



CITY OF ITHACA
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DEPARTMENT OF PUBLIC WORKS • WATER AND SEWER DIVISION

Telephone: 607/272-1717 Fax: 607/277-5028

June 8, 2021

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

Re: TMDL Draft Phosphorus Comments
City of Ithaca, Ithaca, NY

To Whom it May Concern,

As the City of Ithaca DPW Assistant Superintendent of Water and Sewer, please accept the following commentary regarding the recent draft TMDL for our region. Our office holds a primary responsibility over the City owned portion of the Ithaca Area Wastewater Treatment Facility (IAWWTF) which is a point source discharge to Cayuga Lake. As such, we are generally concerned that the proposed TMDL could have significant ramifications on our budget, staffing, best available treatment technology, and general operational practices. These statements come with the support of both the City of Ithaca Mayor and the Superintendent of Public Works.

The IAWWTF is a 13.1 MGD activated sludge plant that is jointly owned by the City of Ithaca, Town of Ithaca and Town of Dryden. It sees an average daily flow of around 6 MGD and accepts emergency overflow from the neighboring community of Cayuga Heights whose own treatment plant is at or near capacity. In its 34 years of operation, municipal owners have shown consistent commitment in protecting Cayuga Lake with roughly \$30 million in cumulative infrastructure investments at the plant. Upgrades including state-of-the-art sustainable co-generation equipment, optimized tertiary phosphorous reduction treatment processes, and a host of energy curtailment initiatives, all of which provide significant environmental benefit for our community.

A. Point Source Concerns

The draft TMDL makes several contradictory statements about Wastewater Treatment Facility (WWTF) phosphorus inputs to the lake. It identifies eight named facilities in the TMDL (including Cornell University's Lake Source Cooling (LSC)) asserting that they likely have the greatest impact on Cayuga Lake water quality. In the southern end of the waterbody, four of the permitted WWTFs and LSC are reported to comprise 21.8% of the

annual TP load at the southern end. However, it is generally acknowledged that point source contributions (specifically the wastewater sector) are said to be small relative to nonpoint sources.

1. The City would like more information about the approach and goals of the TMDL with regards to the WWTF sector. Specifically,
 - a) Is the focus of the TMDL on the entire lake, where WWTF inputs are minor?
Or,
 - b) Is the focus geared toward the south end, where a fifth of the contribution to the that area comes from this sector?
 - c) What is the actual relationship between point source and non-point source inputs?

Overall, clarifying language would help WWTF owner/operators understand the goals of the TMDL and objective for future requirements.

B. IAWWTF Tertiary Phosphorus System

An Actiflo sand ballasted tertiary phosphorus removal process was constructed at the IAWWTF in 2005. Its success in having substantially decreased phosphorus discharges into the southern end of Cayuga Lake is recognized in the draft TMDL. It would be valuable to understand the impacts resulting from this significant (and costly) upgrade to help frame expectations regarding possible future requirements to add soluble reactive phosphorus (SRP) removal techniques.

1. Has DEC assessed the beneficial impacts from the upgrades performed at the IAWWTF? Specifically, did the 2013 studies performed by Upstate Freshwater Institute in support of the Cayuga Lake Model (CLM) project assess the impacts of the upgrades?
2. What does the CLM itself say about the impact of this significant phosphorus decrease and why was it ignored?

C. SRP Monitoring

The IAWWTF, along with all eight listed WWTFs, are being asked to monitor for SRP for two years post TMDL implementation. This data could translate into permit modifications requiring a reduction of SRP in the discharge which would undoubtedly require additional treatment technology and large capital investments. As part of the federal rule making proposal, the EPA includes a cost evaluation of anticipated impacts to help affected parties plan and gauge the practicability of the rule.

1. We request that DEC perform a similar analyses on the costs of both testing and possible treatment upgrades (based on existing treatment technologies available in the industry) as appropriate for the eight named WWTFs in the watershed.
2. We also request that this information be available for public comment prior to finalizing the TMDL.

D. Requirement for a 50% Reduction in Phosphorus

The IAWWTF is asked to accept a 50% reduction over its current permitted phosphorus loading. Notification about proposed permit modifications in this manner is highly unusual, particularly with a change that could so drastically impact fiscal and operating resources. Typical lines of communication in this regard are provided directly between the DEC to the permittee and are hopefully based on sound, reasonable, and applicable water quality standards.

1. The City of Ithaca requests direct notification from DEC of any future proposed permit modifications along with a scientific rationale behind them.

E. Capped SPDES Permit Limits

It is implied, but not explicitly stated, that WWTF discharge permits will be capped.

1. Will the “recommendations” of the TMDL be translated into permit modifications for these SPDES permits? Without that information, municipalities are unable to develop comments regarding potential future impacts with respect to growth.

F. Impacts on MS4s

The City of Ithaca is also a Municipal Separate Stormwater Sewer System (MS4). While the draft TMDL recommended changes are largely being met, some items would require additional staff. These include:

1. Prioritize inspection of illicit discharge, detection, and elimination within areas of high illicit potential, such as plant nurseries, big box stores, and other commercial businesses which may be a source of phosphorus.

Response: Our current inspection program is reactive due to staff limitations.

2. Increase good housekeeping/pollution prevention BMPs for municipal operations and facilities, such as more frequent catch basin cleaning, street sweeping, and facility inspections.

Response: The City of Ithaca cleans and services a large percentage of its catch basins out of roughly 2500 annually. We believe this proactive approach to be well ahead of the curve of most municipalities and cannot conceivably envision

how to increase this frequency without more budget, staff, and equipment. In addition, the City sweeps most of its street lane miles each year. This program is running as its fullest extent and any increases would require additional budget, staff, and equipment.

2. MS4s in the Cayuga Lake watershed are operating under an expired permit. In accordance with the NYS Stormwater Design Manual, those watersheds residing within a TMDL for phosphorus are required to use the “Enhanced Phosphorus Removal Design Standards.” There is also a requirement for a retrofit program that addresses runoff from sites to correct or reduce existing erosion and/or pollutant loading problems, with particular emphasis placed on phosphorus. Built/Urbanized MS4s may have to use more technological methods that require less space.

Further, per very recent communications with DEC (via the Tompkins County Stormwater Coalition): The draft updated MS4 permit will have a Chapter 8, focused on “enhanced water strategies” for watersheds without a TMDL or *watersheds with a TMDL where the pollutant load is not significantly coming from MS4s*. Cayuga Lake watershed is considered the latter.

- a) Will A possible change in the new MS4 permit be sub-watershed specific with regard to enhanced phosphorus removal? For example, different requirements for activities in Cascadilla Creek versus Cayuga Inlet.
3. Changes to the General Construction Permit (GP-0-20-001) will also intersect with the enhanced phosphorus removal design standards as mentioned above. The draft TMDL language in section 7.5.1, Construction Permit section, *may* mean that construction activities in particular areas (sub-watersheds) will have to comply with the enhanced phosphorus standards.
 - a) While the bulk of financial impacts would likely fall onto the developer, municipalities will be still be required to educate developers and enforce these standards. It will also serve as a deterrent for development.
 4. There is so much unknown about the impacts of the TMDL on MS4s, the construction industry, and municipal WWTF management and operations, that it is impossible to assess compliance costs and impacts on growth in this sector. What is clear is that the potential financial impacts could be significant which relates back to the question of relative inputs from the wastewater sector, including MS4s, and the overall goal of the TMDL. As such,
 - a) The TMDL should make perfectly clear how these measures will benefit Cayuga Lake.

G. Climate Change

There are many pressing environmental issues facing municipalities today including the threat of climate change. How does the proposed TMDL help local jurisdictions meet those needs while also addressing nutrient loading to Cayuga Lake?

Thank you for your attention to the foregoing. Should you have any questions or comments, please do not hesitate to contact me.

Sincerely,

Scott D. Gibson
Assistant Superintendent of DPW
Division of Water & Sewer

Cc: Svante Myrick, Mayor
Michael Thorne, PE, Superintendent of DPW
Roxy Johonston, CLWN