



Cayuga County Health Department

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June 25, 2021

NYS DEC - Division of Water,
Bureau of Water Resource Management,
625 Broadway, 4th Floor,
Albany, NY 12233-3508

RE: Draft TMDL for Cayuga Lake

Dear Division of Water,

The Cayuga County Health Department has reviewed the Draft Total Maximum Daily Load (TMDL) for Phosphorus in Cayuga Lake and has the following comments:

Section 1.2 Drinking water supplies on Table 2 should be modified as follows: Camp Casper to Camp Casper Gregory and Mackenzie-Childs LTD to MacKenzie-Childs LLC. Atwater Glen, a public water supply in the Town of Genoa, was not included. It should also be noted that in Cayuga County approximately 290 residential properties draw water directly from Cayuga Lake for their private water supplies.

Section 3.0 Chlorophyll-a is presented as the numeric water quality indicator that would be used in this TMDL as it is a measure of ecosystem response to phosphorus loading. However chlorophyll-a is not a good indicator of macrophytes, which is also a measure of ecosystem response to phosphorus loadings. Dr. John Halfman of Hobart and William Smith Colleges has posited that the phosphorus released from the decay of macrophytes that occurs in the fall is related to the occurrence of HABs at that time of the year. The limits of using chlorophyll-a as the only water quality indicator in this report should be mentioned.

Section 4.0 The models used in the development of the TMDL should be updated as additional data are collected. Will DEC commit to doing this?

The TMDL states that the discharges from CAFOs is assumed to be zero since nutrients are applied at agronomic rates. It is my understanding however that CAFOs typically use the New York Phosphorus Runoff Index which allows the application of phosphorus above the phosphorus crop removal rates if the relative risk of runoff from a field is designated as not high. The TMDL therefore inappropriately neglects to include P laden runoff transported overland and via the subsurface from fields associated with CAFOs. The NYSDEC should review CAFO plans to determine which areas have an actual phosphorus balance and which ones do not in determining CAFO's contributions.

As another rationale for listing CAFOs phosphorus discharges as zero, the TMDL states that under the ECL CAFO SPDES General Permit, no discharge of process water is permitted. However, in that General Permit, precipitation related runoff from pastures or crop fields where manure is applied in accordance with NRCS standards is specifically not considered process water. So even though process water discharge is not permitted, runoff associated with rain events does occur and its contribution should be included in this TMDL.

How is chemical fertilizer accounted for in the TMDL?

Section 4.1.6.1 The TMDL states that mussel excretion has increased the amount of dissolved phosphorus in the lake. Please provide a reference and quantify this contribution.

Section 6.10 The TMDL should be more explicit as to how it provides a reasonable assurance that phosphorus loadings will be reduced. Relying on existing programs, that are primarily voluntary in nature, and existing funding sources has resulted in the current water quality problems.

Section 7.0 The TMDL states that appropriate reductions in agricultural loads is key because these loads represent the dominant external loading sector and for the agricultural source sector, implementation relies upon voluntary installation of BMPs and compliance with the conditions of the CAFO SPDES General Permits. It is widely understood, however, that without funding incentives, voluntary installation of practices will not occur. In addition, in order to ensure that the conditions of the General Permit are complied with, NYSDEC will need additional resources in order to provide additional oversight.

BMP Tables 21 and 22 give no numerical values (or even estimates) for implementation costs or phosphorus reduction nor do they reference where the listed BMPs are best suited. The efficiencies of BMPs should be provided with methods of calculating the pounds of phosphorus reduced for a particular application given soil type, slope, etc. This would help in prioritizing where the various BMPs should be installed.

Section 7.3 The TMDL states that NYSDEC has been achieving environmental compliance for all New York's agricultural community. This statement is misleading as currently CAFOs are the only farms regulated by NYSDEC. There are many farms that either do not meet the CAFO definition or only grow crops and therefore do not have compliance requirements.

Section 7.8.1 The TMDL highlights the Cayuga County SWCD services regarding septic system inspections and design services. This should be clarified to show that SWCD is only one of many individuals/companies that provide these services in Cayuga County.

The Cayuga County Health Department enforces the Cayuga County Sanitary Code and reviews plans for new and modified/repared septic system proposals, investigates complaints related to septic system, provides technical assistance to septic system installers and designers, provides a list of registered septic system installers and septic tank pumpers, and answers questions from the public, not the County's SWCD. In addition, the contributions of Tompkins

and Seneca County Health Departments regarding work done to minimize the impact of septic systems should also be included.

Overall The current document lacks specific guidance on roles and leadership to implement the TMDL and needed actions. It does not state who will take the lead role in implementing the TMDL, how the implementation of BMPs will be prioritized, how BMPs will be tracked, who will track them and how and where this information will be compiled. In addition, the TMDL does not state how the progress of the TMDL will be monitored, who will monitor it, how the public will be informed of on-going improvements, or how funding will be obtained.

The TMDL states “The implementation of nonpoint source BMPs is expected to primarily be a continuation of the work of various stakeholders throughout the watershed.” To date, however, these existing programs and funding sources have been inadequate in protecting the water quality of Cayuga Lake. The TMDL should be more prescriptive by specifying necessary loading reductions in the various sub-watersheds and the BMPs that are best suited in these sub-watersheds based upon their characteristics. The TMDL should also specify the sub-watersheds where certain BMPs should be implemented first to have the most immediate positive impact on water quality.

The Cayuga County Health Department appreciates the tremendous amount of effort expended in developing the draft TMDL. Thank you for taking these comments into consideration as you finalize this document.

Sincerely,



Eileen O'Connor, PE
Environmental Health Division