



# Platte Lake Improvement Association

Keeping Watch on Platte Lake for more than 40 years

**2022**  
**NEWS LETTER**

*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.*

**A**s you read this Annual Report, please keep one thing in mind. All of the work, all of the energy that is evident in this Report is the product of the spirit of volunteerism. The PLIA exists only because of that spirit. These volunteers are your neighbors. Anyone who loves Platte Lake should join the Platte Lake Improvement Association (PLIA).

For 44 years, the PLIA has been protecting the water quality of our lake. Platte Lake is now one of the most studied lakes in America and is recognized for its clarity and water quality.

The list of accomplishments for the past year is detailed in this Report and is quite extensive for an all-volunteer organization. Those accomplishments reflect the dedication and mission of the PLIA. We are the stewards of this lake. The lake cannot speak for itself.

Four decades ago, virtually overnight, homeowners saw what can happen if there are no stewards for the lake. The Fish Hatchery in Honor was pouring thousands of pounds of phosphorous into the Platte River and had fertilized the entire lake. The lake quickly deteriorated to an algae ridden, gray-green nightmare. Homeowners banded together to form the PLIA, a non-profit 501c3 organization, to reverse the destruction of Big Platte Lake. They needed a voice and PLIA became their champion. (continued on next page)

## What we accomplished in the past year.

- **PLIA** applied for an EGLE grant to transform the lake surveillance database into a model that can be easily queried to identify deviations from baseline and serve as a predictive model for measuring the impact of phosphorus loading into our watershed now and in the future. Although the grant was not obtained, the PLIA Board was committed to that objective and funded the project internally.
- **PLIA** organized the July 4th boat parade that attracted over 70 participants. Drone footage of that parade can be viewed on our website: [plattelake.org](http://plattelake.org).
- **PLIA** created new opportunities for members to become involved in important lake surveillance projects such as the Cladophora shoreline survey. A dozen volunteers walked occupied lake frontage looking for evidence of Cladophora, an indicator algae for excessive nutrient loading.
- **PLIA** continued its longstanding partnership with the Benzie Conservation District and the Platte Lake State Fish Hatchery to monitor Platte Lake and its tributaries every two weeks for key indicators of pollution. The hatchery was well in compliance with the 150 pound per year phosphorus discharge limit: 29.58 LB Phosphorus in 2021 and 69 LB Phosphorus YTD in 2022.
- **PLIA** volunteers monitored the lower Platte River weir fall release of salmon to ensure that the number of returning fish allowed into the lake did not exceed the 2000 court ordered consent judgement amount. The 2022 fall salmon run was in compliance with the maximum 20,000 Adult Coho and 1000 Adult Chinook allowed upstream of the Lower Weir. 16,908 Adult Coho and 8 Adult Chinook were passed in 2022.
- **PLIA** sponsored a private tour of the Platte River State Fish Hatchery for our members in September.
- **PLIA** utilized novel surveillance tools, such as our Deeptrekker underwater ROV, to monitor aquatic invasive species, particularly Eurasian milfoil. PLIA was the first to discover that Eurasian milfoil was being coated with a biofilm and marl (calcium carbonate) and was dying as a consequence. PLIA will use these ongoing video observations to determine whether the Eurasian milfoil problem is getting better, worst or stable on Platte Lake.
- **PLIA** benchmarked with local lake associations and consultants to determine the best strategy for monitoring and managing swimmers itch.
- **PLIA** website, [plattelake.org](http://plattelake.org), added Platte Lake merchandise for our members to purchase and enjoy.

Today, the PLIA works closely with the MDNR and the hatchery to achieve discharge limits that are a small fraction of what they were 40 years ago. The hatchery phosphorous discharge dropped from over 4000 pounds annually to less than 150 pounds. All of this is because of the PLIA.

Events from the past can become events of the present. Upstream development in the Platte River watershed is increasing every year. Most Platte Lake homeowners are not even aware of the destruction this lake faced. Ongoing testing and vigilance are critical.

PLIA is the only guardian of this lake. No one else is paying for monitoring the lake. PLIA is responsible for 100% of the cost of lake and river sampling. If a new source of pollution occurs it will be up to PLIA to discover it.

We cannot exist without the ongoing support of the people who love this lake. If you are not a member of the PLIA please join us and support the volunteers who work to protect the lake so it can be enjoyed now and for future generations.



## Data Base Update was a major project this year. It is key to letting us stay on top of what's happening in the Lake

What can you do with over 200,000 individual data points about Platte Lake water quality that have been collected since 1989? How do you transform all that data into easily accessible information that can be used to provide critical water quality information about the 193 square miles that comprise the Platte River Watershed? That was the challenge and opportunity facing the PLIA one year ago.

In October 2021, PLIA and the Benzie Conservation District (BCD) submitted an EGLE grant application to consolidate decades of watershed data acquired by the BCD, the MDNR Platte River Fish Hatchery and the Platte Lake Improvement Association on the Platte River, Platte Lake and the Platte River Watershed. The PLIA was notified in March, 2022 that the grant was not approved. Undaunted, the board unanimously voted to use internal funding for this visionary project.

The amount of data collected represented an enormous sample size that was perfect for creating one of the most statistically valid models in the country about our watershed.

### The goals of the project were to:

1. Create a user-friendly application for the database that can conveniently store and retrieve historical as well as future data.
2. Allow interpretation of that data to identify any deviation from the expected and find possible new sources of nutrient loading with a focus on phosphorus.
3. Provide the ability to observe the impact of these phosphorus sources on the watershed by developing a model called the "watershed annual average mass balance for water flow and phosphorus".
4. Use that "mass balance" information to then create a predictive model that allows accurate quantification of the impact on Platte Lake from any future watershed development upstream.

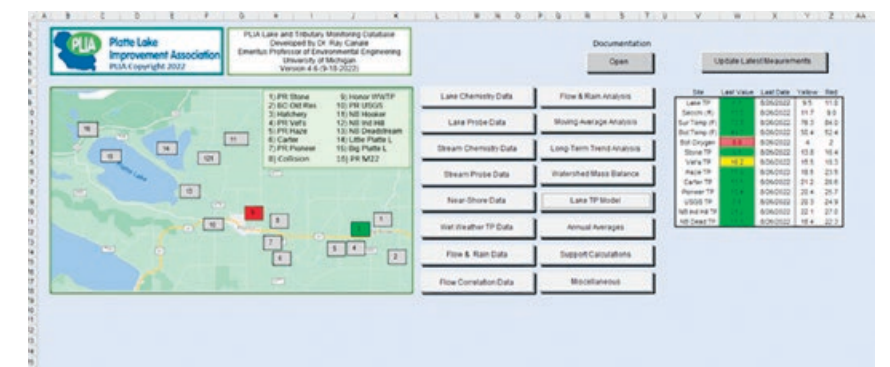
Sound challenging? It would have been impossible without the expertise of Dr. Ray Canale, Professor Emeritus at the University of Michigan. He is one of the world's foremost experts on lake and watershed computer modeling. In less than a year, Dr. Canale successfully accomplished each of these goals.

With this new model, the PLIA and BCD can now identify new sources of phosphorus in the watershed, quickly detect changes in the water quality and, finally, predict the future impact of these various phosphorus sources on Platte Lake.

This is cutting edge research and has quickly captured the attention of other lake associations and organizations seeking solutions to their own lake contamination problems. It also reflects the strong commitment of the PLIA board to continually explore opportunities to keep Platte Lake beautiful.

The PLIA is enormously indebted to Dr. Canale, not only for this project but for all the work he has done for the people who love Platte Lake. He completely re-designed the operations of the fish hatchery using his knowledge of fish bioenergetics and computer modeling. The hatchery is now a world leader in pollution-neutral fish production. It is not just a fish production site. It has become a water treatment plant with discharged water into Platte River often cleaner than the water it takes in from Brundage Creek.

A copy of this database is posted regularly on our website (under MEMBERS/DataBases) if you'd like to take a look. The Database is a large Excel file, so you'll need that program.





## Where can I get answers to...

What did the Fourth of July Platte Lake boat parade look like from the air?

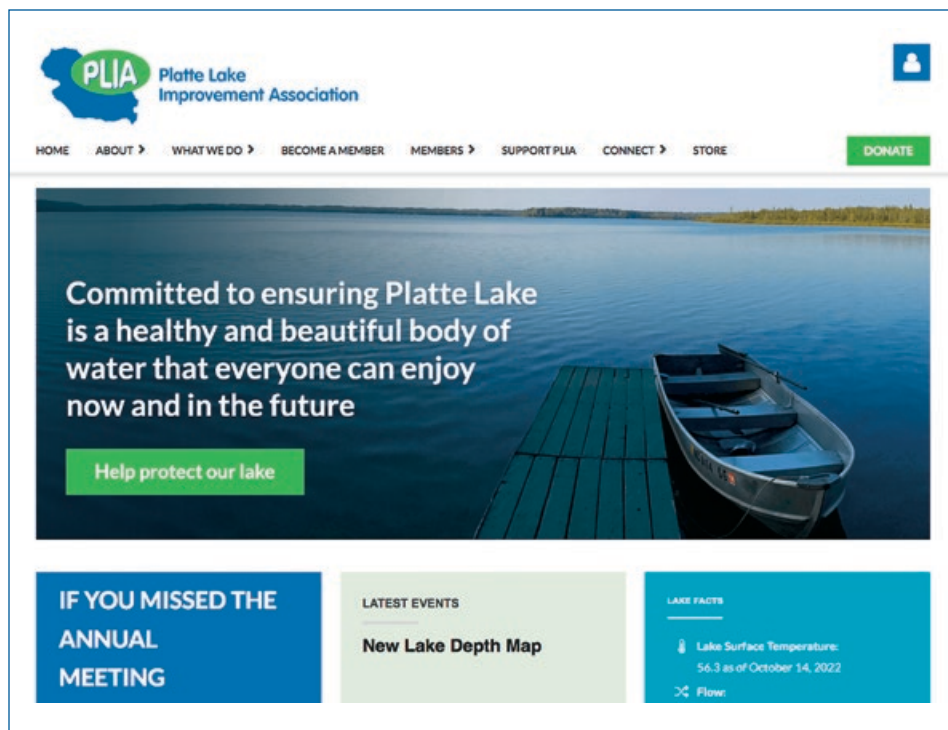
What causes an "ice shove" and why did it push my shoreline back 3 feet?

What is swimmers itch and how do I avoid getting it?

How can I easily renew my membership to the PLIA?

Where can I shop for fun Platte Lake tee shirts and more?

Get answers to these questions and much more at the PLIA website: [plattelake.org](http://plattelake.org). We are working continuously to keep the webpage updated and a source for current information about Platte Lake.



## Shoreline Survey

This fall the PLIA volunteers walked every inch of the inhabited Platte Lake shoreline looking for Cladophora. Why? Cladophora is an algae that is unique in that it serves as a reliable marker for nutrient overloading such as phosphorous and nitrogen. It is important to minimize the amount of these nutrients because they cause excessive algae and plant growth, which will then affect the water quality where you swim and play.

The study is a follow up to a Cladophora survey done in 2003. It is important to monitor where Cladophora is growing and how that growth pattern changes over time. PLIA wants to educate all members that they can help contribute to keeping the nutrient levels in our lake as low as possible. We can't right the wrongs of well over a hundred years of occupancy on our beautiful lake, but we can control and limit the amount of nutrients getting into our lake moving forward.

What are some common solutions? Fixing a faulty septic system and/or have septic tanks pumped on a regular schedule. Eliminate any factors that allow runoff and erosion into the lake, particularly during storm events. Stop feeding waterfowl and create a natural buffer strip to discourage geese and other waterfowl from spending time on your lakefront. You know what they leave behind. Finally, naturalize your shoreline to create a buffer strip so terrestrial plants can absorb nutrients before entering the lake.

## A Call for Volunteers

The PLIA is an all volunteer-run organization. We are looking for volunteers for essential roles in the work of caring for Platte Lake.

### 1. Lake Monitoring

Currently, the Science and Research Committee is seeking members of all ages to volunteer in the ongoing monitoring of our beautiful lake. Exciting new modalities, such as the Deeptrekker underwater ROV, are being used to directly observe what is happening below the surface. Your participation can range from working with the ROV, field sampling and observations to participating in the in-depth analysis of the data we review on our watershed. Wil Swieki leads this committee.

### 2. Communications

The Communication Committee is also looking for volunteers with skills in areas such as public relations, advertising, member and non-member outreach, and webpage development. Members who have experience in other non-profit organizations or have local government relationships are also talents the PLIA is seeking. The PLIA website, [plattelake.org](http://plattelake.org), is a great resource for updates on PLIA board activity, new projects, and opportunities for you to get involved as a volunteer. Jerry Heiman leads this committee.

### 3. Potential Board Members

As seats on the Board open up, we will be looking for persons with a variety of skills to serve. If you would like to be considered, get in touch. John Colins leads the Governance committee.

There are many ways you can get involved. If you are are interested in volunteering, simply contact us through our website (email to [info@plattelake.org](mailto:info@plattelake.org)). We would love to hear from you.



Not a fish fan.



## PLIA monitors the water quality of Platte Lake all year long.

PLIA knows that whatever floats into our lake from the upper Platte River or swims into it from Lake Michigan can cause problems. 3.5 million gallons of water flow into it every hour from a watershed that contains 50 other lakes. To address that vulnerability, the PLIA has created a surveillance model that has been recognized as one of the best in the nation.

The model is built on data obtained every two weeks, twenty-six times a year by specialists from Benzie Conservation District at eight critical locations. This information provides the most comprehensive picture of the water that enters the lake. Water is sampled using a specialized instrument that measures temperature, depth, dissolved oxygen, conductivity, oxygen reduction potential and pH readings at various depths all the way down to the bottom, 90 feet below.

Water samples from these sites are then analyzed by laboratory experts at the Platte River State Fish Hatchery. Using the “Digester,” a specialized device that



has a voracious appetite for breaking compounds down using acid and heat, elemental phosphorus can be extracted. The phosphorus concentration, now calculated by a spectrophotometer, is directly loaded into the PLIA database.

This data is reviewed by the PLIA for either short term fluctuations or long-term trends that could potentially affect the water quality of our lake. This analytical process has been greatly enhanced this year by the creation of a new computer model that quickly identifies data abnormalities.

By using this process, PLIA has been able to pinpoint sources of phosphorus dumping into the watershed such as the Section 13 Homestead Township site. The Platte River State Fish Hatchery in Honor, once the single worst contributor of phosphorus pollution, is now an important partner in a practice that has resulted in a beautiful lake with excellent water quality.



## Members get behind-the-scenes tour of the Hatchery

In September PLIA members had a very interesting tour of the Platte River Fish Hatchery. Paul Stowe, who is in charge of the operation gave us the history of the hatchery’s role in bringing salmon to the great lakes to help with the alewife problem. Then Paul and Nikki Sherretz, the hatchery employee who runs the lab where our samples are analyzed, gave us a full tour from the building where the eggs are taken from returning salmon, through the incubation racks and on to the raceways where fingerlings grow. At each stage he pointed out how the operation is carefully controlled and monitored to manage the output of phosphorus back into the river and onto the lake.

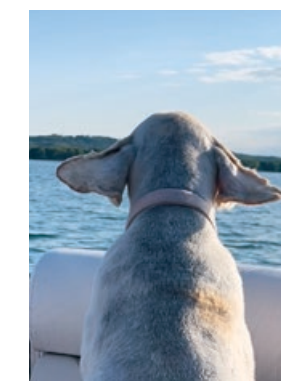


### 2022 PLIA Board of Directors

- William Anderson, President
- Joe Buechel, Vice President
- Jerry Heiman, Secretary, Chair Communications Committee
- Dave Fuhrhop, Treasurer, Chair Finance Committee
- Wil Swiecki, Chair Science and Research Committee
- John Collins, Chair Governance Committee
- Steve Peterson
- Jack Harnish
- Dan Myler
- Ross Stephenson

### 2022 PLIA Volunteers

- Jay Berger
- Lynn Collins
- Chris Gaffield
- Brenda Wade
- John Goidosik
- Jerry Hesch
- Scott Jones
- Warren Lanphear
- Mike Pattison
- John Prokes
- Bruce Van Eyck
- Susan Wilhelm
- Chris Wilhelm
- Mary Rupley





# Members Direct Memorials To PLIA

This year we lost three of our most ardent supporters of Platte Lake. As a final gesture of their devotion to the lake, they requested memorials be directed to PLIA. Many friends responded. This is something we can all keep in mind as a legacy to the lake we love.

## BRUCE STOWE

On October 18 Platte Lake lost one of its staunchest defenders when Bruce Stowe died in Cincinnati at age 91. Bruce spent summer vacations at Platte Lake his whole life and all summers after retirement at his Cuambeco home with wife Jane. The two of them were almost a daily sight going by on their old pontoon, Bruce trolling for bass or walleyes and Jane reading, classical music at high volume. Bruce served as treasurer on the PLIA board



for many years and guided our investments wisely. He and Jane were also major long-time financial benefactors for Platte Lake.

## CAROLYN LEWIS

Carolyn died June 6, 2022, at age 90. She and her husband John lived in their home on Deadstream Rd. for 40 years and enjoyed every facet of Platte Lake. Carolyn was a life-long teacher and a welcoming friend to all who knew her.



## JIM ROGERS

Jim passed away at age 88 on April 29th, 2022, at his winter home in Florida. Jim began coming to Platte Lake with his family in the 1950's and spent summers at his home there with wife Peg throughout retirement where he loved all watersports. Most of all, Jim loved sharing his beloved lake with guests.



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**The lake cannot speak for itself. Join PLIA and help us speak for it.**

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**Platte Lake  
Improvement Association**

**Keeping Watch on Platte Lake  
for more than 40 years**

plattelake.org

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