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STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
LANSING



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VIA E-MAIL

TO: Senate Appropriations Subcommittee on Environmental Quality Members  
House Appropriations Subcommittee on Environmental Quality Members  
Ellen Jeffries, Director, Senate Fiscal Agency  
Mary Ann Cleary, Director, House Fiscal Agency

FROM: Amy Epkey, Administration Deputy Director

DATE: March 1, 2018

SUBJECT: Report on the Status of the Implementation Plan for the Western Lake Erie Basin Collaborative Agreement

In accordance with Section 410 of Part 2, Article VII, of 2016 PA 268, attached is the Department of Environmental Quality's (DEQ) report on the Status of the Implementation Plan for the Western Lake Erie Basin Collaborative Agreement.

If you need further information, please contact Phil Argiroff, Assistant Director, Water Resources Division, at 517-290-3039; or you may contact me at 517-284-5002.

Attachment

cc/att: John Walsh, Director, State Budget Office  
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Angela Ayers, Governor's Office  
Josh Sefton, Senate Fiscal Agency  
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**Department of Environmental Quality  
Status of the Implementation Plan for the  
Western Lake Erie Basin Collaborative Agreement  
March 1, 2018**

Summary

Lake Erie has nuisance and harmful algal blooms (HAB) in the western basin and dissolved oxygen depletion in the central basin. In June 2015 Governor Rick Snyder signed the Western Basin of Lake Erie Collaborative Agreement (Agreement) with the Premier of Ontario and the Lieutenant Governor of Ohio. The Agreement with Ohio and Ontario calls for a 40 percent reduction in phosphorus loading to the Western Lake Erie Basin (WLEB) by 2025. Each party was to develop an implementation plan to accomplish this. Michigan published its final implementation plan in January 2016 after considering public comments.

Accomplishments

Significant accomplishments to date include the following:

1. **Reduced Phosphorus from the Detroit Wastewater Treatment Plant (WWTP):** The Department of Environmental Quality (DEQ) continues to hold monthly calls with the Great Lakes Water Authority (which now operates the Detroit WWTP) and the Detroit Water and Sewerage Department. Total phosphorus (TP) reductions are continuing, and the Detroit WWTP typically discharges from its main outfall in the 0.2-0.4 milligram per liter (mg/l) TP concentration range (the new limit is 0.6 mg/l growing season average). The Detroit WWTP continues to discharge TP loads that are about 350 metric tons less than 2008 levels. The TP reductions at the Detroit WWTP are the primary cause for the TP reductions at the mouth of the Detroit River into the WLEB.
2. **Reduced Phosphorus from the Wayne County Downriver WWTP:** The DEQ issued the National Pollutant Discharge Elimination System (NPDES) permit in 2017 with the more stringent TP limits to be achieved by 2020 that are consistent with those specified in the Detroit WWTP (a growing season average of 0.6 mg/l).
3. **Achieved Target Reductions in the Maumee River Basin:** Implementation of the monitoring plan is ongoing with the final samples to be collected during spring 2018. In addition, the DEQ is working with the United States Environmental Protection Agency, the United States Geological Survey, and counterpart agencies from Ohio and Indiana to design a coordinated monitoring approach for the Maumee River. The new monitoring design should enable Michigan to continue to identify areas of the watershed requiring phosphorus reductions and to track progress. Implementation of the new monitoring plan is anticipated to begin in 2018. The DEQ is also working to approve or develop watershed management plans for two areas of the upper Maumee River subbasin. Indiana stakeholders developed a watershed management plan for the St. Joseph River, and the DEQ recently approved the portions in Michigan. The DEQ entered into a grant with the Hillsdale County Conservation District to develop a watershed management plan

for Michigan's portion of the Tiffin/Bean watershed in the upper Maumee River subbasin. Finally, the DEQ continues to work with organizations and landowners in the Maumee River watershed to control nonpoint sources of phosphorus through implementation of best management practices.

4. **Gained Additional Understanding of HABs:** This is a critical issue of importance in the WLEB. An HAB produces toxin(s). In the WLEB, blooms of cyanobacteria can produce toxins(s). An HAB work group, coordinated by the DEQ with input from several departments/agencies, continues to make progress to provide a better understanding regarding presence and timing. In May 2016 the DEQ issued a request for proposals to develop a deeper understanding of how harmful blooms develop and how to prevent them. To assist in the development of technology to combat HABs, \$241,887 was awarded in two grants – one to Grand Valley State University and one to Oakland University with Wayne State University. These projects are ongoing.
5. **Led Efforts to Understand the Impact of Invasive Mussels:** The DEQ continues to help with understanding the role of invasive mussels in causing Lake Erie algae blooms and the effect of potential mussel control options. The Invasive Mussel Collaborative, led by the Great Lakes Commission, National Oceanic and Atmospheric Administration, United States Geological Survey, and Great Lakes Fishery Commission, established a Science Team to identify needs and gaps in Dreissenid research. Gaps include the need for improved understanding of Dreissenid effects on nutrient cycling and the lower trophic levels of Great Lakes foodwebs.
6. **Gained Additional Knowledge of Sources Impacting the Raisin River Watershed:** A document was completed in February 2016 titled, "What was the Cause?" This document discussed the DEQ's determination that, among other things, Concentrated Animal Feeding Operation NPDES permitting and compliance with those permits and nonpoint source activities, especially best management practices related to agriculture, were the main source reductions that resulted in lower loads of TP. In addition, the NPDES permit for the Monroe Metro WWTP was also issued in May 2016 with more stringent TP limits (0.6 mg/l growing season average) that are consistent with those for the Detroit WWTP and a schedule to achieve those tighter limits by 2019.
7. **Developed Partnership Effort to Research Dissolved Reactive Phosphorus (DRP):** The DEQ partnered with the Department of Agriculture and Rural Development (DARD) and provided \$400,000 toward a grant to Michigan State University to study the effectiveness of drain water management practices in reducing nutrient loads, including DRP, from tiled fields. The study will examine farm fields over a five-year period and analyze methods, quantification levels, conversion and uptake of this form of phosphorus, and what source controls and management practices are available.

8. **Continued Partnership with Canada and Other States to Develop Domestic Action Plan:** The International Joint Commission established a process under Annex 4 to bring the United States and Canadian governments together to address the water quality issues affecting Lake Erie. This process is chaired by the United States Environmental Protection Agency and Environment Canada, with participation by Michigan, Ohio, Indiana, Pennsylvania, New York, and Ontario. The DEQ, DARD, and Department of Natural Resources are working together, building on Collaborative Implementation Plans, in part, to develop the Domestic Action Plan. A draft Domestic Action Plan was available for public input from June 14 through July 14, 2017, with a public meeting held on June 28, 2017. The next step includes submission of the Domestic Action Plan to the United States Environmental Protection Agency.