



Platte Lake Improvement Association

Keeping Platte Lake Clean for 37 Years

Annual Report 2015

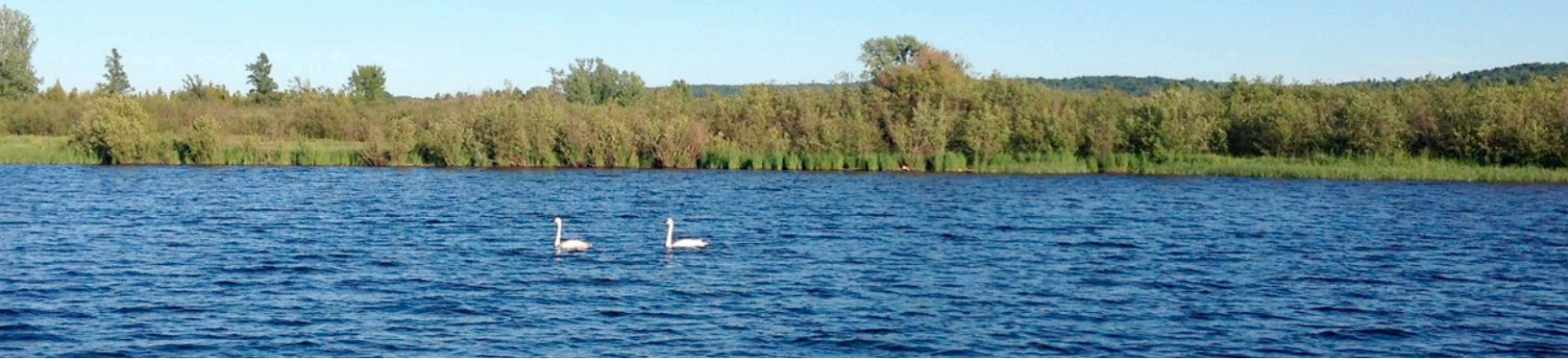
We are a grassroots, non-profit association of individuals committed to insuring that Platte Lake is a healthy and beautiful body of water to be enjoyed now and in the future.

If you love Platte Lake and want to help keep it beautiful and safe, you should become a member of PLIA.

The Platte Lake Improvement Association was formed 37 years ago to protect one of the most beautiful bodies of water in the state. It was a response of concerned homeowners, like you, who saw serious changes occurring to a lake they and their families had loved for many years. A lake that had been one of Michigan's finest with sky blue waters had turned gray-green with huge seasonal algae blooms. Native plants, fish and other aquatic species either died off or dramatically declined. As the water quality declined, so did the value of the property that surround the lake.

These changes were a direct result of one thing, the over fertilization of Platte Lake by the phosphorus being discharged by the state fish hatchery upstream which was expanded in the 1960s to introduce salmon into the Great Lakes to control an Alewife overpopulation. Now, in addition to becoming the sole source of Coho Salmon for the Great Lakes, the Platte River State Fish Hatchery was discharging over 4000 pounds of phosphorus into the Platte River, and into Platte Lake.

Phosphorus is an incredible fertilizer for the algae in Platte Lake. One pound of phosphorus can create 500 pounds of algae. *(Continued)*



Homeowners were outraged at what they were seeing. Working together, they formed the Platte Lake Improvement Association, determined to reverse the destruction of their lake. After eight years of protracted negotiations with the Michigan Department of Natural Resources (MDNR), the parties finally ended up in court. The court ruled in favor of the lake and appointed an expert to supervise fish hatchery operations and to begin to control the waste that was being dumped into the Platte Rive and Platte Lake.

A Consent Judgement between the PLIA and MDNR finally was forged in 2000. It took 22 years of hard work, determination and sacrifice of time and money to achieve this success. That settlement agreement sets the rules for keeping Platte Lake clean. There is a strict limit on the amount of phosphorus that can be discharged by the hatchery each year. Failure to meet this standard means the MDNR must pay a penalty.

Who will keep a watchful eye and insure that those standards continue to be met? That is where the role of the Platte Lake Improvement Association becomes so important. Our volunteer organization has the responsibility of continually monitoring the lake to insure the hatchery remains in compliance. Ongoing vigilance and testing will be necessary to insure compliance with the court ordered phosphorus standard for the lake. That takes time and money. That is why the PLIA needs your support.



What you can do to help the lake.

- Become a member of the PLIA and support its efforts.
- Encourage your neighbors to join.
- Keep grass clippings and leaves out of the lake. This is especially important in the fall.
- Don't use fertilizers containing phosphorus.
- Maintain your septic system or holding tanks and pump your tank every 2 years

Why 2015 is Different? We're on our own.

Until this year, as a result of the Settlement Agreement, the MDNR was responsible for managing, implementing, and paying for 98% of the cost for monitoring the Lake. The PLIA only paid for 2%.

That all changed in 2015. As of January 1, the hatchery had been in compliance with the Agreement for 5 years and no longer is required to sample the lake. Now, the PLIA is solely responsible for the lake, river and tributary monitoring program. Here's what that means for us:

1. Sampling

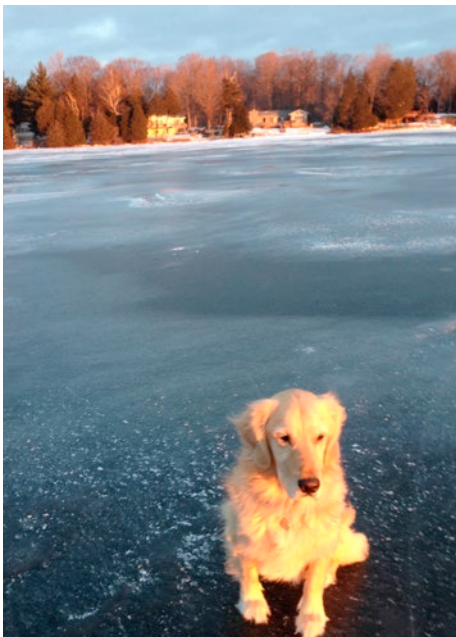
We've contracted with the Benzie Conservation District to collect water samples and "in field" measurements approximately 20 times a year (weather permitting) from the lake and tributaries. In addition, we've purchased special Teflon Kmmerer water sampler and a Yellow Springs Instrument multi-sensor which allows us to measure time, date, GPS coordinates, depth, temperature, and dissolved oxygen, etc.

2. Lab Analysis of Water Samples

In an effort to preserve data continuity, the samples will be analyzed at the hatchery laboratory. We've worked intensively with the Hatchery to confirm the reliability of their analysis, and feel this continuity will be the most effective way for us to get the phosphorus data. All of these data are entered into the lake and river database that we've been fine-tuning and using for years to store and analyze lake and river data.

3. Monitoring the Data

Once we have lake and hatchery data in our databases, we have to look at them and determine if there are any concerns that need to be addressed. In the past, Dr. Canale, the court appointed and DNR-paid Settlement Implementation Coordinator performed this important function. Now it falls to PLIA's officers and Directors.





What will all this cost?

We project that the annual cost of sampling and analysis will be \$25,000 to \$30,000, plus the extra time and effort from our officers and directors to monitor the data. This is a cost we haven't had before. Last year, anticipating that we'd be on our own, we commissioned a statistical study to determine if our rate of lake sampling (When the DNR was paying they collected three samples at 8 different depths--that's a lot of sampling and lab analysis) could be reduced without jeopardizing our ability to detect problematic changes in the lake. The report was complex, but told us that we could reduce the number of in-lake phosphorus samples from 24 to 9 by combining water samples from specific depths and still be confident of our results. This will save us a significant amount on our sampling and lab analysis costs.

We know that, without close observation and monitoring, Platte Lake could regress to what it was just 15 years ago, a grey-green lake ridden with ugly algae blooms. PLIA is the only organization monitoring the lake. Any source of contamination upstream in the Platte River will end up in Platte Lake. If the hatchery falls out of compliance it will be up to PLIA to discover it. As the population increases and development occurs, history shows that the lake can change quickly.

In 2015, more than ever, we need the support of all lake property owners to continue our work in keeping the lake clean and beautiful.

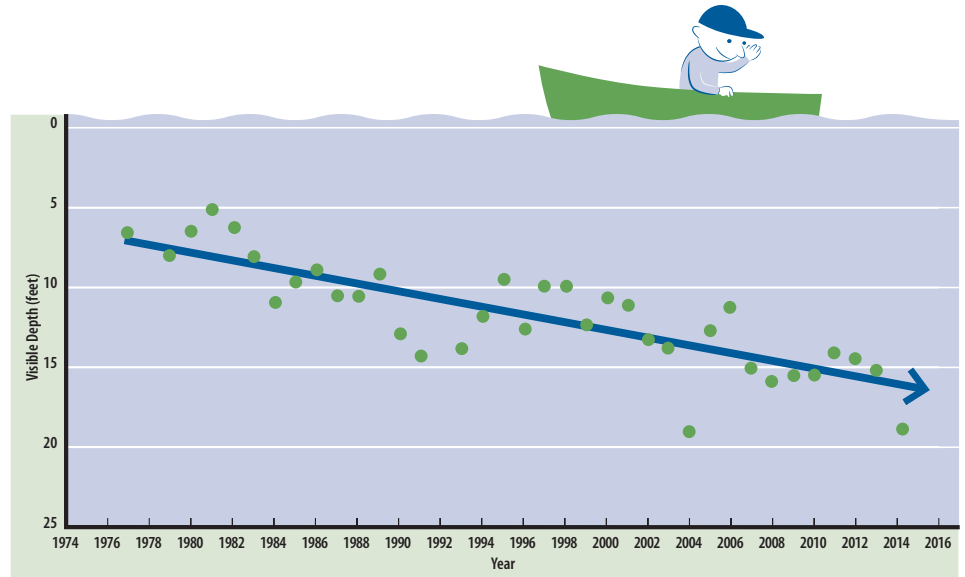
The lake cannot speak for itself. Join the PLIA and help us speak on behalf of Platte Lake, a living body of water.

What we've done this year:

- Continually monitored the lake and upstream watershed working with the MDNR and Dr. Canale, the Court-appointed Implementation Coordinator.
- Partnered with the Hatchery personnel to help them reach compliance. On December 31, 2014, the Hatchery was in compliance with all phosphorus, discharge flow, salmon passage and all other requirements of the March 10, 2000 Consent Judgment.
- The MDNR successfully completed its five year compliance period demonstration effective December 31, 2014. The PLIA is now responsible for 100% of the cost of lake and river sampling.
- The Platte River Watershed Protection Plan was completed and approved by the MDEQ and the USEPA late last year with copies will distributed to affected townships, government agencies, lake associations, etc. The document is presently on the PLIA website: www.plattelake.org/updates .
- To better understand swimmers itch in Platte Lake, the PLIA will be participating in a study sponsored by Oakland University beginning in July 2015.
- The PLIA will complete the final phase of the septic system phosphorus reduction study this summer with the addition of aluminum sulfate to the test tank.
- PLIA action avoided the introduction of 150 pounds of phosphorus fertilizer into the watershed during the Deadstream Road resurfacing project. The Benzie County Road Commission's contractor was planning on using 800 pounds of phosphorus-containing fertilizer for lawn remediation on both sides of Deadstream Road. Once Lake Township was notified by the PLIA, they contacted the contractor and plans were immediately changed. No chemical nutrients of any kind were used on the project.



Platte Lake Water Clarity



So how clear is Platte Lake?

This chart shows how the clarity of the water (how far below the surface a secchi disk can be seen) has improved over the last 40 years. You can see almost three times as deeply into the lake as you could 40 years ago!



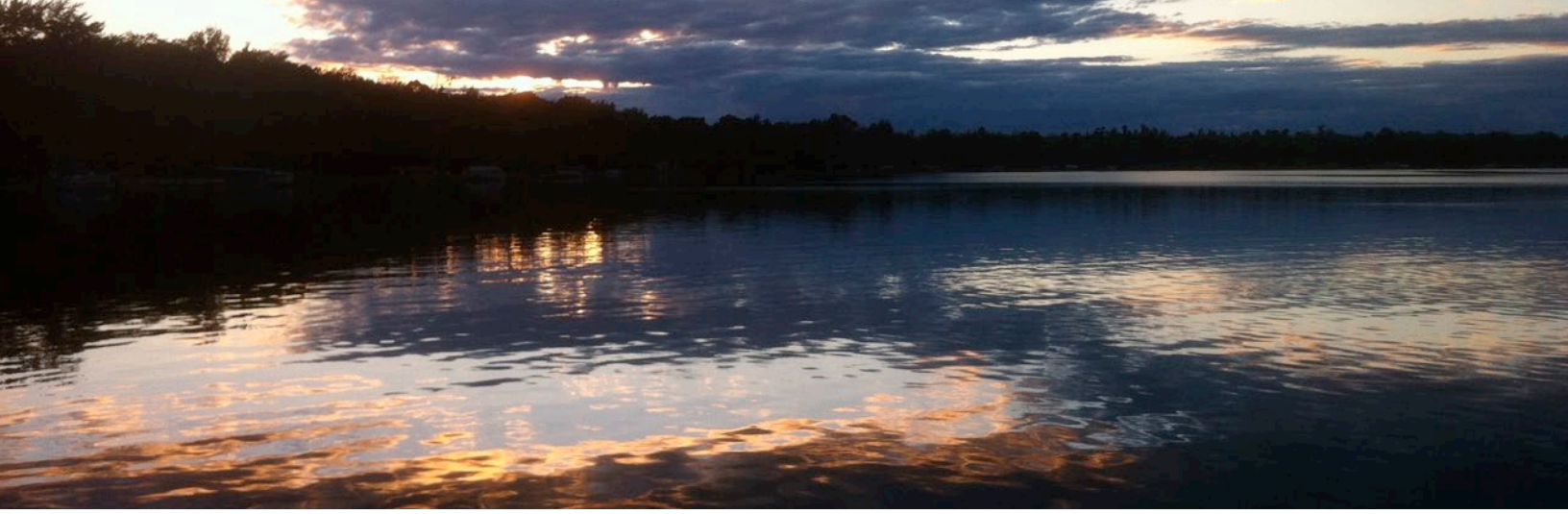
Leslie Wanner Leaves Legacy

In May, 2015, the PLIA received a bequest of \$10,000 from the estate of Leslie Ann Wanner to be used for continued monitoring and improving lake quality. Leslie died in December, 2014 after a long and courageous battle against cancer. She lived in Maryland but her favorite place was the Wanner family cottage on the north shore of Platte Lake.

Leslie had a life-long love affair with Platte Lake, having summered on its shores since childhood, and left this very generous gift to help ensure that future generations will be able to cherish time on Platte Lake as she did. We are all in her debt.

How Did Platte Lake Get Its Name?

Nobody knows for certain, but French voyageurs were the first non-native settlers in the area. They came to establish a thriving fur trade, especially seeking beaver pelts. Compared to the rough waters of Lake Michigan, the waters of Platte Lake were much calmer. The French word plate (meaning flat, and pronounced plat, or platte) was probably used by the French to name the river and lake.



How well do you know Platte Lake?

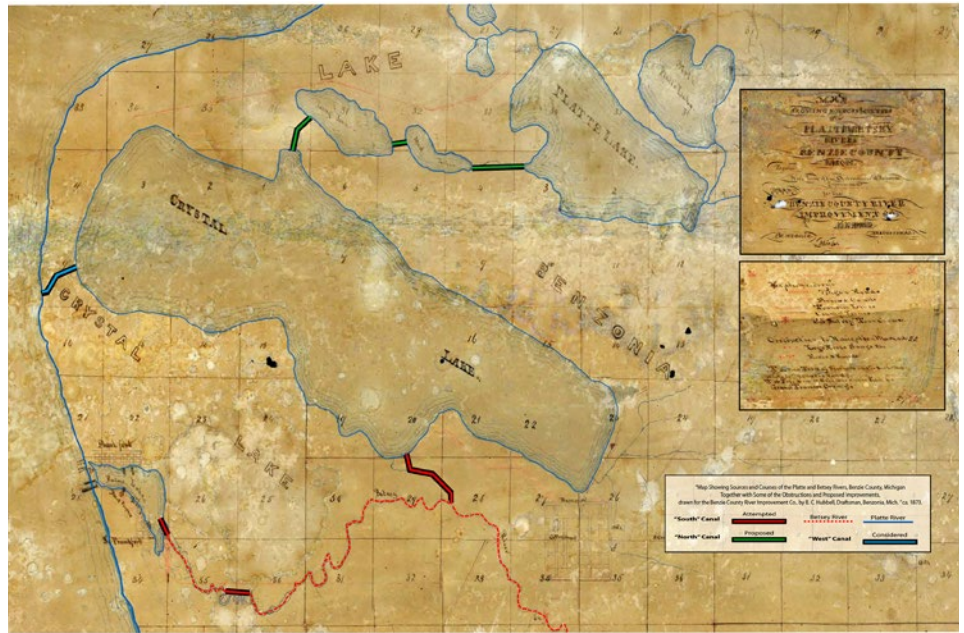
1. How many gallons of water are in the lake?
 - a. 2.2 trillion
 - b. 2.2 billion
 - c. 2.2 million
 - d. 2.2 thousand
2. What was the name of the village that existed on the north shore of Platte Lake in 1890?
 - a. North Beulah
 - b. Edgewater
 - c. Platte City
 - d. Spencerville
3. How quickly does the flow from the Platte River replace all the water in Platte Lake?
 - a. Every 8 years
 - b. Every 8 months
 - c. Every 8 days
 - d. Every 8 hours.

Answer: b to all three questions.

Maintaining the Power of the Consent Judgement

The 2000 Consent Judgement between the Platte Lake Improvement Association (PLIA) and the Michigan Department of Natural Resources (MDNR) established tight controls on the Platte River State Fish Hatchery's operation. It allowed the MDNR to proceed with an upgrade of the hatchery that would dramatically reduce its environmental impact on Platte Lake and improve the quality of our water.

This original agreement and subsequent amendments are significant in that they define a legally-binding management path forward that will insure the long-term health and preservation of Platte Lake and the Platte River.



The Almost Platte Lake Canal

Did you know that there was once a plan for blocking the outlet of the Platte River and building a shipping canal from Platte Lake to Crystal Lake? The grand plan of Archibald Jones' Benzie County River Improvement Co. included the extension to Platte Lake shown on this 1873 map. The plan was abandoned when the surveyors found themselves working uphill when starting toward Crystal Lake. Completion would have raised Platte by 22 feet and lowered Crystal Lake by the same amount, too much for the planned construction of the infamous canal to the Betsie River, which later in 1873 "pulled the plug" on Crystal Lake. The illustration is from the recently published book "The Comedy of Crystal Lake" by Dr. Stacy Daniels, available at all area bookstores and the Benzie Area Historical Museum.



**Platte Lake
Improvement Association**

Keeping Platte Lake Clean for 37 Years

plattelake.org

PO Box 272
Honor, MI 49640-0272