Strip- or no-tillage	4,000 acres
Buffer strips	18 acres
Drainage water management	3 systems
Nitrification inhibitors	2,500 acres
Nitrogen application rate management	1000 acres
Denitrification bioreactors	4 installed



Miller Creek Water Quality Improvement Project

by Shane Wulf

With spring finally arriving, and the sight of farmers planting their fields for the 2014 season, one concern on everyone's mind is whether the weather will be more cooperative than the past few years. In addition, another area of concern for both the agricultural community and urban communities in Iowa this year, is the issue of "Water Quality."

Through collaboration

between 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, a science and technology-based approach has been formulated to assess and reduce the number of nutrients to Iowa streams that lead to the Mississippi River and, eventually, the Gulf of Mexico.

The title of this effort is the Iowa Nutrient Reduction Strategy. Its updated version was released on May 29, 2013.

The Iowa Nutrient Reduction Strategy was created in response to the nation-wide 2008 Gulf Hypoxia Action Plan. This plan calls for 12 states along the Mississippi River to reduce and control hypoxia in the Gulf of Mexico and to improve

water quality in the Mississippi River Basin.

Hypoxic zones, also referred to as “dead zones”, are areas in oceans and lakes that have abnormally low oxygen content. According to the National Oceanic and Atmospheric Administration, the hypoxic zones are areas that have received “excessive nutrient pollution from human activities coupled with other factors that deplete the oxygen required to support most marine life in bottom and near-bottom water”. These zones have caused major economic and ecological consequences to fisheries that harvest within its boundaries. In summer of 2013, the Gulf’s dead zone covered 5,840 square miles. To give you some perspective, that is an area around the size of Connecticut.

You may ask yourself, “What can Iowa do help with a problem that resides 1,000 miles away?”

The Iowa Nutrient Reduction Strategy plans to reduce nutrients to the Gulf of Mexico by working with point and non-point sources in a scientific, reasonable, and cost-effective manner. Point source pollution occurs in areas where nutrients are discharged from one specific place such as a pipe from a factory. Non-point source pollution is different from point source pollution, because it occurs when rain or snow falls over a large area of land and carries nutrients with it into streams and lakes. The overall goal of the Iowa Nutrient Reduction Strategy is an overall load reduction of 45%.

The Water Quality Initiative is helping support the Nutrient Reduction Strategy’s plan by funding eight different projects across the state of Iowa. One of those projects which received funding as part of the Nutrient Reduction Strategy is located in the Miller Creek Watershed here in

Black Hawk County. The project is titled the Miller Creek Water Quality Improvement Project and covers approximately 42,461 acres. The boundary for the project is made up of two small watersheds including the Headwaters Miller Creek and Miller Creek.

A watershed is an area of land where surface rain and snow runoff meets at one point at a lower elevation. The Miller Creek Water Quality Improvement Project will support the Iowa Nutrient Reduction Strategy by working with both Black Hawk and Tama County producers located within the watersheds to install conservation practices. This demonstration and educational based project is completely voluntary to the producer and cost share will be available for financial assistance.

Different resources will be available to producers to interact with others by the means of social networking, a digital learning commons,

webinars, and field workshops.

The Black Hawk Soil and Water Conservation District is partnering with the Iowa Soybean Association to offer a free edge-of-field performance evaluation to ten different producers who farm in the Miller Creek or Headwaters Miller Creek watersheds. Each producer will be offered two different locations to be evaluated. This performance will monitor nutrient runoff on fields that have conservation practices implemented and those that do not. The producer can compare the agronomic data collected for the two different locations and gain a better understanding for how beneficial conservation practices can be.

For more information, please contact Shane Wulf of the Black Soil and Water Conservation District at 319-296-3262 extension 305.