

On Wednesday of this past week, August 28, 2015, a rule newly issued by the EPA (U.S. Environmental Protection Agency) and the Army Corps of Engineers explaining "Water of the U.S." (WOTUS) officially went into effect. This implements the federal Clean Water Act (CWA) authority on privately owned land including land that is used for farming. This new rule going into effect has caused some uproar in the agriculture community. However, it is important to stress that farmers had and continue to possess one common goal, to care for the land the best they can.

Gary Shedd, a member of the Winnebago-Boone Farm Bureau, and his wife Cheryl Ann have a lot of experience in agriculture. They operate a mid-size family farm in Rockton, Illinois.

The Shedds are firm believers in caring for the land that provides them with so much. Shedd has experimented with different ways to keep their land happy and they have come down to a solution: stewardship is very important. Stewardship is a core value of the Winnebago-Boone Farm Bureau. Gary's story will show you how farmers are concerned with stewardship on their own farms.



"What we know now that we did not know 50 years ago is that the soil is very much alive" said Shedd "The microbes in the soil are vital to the health of the plant as well as the soil. It is the farmer's responsibility to ensure that these microbes are healthy. That is what stewardship is, taking care of the land."

In the 1950s-60s, the Shedd Farm would moldboard, plow everything, disk and cultivate every acre and pray that the weather pattern would not cause heavy soil erosion. A moldboard plow was a big advancement in agriculture in these times. It not only cut furrows with a share but

turned the soil as well. Since then, Science has come a long way and Technology has allowed us to focus on more important aspects such as protecting our land.

There is a common misconception that farmland acts like a natural concrete: when rain falls, it all runs off the field and into the ditches, waterways, and rivers, which causes flooding. Thirty years ago, that may have been the case. But now, farming is a science that attempts to meet the yearly challenges of too hot and dry, or too wet and cold. One of the ways that farmers attempt to meet this challenge is to progress in tillage practices.

"We are lucky to live in an area that can produce so much grain," said Shedd "My grain does not just go to feed cattle, but is used in ethanol, corn chips, and baking supplies that people use every day. If we treat our land like concrete, we will not be able to provide these goods to people."

Tillage is the preparation of soil by mechanical agitation of various types, such as digging, stirring, and overturning. Different varieties work better for different types of soil. The soil on Shedd's land ranges from flood plains to gently sloping open space, to rock outcroppings and sand. Each soil presents its own challenge and requires different management methods.

Recently, the Shedd's have moved to vertical tillage, a practice that allows the soil to interact with the leftover plant matter without exposing the soil to the harsh elements. Vertical tillage penetrates the soil four inches deep and it mixes the dry matter on top into the soil.

"Vertical tillage allows water movement into the soil through the vertical slots so the soil can retain more water," said Shedd. He knows there are benefits to other methods of tillage, such as deep tillage, depending on the condition of the soil. But, he has found that for him vertical tillage is making a big difference. His hope is that this practice will work towards building a sustainable agro-ecosystem. To do that requires an understanding of science.

"In the end, our goal is to produce a clean healthy grain for our consumers," said Shedd "Current statistics show that the average farmer feeds around 150 people per year. By 2050, we have to be able to feed 300 people. So not only do we have to feed the world, but we also have to remember our responsibility as stewards of our land." (Published September 4, 2015)