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Bureau of Water Protect and Land Reuse

RE: IWMP II Comments

February 16, 2024



**FRIENDS**  
**OF THE LAKE**

Friends of the Lake (FOTL) is a non-profit organization, formed in 2003, dedicated to preserving and to improving majestic Lake Lillinonah so that it can be enjoyed for generations to come.

We are grateful to be included in the Integrated Water Planning Management (IWPM) Phase I and look forward to an Action Plan. We are also thankful for the opportunity to express our thoughts on the priorities of Phase II. As expressed during the meeting, all focus areas are inter-related and important to the protection of our state waters. For Lake Lillinonah, a focus on nutrients, climate change, and stormwater and non-point source aligns with our mission.

FOTL has a well-established Water Quality Monitoring program for Lake Lillinonah. We have a Citizen-Led Environmental Observatory (CLEO), which allows volunteers to record several water-quality observations numerous times each week between Memorial Day and Labor Day. We also deploy a multiparameter sonde from approximately mid-April through mid-October collecting temperature (T), dissolved oxygen (DO), conductivity, pH, and chlorophyll and phycocyanin pigments in relative fluorescence units (RFU) every 15 minutes. To complement all these programs, we collect water samples for nutrients and microcystin analysis weekly during the season. We currently have a student attending Fairfield University under the direction of Dr. Jen Klug who conducts analyses of the past ten years of our data.

We anticipate that the forthcoming Nutrient TMDLs and Action Plan for Lillinonah will be essential tools to prioritize and initiate projects with stakeholders and start to implement positive change in the watershed.

Regarding other lakes, we believe a focus on nutrients would provide a guide to help other smaller lakes initiate their water quality improvement efforts in an effective and efficient manner. The financial burden of hiring a lake consulting company to assist in the formulation of a management plan is not feasible for many lakes. Other lakes that we would suggest as a priority for IWPM II would be the Twin Lakes and Lake Waramaug. We believe the stakeholder organizations and groups in the Upper Housatonic Watershed can work together to initiate projects that could be used to exemplify the benefits state-supplied Action Plans can provide.

As Lake Lillinonah is part of a watershed that is over 1,940 square miles in size, a focus on Climate Change is another priority. Most importantly, FOTL believes that

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the formulation of modeling scenarios that reflect the impacts of climate change would help in the development of Action Plans that would be most beneficial. As you know, our water quality is greatly affected by storms. Lillinonah can be stratified and 'hot' one day and the next day be mixed and cool. Visually, the lake can offer mesotrophic Secchi disks readings, but following a storm often show turbid, eutrophic readings at all sites on the lake. These events are obviously becoming more numerous and intense. Last year alone, Lillinonah experienced more than four extended deep drawdowns because of high flows. These drawdowns make our lake a sink for upper watershed debris that lasts far past the duration of the storm. If what we can see is overwhelming, we can only imagine the effects at a molecular level. Modeling may help us to better understand the impacts of this loading, both visible, microscopic, and molecular.



*Figure 1: Lake Lillinonah, Shepaug Arm 9/30/2023. Note the lake-wide patch of woody debris and leaf detritus floating on the surface.*

Stormwater and non-point nutrient sources would be third on the priority list for FOTL. Lake Lillinonah shares its shores with six municipalities; New Milford, Bridgewater, Brookfield, Newtown, Southbury, and Roxbury, which are not all MS4 towns. Unfortunately, many municipalities upstream from Lillinonah are also not MS4 towns. Additionally, we have numerous non-point sources and Concentrated Animal Feeding Operations (CAFO's) located in the upper watershed that contribute nutrients to the system. Therefore, a TMDL for Total Suspended Solids (TSS) would be helpful. In our monitoring we have never tested for TSS, but we do track lake color. Usually following events like the one pictured above cause the color of the lake to be brown for many days if not weeks.

FOTL is thankful for this opportunity to express our opinion toward the development of IWPM Phase II priorities. We look forward to receiving notification of the recommended TMDL and Action Plan. We will send our latest data within the next few weeks for the 2023 season to add to your modeling efforts. We are interested to learn more about the effects of Climate Change and how best to incorporate that into IWPM phase II. We will work with MS4 towns to promote and develop the program. We remain available if any further information or comments are deemed helpful. Thank you again for your time and efforts.