

Grand Lake St. Marys Action Steps

Fact Sheet

About Grand Lake St Marys (GLSM)

- Grand Lake St. Marys is Ohio's largest inland lake. Straddling the Auglaize-Mercer County line between St. Marys and Celina, the lake was constructed in the mid-1800s to store water for the Miami-Erie Canal.
- In 1949, GLSM was among the first state parks established in Ohio. The Ohio Department of Natural Resources maintains a campground, three public beaches and several picnic areas in a state park along the lake.
- Today, GLSM is a popular recreation lake for boating, personal watercraft, fishing and swimming, as well as the drinking water supply for the city of Celina.

What is the problem at GLSM?

- Over the years the lake has become increasingly enriched by phosphates and nitrates from a number of sources. These nutrients have contributed to the decline of the lake's water quality.
- Ohio EPA participated in a national study of water quality conditions in lakes across the United States in 2007 by collecting one day of sampling data in GLSM and 19 other Ohio lakes. Laboratory analysis included testing for the presence of algal toxins. Ohio EPA received lab results for microcystins (algal toxins) levels on April 27, 2009. The level of toxins recorded in Grand Lake St. Marys was very high compared to the other lakes sampled.
- Sampling continued on a regular basis in 2009 and 2010. Results show an ongoing problem with blue-green algae and the toxins it produces.

Action Steps

Acting at the direction of Ohio Governor John Kasich, the directors of Agriculture, EPA, and Natural Resources are implementing a multi-tiered plan to improve water quality at GLSM.

Ohio EPA

- Testing granular alum treatment options: The agency is providing a grant to the Ohio State Parks to test of the effectiveness of using granular alum to inactivate excess phosphorus in small channel areas of the lake. Small channels comprise more than a thousand surface acres of the lake and are particularly challenging areas to treat because they are confined spaces with shallow depths. Granular alum provides an application method that may be more suitable for these areas.
- Testing hydrogen peroxide treatment options: This grant also will provide Ohio State Parks with the funding necessary to conduct a second alum test preceded by a pre-treatment with hydrogen peroxide. Hydrogen peroxide helps to oxidize phosphorus-laden sediment and improve the effectiveness of alum treatments. Oxidizing the sediment releases sediment-bound phosphorus and makes it more available for inactivation when alum is applied.
- Installation of water treatment equipment: The agency also is making up to \$500,000 in grant funding available to assist with the installation of additional water quality improvement technology to reduce phosphorus inputs from two of the tributaries draining into Grand Lake St. Marys. These funds will be awarded to a local government for implementation of additional

water treatment technologies to be deployed in conjunction with existing sediment collectors that are installed in Chickasaw and Prairie creeks.

ODNR

- More dredging: Increased dredging at Grand Lake St. Marys which will begin earlier this year and go longer in the season than previously conducted. This includes adding a third dredge to Ohio State Park lake operations.
- Removing undesirable fish species: Developing guidelines for approaches on removing rough fish from the lake, which likely would involve the use of private contractors. These efforts would reduce the number of common carp and gizzard shad while protecting game species. Rough fish are believed to release phosphorous from bottom sediments.

ODA

- Appointment of an action coordinator: Kevin Elder with the Ohio Department of Agriculture, will coordinated all state agency efforts with Grand Lake St. Marys organizations and conservation groups.
- Additional treatment options: The Ohio Department of Agriculture is working towards obtaining funds to assist with the development of a treatment train that would be implemented on either Coldwater or Prairie creeks.
- More regular public reporting: Finally, the three agency directors are committed to providing monthly updates to the public on the status of these, and any other actions, that the State of Ohio will implement this year toward improving Grand Lake St. Marys.

What is the Grand Lake St. Marys Restoration Commission?

Community leaders and volunteers started the group in December 2009 with the mission of fostering the regional cooperation and resources needed for the environmental renewal and sustainability of the lake. They have raised more the \$600,000 and secured an additional \$1.6 million in additional funds. The group has eight action items that they believe will help improve the water quality in the lake, and the state plan addresses many of the items.

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