

Written by Charlie Taylor 8-28-2021

2021 summary: Water temperature was low and dissolved oxygen was high throughout the water column in winter and until mid-April. However, by mid-May oxygen at the bottom was only 15% of that at the surface and by June 9, oxygen was 90% depleted at 35 feet and in July 90% depleted at 21 feet. This early June oxygen depletion is probably the earliest we have recorded. It may be caused by warmer water temperatures but also possibly from increased plant growth.

Water surface temperature varied fairly widely starting in mid-May (60-63°) and reached 79° by June 9 (earlier than previous years). Water clarity (average target disk visibility) for 2021 was 11 feet or about 2 feet less than the previous 8 years (2017, 2013 and before 2011 were similar to 2021).

Dissolved phosphorus is one of the major nutrients for weeds and suspended algae and has been measured sporadically over the past 6 years by CLMP. The early April 2021 measurement (13.5 parts per billion) was about the same as all previous years. An exception was 2016, which had lower spring phosphorus (8.0 PPB) and also had better water clarity throughout the summer months.

Observations over many years show that by-and-large, water quality has remained good and is not changing drastically over time. However, we should keep an eye on high spring phosphorus and high early season temperatures, which may contribute to algae growth (scum on the surface).

So, Lakers...keep up the good work, and try to limit organic matter and fertilizer runoff into our lake!

Note about water monitoring: NLPA has been sampling North Lake water quality (intermittently) for 45 years, with fairly extensive records since 1995. Since 2015, NLPA has taken detailed measurements of water clarity each week during summer months along with complete temperature and oxygen level depth profiles each month that measure oxygen depletion and temperature down to the deepest point in the lake. Overall, North Lake is relatively clear and clean for Southeast Michigan, but with lower water quality than many lakes in North Michigan.

