2022 Details on Water Quality/Lake Monitoring Results for the Quiet Lakes

Carol Jarzyna and Michelle Keil were busy from May through October this 2022 on the lakes as our Citizen Lake Monitoring Network (CLMN) volunteers. Teal and Lost Land Lakes have been monitored by volunteers since 1992 and 1993, respectively, so Carol and Michelle carry on a long tradition of volunteer efforts that help us (along with the WDNR) monitor, understand and manage the health and productivity of our lakes. It is especially important to have this data now so that if/when large-scale Eurasian Water Milfoil management occurs, any significant impacts on water quality can be documented.

These dedicated volunteers measure water clarity, collect temperature and dissolved oxygen data, and send water samples to the Wisconsin State Lab of Hygiene for chemical analysis. The monitoring and sample collection equipment and the water quality analysis are all paid for through CLMN and/or WDNR grants the QLIA obtains from the WDNR. Next year Michelle also plans to start collecting water clarity, temperature and dissolved oxygen data for Ghost Lake as well. The last time water quality data was collected on Ghost Lake was in 2006, so it will be great to compare any changes.

This year's data from Lost Land and Teal indicates that the water quality in these lakes appears to be in good shape overall, with the last five years of data reflecting overall better water quality (especially on Teal) than the previous five years. Though there were a few times – especially on Teal – when the water looked a bit "murky" near shore after large rainfall/runoff events, the water clarity measurements at the sampling locations were as good (or better) than those from the past several years. Graphs and explanations of these trends can be found at the links below.

Another measure of a lake's health is called the "trophic state", which is related to the number of algae (measured by the amount of chlorophyll) in the water. Lakes that have contamination from septic systems or lawn fertilizers tend to have high phosphorus levels, which can lead to algal blooms, lower dissolved oxygen levels and even fish dye-offs in summer. These lakes also tend to have high trophic state measurements of above 60 or so.

The overall Trophic State Index (determined using the chlorophyll data) on Teal this year was 53, and on Lost Land it was 48. For shallow lowland lakes such as ours, these numbers are considered by the WDNR to be good. Lakes in this range contain moderate amounts of nutrients, and tend to contain healthy, diverse populations of aquatic plants, algae, and fish. These numbers also indicate that we have relatively low levels of phosphorus contamination from human sources in our waters, which is great! Realistically we probably want to keep our lakes in the Trophic State Index range of something like 45-55 to keep our waters and fisheries healthy and enjoyable.

More detailed reports and graphs built from the water sampling data can be viewed at **Lost Land Lake** and **Teal Lake**