



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Senate and House Joint Agricultural Committee
Director's update on the progress of Senate Bill 1 (131st General Assembly)
Provided by Ohio Department of Natural Resources Director James Zehringer
June 5, 2018

Chairmans Hacket and Hill, Vice-chairs Hoagland and Koehler, Ranking Members O'Brien and Patterson, as well as members of the Senate and House Joint Agriculture Committee, my name is Jim Zehringer and I am the Director of the Ohio Department of Natural Resources. I would like to thank you for the opportunity to provide an update on the impact of Senate Bill 1. Passed in 2015, this legislation was enacted to address water quality issues and harmful algal blooms that effect Ohio's greatest natural resource: Lake Erie.

In July of 2015 at Maumee Bay State Park, I joined Governor Kasich, OEPA Director Butler, and ODA Director Daniels for the bill signing of this important legislation, and we were encouraged by Senate President Faber and bill sponsors Senator Gardener and Senator Peterson for making water quality their top priority. Joining us for this event were various environmental groups and agricultural groups who normally don't see eye-to-eye, but on that day they sat side-by-side as proponents of this legislation. They agreed on how vital Lake Erie is to communities who rely on safe drinking water and how important our state's agricultural, travel and tourism industry is, as well as the economic benefits it provides for so many small businesses.

As I reflect on that day, Senate Bill 1 was a step in the right direction when it comes to addressing nutrient runoff and Lake Erie's algal bloom problems. That is why after the signing of Senate Bill 1; Ohio, Michigan, and Ontario signed an agreement at the Governor's 2015 FishOhio day to reduce the amount of phosphorous flowing in to Lake Erie by 40 percent by 2025 with an interim goal of 20 percent by 2020. With this challenge laid in front of us, we knew there must be significant improvements made each year to reach these goals.

I'm personally familiar with the challenges brought by harmful algal blooms. Before I was appointed by Governor Kasich to be the Director of the Ohio Department of Agriculture in January, 2011, I owned and operated a farm in Mercer County near Grand Lake St. Marys. I am fully aware of the vital role agriculture plays in the state, and how phosphorous and nitrogen runoff can feed and create algal blooms especially in Northwestern and West Central Ohio.

After Grand Lake St. Marys experienced the most severe bloom in the summer of 2010, all stakeholders around the lake (including the agricultural community) knew something had to change. Those stakeholders worked with the state to designate Grand Lake St. Marys as a watershed in distress and helped to implement regulations with the goal of reducing external loading of phosphorus in to the lake.

In a study conducted by Dr. Stephen Jacquemin of the Wright State University – Lake Campus, he found there has been a significant reduction in the amount of phosphorus loading occurring in Grand Lake St. Marys since the rules were implemented in 2011. He found that when the manure ban was effective from December 15-March 1 of every year from December, 2011 to October, 2016; there has been a reduction of 46 percent of particulate phosphorus during high flow events and an 18 percent reduction of dissolved reactive phosphorus during high flow events. I have included a summary of these findings with my submitted testimony.

Dr. Jacquemin not only credits the rules implemented for these changes, but also gives credit to the farmers in the watershed for their work that allowed for these results. Dr. Jacquemin also stresses that there is always room for improvement and that the stakeholders must stay the course while engaging in new practices. This is an example of what can happen when the agricultural community works with all stakeholders involved to come up with solutions to solve problems and what they produced has shown results.

That said, Senate Bill 1 was a similar step in the right direction, but with the reoccurrence of algal blooms and fish kills in the Western Basin since its passage ODNR recognizes that more needs to be done to keep our nutrients on the land, if

we are to meet our goals by 2025. Since Senate Bill 1 was enacted, ODNR continues to hear concerns about harmful algal blooms from Lake Erie boaters, anglers, small business owners, or those who visit ODNR properties. It is estimated that over 3 million people visit our Lake Erie state park facilities each year and with more than 450,000 staying overnight at one of our campgrounds or lodges. Lake Erie is a popular destination for many wanting to hook a world-class walleye or take a night to camp out on one of its islands, not to mention that it supplies fresh drinking water to 25% of Ohioans. Maintaining proper lake health will strengthen Lake Erie's appeal now and for future generations. A healthy Lake Erie will lead to even more Ohioans and non-Ohioans utilizing this resource for its recreational opportunities. This not only benefits ODNR and its mission, but also promotes Ohio's tourism economy.

Coinciding with Senate Bill 1, House Bill 64 of the 131st General Assembly shifted all ODNR's water quality responsibilities over to the Ohio Department of Agriculture and the Ohio Environmental Protection Agency in an effort to shrink government and eliminate duplication of services. However, as ODNR Director I stand with those departments when it comes to finding and employing more ways to reduce the amount of phosphorous flowing in to Lake Erie. It is my hope that all stakeholders who find themselves involved with this issue will work with our departments to find solutions that help Ohio meet its goals and improve the health of Lake Erie. I do believe this is possible, because I have seen it happen at Grand Lake St. Marys and with the passage of Senate Bill 1. Thanks again for the opportunity to present testimony, and I will answer any questions once OEPA Deputy Director has had the chance to deliver his remarks.

Changes in Water Quality in GLSM Watershed Following Manure Application Regulations

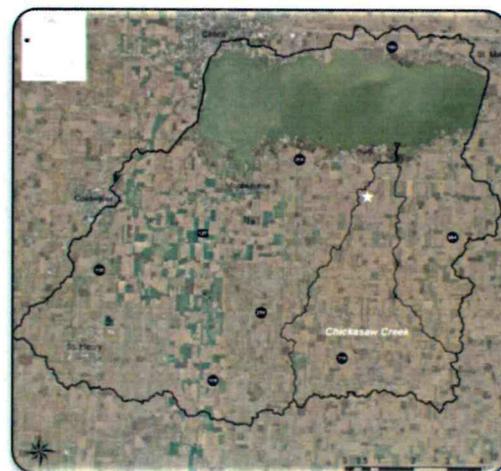
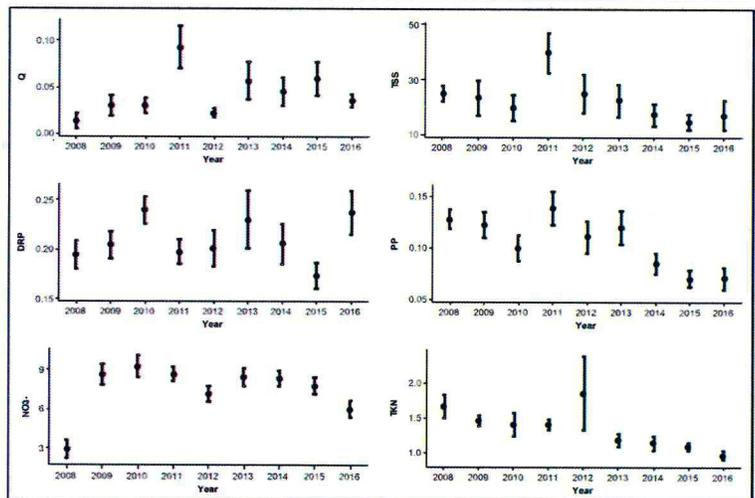
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Research objective was to examine trends from 2008-2016 in sediment and nutrient water quality for changes concurrent with distressed watershed rules (OAC 901:13-1-11) phased in beginning 2011

- Testing the efficacy of the manure ban (December 15—March 1) of each year (pre-regulation vs. post-regulation)
- Data collected in Chickasaw Creek from 2008-2016 (by Heidelberg University), a sub-watershed of Grand Lake St. Marys (GLSM) Watershed
- Pre-regulation time period = 2008 through November 2011
- Post-regulation time period = December 2011 through October 2016
- Has there been a change? Nutrient loads are dependent on flow and season, which is all accounted for in the model
- Negative numbers mean a decrease in nutrients, demonstrating improved water quality. Parameters are arranged by equal flow percentiles

December 15 - March 1 (Manure Ban)	
Water Quality Parameter	Pre vs Post Change (%)
Total Suspended Solids (TSS)	
Low Flow	2
Medium Flow	-36
High Flow	-29
Particulate Phosphorus (PP)	
Low Flow	-55
Medium Flow	-57
High Flow	-46
Dissolved Reactive Phosphorus (DRP)	
Low Flow	-48
Medium Flow	-28
High Flow	-18
Nitrate (NO3-)	
Low Flow	-1
Medium Flow	-16
High Flow	-19
Total Kjeldahl Nitrogen (TKN)	
Low Flow	-39
Medium Flow	-42
High Flow	-36

Annual Flow and Nutrient Summary



Tremendous efforts made by farmers in the watershed have made these decreases possible.

There is always room for more improvement! We must stay the course while also engaging in new practices.

THANK YOU FARMERS!