



9353 Hill Road • Swartz Creek, MI 48473
(810) 635-4400 • Fax (810) 635-4404

www.lakeproinc.com

November 27, 2018

Prepared for:
Naturalake Biosciences
c/o Landon Wiet

Prepared by:
Zach Goodheart
Director - LakePro Inc.
Swartz Creek, MI

Forest Lake, Macomb County, Michigan **2018 Cyanobacteria Treatment Case Study**

Waterbody History:

Forest Lake is a 4 acre retention pond with an average depth of 4 feet and a maximum depth of 14 feet. It is surrounded by residential development. The lake has been managed by LakePro since 2001 with few aquatic nuisance issues. The annual treatment program typically included monthly algaecide treatments and one or two herbicide treatments. In 2012 the association decided to include Naturalake MD Pellets at a rate of 5 pounds per acre around the shoreline.

In 2014, cyanobacteria bloomed during the late summer months. In 2016, the cyanobacteria appeared in the lake earlier. The cyanobacteria dominated the lake by early June in 2017. Throughout the summer, treatment efficacy was limited with combinations of Copper Sulfate, Chelated Copper, and Endothal.

Treatment Plan:

In 2018, LakePro changed the treatment program to better control the cyanobacteria. We increased the application of Naturalake Pellets to 50 pounds per acre around the shoreline. The objective was for the higher rate of bacteria to outcompete the cyanobacteria for nutrients. The first application was conducted on May 2 when the water was 67 degrees Fahrenheit. This application was done in combination with an algaecide treatment that included Chelated Copper Ethanolamine at 0.6 gallons per acre-foot and Endothal at 1.1 pints per acre-foot.

This same treatment was repeated eight times throughout the summer, ending in September. Cyanobacteria finally bloomed in August, so LakePro changed the treatment recipe on August 14. For that treatment, we increased the amount of Chelated Copper Ethanolamine to 1.2 gallons per acre-foot and Endothal to 2.2 pints per acre-foot. LakePro also applied AquaSticker at a rate of 20 pounds per acre.

At the time of treatment, there were small areas of the lake where the cyanobacteria floated to the surface, but the majority of the product was applied along the bottom of the waterbody where the cyanobacteria was growing. This bloom was effectively controlled by 5 days after treatment and the lake remained clear for the rest of the 2018 season.

For 2019, we plan to continue the same treatment program that was conducted in 2018, including the higher rate of Naturalake Pellets. We will also budget for the AquaSticker needed to control cyanobacteria blooms as they appear.

Treatment Results:

The 2018 treatment program was a tremendous success. We expected reductions in cyanobacteria bloom severity and frequency, but we actually saw elimination of cyanobacteria growth until the first week of August. The client was satisfied with both the prevention of cyanobacteria blooms and control of the August bloom. The lake condition was drastically improved from being unswimmable in 2016 and 2017. We look forward to continuing using Naturalake products to continue controlling the cyanobacteria nuisances in this lake.



9353 Hill Road • Swartz Creek, MI 48473
(810) 635-4400 • Fax (810) 635-4404

www.lakeproinc.com

Summer 2017

The photos below are of the lake on September 21, 2017. These photos show the cyanobacteria colonies floating on the lake surface, making the lake unswimmable.





9353 Hill Road • Swartz Creek, MI 48473
(810) 635-4400 • Fax (810) 635-4404

www.lakeproinc.com

2018 August Bloom

These photos show the cyanobacteria bloom in August 2018. This was the first cyanobacteria bloom of the season and was greatly reduced from the cyanobacteria populations in previous years.



September 20, 2018

These photos show the lake clear of cyanobacteria. From the pre-treatment photos above, these results are from a treatment on August 14 that included AquaSticker and a regular treatment on August 30.

