



Protecting the Common Waters of the Great Lakes Basin
Through Public Trust Solutions

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Michigan Department of Environment, Great Lakes, and Energy
Water Resources Division
Attn: Lake Erie AM DAP
P.O. Box 30458
Lansing, MI 48909

EGLE-LakeErieDAP@michigan.gov

VIA Electronic Mail

We appreciate the opportunity to provide comments on the State of Michigan's draft Adaptive Management Plan to inform actions and guide projects to meet the State's commitments under the Domestic Action Plan for Lake Erie. The deteriorating water quality of western Lake Erie must compel Michigan, as well as Indiana, Ohio and Ontario to make meaningful and measurable progress toward the Plan's goal of a 40% reduction in phosphorus loadings by 2025 when compared with 2015 loadings. Unfortunately, while the draft Adaptive Management Plan is well-intended, it fails to meet this standard.

Perhaps the greatest shortcoming of the draft plan is that it sidesteps the State's own determination that its waters of the western Lake Erie basin are impaired under the Clean Water Act's Section 303(d) listing. This impairment finding and listing is well-justified given the overwhelming scientific documentation¹ and recurrent, extensive nuisance and harmful algal blooms that have characterized the western basin for more than a decade.

Logically, consistent with the impairment listing, the State should commit to a Total Maximum Daily Load ("TMDL") process for its western Lake Erie waters. The State of Ohio has now committed to this process. After years of largely unsuccessful efforts to achieve compliance with Clean Water Act standards by agricultural sources through incentive-based, publicly-subsidized and voluntary approaches, Ohio has recognized it is time for a new, transparent and more promising approach through the TMDL process. It is regrettable that the State of Michigan fails to recognize this reality through the Adaptive Management Plan and other program efforts affecting western Lake Erie.

¹ Great Lakes Science Advisory Board Report <https://www.ijc.org/en/sab>; Lake Erie Ecosystem Priority ("LEEP Report," IJC, Feb. 2014) <https://legacyfiles.ijc.org/publications/2014%20IJC%20LEEP%20REPORT.pdf>.

A TMDL is also a matter of equity. Through EGLE, the State has already worked with point source contributors of phosphorus to the basin and set reduced, enforceable phosphorus discharge limits. Agricultural sources should be held to no lower standard, especially given that the current voluntary approach has fallen far short of delivering necessary reductions in phosphorus loadings.

A second shortcoming of the draft Adaptive Management Plan is that it is more a “plan to plan” than an actual adaptive management plan. It describes how the agencies will work over time to perform an adaptive management plan but does not provide a full Lake Erie phosphorus reduction plan that can then be adapted through the adaptive management process. While it is not unreasonable to have a “plan to plan,” it is less effective for both meeting the objective of phosphorus reduction and for purposes of learning than would an actual adaptive management plan.

The key elements of an adaptive management plan that are missing are

- 1) the estimated course of mitigating action based on current knowledge that will achieve the ultimate management objective;
- 2) the model of the relationship between the planned actions and the expected results;
- 3) the uncertainties about which learning is needed; and
- 4) an analysis of how the proposed course of action will lead to reduction of the uncertainties.

The agencies need to ultimately develop an adaptive management plan that reflects their understanding of each of these elements. That said, the following observations are intended to encourage development of a more successful plan. Governor Whitmer’s order asks that the State reduce phosphorus loadings by 40% by 2025. Annex 4 provides an allocation of responsibility for that reduction.

Because the point sources regulated through NPDES permits can be engineered and are relatively predictable, it does not appear that achievement of point source responsibility is subject to a great deal of uncertainty. The non-point source reduction target does not seem to be well-analyzed.

The plan provides a menu of actions that can be taken but does not provide estimates or targets of the levels of achievement that would be necessary to achieve the objective. It does not allocate phosphorus reductions or phosphorus usage within each major watershed to biosolids, manure, and fertilizers. It does not provide ratios of phosphorus loadings to Lake Erie to applied phosphorus in biosolids, manure, and fertilizers nor how those ratios will change as a result of the application of various land management practices. It does not identify acres of Conservation Reserve Enhancement Program (“CREP”) land, lengths of buffer, acres of land under the Michigan Agriculture Environmental Assurance Program (“MAEAP”), and other initiatives that are thought to be required to achieve sufficient reduction in phosphorus loading given expected levels of phosphorus application to land. As a result, if ultimate phosphorus loading results are different than desired, it will not be possible to identify what part of the “model” was incorrect

and in need of revision. As a result, failure to achieve the objective will translate into a need to “try harder” rather than a deeply understood learning about what is necessary to achieve the objective.

To the extent that farm implementation varies from the needed levels, it will be difficult to tell what is due to program delivery, economic conditions, weather, and other factors. As it stands now, the agencies are planning to do “good works” and try to adjust that work as results unfold, but the adaptive management plan does not appear to set up the agencies for the kind of learning that is necessary to achieve the objective most expeditiously or inexpensively. Crisply defined expectations in the form of an articulated quantitative model is the most powerful way to achieve rapid and accurate learning.

A third shortcoming is the draft plan’s heavy reliance on MAEAP to achieve phosphorus-loading reductions from agricultural sources. MAEAP is a deeply flawed program. It provides a shield against compliance and enforcement of environmental laws by EGLE without sufficient assurance of effort and actual compliance with environmental standards by farm operators. Enrollment in the program is not, and has not proven to be an indicator of improved environmental performance. At best, it is a signal of a commitment to undertake conservation-based practices. There is reason to believe that the State does not even periodically monitor implementation of the practices, let alone environmental benefits.

Without accountability in the form of measurable proven reductions in nutrients in water coming off fields or out of tileage, the use of MAEAP in the plan is unacceptable. The number of acres enrolled in MAEAP does not equal nutrient reduction, since there is no data to show that any one best management practice (“BMP”) is automatically effective on any field. MAEAP requires no testing after BMPs are installed or applied to show that the practices accomplished what they were intended to. Checkoffs from a MAEAP criteria sheet are not the same as proving, with test results, that nutrients in runoff from farms and fields have been reduced. Of the approximately 5,500 MAEAP verifications listed by MDARD as of Jan. 31, 2020, nearly 20% had expired. Further, some farms with NPDES permits and a history of permit violations and pollution incidents remain on the MAEAP enrollment list.

The fourth shortcoming in the plan is a set of deficiencies in the CAFO general permit announced by EGLE on March 27. The CAFO general permit as applied in Michigan’s Lake Erie watershed could be a tool in the achievement of the 40% phosphorus reduction goal.

The State has correctly identified winter land application of CAFO waste, and land application on saturated ground of CAFO waste as potentially major sources of nutrients delivered to their river basins and Lake Erie. However, the CAFO general permit allows exceptions to the presumptive ban on such application if the farm operator submits no less than 24 hours before application a demonstration that there will likely be no impact on the waters of the state. Given the lack of adequate EGLE field staff to review such documents in a timely way, submittal of these documents does not adequately protect against contamination from CAFO runoff.

The fifth, and perhaps most serious, shortcoming of the plan is its failure to respect and follow the legal framework and duties imposed on the State under art. 4, sec. 52 of the Michigan Constitution, the Michigan Environmental Protection Act,² and the common law public trust doctrine. Art. 4, sec. 52 declares water and natural resources to be of “paramount public concern.” The MEPA has been characterized by the Supreme Court as the legislature’s response to this constitutional commitment.³ The MEPA also imposes a substantive duty on the State, DNR, and EGLE to prevent or minimize pollution or impairment of the waters, natural resources, and public trust in those resources of the State.⁴ The common law public trust doctrine imposes a solemn and affirmative duty on the State to protect navigable waters, bottomlands, habitat, and fish and to prevent impairment or subordination of the superior public trust rights for fishing, boating, swimming, sustenance, including drinking water and bathing.⁵ In light of the undisputed and operative finding that Lake Erie is “impaired,” the failure to recognize and implement an action plan to establish a mandatory TMDL and take other actions to immediately prevent or minimize nutrient loading and impairment of these waters, natural resources, and public trust rights constitutes a per se violation of the MEPA and this public trust.

In summary, the draft plan’s metrics are weak, non-existent or misleading. It avoids highlighting essential elements of accepted science, primarily that of the dominant role played in the impairment of western Lake Erie by agricultural phosphorus-rich manure and chemical fertilizer field runoff, most recently confirmed by the International Joint Commission.

A more useful plan would include information on the proportionality of the various sources of excess phosphorous entering Lake Erie; discuss the best understanding of the relative impacts of total phosphorus and more bioavailable dissolved reactive phosphorus; reveal the amount of acreage covered, conservation measures taken and off-field outcomes of the MAEAP and other voluntary programs, including a cost-benefit analysis of MEAP measures; include cost-benefit analysis of measures taken in other jurisdictions (and other watersheds), both voluntary and mandatory; address fundamental questions relating to the Lake Erie watershed’s carrying capacity for row-crop agriculture and CAFOs under current and anticipated climate conditions; and address the non-agricultural contributions to the algal bloom problems.

Thank you for the opportunity to comment.

Sincerely yours,



Elizabeth Kirkwood
Executive Director
FLOW

² Part 17, NREPA, MCL 324.1701 et seq.

³ Highway Comm’n. v Vanderkloot, 392 Mich 159 (1974).

⁴ Ray v Mason County Drain Comm’r., 393 Mich 294 (1975).

⁵ Obrecht v National Gypsum Co., 361 Mich 399 (1960); Collins v Gerhardt, 237 Mich 38 (1926); Glass v Goeckel, 473 Mich 667 (2005).