State of Ohio Environmental Protection Agency

Fact Sheet

June 2009

Efforts to Improve Water Quality in Grand Lake St. Marys

Many Ohioans and out-of-state tourists vacation in the Grand Lake St. Marys (GLSM) area each year, particularly during the summer.

The lake draws fishermen, swimmers and boaters, and the surrounding countryside provides a pastoral backdrop for camping and cycling.

In spite of its allure, there have been concerns about the water quality of the lake for many years.

The lake's warm, shallow waters, combined with nutrient and manure runoff, have made it susceptible to algal blooms, leading to the release of algal toxins.

Monitoring and Working to Improve Water Quality

Ohio EPA has focused on improving the water quality of GLSM for many years.

The Agency is responsible for upholding state water quality laws (Ohio Revised Code 6111) and the federal Clean Water Act in Ohio.

The Agency's largest regulatory program, the Division of Surface Water, oversees public wastewater treatment systems in the state.

In the GLSM and Beaver Creek watersheds, our goal has been to provide centralized collection and treatment of sanitary sewage around the perimeter of the lake

To date, sanitary sewer extensions from Celina and St. Marys have made treatment available to communities and businesses on the north and east sides of the lake.

Also, a complete system for the south side of the lake was constructed in the late 1980s. Since then, additional facilities have been constructed or proposed for villages in Franklin and Marion townships that drain toward the lake.

Safe Drinking Water for Celina

In response to Safe Drinking Water Act violations, the city of Celina completed and began operating a new water treatment facility in July 2008.

The system is able to remove organic carbon materials from drinking water.

This new treatment process will greatly reduce the formation of trihalomethanes in the finished drinking water.

Trihalomethanes are a byproduct of the water treatment process. They are formed when natural organic material, such as the decaying vegetation commonly found in lakes and reservoirs, reacts with chlorine used to treat the water.

This same treatment system keeps the drinking water safe from the algal toxins currently being monitored in GLSM.

The granular activated carbon process used at the water plant is expensive and a reduction of organic material entering the lake from fertilizer runoff, leaking septic systems and livestock manure would help reduce water treatment costs.

Identifying and Addressing Impaired Waters

Ohio EPA is also required by the Clean Water Act to identify impaired waters and develop a set of guidelines for the total maximum daily loads (TMDL) of pollutants for streams and rivers in Ohio.

The TMDL is the maximum amount of pollutants that a water body can assimilate and still meet state and federal water quality standards.

To complete a TMDL, Ohio EPA conducts stream and lake sampling.

The TMDLs for pathogens, phosphorus, nitrate and sediment were developed for Beaver Creek and GLSM in 2007.

U.S. EPA approved the Beaver Creek and Grand Lake St. Marys (Wabash) Watershed TMDL report on September 28, 2007. It is available online at www.epa.state.oh.us/dsw/tmdl/BeaverCreekWabashTMDL.html.

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The TMDL for the Beaver Creek-Wabash watershed prescribes specific waste loads and permit requirements for the regulated discharges in the watershed, and recommends implementation of voluntary agricultural and rural management practices in the Grand Lake-Wabash Watershed Action Plan.

Ohio EPA does not have authority to regulate nonpoint source pollution through permits, so we focus our efforts on funding and education.

Nonpoint source pollution occurs when the runoff from rain or snow-melt picks up and carries away natural and human-made pollutants, and eventually deposits them into water bodies.

Three Ohio EPA grants have been awarded to various partners in the watershed since 1994.

These grants, totaling nearly $650,000 in federal funds, paid cost share for agricultural row crop practices to reduce sediment and nutrient runoff and nutrient management practices at livestock facilities in the watershed.

Also, a grant was awarded in 2000 for maintaining home septic systems, installing wetlands and enhancing stream habitat. That project brought in $259,000 in local funds to match $121,000 federal grant dollars.

Financial Support

In addition to completing the TMDL for the Beaver Creek-Wabash watersheds, Ohio EPA provides financial support for local watershed planning efforts throughout the state.

Mercer County Soil and Water Conservation District receives funding from Ohio EPA and Ohio Department of Natural Resources (ODNR) to support a watershed coordinator, Laura Walker.

Watershed Action Plan

The watershed plan for GLSM was endorsed by Ohio EPA and ODNR on August 23, 2005.

The plan was updated in 2008 to include the Wabash River watershed.

There are specific actions prioritized by subwatershed in the watershed action plan that also deal with both livestock and row crop farming.

Most of the recommendations in the TMDL and watershed action plan are voluntary actions that need to be implemented at the local level.

Most of the recommended actions are improvements that could be made by the agriculture sector, but those improvements are voluntary.

Most livestock operations are just under the size that requires owners to obtain permits from the Ohio Department of Agriculture.

There are many technical assistance and funding programs to deal with the manure generated in the watershed boundaries.

Focus Group

Ohio EPA, the Ohio Department of Health and ODNR met on May 26, 2009, to discuss how to focus water quality improvement efforts in the GLSM watershed.

A focus group is convening that includes ODNR Soil and Water Conservation, Natural Resource Conservation Service and Ohio EPA.

The group will pull together elements from the Watershed Action Plan and TMDL for guidance.

Part of the Problem, Part of the Solution

Many different sources contribute to the lake's current condition.

State and local government are working steadily toward improving the water quality in GLSM.

However, local residents - both rural and town - can help expedite that work by deciding what they are willing to do to make the changes necessary to improve the water quality in the lake.

Members of the community have a voice in how this might be accomplished.

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