

Written Testimony of Shanon Phillips, Water Quality Division Director with the Oklahoma Conservation Commission before the House Committee on Agriculture's Subcommittee on Conservation, Energy, and Forestry on September 18, 2014

Thank you for the opportunity to testify today about the relationship between soil health and water quality. I'm certain you're aware of the Natural Resource Conservation Service's (NRCS) campaign to raise awareness about the importance of soil health and to provide private landowners the knowledge, skills and tools to protect this resource. The impetus behind this campaign lies with the increasing demands on our soil resources and the agricultural community to cost-effectively feed the world. We can thank progressive farmers and agricultural experts all around the globe who have developed methods, knowledge, and skill sets to help address this problem and we can thank the NRCS for bringing these tools to the U.S. agricultural community.

The importance of protecting our national soil resources, which were built over geologic time and heavily impacted through settlement and development of our continent, is relatively obvious as it relates to the promotion of a strong agricultural industry, which, in turn, is critical for a healthy national economy. Scientists estimate that as much as 60% of carbon has been lost from agricultural soils since the 1800s. This loss in organic matter affects a soil's capacity to absorb and hold nutrients and water, which are critical for production of crops and livestock forage. However, protection of our soil resources is also mandatory for protection of the Nation's water resources.

Erosion of soil particles, washing of compounds from the soil, and changes in soil structure which affect water infiltration are some of the most significant sources of water quality problems in the U.S. According to the U.S. Environmental Protection Agency, approximately 777,759 or 67 percent of impaired miles of US streams and rivers and 9,794,360 or 40 percent of impairments to acres of lakes, reservoirs and ponds are caused by pollutants related to soil erosion or leaching of pollutants from soils such as excess nutrients, sedimentation, turbidity (suspended particles), pathogens, and pesticides.

In August of this year, the City of Toledo, Ohio was in the news related to toxins from bluegreen algae blooms which made the city water supply from Lake Erie unusable. Bluegreen algae blooms, which sometimes produce deadly toxins, happen all over the U.S., from New York to Oregon and from Wisconsin to Texas. A July fourth holiday bloom in 2011 in Grand Lake, Oklahoma dramatically impacted the local community and made the news for sickening one of our senators. At least 38 waterbodies in New York had suspected or confirmed bluegreen algae blooms this summer, and toxin production above safe levels was confirmed in at least seven of those systems.

Algae blooms occur and persist when a waterbody receives more nutrients than it can naturally assimilate. These excessive nutrients are often related to soil erosion and the washing of pollutants from land surfaces. Agriculture, although certainly not the only source, is one of the most significant sources of nutrients in the U.S.

The good news is that we know and have demonstrated how to reduce these nutrient and sediment-related impacts from agriculture. These successes have been demonstrated all over the nation and many of them are chronicled on the EPA Nonpoint Source Success Story Website at: <http://water.epa.gov/polwaste/nps/success319/>. This website highlights at least 508 waterbodies across the nation where water pollution problems have been solved. Most of these programs relied on voluntary conservation programs to help states and local partners clean up waterbodies affected by pollution which resulted from soil erosion or the washing of pollutants from the soil.

I'm especially proud of the Oklahoma record of demonstrating success at addressing these water quality problems. Oklahoma is a national leader at building partnerships among private landowners, conservation districts, NRCS, the state conservation agency (Oklahoma Conservation Commission), and the EPA to solve nonpoint-driven water quality problems.

Nonpoint source pollution results when rainfall or snowmelt washes pollutants off or out of the land and into streams. It is much more difficult to measure or control than point source pollution, which is generally thought of as pollution from a defined source, such as a pipe at a waste-water treatment plant. In states like Oklahoma where the majority

of land is privately held and used for agricultural production, conservation programs to protect and reduce the impacts from agriculture have been very successful. In fact, only one other state in the nation has more success at addressing water quality programs through voluntary, nonpoint source programs. The EPA Nonpoint Source Success Story webpage currently lists 39 different Oklahoma watersheds where voluntary, agriculturally-based conservation programs have solved water quality problems and another 6 are pending in the coming months.

These successes have been possible through the partnership formed as a response to solve the economic and natural resource devastation associated with the Dust Bowl. This partnership among the local landowners, local conservation districts, NRCS, and the state conservation agency has a long history of effectively working to address soil erosion. However, by including EPA in this partnership, we're able to definitively document that this partnership is also successful at addressing water quality impacts that are, at least in part, associated with agricultural production.

States are provided funding through the EPA Clean Water Act Section 319 Program which can be used to monitor waters for nonpoint source pollution-related impacts and to document water quality improvements from conservation programs. These funds can also be used to support boots on the ground personnel who can help the ever-shrinking NRCS staff work with landowners to implement conservation practices. Finally, the 319 funds can be used to supplement cost-share dollars available to landowners to help them install and maintain these effective conservation practices.

Without the EPA partnership, there would not be a Nonpoint Source Program in Oklahoma, nor would there be any documented Nonpoint Source Success Stories. We would not be able to prove that voluntary programs can successfully address water quality problems on our agricultural lands because our limited state and federal funds from other programs are focused on other purposes. Finally, the EPA oversight and technical support for the 319 program is both beneficial for the overall program and critical toward legitimizing program results.

Thank you for your attention today and for your support for voluntary-based conservation programs such as those provided for in the Farm Bill. Meaningful, measurable progress towards protecting our Nation's economic and natural resources health is possible due to this support. Please also recognize EPA as a critical, beneficial partner in this effort as well. I am pleased to answer any questions that you might have.