

Memorandum

To: Colleen Lyons, Lake Hopatcong Commission
Kyle Richter, Lake Hopatcong Foundation
Marty Kane, Lake Hopatcong Foundation
From: F.S. Lubnow, Ph.D., Princeton Hydro
cc: Lake Hopatcong Commission
Patrick Rose, Princeton Hydro
Date: 8 September 2025
Re: Brief update on project activities

This memo provides a summary of the Lake Hopatcong Commission (LHC) project activities for Lake Hopatcong and its watershed.

1. The latest standard water quality monitoring event was conducted on 20th of August 2025.
 - At ST-2 (mid-lake) the mean Secchi depth for May – August 2025 was 1.6 meters (5.3 ft). The same mean for 2024 was 1.2 meters (4.0 ft).
 - At ST-3 (Crescent Cove) the mean Secchi depth for May – August 2025 was 1.2 meters (4.0 ft). The same mean for 2024 was 0.9 meters (3.0 ft).
 - Cyanobacteria densities were below the Advisory threshold of 80,000 cells/mL at all stations with the exception being ST-10 (northern cove). The mid-lake (ST-2) surface cell count was 49,205 cells/mL. In August 2024, the surface cyanobacteria cell count exceeded 151,000 cells/mL.
 - The August 2025 cyanobacteria cell counts at ST-3 was below the Advisory threshold (69,875 cells/mL) and was 62% lower than the August 2024 cyanobacteria cell count of 182,783 cells/mL.
 - The mean, August 2025 surface total phosphorus (TP) concentration was 0.037 mg/L.
 - The deep SRP concentration in August 2025 (0.005 mg/L) was substantially lower than it's respective value in 2024 (0.049 mg/L). Also, the mean SRP values for May – August for 2025 and 2024 were 0.005 mg/L and 0.034 mg/L, respectively. This is an indication that the alum treatment is keeping dissolved phosphorus concentrations under control.



2. The second cyanotoxin monitoring event was conducted on 19 August 2025. Cyanobacteria densities at all of the nearshore sites exceeded the Advisory threshold of 80,000 cells/mL. However, no cyanotoxins (microcystins and anatoxin-a) were detected at any of the nearshore sampling locations. It should be noted that neither of these cyanotoxins were detected during the July or August 2025 sampling events. Typically, at least one cyanotoxin is detected in one of the Crescent Cove sampling locations and this is usually in August. The early season, benthic application of the oxidizer in April 2025 may have contributed to this; similar observations were made (no measurable cyanotoxins in August) in 2022 when the oxidizer GreenClean was applied to Crescent Cove.
3. Princeton Hydro conducted the submerged aquatic vegetation (SAV) survey last week (2nd and 3rd of September 2025) and are compiling the data.
4. Princeton Hydro provided the LHC with a proposal to use remaining funds in the NFWF grant to install trees and plugs in Hopatcong State Park. The LHC is coordinating with NFWF to have this approved.
5. Princeton Hydro continues to work on the New Jersey Department of Environmental Protection (NJDEP) Stormwater Management Grant awarded to the LHF for the Design and Installation of a Bioretention System in Jefferson Township. Princeton Hydro has provided Jefferson Township with an updated design for their review after receiving news that Swan Lane was recently paved. Once the new design is approved, Princeton Hydro will schedule the new test pit and infiltration testing that is required.
6. Princeton Hydro is in the process of requesting a pre-application meeting with NJDEP to discuss the Mt. Arlington Blvd basin project in Roxbury.
7. Princeton Hydro recently obtained the HAB Management permit for the four remaining treatments for the US Army Corps of Engineers, Engineer Research and Development Center (ERDC) project. We are currently in the process of ordering the necessary materials and coordinating with local stakeholders for access and temporary storage of the products. These treatments are tentatively scheduled to start sometime next week (15th September 2025). The first treatment will be in the Northern Cove.