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Tompkins & Cortland Counties

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

Re: Comments from Assemblymember Anna Kelles on Draft Cayuga Lake Phosphorus TMDL

Dear DEC Bureau of Water Resource Management:

As you know, the southern end of Cayuga Lake, in my Assembly district, was added to New York's list of "impaired waters" in 2002.[1] The lake's declining water quality mandated listing under section 303(d) of the Clean Water Act, which triggered the state to develop a Total Maximum Daily Load (TMDL) report. The report is intended to be a "calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards."[2] It was welcome news to see the Department release a Draft TMDL for Cayuga Lake in April 2021, especially with the recent increase in Harmful Algal Blooms (HABs) affecting recreation, wildlife, and drinking water in Cayuga Lake and across our region.

However, I have been alerted by my constituents, and through my office's review, to several concerns with the TMDL document. On behalf of the concerned citizens of the 125th Assembly district I submit the following comments:

I. The Cayuga Lake TMDL was not issued in a timely manner as established in official Environmental Protection Agency (EPA) guidance, and relies upon outdated and arbitrary data points.

[1] *See* New York 2016 Impaired Waters List, available at: https://www.epa.gov/tmdl/new-york-impaired-waters-list
[2] https://www.epa.gov/tmdl/overview-total-maximum-daily-loads-tmdls

A. Federal TMDL Guidance seeks an 8-13 year "schedule" agreed to by the State and the EPA.

In 1997, the EPA released its guidance document for states, "New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs)."[3] While it may have been "new" practice at the time, the release of this guidance pre-dated the listing of Cayuga Lake as an impaired waterbody under the Clean Water Act by five years. This guidance should have formed the basis for an agreement between New York DEC and the EPA to establish a Cayuga Lake TMDL plan with an appropriate schedule of eight to thirteen years, to be completed between 2010 and 2015. Even allowing for a complex set of circumstances and a unique "slightly longer" agreement as allowed under the guidance, it is reasonable to believe that the TMDL should have not exceeded 15 years of development time, with completion by 2017. DEC provides no explanation for the significant delay, taking 19 years to release the draft TMDL report and preventing action on water quality improvements during that time. The guidance reminds us that "[a] TMDL improves water quality when the pollutant allocations are implemented, not when a TMDL is established." DEC must offer, and implement, aggressive pollutant reduction measures to offset the additional decade of nutrient loading in Cayuga Lake that the department willfully allowed through its delayed action.

B. Foundational data used for the draft Cayuga Lake TMDL is outdated and geographically and seasonally arbitrary.

The draft TMDL uses water quality monitoring data collected between 1998-2012.[4] It's reasonable to assume that this data – nearly a decade or more old – no longer reflects the current status of Cayuga Lake's water quality. Evidence of a changed lake ecosystem in the years following DECs data collection is seen in Tompkins County's HABs monitoring efforts, stating that HABs "have been observed at various locations in Cayuga Lake, including in Tompkins County, during the summers since 2017."[5] In addition, a key element of the TMDL report assessing the lake's phosphorous impacts from Concentrated Animal Feeding Operations (CAFOs), specifically what is known as the Environmental Conservation Law (ECL) CAFO permit, was only updated and finalized in 2017, years after the data for the TMDL report was collected.[6] Under the ECL CAFO permit, farms must have zero runoff into the lake. Accordingly, the draft TMDL assumes that all farms with this type of permit are contributing nothing to the Cayuga Lake's nutrient load, even though instances of large-scale manure runoff are well-documented.[7] DEC must use current water quality data for the TMDL, including from the years following implementation of the updated ECL CAFO permit. Additionally, there must be real data on the impacts of these CAFOs, not adherence to a statutory fiction that presumes zero pollution.

The water samples collected for the draft TMDL are largely from deep, open water

[3] https://www3.epa.gov/npdes/pubs/owm0124.pdf
[4] Draft TMDL pg. 23.
[5] *See* https://tompkinscountyny.gov/health/eh/water/algae
[6] *See* https://www.dec.ny.gov/permits/55368.html
[7] *See* https://www.pressconnects.com/story/news/local/watchdog/2018/09/13/blue-green-algae-toxicity-agriculture-dairy-farms-clean-water/1031631002/

sections of the lake – exactly where impaired water is minimized, HABs are typically less prevalent, and nutrients can mix to provide lower rates of contamination. The shallower areas close to shore are where people and wildlife live, recreate, and are the input zones for point source and non-point source discharges. DEC needs to have robust water quality sampling close to shore to create an accurate assessment of impacts to the lake. Also, the water quality testing must occur year round, not only from mid-April to October as used in the TMDL. Winter precipitation and the inefficient practice of CAFO manure spreading often leads to significant nutrient runoff.[8] DEC is arbitrarily limiting its water sampling to the summer months, providing an inaccurate assessment for when and where phosphorus enters Cayuga Lake. The TMDL must undertake new, year-round water sampling in all sections of the lake, including in shallower, impacted areas.

II. The TMDL fails to offer new mechanisms to improve water quality.

A. Reliance on existing programs in the draft document will not create improved water conditions.

The TMDL merely establishes the maximum pollutant level that a waterbody can receive while maintaining high-quality use for wildlife and human consumption/recreation.[9] New York has a "narrative" water quality standard for nutrients, mandating that 'phosphorus and nitrogen shall not be present within the waterbody "in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages."'[10] Accomplishing these goals will require implementation of control mechanisms to ensure a reduction/ equilibrium of pollutants that are consistent with the best uses of the lake. However, the draft TMDL is wholly lacking in offering specific legislative, regulatory and budgetary goals that would enhance the water quality of the region. Instead, the document points to existing mechanisms and best management practices, without a clear plan for stakeholders to implement, under what authority and oversight, and at what cost. It is clear that saving our Finger Lakes and the associated tourism and agriculture industries will require money to ensure a high-water quality future, and a new plan must be developed – one that accounts for changes in climate, weather patterns, invasive species, HABs, and more. The TMDL needs to present a clear strategy, or several strategies, about how to move forward.

B. Reliance on phosphorous modeling may not be an accurate predictor of impacts to the lake.

As noted above, TMDLs are responsive to the state's water quality designations, setting a baseline for acceptable pollutants in our waterbodies. Notably, the state's standards are intended to apply to "phosphorous *and* nitrogen" limits (emphasis added). Yet the draft TMDL only applies to the phosphorous levels within the Cayuga Lake watershed. Given the complexities of nutrient loading, and the numerous algae (including HABs) and invasive species that may thrive

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[8] *See* https://www.newyorkupstate.com/news/2017/06/whats_the_poop_on_manure_lagoons_see_how_they_work_why_farmers_need_them_video.html

[9] Draft TMDL pg. 7.

[10] Draft TMDL pg. 12.

with the prevalence of nutrient compounds from fertilizers, manures, Lake Source Cooling, urban runoff and more, the TMDL is arbitrarily limited to only look at phosphorous. To provide a clear picture of the stressors leading to impaired water in Cayuga Lake, nitrogen, and perhaps more, must also be addressed.

Below are additional questions about the draft TMDL from my constituents, as represented by the Cayuga Lake Watershed Intermunicipal Organization:

- The TMDL is unclear about how progress in reducing phosphorus will be measured since there are not clear milestones for success within the document. What is the monitoring plan to gauge progress?
- Who will oversee the implementation of the document? What is the role of the DEC? There are a lot of best management practices (BMPs) recommended but it is unclear especially in regard to agriculture where the 82% of phosphorus reduction is required, who will enforce this since ag cannot be regulated at the local level.
- We are unclear about what data is being used to classify the lake as impaired since the data is conflicting.
- The TMDL document is unclear about how Concentrated Animal Feeding Operations (CAFO) manure is being accounted for. The document seems to be saying that phosphorus from CAFOs is zero, but this is confusing. We assume much of the 82% required reduction from ag lands would include manure from CAFOs, but this is unclear.
- The TMDL seems to be saying there will be no increase in phosphorus contributions from wastewater treatment plants (WWTP), but does that mean the phosphorus from WWTP is capped at current levels? This will affect development of the area. This same confusion is in the document regarding urbanized MS4 areas (Municipal Separate Storm Sewer System) leaving us to wonder if development is capped according to the TMDL.
- The 15% reduction of Total Phosphorus (TP) from forested land is confusing since the TMDL is not clear on where the phosphorus from forested lands is coming from and not clear how to reduce TP from this land use.

I urge your attention to these concerns with the draft Cayuga Lake TMDL. We must protect our Finger Lakes using the most rigorous science to inform our path forward.

Most Sincerely,

Anna R Kelles

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