

WATER QUALITY MONITORING, MORROW LAKE KALAMAZOO, MICHIGAN

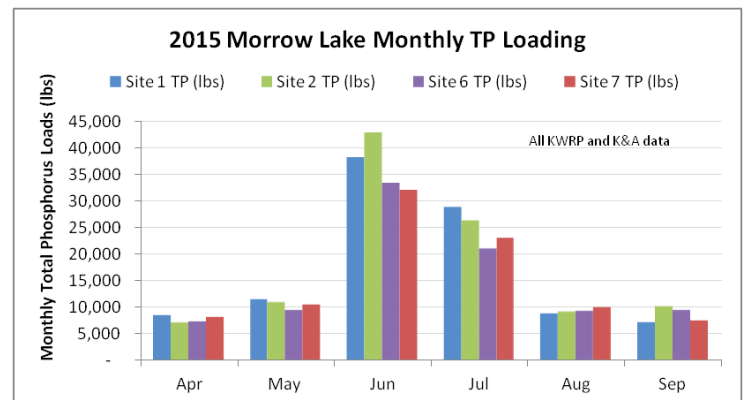


A 2015 Clean Michigan Initiative (CMI) grant was awarded to the Office of the Kalamazoo County Drain Commissioner (KCDC) by the Michigan Department of Environmental Quality (MDEQ) to assess phosphorus dynamics within Morrow Lake. Morrow Lake is a 900-acre impoundment on the Kalamazoo River near Galesburg, Michigan situated upstream of Lake Allegan. Lake Allegan is on the State of Michigan’s Impaired Waters List and has been under a Total Maximum Daily Load (TMDL) requirement for total phosphorus (TP) since 2001.

Morrow Lake was used as a benchmark for the Lake Allegan phosphorus TMDL due to perceived good water quality conditions. However, during more recent years, limited monitoring data suggested that the lake might be a substantial source of TP loading during certain growing seasons based on data collected by TMDL stakeholders, Michigan State University, and Michigan Department of Environmental Quality (MDEQ).

Supporting the Drain Commissioner in these efforts, Kieser & Associates’ CMI proposal, work scope, QAPP, monitoring and reporting focused on the following:

- Confirming TP sources from the Morrow Lake outlet via collection and analysis of water quality samples collected from the inlet, outlet and within the reservoir during the growing season (April-September)
- Determining the likely causes of TP source(s) from the reservoir through analysis of sediment and water samples that might indicate whether sediment or biological productivity are contributors
- Identifying management activities linked to the sources identified through sampling that might reduce TP loading from within the reservoir
- Comparing Morrow Lake impoundment dynamics with those of Lake Allegan based on similar 2014 sampling of phosphorus dynamics in this downstream impoundment



Contact:

Patricia A.S. Crowley, PhD
Office of the Kalamazoo County Drain Commissioner
201 West Kalamazoo Avenue
Kalamazoo, MI 49007
(269) 384-8117

Project Costs:

\$33,000 (K&A)
\$52,920 (Total)

Project Duration:

Apr 2015 – June 2016