



CRYSTAL WHITECAPS

The Newsletter of the Crystal Lake & Watershed Association

Protecting Crystal Lake Now for Generations to Come.

Vol. 19, No. 2

Fall 2024

SUNKISSED HILLS AND THE CLWA: WHAT NEXT?

Concerned CLWA members first brought the Sunkissed Hills development on Mollineaux Road to our attention in early summer 2022. From across the Lake they noticed a denuded expanse of land – bare dirt where steeply sloping shoreline property previously had been green with mature forest and vegetation.

Since then activity at the project has continued to concern the CLWA and draw the attention of the press and public officials. It has become a major focus of the CLWA, which has worked with local officials and state agencies to encourage adherence to zoning ordinances, environmental laws and practices that protect the Crystal Lake watershed.

This article is to review the background and update our members on the

current situation with this challenging land use issue.

HISTORY

At the time the CLWA became aware of the project, it appeared that earth had been moved from the crest of the hill to the base of the slope, forming a long plateau parallel to the shoreline and the Betsie Valley Trail. This earth appears to have covered a portion of the lush wetlands present next to the Trail. Tracks for access had been carved out.

[The Crystal Lake Watershed Overlay District zoning ordinance](#) is in effect in all three townships that surround Crystal Lake. It and other existing regulations are designed to protect slopes, maintain trees and vegetation, preserve wetlands,

minimize impervious surfaces, and manage stormwater runoff. These provisions sustain water quality by preventing harmful pollutants from entering surface waters.

Upon investigation, the CLWA discovered that Benzonia Township had approved a permit for the construction of eight homes on 50-foot wide lots. (The 1940s plat of the property allowed lots of this size although current zoning requires larger lots.)

Over the past two years CLWA members have observed impacts to the wetlands and evidence of severe erosion at the Sunkissed development. As a result, CLWA board and committee members – with strong support from members and the community –

Continued on pages 4 & 5



Future location of Sunkissed Hills development: DNR boat launch (right), Mollineaux Road (bottom)



Attempted revegetation of slope, May 2024



PRESIDENT'S MESSAGE

As the leaves pile up in my garden, I'm constantly reminded that there is still work that needs to be done, especially for the CLWA. The issues we've worked on all year are still front and center, and we continue to address them even as we must have our sights trained on what might be next. You are reading this because you are part of a sizable cohort of dedicated watershed citizens, and your dedication is greatly appreciated.

As you will read here, invasive Eurasian watermilfoil is being held at bay due to the diligent efforts of the CLWA's Water Quality committee. The original bed of over 7 acres is now down to less than 2 acres. But we still must be vigilant and maintain our active boat washing efforts in order to prevent new aquatic invasives from infesting our lake.

The CLWA has continued to oppose irresponsible development in the watershed. In this issue we provide a detailed account of CLWA's activities regarding the Sunkissed Hills development in

Benzonia Township. Despite court rulings that required mitigation of the damage done to the fragile slope on the Sunkissed Hills property, the developer and the Township have not protected this important portion of the Crystal Lake watershed.

One good outcome from the Sunkissed affair is that citizens and township officials from around the lake are becoming more aware and more active in their scrutiny of developments. CLWA's efforts have increased understanding of the importance of zoning ordinances designed to protect water quality. We are not giving up, and count on you, our members, for continuing support.

The past year has also highlighted volunteerism in our incredibly diverse membership. Many individuals have offered their time and talents to contribute to CLWA's success.

Once again a group of "next generation" leaders organized a successful "Keep Crystal Clear" fundraiser to benefit the CLWA.

And we honored our "veteran generation" with the Crystal Circle Award, presenting it to Ellen Herscher, a long-serving officer, board member, and chair of the Education and Communication committee. (Ellen's grandfather was one of the founders of CLWA's predecessor organizations back in the 1950s!)

One lake issue that we cannot solve is the lack of rain that has lowered the lake to historic levels, causing problems for boaters and riparians. This reminds us that we don't control Mother Nature, we are only her stewards.

So, it's time to put away the bathing suits, get out the sweaters, and enjoy the fall and winter wherever you are. As always, we're very grateful to you for your generous support. Working together, we will help keep the pristine waters and beautiful environs of Crystal Lake the cherished place it has been for so many generations.

Sue Brown, CLWA President



Annual Meeting 2024: Crystal Circle awardee Ellen Herscher, presenter Wanda Shreiner, President Sue Brown



Keep Crystal Clear 2024: organizing committee members



PROGRESS IN CONTROLLING EURASIAN WATERMILFOIL

Veteran Crystal Lake observer Stacy Daniels first identified invasive Eurasian watermilfoil (*Myriophyllum spicatum*, “EWM”) on Beulah’s shoreline in 1996. He recognized that it was something distinct from the Northern Watermilfoil plant native to these shallow waters. By then EWM was already widespread in the Great Lakes, brought by ocean-going vessels via the St Lawrence Seaway. Recreational boats launching at Beulah beach likely then introduced it to Crystal.

To better understand the plant life in Crystal Lake, the CLWA carried out a comprehensive identification and mapping survey over the summers of 2016-2018. The only invasive nuisance found was EWM, well established, extensive and dense at the east end of the lake. Smaller patches appeared at various locations, mainly around public boat launches.

Estimated total extent was more than seven acres (relatively limited compared to many other lakes in Michigan). Left unchecked, EWM forms large mats of floating vegetation that will impede recreational activities and shade out other aquatic life. Therefore the CLWA developed a treatment and control plan to prevent this problem from becoming more severe.

Since 2021 CLWA has treated EWM four times using the herbicide 2, 4D, most recently in September 2024. The application of herbicide is guided by aerial drone oversight, which ensures

accuracy and minimal use of the product. The addition of an underwater GoPro camera to the drone boat in 2024 further increased underwater observation and accurate plant identification.

After two treatments in 2021, the response was effective enough to reduce treatments to only once a year in 2022-2024. The control program has reduced the acreage to approximately 1.7-1.8 acres, and what remains is much less dense and more dispersed. On the east end several of the sites heavily infested three years ago now have only isolated single stalks of EWM remaining. The one area of concern that has not responded as well is around 3rd St. on the Beulah shore. If it persists CLWA may need to test for [hybrid strains of milfoil](#), which do not respond to the herbicides CLWA is using.

In 2023 the CLWA tested a relatively new herbicide, ProcellaCOR, in a shallow area near Beulah. This product is more expensive, but has proven to be more effective and dissipates more quickly in the water body. The test produced good results, so the use of ProcellaCOR (along with 2,4D) was expanded in 2024. Both herbicides used have been extensively tested and only treat EWM in Crystal Lake. Native plants, fish, benthic invertebrates on the bottom and humans and dogs are not affected.

With a total reduction of 75-80% in EWM biomass, the results obtained so

far in Crystal Lake reflect a high rate of success. At the same time, several small new patches of plant appeared in 2024. (All property owners are contacted for permission before CLWA treats their littoral zone.) This reminds us that complacency is not an option.

Although invasive species, once established, never completely go away, we are left with a smaller manageable remnant to control in the future. CLWA will continue to treat EWM once a year, with interventions in future years subject to monitoring and evaluation. This is consistent with CLWA’s goal of using only the absolute minimal treatment.

This work is authorized by the Michigan Department of Environment, Great Lakes, and Energy under Aquatic Nuisance Control Permit No. ANC9805924.

If you have questions, see [FAQs about Eurasian watermilfoil](#).



Treating EWM near northeastern corner of Crystal Lake 2024. Drone guidance boat followed by application boat.



Boats launching at Lobb Road end where no washing facility is available.

Protecting Crystal Lake Now for Generations to Come.



SUNKISSED HILLS AND THE CLWA: WHAT NEXT?

Continued from page 1

have dedicated hundreds of hours to attending Benzonia Township and West Benzie Joint Planning Commission meetings and public hearings to monitor the progress and compliance of the development. We have written letters and publicly voiced concern, made FOIA requests, raised questions, offered suggestions, and provided detailed analyses of gaps in compliance with local, county and state regulations.

In March 2023 the CLWA hired attorney Kristyn Houle to advise us and assist with retrieving and understanding the documentation received and making certain inquiries.

An underlying issue is that In Benzie County the planning and development process is fragmented. No county-wide entity takes responsibility for total oversight.

This means that, in addition to the Township, various County and State offices approve aspects of building projects: Building Department, Soil Erosion and Sedimentation Control,

Road Commission, Health Department (septic and well). Michigan Department of Energy, Great Lakes and Environment (EGLE) controls wetlands, community septic systems, aspects of soil erosion and sedimentation control, and inland lakes and streams.

CLWA's outreach has included County Administrator Katie Ziets, County Commissioner for Benzonia Township Rhonda Nye, and Eric Johnston, Director of Environmental Health, Benzie-Leelanau District Health Department.

We have suggested improving the permitting process to ensure that all other permits and approvals are in place before the final building permit is granted. This would help prevent such violations happening in the future. Ideally, each step in the approval process should be complete before a shovel hits dirt.

CURRENT STATUS OF THE PROJECT

Wetlands are present on both sides of the Betsie Valley Trail, which runs

along the Crystal Lake shoreline at this point. Construction activities have apparently damaged these. CLWA's goal is restoration of the wetlands to their original state and protection of the shoreline from wholesale removal of vegetation.

Erosion affected the project from its early stages after extensive deforestation and clearance of vegetation in preparation for construction. The developer has now added some measures to mitigate the erosion and implemented a stormwater runoff plan, but erosion and runoff are still apparent during rain events. The lack of revegetation on the hillside south of the houses still poses a risk. CLWA's goal is a robust reforestation and revegetation landscape plan along with an effective stormwater runoff design.

Wastewater treatment for the multiple homes is a major concern, due to the development's proximity to Crystal Lake. The developer discussed various designs – including holding

Continued on page 5



Sunkissed Hills site after clearing, foundations laid (August 2022)



Overflow breach in protective silt fence and erosion following storm, April 5, 2023; Betsie Valley Trail at right (photo EGLE)



SUNKISSED HILLS AND THE CLWA: WHAT NEXT?

Continued from page 4

tanks and a community septic system – with the County health department and EGLE. The health department has now approved standard septic systems with drain fields for each of the homes. Since these plans were not finalized prior to the final approvals for land use and building permitting, locating the wells and drain fields on the site’s limited space makes them vulnerable to damage by parked cars.

Access to the development is provided by a private road from Mollineaux Road. Because the road follows a very steep slope, its design and storm runoff engineering needed to be carefully approached. This issue led to a lengthy dispute between the developer and the Township, including court proceedings and an eventual settlement agreement. The CLWA believes that this agreement does not adequately address ongoing environmental concerns.

CLWA LOOKS AHEAD

By the summer of 2024, the CLWA felt that its efforts – along with those

of its members and other community members who had joined us – had brought about *some* positive results. Most importantly, we had raised awareness among county and township officials of the importance of the Watershed Overlay zoning ordinances to protect water quality. Our efforts have also served to engage local citizens throughout the county.

The CLWA is not an enforcer. Until now our strategy has been to maintain a visible and vocal presence to hold our local, county and state regulators, and the developer, accountable to the ordinances and laws that are in place to protect the watershed and lake. We have monitored the progress of the development throughout.

But as outlined above, from the point of view of protecting Crystal Lake, the situation at the Sunkissed development still leaves much to be desired.

Much irreparable damage has been done, but work at the site continues without the necessary remediation

yet in place. Construction has not yet begun on the seven upland “luxury homes” that are part of the original plans, although *garages* for them are already under way.

The CLWA’s main concern is to prevent similar violations from happening again in the future. To ensure this, our Watershed needs strong water-friendly zoning, local officials committed to enforcing it, and a public that supports protecting our waters.

CLWA board members have continued to examine the lessons learned from our experiences with the Sunkissed Hills development. We are carefully considering all possible future actions and will keep CLWA members fully informed of our next steps.

We are grateful to our members for their ongoing support of our mission to protect Crystal Lake now for future generations.

Board of Directors,
Crystal Lake Watershed Association



Erosion May 2023



South side of completed homes, May 2024



FRIENDS IN THE LAKE

Much of what I do as the CLWA's lake biologist focuses on the "bad" stuff. Is the water quality degrading? How much E coli is entering the lake? Is there excess algae growth or new invasive species in the lake? I love talking to people who are concerned that the lake seems to have changed or that there is something slimy on the bottom. Together we are aiming to protect it.

For a change I want to focus on the often overlooked "good" stuff in the lake, some of the noteworthy native creatures and plants that call Crystal Lake home.

Many creeped-out riparians have asked me to identify one of Crystal Lake's least understood inhabitants: the mudpuppy (*Necturus maculosus*). These aquatic salamanders prefer clean, cool freshwater environments, and are intolerant of pollution – making them a great indicator species for Crystal Lake.

The appearance of a mudpuppy may be rather repellent when first encountered. They can grow up to 15 inches long and have feathery external gills protruding from the sides of their heads. These distinctive gills

allow them to breathe underwater. Most active at night, they are excellent swimmers. They have three rows of teeth and can eat almost anything, including small fish, crustaceans, and aquatic invertebrates. They can live for up to 12 years in the wild, and most amazing, mudpuppies can regenerate limbs!

Mudpuppies live under rocks and crevasses on the lake bottom, so you are most likely to encounter them while pulling out your docks in the fall. The Glen Lake biologist reports that he was helping pull an ATV out of the lake that fell through the ice last winter. When they got it to shore, over a dozen mudpuppies came out of the ATV.

Mudpuppies are largely unappreciated. Ice anglers see them as a nuisance and they have been misidentified as lampreys. But despite their "scary" appearance they are harmless to humans, good for the ecosystem, and are a good indicator of lake health. So if you encounter a mudpuppy while swimming or fishing, please let it be. And if you find a *dead* mudpuppy, please report it.

Lake critters can also be cute and furry. This August some folks in Mollinaux

Bay contacted me about a playful otter that was visiting the lake. I assumed this was a rare visitor, but when I mentioned it to others around the lake, I realized a lot of Crystal Lakers had otter sightings. River otters were once common throughout Michigan, but trapping for the fur trade and habitat loss led to declines in their population.

Otters are playful and social animals that are often seen in family groups. In the wild they are skilled hunters feeding on fish, mussels, crustaceans, and likely mudpuppies when the opportunity arises. They use their large whiskers for hunting underwater and are so sensitive they can detect even the slightest changes in water currents, allowing them to locate prey by feel even in complete darkness.

In recent decades otters have been making a comeback in some areas. They were recently sighted in the Detroit River for the first time in 100 years. Otters are always searching for food, so seeing them in Crystal means they are finding fish for forage. They are also sensitive to pollution, so their presence is a good sign of Crystal's health. Maybe otters will become a more common sight here in the future. The otter spotted in

Continued on page 7



Mudpuppy
(photo Kevin Hutcheson)



Mollinaux Bay Otter
(screenshot from Mary Devine's video)



FRIENDS IN THE LAKE

Continued from page 6

August had a large white scar on its nose. Let us know if you see this guy fishing in the lake!

Sometimes I take a break from the office and stroll to Cold Creek to see what's swimming under the bridge in Beulah. In the summer I often see a school of logperch scooting around the bottom in the currents. These are not the tasty and much sought-after sportfish, yellow perch. Logperch (*Percina caprodes*) are no relation, but actually in the Darter family.

Growing to an average size of just 3-5 inches, they are striking fish with dark bands on their long slender bodies that help them stay camouflaged amongst the stony bottom. Logperch are known for their interesting behavior: They use their specialized mouths and hard pointy noses to flip over rocks to sift through the substrate for food. Crystal Lake provides a perfect habitat for the logperch, which needs clear water with a rocky bottom where they can find macroinvertebrates.

Logperch numbers have been in decline regionally due to competition

from the invasive round goby. So, seeing a healthy population of logperch in Crystal Lake and Cold Creek gives me hope that the gobies have not found their way into the lake.

Also thriving along the lake bottom and much more common than logperch and mudpuppies is Chara. This organism is one of the most common aquatic "plants" in our region and plays a vital role in Crystal Lake's ecosystem.

Anyone who has conducted an aquatic plant survey or removed some "weeds" from their fishing hook or even had to pull a mass of plants off their boat anchor, will know why Chara is often known as "stinkweed" or "muskgrass." Its distinctive smell comes from the sulfur compounds it contains. It also goes by the name "stonewort" due to its hard stony texture caused by an accumulation of lime (calcium carbonate) crust from the alkaline water it thrives in, like that of Crystal. Chara also stores nutrients longer than other plants, which helps it overwinter in a low-nutrient lake

like Crystal. Plant studies done here over the years always have found Chara to be the most common species found in the lake.

Despite its looks however, Chara is actually not a plant at all! It is an advanced form of macroalgae. Its stem and whorls of leaflike structures give it the appearance of a flowering plant but it does not produce flowers and is much older than any flowering plant. Chara has been found in the fossil record going back 400 million years and may be an ancient precursor to land plants on earth. Because aquatic plants in Crystal Lake are relatively limited, Chara plays an important role in providing habitat for aquatic bugs and small fish that make up the base of the food chain in the lake.

All these lake dwellers remind us of the delicate environmental balance that forms our healthy watershed. It's up to us all to share it responsibly, protecting it for generations of creatures to come.

John Ransom

John Ransom is the Crystal Lake biologist, responsible for CLWA's water quality monitoring program.



Logperch Darter (photo U.S. Fish and Wildlife Service)



Chara from CLWA's Crystal Lake aquatic plant survey, collected and pressed by Jim Hamp



CRYSTAL LAKE & WATERSHED ASSOCIATION

P.O. Box 89 • Beulah, MI 49617
Tel 231/882-4001
Fax 231/882-7810
info@CrystalLakeWatershed.org
CrystalLakeWatershed.org

 Like Us on facebook.com/theclwa

BOARD OF DIRECTORS

OFFICERS

President
Susan Brown
Vice President
Mark Walton
Secretary
Ellen Herscher
Treasurer
Bruce Gerhart

MEMBERS AT LARGE

Ron Ahrns
Catherine Boshier
Rick Cosaro
Mary Ferens
James Hamp
Susan Kirkpatrick
Tom Kucera
Barbara Leonard
Dirk Nelson
Greg Nowell
Coleman Schindler
Wanda Shreiner
Steve Stephens
Hugh Walton
David Wynne

PAST PRESIDENTS

Bob Appleford
Joel Buzzell
Ed Hoogterp

CRYSTAL WHITECAPS

is published twice a year and is a benefit of membership in the Crystal Lake & Watershed Association. Back issues and membership information are available on the CLWA website:
crystallakewatershed.org/education/newsletter

CALL FOR NOMINATIONS TO THE CLWA BOARD OF DIRECTORS

The CLWA is an all-volunteer organization and welcomes new members to its board and committees. It seeks individuals from throughout the watershed area. Special skills are helpful, but most important are enthusiasm and willingness to pitch in for the many tasks that help the CLWA preserve and protect Crystal Lake.

If you would like to recommend yourself or someone you know, please contact the Nominating committee at info@CrystalLakeWatershed.org.

For information on terms and duties, see "[CLWA Board Member Responsibilities](#)" and the [Bylaws](#) posted on the CLWA website.

If you are interested in a committee, contact information for the chairs is also available on the website and in the annual Directory.



Outlet dam, October 2024

CLWA ANNUAL MEETING 2024

The annual members meeting of the CLWA was held on Saturday, July 20, at the Congregational Summer Assembly in Frankfort. Over 120 members and other interested persons attended. President Sue Brown presented the Crystal Circle Award to Ellen Herscher. Brown surveyed the Association's current programs, accomplishments and future plans. Treasurer Bruce Gerhart reviewed the organization's financial situation and reported that it was healthy. Draft minutes are available on the CLWA website.

The following officers and board members were elected by mail ballot:

Re-elected President (2024-2026): Sue Brown
Re-elected Secretary (2024-2026): Ellen Herscher
Re-elected board members (2024-2027): Catherine Boshier, Mary Ferens, Susan Kirkpatrick, Barbara Leonard, Coleman Schindler

CLWA thanks the Congregational Summer Assembly for the use of its facility.