

2017 Water Quality Report

2017 was the 11th year of the Loon Lake Water Quality Monitoring Program. The program was designed by the Department of Ecology and the Loon Lake Property Owners Association. Equipment was purchased through an LLPOA-originated \$10K state grant and training from the WSDOE, the WDFW, and the Hach Corporation (equipment manufacturer).

The program sets forth 3 forays per year at 6 week intervals. They are mid-June, end of July, and mid-September. Data collected includes:

- Water clarity
- Nutrient content (both nitrogen and phosphorus)
- Chlorophyll content
- Temperature
- Acidity/alkalinity
- Electrical conductivity
- Dissolved oxygen content.

From this data and information received from the laboratory analysis of samples the health of the lake and the direction it is taking can be determined.

Results thus far show that the lake is not healthy but is fairly stable. After Spring stratification and until Fall turnover there is insufficient dissolved oxygen below 50 feet to sustain other than microbial life. "Stability", however, is not the goal we should be seeking. The advent of Sewer District #4 very substantially slowed down the ruin of the lake. Improved lake stewardship by landowners and the advent of the Land Conservancy saving important wetlands and uplands has helped, but no movement toward a totally clean lake has been made. It seems that the little natural flushing that the lake receives each Spring is negatively balancing out the good that has been done. Continued use of nutrient-loaded lawn fertilizers; open burning of trash and brush; camp fires and beach fires; the proliferation of impervious surfaces on roads, driveways, and walkways; inappropriate lakeside landscaping; wake boats and associated beach erosion into the lake; and the fact that there remains sewerage systems that do not export septic effluent from the watershed are the reasons why the lake does not improve.

Specific fixes such as a large scale oxygenation system that has been exhaustively studied by WSU and recommended by their 2012 study or alum applications are too expensive and would not be underwritten by the lake owners until the lake is so bad that property values plummet and water-related recreational activities are compromised.

Let everyone do their part in understanding the issues and taking part in improving our stewardship of the lake.