



Higgins Lake Property Owners Association

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To Protect, Preserve and Enhance the Quality of Higgins Lake and Its Surrounding Watershed

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President's Message



Docks coming off the lake, boats readied for storage, colors popping as Fall arrives. It's been a busy, busy summer for HLPOA members, especially with the collective efforts to oppose the establishment of the special assessment district by the county commissioners. Thank you for all the support. Additionally, our Environmental, Riparian, and Membership/Communication Committees carried out many of our on-going projects and added new ones. More on these efforts can be read about in this newsletter.

Extending a special thanks to board members and the many volunteers who make HLPOA the best.

Charlene Cornell, President HLPOA

Dedicated to Preserving the Quality and Beauty of Higgins Lake

Algae Blooms Turns Higgins Lake Crystal Blue Water Murky and Green

Until a few years ago, one could look into Higgins Lake from one's dock and see the bottom. This past summer the near shore waters for much of Higgins Lake were so murky that you couldn't see the bottom. The waves washed up oozy, mucky water that at times looked like mud. On calm days, the water would clear but the organic plant life was easily disturbed once the wave action picked up. This persisted most of the summer. The culprit was a Golden-Brown Algae bloom.

An algal bloom is a rapid increase in algae growth. It is the result of an excess of nutrients, like phosphorus or nitrogen from various sources. Potential sources include fertilizer run off from fertilized lawns, runoff from pavements (road ends) following rain storms, but the biggest culprit is the groundwater entering the lake, bringing nutrients from septic systems in the watershed.

Algae tend to grow very quickly when there is a presence of nutrients, but each alga is short-lived, and the result is a high concentration of dead organic matter which starts to decompose. Natural decomposers that are present in the water begin decomposing the dead algae. When the microscopic algae die, they sink to the bottom and decompose. This creates a fertile growing ground for the ongoing process which adds more nutrients to the sediments on the bottom prompting more growth and the cycle continues. Once the nutrient is present in the water, the algae begin to grow at a much faster rate.

How to get rid of the algal blooms? Remove the sources of the nutrients. Install storm drains at road ends to capture pavement run off. Remove the source of nitrogen and phosphorus entering the lake by eliminating lawn fertilizer, and installing a lakewide sewer system. If a septic system is to be installed, a performance based septic system which reduces the nitrogen released into the groundwater by 50 to 90% should be the standard.



Cut River September 25, 2023

The Roscommon High School Water Sampling and Analysis Project

John Blizzard, the owner of the Raven Laboratories in Roscommon and Midland Michigan, has been a longtime supporter of encouraging and supporting High School Chemistry Students to participate in hands-on experiences with real world applications of this vital modern science. To this end, John and the water technicians of the Raven Laboratory in Roscommon have provided expert instruction and supervision for their sampling the waters of Higgins Lake. They then perform the chemical and biological analyses in the local Raven Laboratory. Several local organizations and individuals have joined with the HLPOA and the Roscommon Area Public High School in supporting this program for the past six years, and hopefully will continue to do so for the foreseeable future. All of these reports and the data from this work are posted on our HLPOA website under the Environmental Committee tab.

In John's own words, he expresses his commitment to this STEM program, and highlights the many benefits this program brings to our community neighbors from their young people's enthusiastic participation.

Quoting John:

"The key to this project has been the students. The students were very quick and eager to learn. They would take over responsibility for the testing, helping each other to complete all the tasks. This demonstrates the team building and win/win attitude to critical thinking problem solving. One of the main goals of this project was not so much "teaching" them chemistry but demonstrating how to incorporate their education into a

life experience. One student, Corbin, commented that he wished they had more "chemistry" classes as he would be taking all of them.

It is a privilege to work with these students and I trust this life experience will continue to motivate and encourage them further in whatever and where ever they go in life."

Another significant key to this project is that none of this could be accomplished without the support of our sponsors. Additionally, this project was not possible without the support of the Roscommon Area Schools superintendent, Ms. Cathy Erickson, and the dedicated educators at the Roscommon Area Public High School. Like their motto says, "Life is all about testing the waters".

Please see this year's student work by clicking on the following URL:

<http://hlpoa.org/wp-content/uploads/2023/10/Higgins-Lake-report-September-2023-1.pdf>

Higgins Lake Swimmer's Itch Organization

The Higgins Lake Swimmer's Itch Organization (HLSIO) concluded lake operations in August after doing research about frequency and location of Swimmer's Itch (SI) cases in 2023. Reports have been few for many years since we have been relocating Common Merganser ducks now since 2015. Our program has been very successful at minimizing SI on Higgins Lake. Unfortunately, the Department of Natural Resources (DNR) did not allow us to relocate birds in 2023 due to their fear that relocating ducks would contribute to the spreading of Avian Flu. We did see Merganser ducks on the lake in July and August that we would have relocated and fear that SI may be elevated in 2024. HLSIO will be meeting with our contacts at the DNR to discuss the possible end of the suspension in 2024.

Another research project that was sponsored by HLSIO this summer was designed to determine how soon infected ducklings would begin to cycle parasites. This is very important so that we know exactly how much time we have to relocate the ducks before they can begin to infect snails. Early results showed that sometime between 4 and 7 weeks was when the process begins. We will have the final results soon and will be able to use this knowledge in summers to come to make certain that the cycle is successfully broken.

A peer reviewed paper from Swimmer's Itch Solutions is in the finishing stages. The paper details the success that Merganser relocation has had in controlling SI. Higgins Lake is one of the stars of the paper as Higgins Lake research and data show just how effective relocation has been in reducing the incidence of SI. We will be making access to this paper known to HLPOA members in the months ahead.

The HLSIO held its annual fundraising dinner at Jim and Laura Witt's barn on August 17th. The dinner was once again catered by Fred's of Roscommon. Drs. Curt Blankespoor and Randy DeJong were on hand to update the dinner guests and answer questions related to the state of Swimmer's Itch on Higgins Lake. Once again, a good time was had by all in attendance.

Macro Invertebrate Survey of Big Creek 09/19/2023

It was a great day for a sampling event at Big Creek, as the weather cooperated. The creek was at 8 degrees Celsius, which was perfect for the Brook Trout. Samples were

collected on both sides of the Dewey Avenue culvert. Wayne Brooks took a few pictures.

The team identified about a dozen species of macro invertebrates, including a Hellgrammite and lots of Mayflies. The most abundant species were Scuds at "too numerous" to count. The tally of species and their sensitivities to pollution resulted in a "Very Good" rating.



Pictured here, Rick and Melanie

Volunteer helpers were Sarah Krzemien from the Muskegon River Watershed Assembly, HLPOA members Melanie Brown, Wayne and Susan Brooks, Rick Larobardiere, and friends from Houghton Lake, Candy Hendrickson and Linda Stevens.



Candy, Linda, Sarah and Susan pictured here

Macro-Invertebrate Survey in the Cut River – 09/25/2023

Melanie Brown, Wayne and Susan Brooks, Rick Larobardiere, Dan Schaeffer from the HLPOA, and Sarah Krzemien from the Muskegon River Watershed Assembly sampled and evaluated the abundance and species of

macro-invertebrates just below the Higgins Lake level control structure.

The algae growth in the Cut River is dense, and appears to be increasing every year. This proliferation is likely due to the increasing levels of phosphorous seen each year in the Roscommon Area Public High School students' sampling and testing of the near shore waters of Higgins Lake. The impacts downstream are significant as well, as travelers in kayaks and canoes have noted in recent years.



Melanie Brown collecting samples from the bottom sediments in the Cut below the dam

Road End Signs

All of the Higgins Lake Road ends were checked for missing and damaged Jacob's Public Notices signs and posts as well as PA-56 signs were requested by the Roscommon County Sheriff's Department or the Gerrish Township Police. Several signs and six posts were replaced. Please contact John Ogren at 713-851-4388 if you notice additional signs that need to be replaced.

Lyon Township working on adopting a Septic Ordinance

Larry Maduri, Lyon Township Supervisor, has held informative meetings regarding the proposed ordinance for Lyon Township residents. The link for the draft of the proposed ordinance can be found here: [Lyon Township Wastewater Ordinance](#). Lyon Township Board is currently working on a Septic Ordinance to be adopted for Lyon.

Flow Rate Measurement in the Cut River

The site chosen for the test run data collection was about 100' downstream from the County Road 100 bridge where the stream bottom was relatively flat and the Cut

River was approximately 36' wide. The water velocity was measured with a Global Water Company FP111 flow meter, purchased by Jack Cornell, HLPOA member, and contributed for use with this application. Each data collection team member alternated tasks between taking average flow rate data in each cell, and recording the data from each of those measurements. At the completion of the data collection activity, the team adjourned to work up the data and to determine their estimate of the flow rate in the Cut. Flow data has been collected on four different dates. Flow rates are computed from field measurements recorded by students using a spreadsheet application created by student Ben Hornicle, from West Newton Massachusetts.

- On 06/30/2023 the flow rate was determined to be about 40 cu. ft. /sec.
- On 07/12/2023 the flow rate was determined to be about 37 cu. ft. /sec.
- On 08/04/2023 the flow rate was determined to be about 34 cu. ft. /sec.
- On 09/01/2023 the flow rate was determined to be about 31 cu. ft. /sec.

One additional flow rate will be collected. These flow rates are well below the recommended 50 cu. ft. / sec. minimum flow from prior fishery related studies. Cut River flow rate data will be posted on the HLPOA website: <http://hlpoa.org/wp-content/uploads/2023/09/Flow-07-09-2023.pdf-.pdf> as it is determined.

Thank you to Joe Berglund, Lily Gorman, Ramsey May, and Nick Newman for assistance.



Cut River Dam September 25, 2023



Marine Patrol Ron Bradley accepts check from HLPOA



Testing of Drinking Water Wells

We are still encouraging any of our members who have older wells, or wells with depths less than 100', to have their wells tested for nitrate or nitrite contamination. If ANY level of these ions are detected, and if further testing for "live forever" chemicals, like PFAS, pharmaceuticals, or synthetic hormone contamination would be desired, please contact HLPOA for further information.

Trash Bash

Once again, HLPOA members participated in the Muskegon River Watershed Assembly Trash Bash event this summer. Higgins Lake is the headwaters of the Muskegon River whose watershed covers a large portion of western Michigan. Bright orange bags were distributed at the Annual Meeting, then filled with trash from our shores. Thank you to all who took part in the clean-up. We look forward to participating again next year.

Higgins Lake Sewer Update

The Gerrish Lyon Utility Authority (GLUA) met Monday October 9. The following updates were provided at the meeting.

- The GLUA is setting up a bank account.
- Aerial photography and topographic mapping will start soon which is part of the permitting process to build a treatment facility.
- The permitting process is through the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and could take many months.
- Once both townships approve the sewer project, assessment roles have to be created. Those would detail the amount each property would be assessed. Each property owner would be mailed the proposed assessment and a public hearing would be scheduled for the public to voice their opinions.

We will keep HLPOA members informed as the process moves forward.

Introduction to Lakes Course

MSU Extension's popular Introduction to Lakes Online course is back in January. The course will kickoff on January 30, 2024. Registration is open until January 28. The cost is \$115, register by January 12 for \$95.

A course schedule and registration details are available on the Introduction to Lakes website at www.canr.msu.edu/lakesonline.

Thank you to our donors

Environmental Fund: Renee Albosta, Big Creek Lane Association, Paul & Carol Bodiya, Higgins Lake Foundation and Elizabeth Maczik

General Fund: Glen Artz, Dana Atteberry, Kevin & Julie Baker, Dudley Cahn, Dennis & Tina Doyle, Denny & Terry Grant, Marc & Kelly Hutfilz, Ron & Linda Koelsch, Arlene Maczik, John & Chris Ogren, Barbara & Mark Richter and Susan Touscany

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In memory of Martin Heger: Janet & Rod Kivell



Vintage Maps

Vintage Higgins Lake Maps available for purchase.

Order your 1936-1937 Map of Higgins Lake. (Map only, mat and frame not included)

Looking for a great gift or addition to your lake decor?

Exclusive to Higgins Lake Property Owners Association members...Vintage 1930's map of Higgins Lake suitable for framing.

Please submit \$50.00 to further support our organization and receive your 14" x 11" print. Make Checks payable to HLPOA.

Exclusive offer to Higgins Lake Property Owner Association members

Name _____

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Make check out to HLPOA. Send to: HLPOA, PO Box 55, Roscommon, MI 48653

2023-2024 HLPOA Board: President - Charlene Cornell, Vice President - Greg Semack, Secretary - Herb Weatherly, Treasurer - Bruce Carleton. Directors: Wayne Brooks, Jack Cornell, Becky Gibson, Curt DeVoe, Bob McKellar, John Ogren and Fred Swinehart. Administrative Assistant - Kathleen Barger.