

## 2021 State of Pentwater Lake Report

By Joe Primozich

This report will cover observations on Pentwater lake, water tests, and management practices used on aquatic invasive plant species over this past summer. The best news is that the water level in the Great Lakes Basin is going down. This is important as Pentwater Lake water level is controlled by precipitation over the Lake Superior, Lake Huron, and Lake Michigan watersheds. As of this writing we are noticing an 18 inch drop in the lake level from the high of last year. The trend should be that it continues going down depending on the snowfall this winter and lake evaporation. As warm as this year is, the evaporation rate should be as high as last winter with all three great lakes not freezing over. The only surge in Pentwater Lake came in the first week of August with a storm pushing water up two feet or so at the east end of the lake before the bridge and river mouth. No damage was noted unlike last year when several boats were damaged and a pontoon was tipped over. Our lake health is evaluated on 8 factors and will be used in the following to describe the comeback the lake is making today.

In 2008 when we first evaluated the lake by using 8 criteria, we realized the lake is Not Healthy and in the At Risk category. The basis for that was that 6 of the 8 risk factors were evident in the lake monitoring. This had to change. The first factor to address was the loss of the shoreline panfish. The fishery was declining. With DNR fishery advice, the habitat was improved by reducing the chemical spraying of vegetation from 75% of the shoreline to 15%, passed by the Pentwater Lake Improvement Board as their new standard for the future. The annual youth fishing tournament was the fourth and the most successful this summer with 6 master angler fish reported from our lake by kids 16 and under. Also, the coho salmon are in their 4 year of spawning in our river and several were caught on our pier this past year. We are back to good fishing in our lake. Next area to address was the addition of muck to our sandy beaches. To counteract the buildup of dead matter on the bottom we started mechanical harvesting of invasive plants. Invasives are on about 40% of our shoreline. This summer the PLIB hired 150 wet tons of invasive starry stonewort to be removed from the lake. This happened with state approval in September and met our goals to improve our recreational shoreline use for boaters and family use, removal of the vital phosphorous nutrient that triggers algae blooms in lakes, and stop the buildup of muck through dead and decaying plant growth. The PLIB is working to improve the mechanical harvesting for next year. The third factor we are working on is to reduce phosphorous in the lake as the Pentwater Lake Association summer chemical testing shows that it is at 26ppb or the AT Risk level. The PLA will talk about how to create a buffer zone at the lake edge and deter further nutrient loading to the lake with fertilizer runoff, thus adding phosphorous. The more phosphorous the more likely our lake will have a fall blue/green algae bloom. The last one we had was in 2010. The second factor that causes the bloom is the lingering warm weather. So far there is no indication of a fall algae bloom on Pentwater lake. The PLA lake bacteria testing supports the clean rating given to our lake. No high readings have happened with our annual testing. The last threat the health department addressed was in 2010 by closing 3 open cottage pipes draining into the lake. Lastly the PLIB chemical treatment plan does not hurt starry stonewort. Today the only control we have is mechanical lifting or harvesting. Our lake invasive Eurasian Water Milfoil has now hybridized due to chemical treatments of the lake plant. According to Grand Valley State University, milfoil is now hybridized in our lake and is chemically

resistant. GVSU had Emily Neuman research starry stonewort and she identified native plants that combat this invasive. It was one of the only research projects in the state to work on starry stonewort. We encourage riparians to not remove the natives as they combat the aggressive invasive starry stonewort. So as all management state teams are agreeing, you have to learn to live with the new invasive plants and minimize their presence on your shoreline but encourage the native plants by leaving them. Pentwater Lake is a healthier lake today than in 2008 and we need to still work on improving it. Will you help too? Remove invasive plants and not natives by lifting and drying them. Do not use chemical treatments to knock plants down and build up the muck on our beaches and the water nutrient load. The PLA and the PLIB with its lead field team are looking forward to working with you. Join the PLA for up to date support and information. Go to the PLA website.