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FROM THE PUBLISHER

Has Anyone Seen the Lakeville Lump?



I am excited about Lakeville Lake being featured as our front cover story for the summer issue. My interest was piqued the minute I learned they have an island that mysteriously emerges every fall. You have to read on to discover what in the world is the "Lakeville Lump"? Lakeville Lake boasts five islands, and some people actually live on them.

In fact, that gives me an idea for a future article about islands in Michigan's inland lakes for *The Michigan Riparian*. If you live on a lake that has an island or if you actually live on the island, I want to hear from you. You can email me at swagner@mlswa.org. I hope you share my fascination with islands and will keep a lookout for an upcoming article about them in a future issue of *The Michigan Riparian* magazine.

Michigan Lake and Stream Associations held its 56th Annual Conference at Crystal Mountain Resort on April 21 and 22. Conference highlights can be found on page 18.

I hope you find useful tips and information for your lake and discover more ways to experience the best of lake living. Aquatic plant surveys, liability insurance, Michigan Inland Lake Improvement Act, short-term rentals, more underwater pictures, and land conservancies are just some of the articles you'll find in this issue.

Funding to protect our lakes from invasive species is more than a hot topic—it's a real challenge. In support of Michigan Waterfront Alliance and its efforts to address the challenge, we have included the resolution that lake associations are being asked to sign. Preserving our precious inland waters is a worthwhile endeavor, and your involvement is critical. See page 38 for details.

Please keep sending us your pictures, questions and stories. We always love hearing from you.

-publisher, Sharon Wagner

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Lakeville Lump
Photo Credit: Linda Hodges

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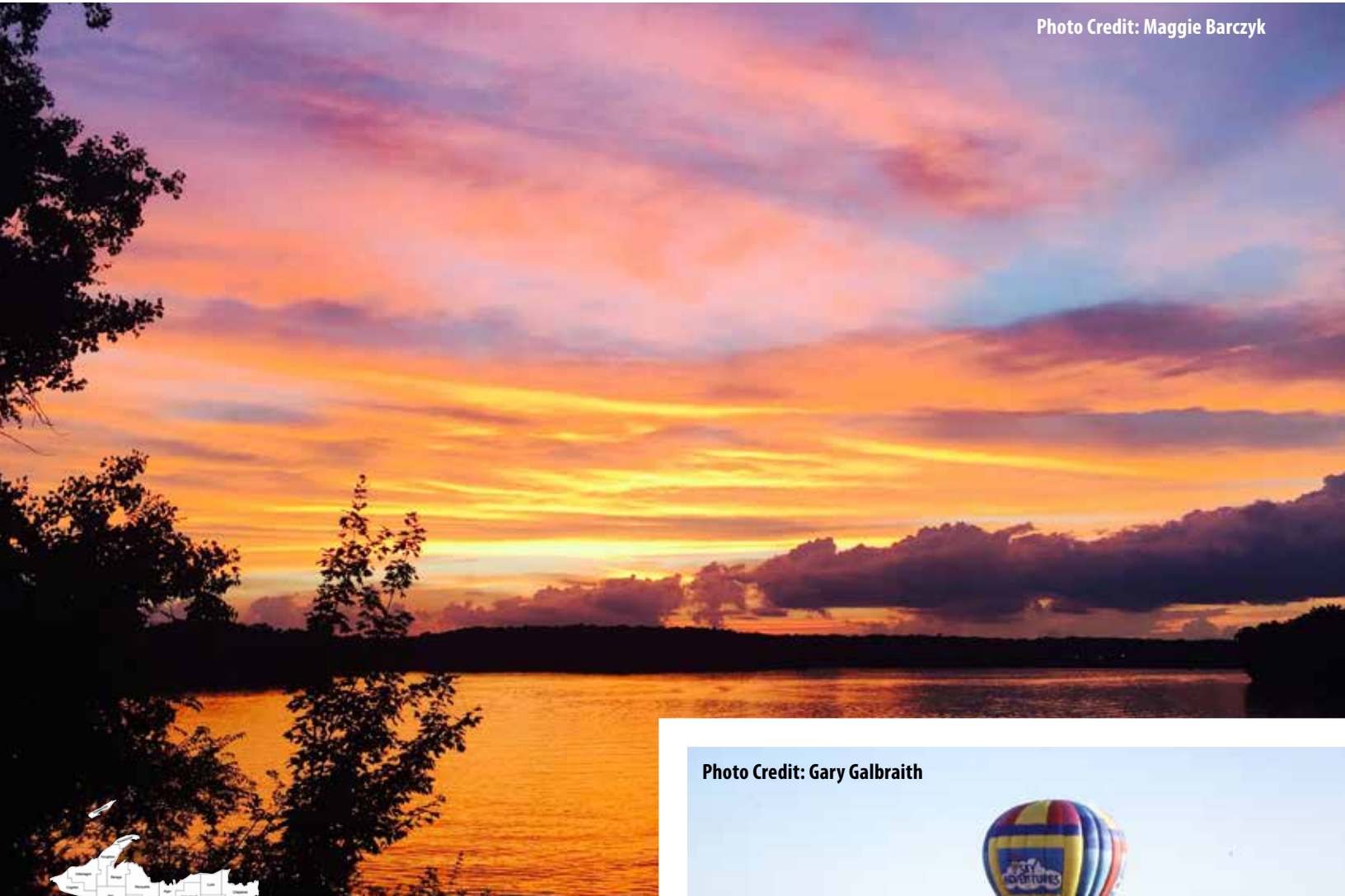
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Lakeville Lake

YESTERDAY, TODAY AND TOMORROW

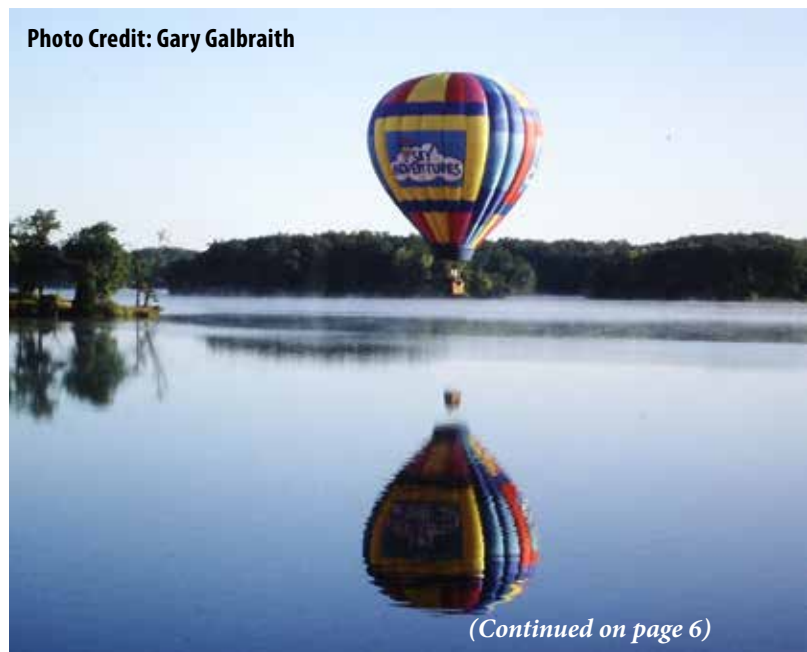
Photo Credit: Maggie Barczyk



By Wayne Hodges,
Lakeville Lake Association President

LAKEVILLE LAKE IS AN ALL-SPORTS, 460 ACRE LAKE LOCATED IN ADDISON TOWNSHIP IN THE NORTHEASTERN CORNER OF OAKLAND COUNTY. THE MAXIMUM DEPTH OF THE LAKE IS 68 FEET AND IS ONE OF LARGEST LAKES IN OAKLAND COUNTY.

Photo Credit: Gary Galbraith



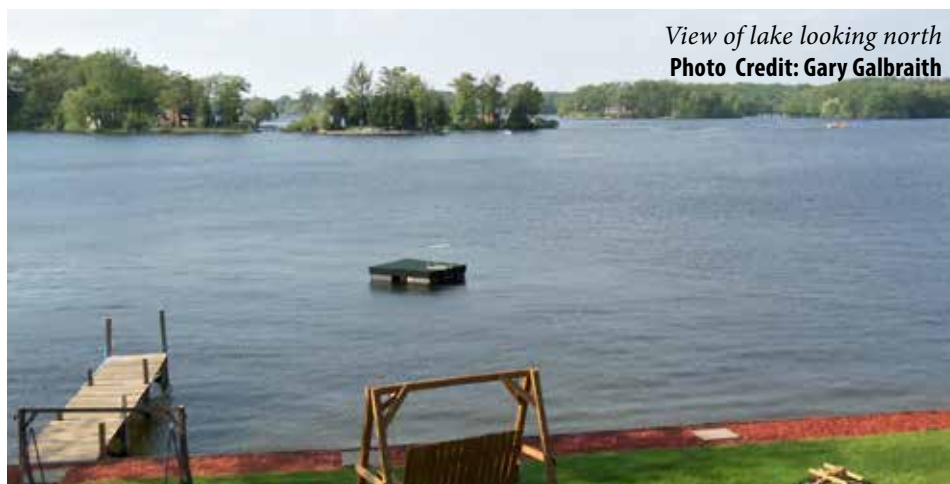
(Continued on page 6)

Lakeville Lake

(Continued from page 5)



Photo Credit: Gretchen Drader



View of lake looking north
Photo Credit: Gary Galbraith

The visiting swallows are back with their artistic glides, dips and dives, so the joy of summer can't be far behind on Lakeville Lake! Soon the flora and fauna will turn Lakeville Lake into the idyllic and precious "little slice of heaven" that we have grown to love and cherish.

There is always something interesting going on, whether it's boating, fishing, swimming or simply sitting on the dock watching boats go by; fish jumping from the water; a turtle head coming up for air; or a Great Blue Heron stalking its prey or a pair of bald eagles soaring overhead--not to mention the muted swans, ducks, geese or occasional loons that also call

the lake home. We average four Bass fishing tournaments most years, plus year around fishing for a variety of pan-fish, Bass and Northern Pike. Just 75 years ago Lakeville Lake was considered "Up North" by Detroit area families who wanted to get away from the hustle, bustle and stifling summer heat of the city. In contrast today, we estimate that about 50% of the property owners are year around residents. The heavily wooded land surrounding Lakeville Lake offers endless opportunities for children and adults to explore nature while providing sustenance and cover for our land animals including fox, coyote, mink and deer.



Photo Credit: Paul Tobian



Bridge Crossing to Schendens Island
Photo Credit: Gary Galbraith



Photo Credit: Gretchen Drader



Bob James on Kayak
Photo Credit: Sue James

Lakeville Lake is in the only free fly zone in Southeastern Michigan, and we see numerous pilots practicing; hot air balloons kissing the tree tops or skimming along the water; helicopters; stunt plane acrobatics that make you glad you are still on the ground; as well as float plane take offs and landings. We even get to enjoy the occasional enormous military cargo planes on landing approach to Selfridge Air Base. And we have our own ‘fantasy island’ that emerges from the lake bottom nearly every fall.

Lakeville Lake is a 460-acre all sports lake located in the northeastern corner of Oakland County on the southern

border of Michigan’s “Metamora Horse Country”, ten miles north of Rochester and five miles east of Oxford. Access to Lakeville Lake can be attained by renting a slip from one of the two licensed marinas; arriving early enough to get one of the parking spaces at the MDNR controlled boat access site; or joining the over 200 property owners who belong to the Lakeville Lake Property Owners Association (LLPOA). The lake is fed by a single ingress and by numerous natural springs. The lake was formed around 1832 by placing a six-foot dam at the egress, thereby flooding platted land and the

(Continued on page 8)



Lakeville Lake

(Continued from page 7)

existing smaller lakes to power a water wheel driven mill which continued in operation until 1958. In 1963, the Michigan Supreme Court set the lake level at 952.3 feet above the mean sea level to settle disputes between the mill and lake property owners. Lake and boater safety is assisted by a part-time Oakland County Sheriff – Marine Patrol, which is paid for by donations from local businesses and lake residents.

(Continued on page 11)



Photo Credit: Eduardo Gonzalez of Madrid, Spain



THE LAKEVILLE LUMP

By John Barczyk

We call it the Lakeville Lump—an island 15 feet long and several feet across that pops up every autumn when the air becomes chillier than the water.

Our beloved piece of mysteriously rising lake bottom has served as a rest stop for gulls, swans, mallards and loons. It can be seen from shore and has sported everything from political placards to college flags, and even For Sale signs from time to time.

The Lakeville Lump has left a number of experts from a variety of scientific backgrounds totally puzzled after having examined the phenomena. After over 75 years of sinking and emerging, the mystery of the vanishing island remains unsolved with no plausible answer for the cause.

The Clinton River Watershed Council once took a group of staffers on a tour to check out the island to see if they could shed light on the mystery. Eventually wetland ecologists and geologists got involved, but they were no more successful in finding an explanation.

So the mystery remains—part of the charm of Lakeville Lake. *R.*

LAKE So far, no one can explain island appearance

From Page 1B

buoyed to the surface by methane gas created by decomposing organic material.

"Swans, mallards, loons, sea-gulls all have rested on it," said Lake resident Sandra Sanders. "Some fishermen who aren't familiar with it can get in trouble with it. I once saw part of a propeller in there."

The Watershed Council leased of the Lakeville Lump the past few years and staffers took a pontoon boat to investigate.

They scratched their heads and called a wetland ecologist and a geologist seeking explanations.

Those experts shrugged their shoulders.

Now the council is asking for help in its recently mailed winter newsletter, the River News.

"Any information that may help solve the mystery of the Lakeville Lump can be submitted to

the CRWC office," the newsletter reads. "Any developments will be reported in the next edition of the River News."

Because inquiring minds want to know:

► Anyone with the key to unlocking the secret of the Lakeville Lump...



Peat, muck and sand are among the components of a mysterious island that bubbles from the bottom of Lakeville Lake. The island is in Addison Township, and peaks the water's surface. The island shows in fall.



1930 Lakeville Lump with Moffat Shoreline in Background



2012 Lakeville Lump with Moffat Shoreline in Background
Photo Credit: Gretchen Drader



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Lakeville Lake

(Continued from page 8)

For over 20 years the lake has had a Special Assessment District (SAD), managed via a Lake Improvement Board (LIB), which has allowed us to purchase and operate our own weed harvesting equipment to help us manage our indigenous weeds and educate our property owners. Since 1979, the LLPOA has participated in the MiCorps Cooperative Lakes Management Program (CLMP) by soliciting lake resident volunteers to undergo the required training, collect the requested data and submit the results to provide the limnologists with trend information so critical to judging the health of a lake eco system. Lakeville Lake is a long-time member of the Michigan Lake and Stream Associations; and we purchase *The Michigan Riparian* magazine for all our property owners as part of the educational activities. Unfortunately, all of our diligence has not kept us immune from invasive species. We have been infected by such invasive species as Eurasian Milfoil, Starry Stonewort, Purple Loosestrife, Curly Leaf Pond Weed, Flowering Rush, Phragmites and Zebra Mussels. Through our LIB and SAD, we have funded chemical treatment of all but the Zebra Mussels and Phragmites through licensed engineering consultants and applicators for almost 10 years. Yet tragically, to date we have been unable to eradicate any of the infestations and each year finds us, through our vendors, fighting to maintain lake navigability and aquatic habitat. Like many other inland lakes, we find ourselves fighting this battle almost completely alone. We need all the other stakeholders to join the party and put some "skin in the game" if we are going to leave a healthy legacy that allows our grandchildren to enjoy the same "Life, Liberty and Pursuit of Happiness" that we inherited and claim to cherish.

For example, the M-DNR operates our boat access site, which we believe is our primary source of controllable invasive species. Yet, M-DNR state mandated budget cuts, and current ordinances prevent them from installing and operating a boat washing station that boaters would be required to utilize before entering and departing from our lake. This action alone would dramatically reduce the invasive species incidence rate. We also do not think it prudent or fair to task just the lake property owners with the sole responsibility to fund these worthwhile initiatives.

Yes, Lakeville Lake is still a "little slice of heaven", and we are passionately working to be good stewards, believing that freedom was never free and that only by working together will our hopes and dreams come true. It just might take longer than we wished. 



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ASK THE EXPERTS

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Question: I noticed that when I looked up my lake trophic classification status, it was listed as “oligotrophic” but our lake manager says it is “eutrophic”. Why the confusion?

Answer: Lakes may be classified as eutrophic (nutrient-rich), mesotrophic (moderate in nutrients), or oligotrophic (low in nutrients). Scientists and state officials may collect water samples at various depths and then have the water analyzed at a laboratory for nutrients or other water quality parameters. Many lakes have much lower phosphorus and nitrogen concentrations at the surface than at mid-depth or bottom depths. Thus, a single lake can have low nutrient concentrations at the surface and high nutrient concentrations at the lake bottom. This is why sampling the lake at only one layer (top, middle, or bottom) can bias the result and make an incorrect conclusion on the trophic status of a lake. If there is concern over a lake’s specific trophic status, it is highly recommended that a profile of nutrients be collected at top, middle, and bottom depths. This is especially important if the lake is deep and there may be differential nutrient concentrations throughout the water column.

Dr. Jennifer L. Jermalowicz-Jones
ML&SA Science Advisory Chair

* * * * *

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Short-Term Rentals, Long-Term Consequences

By Clifford H. Bloom, Esq.
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You likely have been hearing quite a bit recently about short-term rentals in Michigan. What is a short-term rental and why does it matter?

There is no specific legal definition of a short-term rental. However, for purposes of the controversy raging regarding short-term rentals throughout Michigan, a short-term rental ("STR") is typically an otherwise single-family dwelling, cottage, cabin or condominium unit that is rented to someone other than the owner of the dwelling. In most cases, an STR involves only one family or couple renting a dwelling unit at one time. Such rentals can be for such disparate time periods as 30 days, two weeks, one week, a long four-day weekend or even two days. The shorter the rental time period, the more objectionable is the STR to many neighbors and other property owners in the community. Long-term rentals of a dwelling to a single family or couple (for example, a year or longer) are normally not objectionable.

Why do so many neighbors and community members often object to an STR? Typically, there are multiple reasons. First, the rental of a single-family dwelling to a family or couple for relatively short periods of time tends to have a commercial "feel" to such rentals. Long-term rentals to

Interestingly enough, until fairly recently, there were few municipal ordinances in Michigan that either regulated or prohibited STRs. Given the increase in the number of dwellings that are being leased for STRs and the rising controversy, an increasing number of municipalities have recently begun adopting STR ordinance provisions. While some municipalities prohibit STRs altogether or put a "cap" on the number allowed in certain areas, most municipalities have chosen to simply regulate STRs by means of registration, general rules and regulations and building or health codes. Typically, where a municipal zoning ordinance does not expressly address STRs, they are considered lawful single-family residential uses, so long as a dwelling is rented to only one family or couple at a time.

Given the increasing controversy regarding STRs, some rental and real estate groups have become alarmed at efforts by local municipalities to regulate or even ban STRs. Hence, legislation has been introduced in the Michigan Legislature to prohibit local municipalities from prohibiting or even significantly regulating STRs. As of the date that this article was written, the two bills involved are SB 329 and HB 4503. If enacted into law, such legislation would "preempt" or preclude local municipal prohibition and even significant regulation of STRs.

Unfortunately, preemption by legislation (i.e., taking away local zoning and ordinance controls over certain matters) is on the increase. Special interest groups have been able to enact legislation in Michigan that severely limits, and in some cases actually prevents, the ability of local governments (i.e., cities, townships, villages and counties) to regulate uses such as mining, intensive farm livestock operations, landfills, foster care group homes, neighborhood daycare operations, oil and gas wells and pipelines and commercial water withdrawals for bottling. Such loss of local control should alarm all property owners and taxpayers.

Why should any of this matter to riparian property owners? If legislation taking away local control of STRs is enacted into law, STRs could flourish in many lake neighborhoods. That could have a negative impact upon area property values, traffic, the intensity of use of waterfront dwellings and even noise levels. If you have any concerns about the proposed preemption legislation, you should contact your local Michigan senator or representative. *R.*

**THERE IS A GENERAL PERCEPTION
THAT A SHORT-TERM RENTAL
LOWERS THE PROPERTY VALUES FOR
THE NEIGHBORHOOD OR COMMUNITY
INVOLVED.**

a couple or single family for a particular dwelling tend to have more characteristics of an owner-occupied property. The second objection is what has sometimes been referred to as the "rental car syndrome." Just as many people tend to treat a rental car with much less caution and care than their own vehicle, that may also be the case with regard to short-term tenants. Finally, there is a general perception that an STR lowers the property values for the neighborhood or community involved.

Timbers Recreation Area: A success story in riparian property preservation

By Alisha Davidson, PhD
ML&SA Research and Development Coordinator

Imagine a 250-acre property that holds meadows, forests, wetlands and a wild inland lake. A place with 9,000 feet of shoreline on three lakes (including 2,000 feet on northern Michigan's Long Lake), in a location a mere 10 minutes from downtown Traverse City. This might read like a developer advertisement, and it nearly did, if not for preservation efforts by a variety of partners that transitioned the property from Girl Scout camp to recreational area. This property (now known as Timbers Recreation Area, or "Timbers") is located in one of the fastest growing regions of the state. The story of how it came to be protected is not only of local, but statewide, significance for those interested in preserving wild lands near their homes and lakes.

Owned by a private family in the early 1900's, Timbers was sold to the Girl Scouts in the late 1950s and used as a Girl Scout camp for 50 years. Although locals could not use the property, they considered it important that the property remain undeveloped. As such, the local land protection agency, the Grand Traverse Regional Land Conservancy (the "conservancy"), had the foresight to contact the Girl Scouts over the years to request they contact the conservancy if they ever decided to sell the property. This was an important step: it is often discovered that a cherished natural area has been sold before it was even realized to be on the market (and often at a price that could have been raised by fundraising). Following through on this request, in 2005 the Girl Scouts considered





Timbers cove
Photo Credit: Nate Richardson

agreed, and, with help from the Michigan Natural Resources Trust Fund and the Oleson family (again), the conservancy started to raise the local match required. The Michigan Natural Resources Trust Fund is administered by the Department of Natural Resources and provides for natural resource protection and outdoor recreation, with the majority of funds going to acquisition projects like this one. Funds from the Michigan Natural Resources Trust Fund are obtained through an application process and can take at least 18 months to arrive, so planning early is essential. In this case, the Girl Scouts were in a hurry and the Oleson family offered to purchase the property and hold it while the funds were raised.

In 2012, the Michigan Natural Resources Trust Fund approved a \$2.1 million grant. By 2014, the conservancy had raised \$900,000 required for the local match through the generosity of hundreds of donors. In addition to help from the Long Lake Township, the fundraising process utilized the knowledge of local organizations such as the Long Lake Foundation and Long Lake Association to build local support and contact appropriate people to assist with fundraising.

Historically privately owned and rarely visited by the public, Timbers is now a local gem. With 2,000 feet on Long Lake, the entire 20-acre Fern Lake, and half of Page Lake within its boundary, it is a water-lover's paradise. The balance of the property is a combination of mesic northern hardwood forest, fields and riparian

(Continued on page 16)

selling the property and contacted the conservancy. Original discussions were around a conservation easement, but at a price that was too high for a property that was to remain private (many land grants require public access). In 2009, after a change in organization with the Girl Scouts as well as a decline in property prices, negotiations resumed with the option of full purchase for \$3 million. A local philanthropic family, the Olesons, provided initial funds to secure the purchase option and gave the conservancy one year to develop a fundraising plan.

After attempting to find a group interested in running it as a camp without success, the conservancy contacted the Long Lake Township to see if they would assume ownership if the land was purchased. The township



Timbers forest path
Photo Credit: Nate Richardson

Timbers Recreation Area

(Continued from page 15)

wetlands providing a multitude of recreation opportunities including fishing, hiking, kite-flying, wildlife viewing, and more. The property currently has a network of marked and unmarked two-tracks and trails throughout with potential for further trail and infrastructure development. For additional information, visit the Grand Traverse Regional Land Conservancy website (under “Recreation + events”, “Preserves and Trails” and search for Timbers).


While their role in protecting natural, scenic, and/or farm lands is well-known to those familiar with land conservancies (also called land trusts), others not so familiar may be surprised at how effective they are in land preservation – there is a strong chance they have played a role in the protection of natural areas that many ML&SA members regularly visit. For example, the Grand Traverse Land Conservancy has assisted with the protection of the lake’s five islands and multiple other tracts in the watershed. Land conservancies are better suited than any other organization to work with private landowners to safeguard natural beauty and the conservation values of important lands. To do this, land conservancies use the following suite of tools to protect and steward land forever:

- ➔ Nature preserves or sanctuaries - Lands are acquired through donation or purchase to be used as a nature preserve or sanctuary. Often, these lands are open to the general public to visit and enjoy.
- ➔ Conservation easements - A legal tool, entered into voluntarily by the landowner and the land conservancy, which allows the land to remain in private ownership but permanently limits development to protect the conservation values of the property.
- ➔ Government assists - Conservancies often help local communities or the State of Michigan acquire public parkland and open space. Assistance can range from grant writing support to leading fundraising campaigns.
- ➔ Stewardship - For the lands that are owned and managed by conservancies or for the conservation easements they hold, stewardship is the term used for ongoing management and monitoring to protect the conservation values of those properties.
- ➔ Education - Whether providing education to landowners about conservation options or engaging community members in the stewardship of natural areas, conservancies educate people about the values of the natural environment.



Kayaking is possible on the underdeveloped Fern Lake.

Photo Credit: Nate Richardson

For more information on land conservancies, see the “Love your land? Consider a land conservancy” chapter in ML&SA’s publication “The practical guide to lakefront living: enjoying and conserving your lake”. In addition, the Heart of the Lakes organization has an online directory of land conservancies that allows searches by county or current location: directory.heartofthelakes.org. You can also contact info@heartofthelakes.org for questions or connections to a land conservancy. While this story is inspiring and remarkable, it is not a one-of. This kind of effort has been repeated tirelessly around Michigan to preserve the land and water we love. Through application of some of the lessons highlighted here (foresight, local support, good planning), all ML&SA members have the opportunity to help preserve the lands they love. 

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Meet Mango

By Jamie Paramski, Editor of The Gravel Laker
Gravel Lake Newsletter

If you took a ride through the Intercostal Waterway (aka the channel) this summer, chances are that a friendly, white duck swam up to your boat quacking. His name is Mango, and he is about a year-and-a-half old.

Owners Jeff and Jessica Hadley moved to a home about halfway down the channel with their family in May 2016. Their oldest daughter had been begging for a pet duck, and Jeff finally relented. They found Mango on an online garage site and picked him up, at four weeks old. They were told he was a White Pekin duck, but they are questioning that now given his appearance. They named him Mango because it reminds them of Florida, a place they enjoy very much.

In the beginning, baby Mango couldn't quack, and he slept in a Pack'n'Play. He only ventured outside a couple of times and seemed to be scared or overwhelmed. He would swim around in the bathtub, but never liked going out in the "real" water. That is, until he came to Gravel Lake. "Now he thinks he owns the channel," says Jessica. He spends time in the Hadley's lawn, the lawns of the homes across the channel, and the water in between the two.

Mango cannot fly, though he likes to "stand up" on the water and show you how he can flap his wings. According to the Hadley's vet, Mango probably would not learn to fly because ducks develop the urge to fly for their flight south. And their reason for flying south is purely for food purposes. Domesticated ducks get fed, so Mango will probably never learn to fly, though he can fall gracefully, as many birds with clipped wings can.

Mango spends his time on the shore or swimming around his little area of the channel, but he comes home at night for cracked corn and duck feed. He also likes dried meal worms, which are like candy for him. He also likes Cheerios and Lucky Charms puffs (but not the marshmallows). He loves being on the Hadley's pontoon boat, playing with his "siblings" (their two dogs), and bossing the geese around. If you put your hand in the water, he may peck at it, especially if you are wearing any jewelry.

Say hi to Mango on your next trip down the channel!



Photo Credits: Jamie Paramski





The ML&SA 56th Annual Conference: A Remarkable Success – Thank You!

CRYSTAL MOUNTAIN RESORT PROVIDES AN INSPIRATIONAL SETTING FOR A HIGHLY SUCCESSFUL 2017 ML&SA ANNUAL CONFERENCE

Article and Photos by Scott Brown
ML&SA Executive Director

Since 1961, Michigan Lake & Stream Associations has organized and conducted fifty-six consecutive annual conferences each with a special theme focused on exploring an array of diverse topics of particular interest to folks living on Michigan's spectacular inland waterfronts. On Friday and Saturday, April 21st and 22nd, 2017, ML&SA was pleased to again welcome over 250 dedicated folks who made the scenic trek up M-115 to Crystal Mountain Resort located near Thompsonville to learn more about "Bridging the resource gaps: enhancing the ability of lakefront communities to prevent and manage aquatic invasive species."

First and foremost, we would like to express our appreciation to each of our lake association representatives and individual members for their

willingness to commit the time and resources necessary to participate in our annual conference. We recognize that without the enthusiastic perennial support of our dedicated members, our annual conferences would not be possible. Thank you! We were also very pleased when so many of our conference participants shared their overwhelmingly positive comments regarding the conference venue, the food, the hotel rooms, the agenda, our speakers, and the positive aura surrounding the annual event. Every member of our ML&SA extended family came away from this particular conference with a renewed sense of spirit, hope, and purpose!

On behalf of our membership, our Board of Directors, and myself, I would also like to extend a huge ML&SA thank you to Beth Cook, our conference coordinator, for her painstaking commitment to ensuring that each and every one of our conferences is a great success. Thank you Beth, we couldn't do it without you!!!

We would also like to extend a heartfelt thank you from the entire ML&SA organization to each of our outstanding conference speakers and exhibitors who devoted considerable time and effort to making our 56th Annual Conference a great success. Your



ML&SA Annual Conference Coordinator Beth Cook and husband Randy at the 2017 annual banquet.

support of our annual conference and of our organization is greatly appreciated! We would also like to extend a hearty thank you to the hard working staff of Crystal Mountain Resort for their always positive attitudes, and for their detail oriented planning, preparation, and support that was instrumental in helping to ensure the success of our annual conference.

Opening our 56th annual conference on the morning of Friday, April 21st, keynote speaker Jon Allan, Director of the Office of the Great Lakes, delivered an outstanding presentation focused



Jon Allan, Director of the Office of the Great Lakes

together in continuing to strive for healthy and sustainable freshwater ecosystems that are such a valuable part of local, state, national, and international economies. Thank you Director Allan for your outstanding contribution to our 56th annual conference, and for everything you do to help ensure a healthy, viable future for our vast treasure of freshwater resources!



Lisa Brush, Executive Director The Stewardship Network

Providing a closely aligned encore to Mr. Allan's opening presentation, The Stewardship Network Executive Director, Lisa Brush, provided ML&SA conference plenary session participants with a unique perspective in regard to achieving a better understanding of the increasingly important role of individual stewardship and local collaborative efforts in working to preserve and protect our treasure of high quality water resources. Dedicated to championing community-based collaborative conservation efforts, the (Michigan-based) Stewardship Network works to connect, equip, and mobilize people and organizations to care for land and water in their respective communities. Emphasizing the importance of pro-active support and hands-on engagement from individuals and groups with diverse capabilities and perspectives, Lisa engaged the audience in an interactive exercise designed to help participants recognize just how important they are in local efforts to preserve and protect the natural resources that are such a vital component of our communities. Thank you Lisa for inspiring our audience, and for longstanding contributions to preserving our natural world!

The ML&SA 2017 Annual Conference was highlighted by many outstanding presentations offered by an array of distinguished speakers who addressed topics ranging from the important role of local units of government in protecting

on the importance and challenges associated with the need to preserve and protect our astounding legacy of freshwater resources that forms the essence of our increasingly "blue economy". Providing an audience of well over 120 conference participants with an overview of Michigan's 30 year water strategy, Mr. Allan reminded everyone of the importance of working

water resources; the Michigan Invasive Species Grant Program; how our neighbor state, Wisconsin, supports the fight against aquatic invasive species; bio-control of large-scale purple loosestrife infestations; aquatic plant identification; the status of invasive Starry stonewort in Michigan waters; our annual review of Michigan riparian and water law; community capital resources for the betterment of your lake; creating a fair and sustainable system for funding AIS management in Michigan; a new approach to controlling invasive mussel infestations; and lake associations working together to find solutions to the swimmers itch issue. ML&SA was very pleased with the response of folks to our conference agenda – each one of our sessions was very well attended by an enthusiastic audience who asked a lot of good questions.

Friday afternoon's conference agenda was anchored by a three hour workshop dedicated to exploring the thus far unfulfilled important role of local government entities in protecting Michigan's water resources. The well attended interactive session was led by Monica Day, MSU Extension Water Resources Educator, Lon Nordeen, ML&SA Board Director and Vice-President of the Pleasant Lake Property Owners Association, and Paul Sniadecki of the Eagle Lake Improvement Association. In addition to receiving a wealth of reference materials, participants were asked to share their experiences and ideas on how best to foster constructive relationships among various stakeholders at the local level

(Continued on page 34)



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It is estimated that there are more than 170 million Eastern hemlock trees in Michigan. Hemlocks can be found in abundance on wooded dunes and in our Northern forests, especially near rivers and streams. Hemlocks protect watersheds by stabilizing stream banks which keep water clean, and by casting deep shade which keeps water nice and cool. Do you like clean, cold water? Our state fish, the brook trout, sure does. Healthy riparian forests also provide a steady supply of much needed wood into streams. Fallen trees help gravel accumulate for spawning, create deep pools for low flow periods, provide refuge from predators and trap organic matter which provides forage for macroinvertebrates, which feed the fish. Wood in the water also slows stream speeds and decreases sediment movement, provides additional shade and forms pockets of cooler water lowering temperatures throughout the stream. These forests are also an important refuge during tough winter months. Their dense

foliage keeps snow depths shallow and provides thermal cover and shelter for many species of birds and mammals.

Like many Michiganders, I like to enjoy clean, cold water and wildlife at the same time, so I find myself generally in favor of our hemlock trees. Overall, Michigan is home to an aging hemlock resource which makes it more susceptible to stressors in the environment like drought. Deer love to eat hemlock seedlings, so fewer younger, healthier hemlocks are available to join the ranks. To make matters much worse, Hemlock Woolly Adelgid (HWA) has recently been detected in three counties in West Michigan. HWA is a tiny aphid-like insect native to Japan which has decimated hemlock populations in the Eastern US. HWA threatens to diminish habitat quality for fish and wildlife that depend on the ecosystems where hemlocks typically thrive. Invasive species mean big trouble for our forests, water resources, economy and quality of life. For more information on Hemlock Woolly Adelgid, including how to identify and report sightings, visit www.savemihemlocks.org. We need your help in detecting invasive species and other forest health threats on the landscape; a threat to our forests is a threat to our waters.

Forests for Fish is a new project funded through the Forest Service and administered by the DNR to connect foresters, loggers and fisheries biologists to discuss how forest management and wood in water can improve fish habitat. Forests for Fish also provides resources and incentives to landowners and anglers to better manage their forests for clean water and quality fish habitat. Check out Forests for Fish at www.Michigan.gov/forestsforfish and on Facebook.



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FRESHWATER DISCOVERY

By Nancy Washburne

As a certified scuba diver I have experienced some of the most spectacular underwater locations on earth, such as the Red Sea, the Great Barrier Reef, Truk Lagoon, Palau, Papua, New Guinea, the Solomon Islands, the New Hebrides, Fiji, Grand Cayman, Bonaire, Cozumel, and other Caribbean islands. However, I was not aware of the magical world that exists just below the surface of our magnificent inland lakes and rivers in my home state of Michigan.

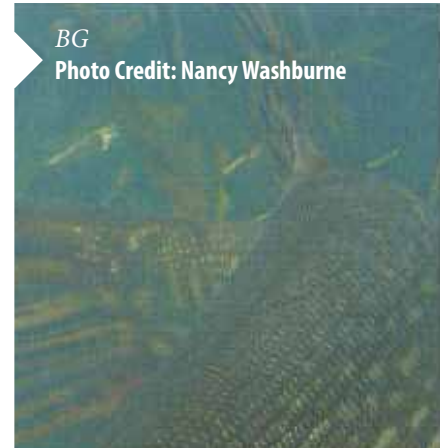
In 1992 when my son was 12, he asked to go camping, an experience no one in our family had ever had. My husband did not want to spend the night in a tent, but I told my son I would be glad to accompany him if I could take my snorkel and mask and explore Michigan's inland lakes.

It came as a big surprise in a state called a "water wonderland" that there was no information available from any source on which lakes were best to snorkel. The DNR and Michigan State's Fisheries and Wildlife Department knew the water chemistry and what fish were there, but from a recreational point of view, there was nothing. It was soon easy to see why---most people snorkeled in the Caribbean, Mexico or Hawaii---there was little or no interest or even any belief that Michigan's inland lakes had anything to offer.

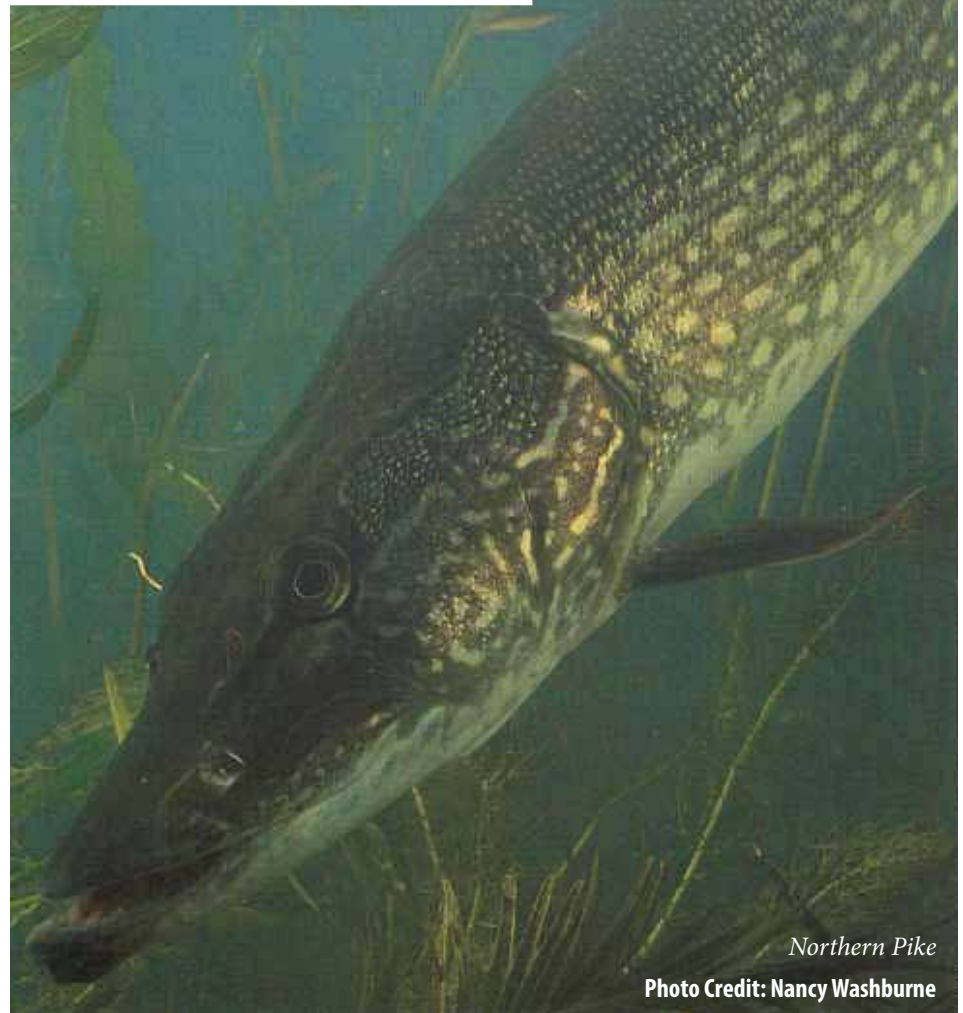
Initially, I thought this was probably because either the lakes were murky or there was nothing to see in shallow water. Indeed, the first few lakes I sampled were total losers, but then I got on a roll, and the next lakes were clear, colorful and full of excitement.

When I saw the infinite variety, I realized that a sampling of lakes would not do; I would not be satisfied or have the necessary knowledge until I checked them all. Since I was not allowed to enter private lakes, this immediately eliminated 10,000 lakes from my list. Still I was left with approximately 1000 public access lakes to explore. Snorkeling them all was a

(Continued on page 35)



BG
Photo Credit: Nancy Washburne



Northern Pike

Photo Credit: Nancy Washburne

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Dear MWA Members and Friends of Michigan's Lakes and Streams,

To our amazement, the Michigan DNR Parks & Recreation Division (PRD) has drafted a new strategic plan (Michigan Parks and Recreation Division Strategic Plan 2017-2022). It appears that one of the goals is to build DNR-owned public boating access facilities on all Michigan lakes 100 acres or more in size. The following is the letter I sent as the MWA response:

May 18, 2017

Ms. Michelle Wieber
DNR Planning
wieberm@michigan.gov

Dear Ms. Wieber:

The Michigan Waterfront Alliance (MWA) is an advocacy organization comprised of riparian property owners on hundreds of Michigan inland lakes who share the common goal of protecting Michigan inland lakes and streams. We are writing to express our serious concerns about the current draft of the DNR Parks & Recreation Division (PRD) strategic plan. We have reviewed the DNR-PRD draft and believe the following issues are not included in this document and deserve additional focus and attention:

1. The Michigan Legislature has long failed to provide an adequate and sustainable mechanism to fund Aquatic Invasive Species (AIS) prevention, management and control in our waters. It is time for our Legislature to finally recognize the scope and severity of the problem. We urge the DNR to work with the Legislature to secure funding for any initiatives to combat the problem, such as boat-washing stations or direct assistance to fund AIS management and removal. We offer to work cooperatively with the DNR to secure funding potentially from general fund appropriations, revisions to boat registration fees, or through creation of a user-funded mechanism for AIS management, potentially through establishment of a cooperative matching state grant program. We urge the DNR to work with the governor and your legislative partners cooperatively to bring overdue focus to this growing statewide problem.

2. It is important to impart the message that the current system is not only inadequate in the face of increasing AIS infestation but also is unfair to lakefront property owners who have been asked to shoulder the entire burden for AIS

management on their lakes even though the direct cause of the growing problem is ever-expanding recreational boating utilizing DNR-owned public boating access facilities.

3. In lieu of the invariable connection between public boating access sites and the introduction of AIS, MWA strongly encourages the DNR to consider a pause on funding new access site construction until the Department can evaluate data pertaining to both the condition, staffing, and usage of existing public access sites and the capacity of inland lakes to handle increased access and traffic in a sustainable manner. We highly recommend that the state invoke a strict "Do No Harm" approach with a goal of utilizing best practices for existing infrastructure before adding new capacity.

Thank you for considering these recommendations from MWA. We would welcome the opportunity to work with you on these and other critical issues that have a significant impact on the future of our Michigan inland lakes and waterways and would be happy to meet with the Department at your convenience in order to achieve an open and honest exchange of ideas in greater detail regarding how best to preserve and protect Michigan's vast legacy of freshwater resources.

Sincerely,

Bob Frye, President
Michigan Waterfront Alliance
P.O. Box 369
Fenton, MI 48430

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Frequently, lake associations, the press, educational institutions and others request permission to reprint an article from *The Michigan Riparian* magazine in a newsletter, newspaper, or other publication. In general, *The Michigan Riparian* magazine is relatively liberal in granting permission for such reprints. However, no such reprint can be done without the expressed prior written permission of the magazine.

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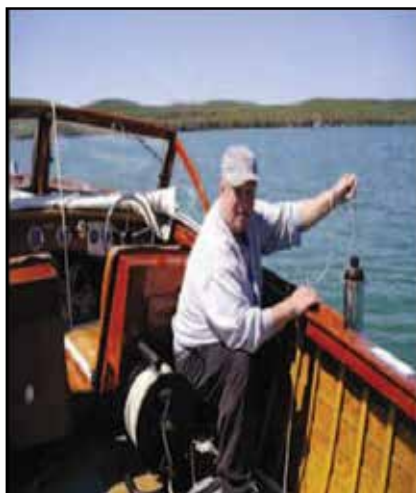
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Michigan's Inland Lake Improvement Act

A Half-Century of Cooperation and Accomplishment

By Tony Groves,
Water Resources Practice Leader, Progressive AE

For half a century the Lake Board Law has been one of the primary statutes used to manage Michigan's inland lakes. The law that allows for the establishment of a lake improvement board was originally known as the Inland Lake Improvement Act (Public Act 345 of 1966). The statute was later re-codified, as were a number of other environmental statutes, and became part of Michigan's Natural Resources and Environmental Protection Act (NREPA, Public Act 451 of 1994). Procedures regarding lake improvement boards are contained in NREPA Part 309, Inland Lake Improvements (MCL 324.30910 – MCL 324.30929). The complete text of the statute can be found at www.legislature.mi.gov. Hereinafter, the statute will be referred to as the Lake Board Law.

This article discusses some of the key provisions and mechanics of the Lake Board Law and provides some practical tips regarding lake board procedures.

STARTING OUT

Often, it is a lake association or group of concerned residents that begins the process to establish a lake board. On public lakes, lake improvement boards can be established by petition of two-thirds of the property owners bordering the lake or by a motion of a local unit of government. On private lakes, a lake improvement board can only be established by petition.

LAKE BOARD COMPOSITION

By statute, lake improvement boards are composed of the following:

- A member of the county board of commissioners appointed by the chairperson of the county board of each county affected by the project.
- A representative of each local unit of government or, if there is only one local unit of government abutting the lake, two representatives must be appointed.
- The County Drain (or Water Resources) Commissioner or his or her designee (or a representative of the county road commission in counties not having a drain commissioner).
- A waterfront property owner (riparian) appointed by the lake improvement board.

On lakes with a lake association representing a majority of lakefront property owners, the association may submit up to

three names for the riparian position on the lake board from which the lake board must make its selection. The waterfront property representative on the lake board has a four-year term.

Local units of government may appoint a member of the township board (or city council, or village council, etc.) to sit on the board, or the local units of government may appoint someone (such as a lake resident) to represent them.

LAKE BOARD PROCEDURES

On newly established lake boards, the first order of business is to appoint the riparian representative and a chairperson, secretary, and treasurer. In accordance with the Lake Board Law, lake improvement boards must do the following:

1. Retain a registered professional engineer to prepare an engineering feasibility report, an economic study report, and an estimate of project costs. The report must include a proposed special assessment district and a recommendation for the apportionment of benefits. The assessment district may include all parcels of land and local units benefited by the improvement project. The lake study is important in that it provides the basis for decision-making and future expenditures.
2. Publish notice and hold a public hearing to review the feasibility report, the proposed special assessment district, the apportionment of benefits, and to determine the practicability of the project. It is only after the public hearing that the lake board makes a decision on whether or not to proceed with the recommended lake improvement project.
3. If a project is determined to be practical and the special assessment district and apportionment of benefits are determined, the lake improvement board may then proceed to finalize the plans for the approved lake improvement project and prepare an assessment roll.
4. Before confirming the assessment roll, the lake improvement board must hold a hearing to review and hear any objections to the assessment roll. Notice of the hearing must be both published and mailed.
5. After the hearing, the lake improvement board may confirm the assessment roll and proceed with carrying out the approved lake improvement project.

(Continued on page 26)

Michigan's Inland Lake Improvement Act

(Continued from page 25)

Part 309, Inland Lake Improvements Natural Resources and Environmental Protection Act (P.A. 451 of 1994)

Chronological Summary of Lake Board Procedures

Receipt of petition, or motion of governing body

within 60 days

Lake Improvement Board established by resolution of local governing body

Lake Board

- (a) elects lakefront property owner representative
- (b) elects chairperson, secretary, and treasurer
- (c) retains engineer to prepare feasibility reports

Lake Board accepts reports and within 60 days holds hearing

public notice published at least 20 days prior

Public hearing on practicability of project

within 10 days

Lake Board determines practicability of project; if determined to be practicable, publishes resolution to that effect

Legal objections must be made within 30 days

Lake Board establishes special assessment district and prepares special assessment roll

public notice mailed and published at least 10 days prior

Public hearing on special assessment roll

Special assessment roll confirmed, and notice of confirmation published

Legal objections must be made within 30 days

Lake Board accepts bids; lets contract(s)

Lake Board computes entire cost of project

Lake improvement boards can undertake a broad array of projects, from dredging to watershed management. However, many lake improvement board projects focus primarily on aquatic plant control. These types of projects typically have multiple-year time frames with public hearing proceedings held periodically (every 5 or so years) to evaluate project costs and the necessity of continuing the project. Lake improvement boards are required by statute to adopt an annual budget. Once established, a lake improvement board remains in place unless the board is formally dissolved in accordance with the dissolution provisions of the Lake Board Law.

THE COMPETITIVE BIDDING PROCESS

For contract work such as plant harvesting, herbicide treatments or dredging, the Lake Board Law requires that lake boards advertise for bids and that a contract be let to the lowest bidder giving adequate security for the performance of the contract. However, a lake board reserves the right to reject any and all bids.

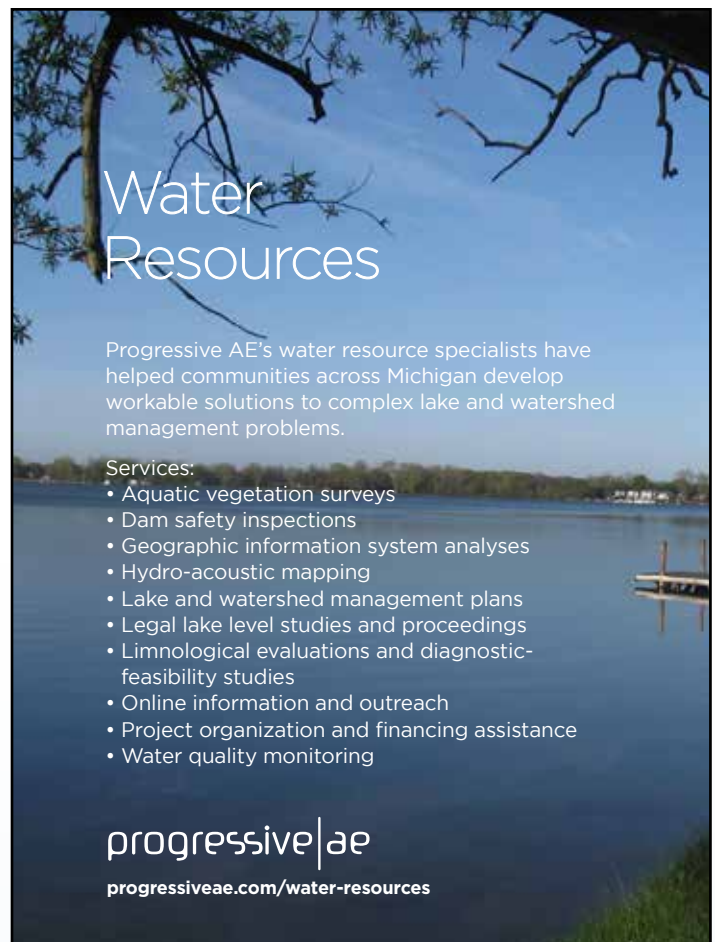
Lake boards also have the option of contracting directly with a local, incorporated, nonprofit lake association whose membership is open to all residents in the special assessment district, without advertising for public bids. If a lake board elects to contract with a lake association, care should be taken to ensure the association is properly insured and that the lake board is named as an additional insured. Finally, the association must provide adequate security for the performance of the contract.

LAKE BOARDS VERSUS TOWNSHIP BOARDS

The Township Special Assessment Act, PA 188 of 1954, was amended in 1994 to provide a mechanism to finance certain types of lake improvement projects, including aquatic plant control. With Act 188, projects are organized under an existing township board. With respect to process, the Lake Board Law and Act 188 are similar. Both the Lake Board Law and Act 188 provide for the establishment of a special assessment district to finance lake improvements. Both statutes also require a public hearing on the necessity (or practicability) of the project, and a public hearing on the special assessment roll. There is nothing inherent in lake board proceedings that make lake board projects more expensive to set up and administer.

With respect to procedure, neither statute is superior over the other. However, there are some instances where one act may be preferred over the other. For example, if a lake is located entirely within one township and the township board

(Continued on page 28)



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Michigan's Inland Lake Improvement Act

(Continued from page 27)

is willing to undertake the project, then Act 188 may be a more expedient way to proceed. If, on the other hand, a lake is located in several townships, Act 188 would require each township involved to undertake separate assessment proceedings which could be both time-consuming and cumbersome. In addition, no single entity would be administering the project. In situations in which a lake is located in more than one township, a lake board established under the Lake Board Law may be a better way to go.

Another issue that should be considered is that township boards often have a myriad of issues to address at township board meetings. Many of these issues will have little, if any, bearing on the lake in question. By contrast, lake boards have a single

purpose and focus, and the only issue on the table at a lake board meeting is the lake in question.

There is a misconception that lake board projects, because of the need for professional assistance, are more expensive than Act 188 projects. However, in practice, this is not the case. Whether a special assessment district is established by a township board or a lake board, it is important to recognize that funds collected are public monies that have been earmarked for a specific public improvement. Given that public funds are involved, it is prudent to solicit bids for contract work and to have a mechanism in place to ensure work is performed in accordance with project contract documents. This way, lake residents can be assured their money is being spent wisely. It is also prudent to have an unbiased evaluation of the lake conducted to determine the scope of proposed improvements. These tasks are generally conducted by an engineering or environmental consultant. It is not wise for a township board or a lake board to make these decisions without some professional guidance. In fact, when a township or lake board simply hires a contractor with no professional assistance, they often pay more. These costs can far exceed the costs of professional assistance. Cutting a contractor loose with the directive to improve the lake or "kill the weeds" could be a recipe for overcharging and over-treatment which ultimately is not good for the pocketbook or the health of the lake.

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POOLING RESOURCES

When establishing a special assessment district (either through the Lake Board Law or Act 188) there is always a concern that lake residents will lose control. However, it is important to realize that in the absence of a special assessment district, it is often difficult to garner sufficient funds to tackle a project. While some residents may contribute financially to help address a problem, many won't. A special assessment district allows residents to collectively pool their resources to achieve clearly defined objectives. The statutory hearing process ensures all interested property owners have an opportunity to provide comment on the scope and cost of the proposed improvements before any decisions are made. Often, input from the lake association is paramount to the final board decision. A special assessment district provides a means to build consensus and get the job done.

PRACTICAL CONSIDERATIONS

The Petition: If a project is proposed to be initiated via petition, the petition should clearly state that “a special assessment district will be established and that special assessments will be levied to finance the desired lake improvements.” Space should be provided on the petition for property owners to both sign and print their names. If property is jointly owned, all freeholders should sign the petition. Prior to circulation, the local unit(s) of government involved with the project should review the petition to ensure petition language is acceptable.

Enabling Resolution(s): The enabling resolution(s) adopted by the local unit of government(s) to establish a lake board should clearly authorize the lake board to determine the scope of the project, and to establish a special assessment district to finance the project.


Statutory Procedures: As in any special assessment proceeding, it is imperative that statutory procedures be followed closely. Meetings and hearings must be properly noticed and each step in the process must be documented. Procedural missteps can be costly, both in terms of time and money. When in doubt, contact a consultant or legal counsel with experience in lake board law.

Public Hearings: Under the Lake Board Law, hearings must be held to determine the practicability of the project and on the special assessment roll. It is often helpful to have the project consultant in attendance to explain the scope and costs of the project and to help answer questions. Although not required by statute, it is recommended that all property owners be given notice by first-class mail of the proposed scope and cost of the project prior to the hearing of practicability. This brings everyone to the table with “eyes

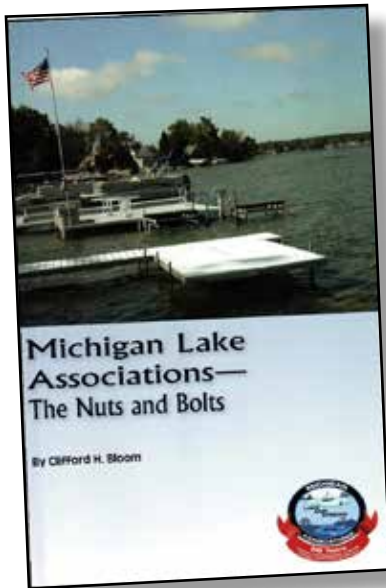
wide open” and allows for more fruitful and constructive deliberations at the hearing.

Special Assessments: When establishing a special assessment for a lake improvement project, care should be taken to ensure the district only includes those properties that directly benefit from the proposed improvements. Typically, this will include all waterfront properties and back lots with deeded or dedicated lake access. Spreading an assessment can be tricky business, and there is no sure-fire way to do it that will satisfy everyone. Assessments should be levied in a way that is fair, equitable and consistent. All similarly situated properties should be assessed the same, and the assessment should be reasonably proportionate to the benefit derived from the project. Often a simple assessment scheme is easier to administer (and easier for property owners to understand), than a more complex formula. For example, waterfront properties can be assessed one unit of benefit and back lots with deeded or dedicated access can be assessed at a lesser rate, perhaps one-half or one-quarter unit of benefit.

A HALF-CENTURY OF COOPERATION AND ACCOMPLISHMENT

The composition of lake boards with representatives from the lake and local governmental units helps to address one of the major obstacles to effective lake management—fragmented authority. A lake improvement board can provide an efficient way for local units of government and lake residents to work together toward a common goal. As such, a lake board is a unique partnership between lake residents and local government. In many communities, lake improvement boards are the primary vehicle under which lake improvement projects are implemented. The vast majority of lake board projects are renewed with broad support from lake residents. Since its enactment some fifty-plus years ago, hundreds of lake improvement projects have been successfully implemented under provisions of the Lake Board Law. 

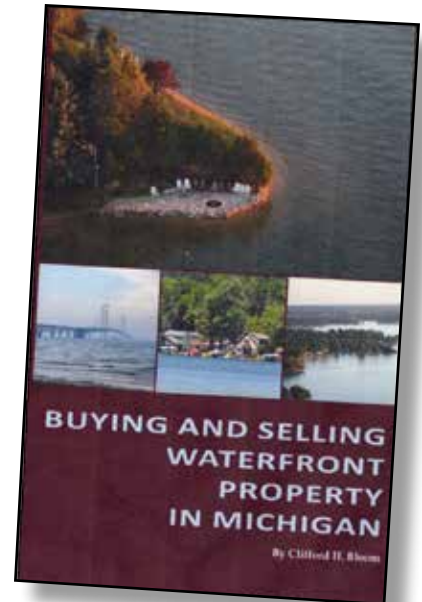
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FRESHWATER DISCOVERY

(Continued from page 21)

daunting task--I was a soggy mess for over 5 years until I finished the project in the fall of 1997, but the discoveries I made have made me a dedicated fresh water snorkeler.

I realized that we have been blessed with these magnificent resources, and it is our duty to preserve them for future generations in their most pristine form. I want our children to be exposed to this magical world. Once they know it, they will love it; and once they love it, they will protect it. I believe in the virtuous circle of exploration, education and conservation; and that is why I have dedicated the last quarter of a century of my life to educate people about the underwater wonders of our freshwater inland lakes and rivers in Michigan; hoping that this will inspire people to do the same all over the world.


After 24 years of field research, snorkeling over one thousand Michigan inland lakes, dozens of rivers, and taking over 700 hours of underwater video, I launched a new website to share with people this magical underwater world. At www.snorkelmichigan.com, you will eventually be able to observe firsthand 49 different species of fish and turtles being themselves in their natural habitat, getting up close and personal with nature. At this stage we already have 7 videos posted.

Direct observation is one of the major sources of empirical knowledge. When we consider that approximately 71% of our world is underwater, we realize the importance of snorkeling as a tool to learn about fish diversity, behavioral biology, underwater flora identification, and conservation, not to mention the great fun of experiencing nature's spontaneous events.

The beauty of this concept is that it applies to the entire demographic spectrum, in the entire Midwest, starting with the educational benefits for children and young kids, to the fabulous therapeutic and recreational benefits for adults and senior citizens.

How many of you have experienced the beauty of a peaceful stroll in the woods? Or the joy of bird watching?

Believe me when I tell you that effortlessly floating over an underwater garden, with a feeling of weightlessness, and the sensation of water on your skin, while enjoying the beauty of Fish Watching, is an experience that you are going to love.

Now it's the time to start planning your Freshwater Discovery Adventure, I highly recommend the middle of April to enjoy the amazing spawning rituals of several species. Happy Freshwater Snorkeling!! 



Northern Brown Bullheads
Photo Credit: Nancy Washburne



Picture Above
Spawning Male Black Crappie (Top)
Spawning Female Black Crappie (Bottom)
Photo Credit: Nancy Washburne



Red Ear Sunfish
Photo Credit: Nancy Washburne

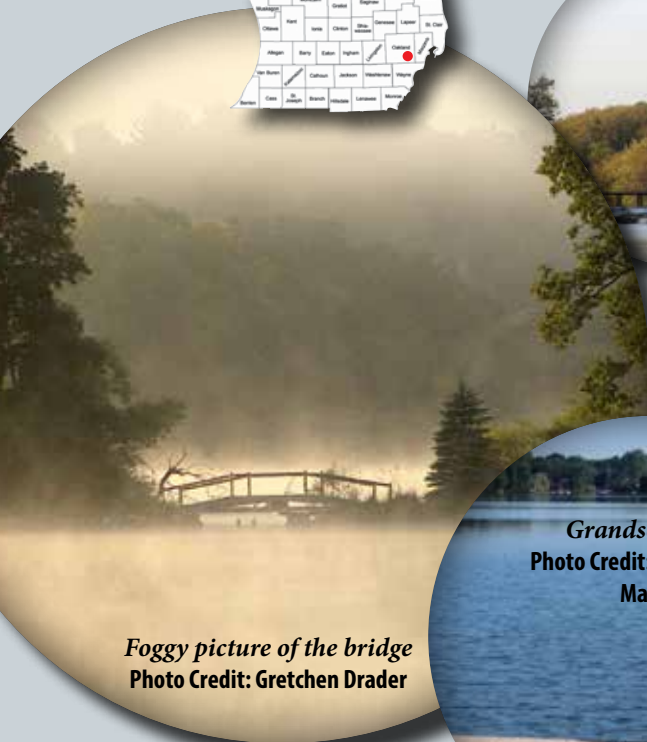


LAKE HAPPENINGS

Hot Air Balloon
Photo Credit: Gretchen Drader



Photo Credit: Doug Riech



Foggy picture of the bridge
Photo Credit: Gretchen Drader



Grandson Fishing
Photo Credit: Dana and Mark
Maletzke



Fall Kayaking
Photo Credit: Chelsea Einheuser

Photo Credit: Janet Riggs



View from Island
Photo Credit: Surendra Kelwala



Jeff's Winter Classic
Photo Credit: Chelsea Einheuser

LAKEVILLE LAKE

memories

The Roles of Aquatic Vegetation and Aquatic Vegetation Survey Methods

Jennifer L. Jermalowicz-Jones, PhD
ML&SA Chair, Science Advisory Board



OVERVIEW OF AQUATIC VEGETATION AND THE ROLE FOR LAKE HEALTH

The overall health of any lake is strongly connected to the type and density of aquatic vegetation present in the lake. Aquatic plants (macrophytes) are an essential component in the littoral zones of most lakes in that they serve as habitat and food for macroinvertebrates, contribute oxygen to the surrounding waters through photosynthesis, stabilize bottom sediments (if in the rooted growth form), and contribute to the cycling of nutrients. In addition, decaying aquatic plants contribute organic matter to lake sediments which further supports healthy growth of successive aquatic plant communities that are necessary for a balanced aquatic ecosystem. An overabundance of aquatic vegetation may cause organic matter to accumulate on the lake bottom faster than it can break down.

Aquatic plants generally consist of rooted submersed, free-floating submersed, floating-leaved, and emergent growth forms. The emergent growth form (i.e. cattails) is critical for the diversity of insects onshore and for the health of nearby wetlands. Submersed aquatic plants can be rooted in the lake sediment (i.e. pondweeds), or free-floating in the water column (i.e. coontail). Nonetheless, there is evidence that the diversity of submersed aquatic macrophytes can greatly influence the diversity of macroinvertebrates associated with aquatic plants of different structural morphologies (Parsons and Matthews, 1995). Therefore, it is possible that declines in the biodiversity and abundance of submersed aquatic plant species and associated macroinvertebrates, could negatively impact the fisheries of inland lakes. Alternatively, the overabundance of aquatic vegetation can compromise recreational activities, aesthetics, and property values. Similarly, an overabundance of exotic aquatic plant species can also negatively impact native aquatic

plant communities and create an unbalanced aquatic ecosystem.

Native aquatic plants are indigenous to a particular lake and each species has a unique function to perform within that lake. Native aquatic plants assume many different forms from tall growing plants that grow high into water columns to low-growing plants that stay close to the lake bottom. Native aquatic vegetation can grow out of control like exotic plants can, but they do not tend to form dense canopies. Examples of native aquatic plant species include Elodea, White-stem Pondweed, Southern Naiad, and White Waterlilies, among many others.

Exotic aquatic plants (macrophytes) are not native to a particular site, but are introduced by some biotic (living) or abiotic (non-living) vector. Such vectors include the transfer of aquatic plant seeds and fragments by boats and trailers (especially if the lake has public access sites), waterfowl, or by wind dispersal. In addition, exotic species may be introduced into aquatic systems through the release of aquarium or water garden plants into a water body. An aquatic exotic species may have profound impacts on the aquatic ecosystem. Examples of exotic aquatic plant species include Eurasian Watermilfoil, Curly-leaf Pondweed, Starry Stonewort, Purple Loosestrife, and Phragmites to name a few.

AQUATIC VEGETATION SAMPLING METHODS

There are three aquatic vegetation survey methods commonly used to survey aquatic vegetation communities in inland lakes. These methods are useful tools for determining the total cover of both native and invasive aquatic plant species and assist lake managers with treatment protocols and lake communities with monitoring changes in aquatic plant distribution with time.

(Continued on page 35)

The ML&SA 56th Annual Conference:

A Remarkable Success – Thank You!

(Continued from page 19)

in order to ensure that future generations will enjoy the same relatively high quality inland lakes, streams, rivers, and wetlands that we have all come to love. A special thanks to Monica, Paul, and Lon for all of their hard work in planning and implementing an outstanding local government workshop!

In addition to a great meal prepared and served by the conscientious staff of Crystal Mountain Resort, the Friday night annual banquet featured a panel discussion focused on the importance of effectively working together to achieve success in local efforts designed to preserve and protect our state's incredible legacy of high quality water resources. Emphasizing the need to cast aside petty personal and political differences and to do what is ultimately right to protect the high quality of our water resources, the panel described the enthusiasm and sense of community that has fueled the high level of collaboration and success that has thus far been achieved in Benzie County to protect the incredibly beautiful water resources that grace the landscape of northwest Michigan. Special thanks go out to Ed Hoogterp, Benzie County Drain Commissioner, John Ransom of the Benzie County Conservation District, and Archibald Jones (a. k. a. long-time ML&SA friend, Dr. Stacy Daniels), the 19th century founder of the now 144 year-old Benzie County River Improvement Company, for their unique and considerable contributions to the overall success of our banquet and of our annual conference!

ML&SA is also proud to announce that our annual "Master's Jacket" award was conferred upon Ms. Sharon Wagner at our Friday evening banquet. Serving as our Stanton-based Central Office manager, and as Publisher of *The Michigan Riparian* magazine, Sharon's dedication and commitment over the course of the past eight years in helping to

facilitate steady improvements to our organization, and in the overall quality of our unique lakefront living dedicated magazine are greatly appreciated. Thank you, Sharon, for your considerable contributions to our now 56 year old organization!

The Friday night annual banquet also provided ML&SA with a great opportunity to publicly announce that our 2017 "Lake Association of the Year" award was being presented to the Crystal Lake and Watershed



Monica Day, MSU Extension Water Resources Educator, talks about the important role of local governments in preserving and protecting our freshwater resources.

Association. Serving as a great example of the power of voluntary lake associations to successfully preserve and protect the quality of their respective inland lakes and their surrounding watersheds, ML&SA commends the leadership and members of Crystal Lake and Watershed Association.



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THE AQUATIC VEGETATION ASSESSMENT SITE (AVAS) SURVEY METHOD:

The Aquatic Vegetation Assessment Site (AVAS) Survey method was developed by the Michigan Department of Environmental Quality (MDEQ) to assess the presence and percent cumulative cover of submersed, floating-leaved, and emergent aquatic vegetation within and around the littoral zones of Michigan lakes. With this survey method, the littoral zone areas of the lakes are divided into lakeshore sections approximately 100 - 300 feet in length. Each AVAS segment is sampled using visual observation, dependent on water clarity, and weighted rake tows to verify species identification. The species of aquatic macrophytes present and density of each macrophyte are recorded onto an MDEQ AVAS data sheet. Each separate plant species found in each AVAS segment is recorded along with an estimate of each plant density. Each macrophyte species corresponds to an assigned number designated by the MDEQ. The MDEQ has designated density codes for the aquatic vegetation surveys, where a = found (occupying < 2% of the surface area of the lake), b = sparse (occupying 2-20% of the surface area of the lake), c = common, (occupying 21-60% of the surface area of the lake), and d = dense (occupying > 60% of the surface area of the lake). In addition to the particular species observed (via assigned numbers), density information above is used to estimate the percent cumulative coverage of each species within the AVAS site. If shallow areas are present in the open waters of the lakes, then individual AVAS segments are usually sampled at those locations to assess the macrophyte communities in offshore locations. This is particularly important since exotics often expand in shallow island areas located offshore in many lakes.

The MDEQ AVAS survey of a lake will result in a table showing the relative abundance of each aquatic plant species found and a resultant calculation showing the frequency of each plant, and cumulative cover. A map showing the locations of each species is also provided and is used to generate the tabular data.

THE GPS POINT-INTERCEPT GRID SURVEY METHOD

While the MDEQ AVAS protocol considers sampling vegetation using visual observations in areas around the littoral zone, the Point-Intercept Grid Survey method is meant to assess vegetation throughout the entire surface area of a lake (Madsen et al. 1994; 1996). This method involves conducting measurements at Global Positioning Systems (GPS)-defined locations that have been pre-selected on the

computer to avoid sampling bias. Furthermore, the GPS points are equally spaced on a map. The points should be placed together as closely and feasibly as possible to obtain adequate information of the aquatic vegetation communities throughout the entire lake. At each GPS grid point location, two rake tows are conducted and the aquatic vegetation species and abundance are recorded. In between the GPS points, any additional species and their relative abundance may also be recorded using visual techniques. This is especially important to add to the GPS Point-Intercept survey method, since Eurasian Watermilfoil and other invasive aquatic plants may be present between GPS points but not necessarily at the pre-selected GPS points. Once the aquatic vegetation communities throughout the lake have been recorded using the GPS points, the data can be placed into a Geographic Information System (GIS) software package to create maps showing the distribution of a particular species. The GPS Point-Intercept method is particularly useful for monitoring aquatic vegetation communities through time and for identification of nuisance species that could potentially spread to other previously uninhabited areas of the lake. A large number of grid points (Figure 1) is recommended for a water body to dramatically increase the sample size necessary to reduce variability among lake sampling sites and to yield an accurate estimate of cover by invasive aquatic plants.



Figure 1. Aquatic vegetation sampling point locations in Houghton Lake (June 22-July 1, 2016). Note: The closely-spaced points represent shallow areas and the more distant-spaced points represent the deep water sampling locations.

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*Kristen and
Her Family 2014*
Photo Credit: John Barczyk

John Diving
Photo Credit: Fred Freeh



Lucky Raft

By John Barczyk

When we bought our old cabin on Lakeville Lake back in 1983, it had a rather rickety old wooden deck that we replaced with a new one. With the help of a chainsaw, I carved up a square section of the old deck, put a few plastic barrels under it and floated it out to be our family swimming raft. A few weeks later we decided that I anchored it too far out for the kids and moved it about eight feet closer to shore.

A week after that, our daughter Kristen and I were sunning on the raft when we heard a roaring motor growing increasingly louder by the second. Startled, we looked up and saw a boat speeding right at us. But there was nobody in the boat. In a split second the boat passed us, going right over the spot where the raft had been a week earlier, and continued toward our neighbors, the Johnsons', dock. The boat ran right smack into their dock and was sent skyward by the canoe resting on top of it. The driverless boat eventually landed safely right in the middle of Johnsons' backyard. (The Johnston cabin is now owned by Tony and Corrine Diemert).

We tore the old cabin down a couple of years ago, but after nearly 35 years, that dock is still floating off our shore. Could be a lucky raft.



Photo Credit: John Barczyk

The Roles of Aquatic Vegetation and Aquatic Vegetation Survey Methods

(Continued from page 35)

THE GPS BENTHIC SCANNING METHOD:

While the MDEQ AVAS protocol considers sampling aquatic vegetation using visual observations in areas around the littoral zone, the GPS Benthic Scanning Survey method is meant to assess aquatic plant biovolume throughout the entire surface area of a lake. This method involves conducting a scan of the entire bottom of a particular lake. Once the aquatic vegetation communities throughout the lake have been recorded using the GPS Lowrance® HDS 8 or 9 unit, the data can be uploaded into a Geographic Information System (GIS) software package (BioBase®) to create maps showing the aquatic vegetation biovolume and bottom hardness and depth contours. The GPS Benthic Scanning method is particularly useful for monitoring aquatic vegetation communities through time and for determining the possible impacts of various aquatic vegetation treatment methods on overall aquatic plant biovolume. The benthic scan will result in a whole-lake aquatic vegetation biovolume map (Figure 2).




Figure 2.

Aquatic vegetation biovolume scan map of Houghton Lake (June-July, 2016). Note: The blue color represents areas that are not covered with aquatic vegetation. The green color represents low-growing aquatic vegetation and the red colors represent high-growing aquatic vegetation. This scan does not differentiate between invasive and native aquatic vegetation biovolume which is why the GPS-point intercept survey is also executed in concert with the whole-lake scan.

CONCLUDING REMARKS:

Many large lakes may require a combination of the aforementioned aquatic vegetation survey methods. All of the methods are useful for determining the scope of invasive aquatic vegetation but each has additional attributes


that allow for more precise determination of aquatic plant locations and cover. All of the survey methods may be used as tools for evaluating the baseline and post-treatment conditions of aquatic vegetation communities prior to and after improvement methods have been executed. The GPS Point-Intercept surveys can be easily conducted along with the benthic scans and this allows for precise determination of the size and shape of individual weed beds. 

Literature Cited:

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HELP SAVE OUR INLAND LAKES and STREAMS

Dear Michigan Lake and Stream Associations, Members and Friends: CALL TO ACTION

Your inland lake, pond, stream and associated waterway may already, or soon could be, seriously impacted by Aquatic Invasive Species (AIS)! The rate of AIS infestations in Michigan have not shown a decline over the last decade, despite communications, educational efforts and studies.

In view of the increasingly grim condition of our lakes and waterways, the Board of the Michigan Waterfront Alliance has resolved to take on a daunting task: **The improvement of State of Michigan policies and laws concerning the identification, confirmation, protection and management of AIS in our critical inland lakes and waterways.** Our focus will be on:

- Development of a fair, shared cost burden to manage inland lakes
- Confirming AIS has had negative impacts to the MI environment and economy
- Identify and Advocate for real solutions to remedy the “Pathways” for infestation
- Effect real changes in the DNR, DEQ, Michigan Waterways Commission, other groups, and the Michigan Legislature.

To help your Michigan Waterfront Alliance and its Lobbyist convince the Michigan Legislature, the Michigan Waterways Commission, the DNR and Governor Snyder to take more direct action, Your Mission is to fill out the Support information at the end of this paper and send it to the Michigan Waterfront Alliance Lobbyist: Karoub Associates, C/O Matt Kurta, 121 W Allegan St, Lansing MI 48933. It is vital that we have the support of as many of individuals and Lake and Stream Associations as possible!! Informal contact with key members of the State Legislature and Agencies have signaled their willingness to explore desired solutions once they are aware of the magnitude of interest by Michigan Property Owners and organized groups.

BACKGROUND: Tourism contributed an estimated \$22B dollars of annual revenue to the state economy in 2015. Inland lakes also contribute a large value to the economic vitality of the Michigan economy (especially in rural areas). A 2008 study estimated the value of shoreline property on MI inland lakes at \$200B and annual tax revenues of \$3.5B which directly contribute to local schools, local, county and state governments and services- (N. Kevern-Project Report-Value of Riparian Property on MI Inland Lakes- MCNALMS). In addition, substantial state revenue is added rental fees, owner upkeep, maintenance, and support industries associated with inland lake properties (rental, real estate, groceries, supplies, marinas, boat repair etc.) at Michigan's 10,000 inland lakes.

Tourism, fishing, boating and lake ownership depend on maintaining the ecological and visual vitality of Michigan's inland lake environments. People do not want to visit, rent or own property on a lake or water body choked by nuisance weeds, zebra mussels and other aquatic invasive species (AIS). These AIS are plants, animals and even microbes that are introduced from other regions and can aggressively out-compete native species. AIS are spread mostly as a result of human activities such as putting unclean boats, fishing gear and bait into uncontaminated lakes, streams and wetlands.

STATUS: AIS are rapidly spread throughout Michigan's Great Lakes and 10,000 inland lakes and is recognized as a significant ecological, economic/fiscal, and quality of life THREAT. The State Government is aware of the AIS issue and possible solutions and funding options; August 21, 2013 report-MI Aquatic Invasive Species Advisory Council-Report and recommendations. The MI AIS State Management Plan 2013 Update (pg-15) listed a \$5.7B annual impact due to AIS!

However, there has been no coordinated or sustained state and local level effort to track and identify the spread of AIS, share data with residents, agree on statewide solutions, nor invest in proven ways to halt the spread of AIS on the Great Lakes AND our 10,000 lakes and ponds, rivers and streams. The current AIS State Management Plan (SMP) is a start but it places the entire burden of AIS management on lake property owners. Property owners and residents currently spend more than \$25 million annually (2013 MI AIS Management Plan, 2013-pg-15) on lake management programs in an attempt to stem the spread of AIS, while the DNR and DEQ dedicate



“ We need to
change the way
we do business
and make critical
investments if
we want to save
Michigan lakes ”

HELP SAVE OUR INLAND LAKES and STREAMS

limited funding to reviewing lake treatment permits, research and education. AIS is spreading and will cause further damage the quality of our inland waters and having property owners pay for all of the inland lake management is not sustainable.

The Michigan DNR Division of Parks and Recreation continues to recommend the development of new Public Access sites, as well as the renovation and expansion of existing Public Access Sites on Michigan inland lakes, despite the known fact that boat launch sites are the top “Pathway” of AIS to inland lakes! Do we have data or scientific analyses to justify this expansion when there is no boat wash protection to reduce the spread of AIS? For many existing boat launch sites, we do not have accurate counts of the number or types of boats that are launched. Therefore, the State cannot scientifically assess boating demand or the adequacy of the supply of launch capacity on Michigan inland lakes. It may be possible that some existing Public Access Sites should be closed because use does not justify the capital and operating costs. Nor could we identify or obtain a comprehensive analysis of the estimated operating costs and needed capital improvements for all public access sites that the Parks and Recreation Division operates. The Michigan Parks and Recreation Division has not made available a scientific, data-based Public Access Needs Assessment, nor plans (other than education) to finance efforts to reduce the introduction of AIS and to control them in lakes where they operate Access Sites. Ironically, while state departments claim they lack resources to provide even minor assistance to local residents to stem the spread of AIS in inland lakes, the state still spends resources expanding state boat launch sites on lake after lake without evaluating objective criteria such as whether additional launch facilities are needed and how can we protect from the spread of AIS and/or support lake management efforts to reduce AIS impact?

SUGGESTED ACTIONS: We need to change the way we do business and make critical investments if we want to save Michigan lakes, waterways and sustain our tourism and lake economies! An honest airing of the real issues needs to take place at the highest levels and solutions identified.

- Development of a fair, shared cost burden to manage inland lakes is long overdue. Encourage the passing of Michigan legislation similar to that in the States of MN, WI, IN, ME, NH, WA, VT, FL, CA, LA, TX, and ID requiring owners of boats registered and unregistered in Michigan to acquire and attach to their boats

or trailers a sticker with all of those revenues going toward the prevention and eradication of AIS in inland lakes

- We are well behind compared to neighboring states with respect to state investment in AIS treatment and eradication. Learn from other states that have developed comprehensive AIS programs.

- Admit there is a problem with the spread of AIS and that responsibility for management and eradication should be shared by state government, local government, the boating public, and lake/water property owners, not just the latter!

- Identify and quantify the AIS problem at local and statewide levels, determine the threat to the Michigan economy of this danger!!!

- Determine realistic options to slow the spread of AIS. All state agencies and associated contractors need to adopt a DO NO HARM approach to protect the Great and inland lakes. This includes inspections and boat wash stations at all public boat launch site as other states do.

- Develop a plan involving state, and local agencies to undertake direct, concrete actions to halt the spread of AIS, such as boat wash stations, carrying capacity studies, responsible management of boat launch access sites, and lake monitoring and management.

- Focus on protecting the public trust, riparian interests, and all the recreational and economic benefits of Michigan's inland lakes, rather than concentrating on expanding boating access at all costs and without regard to eliminating AIS pathways to our lakes and streams.

- Strengthen the provisions of MCL 324.41325, Boat, boating equipment, or boat trailer with aquatic plant attached; placement in state waters prohibited; order to remove aquatic plants; notice; posting; violation as civil infraction penalty.

REFORM OF THE MICHIGAN WATERWAYS COMMISSION: The Michigan Waterfront Alliance supports recreational boating and recommends:

- Representation of inland lake owners on the Michigan Waterways Commission

- Redirection of a portion of existing state funding from various sources such as boat sticker fees and the Marine Fuel tax for lake and water preservation

- Creation of a cost-sharing grant system for AIS management for all lakes and streams with AIS infestation

- Evaluation of current launch sites state-wide before funds are spent on expansion

- Evaluation of Capital Investments needed to eliminate current launch sites as Pathways to future spread of AIS in Michigan

FOR LAKE ASSOCIATIONS

I confirm that the _____ Association supports the above resolution. Our lake community has _____ Property Owners/residents.

I hold the position of _____ for our Association.

Our Lake Association mailing address is:

The email address or phone number to contact me is:

Date signed: _____

Mail signed resolution to:
Karoub Associates
C/O: Matt Kurta
121 W. Allegan Street
Lansing, MI 48933



The Practical Guide to Lakefront Living:

Enjoying and Conserving Your Lake

Lake ecology, natural shorelines, swimmers itch, fishing with conservation in mind, e-coli bacteria, dock placement, riparian rights, algae blooms, Michigan boating law, watershed management, aquatic invasive species and Special Assessment Districts are just a few examples of the important topics that are covered in this unique guidebook that was written and published by ML&SA with Michigan lakefront home owners in mind!

The new guide book may be purchased by visiting the Books and Publications purchase page on the ML&SA website available at www.mylsa.org, or by contacting ML&SA Central Office Manager Sharon Wagner at swagner@mlswa.org.

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The ML&SA 56th Annual Conference:

(Continued from page 34)



Megan Erin Cook

for their outstanding success!!! The leaders and members of the Crystal Lake and Watershed Association have created a great example for others to follow!

The annual banquet also provided a special opportunity for Michigan Lake and Stream Associations to publicly announce the creation of the **Megan Erin Cook Memorial Scholarship Program** that is dedicated to the

loving and lasting memory of the gifted and highly talented sixteen year old daughter of Beth and Randy Cook who tragically lost her life in a senseless car crash last November. Two scholarships will be funded by ML&SA at an as of yet to be determined amount, and will be awarded on an annual competitive basis to fund graduate level research projects focused on improving our knowledge of freshwater science.

The Saturday, April 22nd annual conference agenda was anchored this year by a workshop dedicated to exploring the increasingly important topic of creating a fair, equitable and sustainable system in Michigan for funding inland lakes aquatic invasive species management. For far too long, the entire financial burden for aquatic invasive



Jane Perrino, Benzie County Conservation District, and Ed Hoogterp, Benzie County Drain Commissioner, talk about the need to establish an equitable and sustainable system for funding AIS management in Michigan waters.

species management has fallen on the shoulders of our lake associations whose members are assessed by Special Assessment Districts enacted through their local townships, or by Inland Lake Improvement Boards. Special thanks to Ed Hoogterp, Benzie County Drain Commissioner, Jane




Michigan Clean
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Perrino of the Benzie County Conservation District, Paul Sniadecki, long-time lake conservation activist from the Eagle Lake Improvement Association, and Stacy Daniels of the Crystal Lake and Watershed Association for their time and commitment in making this very well attended workshop a great success! ML&SA shares your commitment to finding an equitable, fair and sustainable solution to this long standing issue!

And last, though certainly not least, we would like to extend a special thank you to the MiCorps Cooperative Lakes Monitoring Program (CLMP) support team for achieving yet another flawless annual volunteer training event! Attended by over 40 people, the 1½ day event provided inland lake water quality parameter monitoring training to an enthusiastic group of volunteers. Congratulations to Marcy Knoll Wilmes, MDEQ program coordinator, Dr. Jo Latimore of MSU Extension, Dr. Paul Steen of the Huron River Watershed Council, Erick Elgin of MSU Extension,

and to Jean Roth, ML&SA CLMP administrator, for your dedication and hard work in making the MiCorps CLMP program one of the most successful in the nation!

To find out more about the ML&SA 56th Annual Conference, including a complete agenda, you may download the conference program guide by pointing your browser toward <http://www.mymlsa.org/wp-content/uploads/2017/05/2017-MLSA-Annual-Conference-Program-Guide.pdf>

Michigan Lake and Stream Associations encourages the readers of *The Michigan Riparian* to plan on attending our 57th Annual Conference that will again be held at the splendid **Crystal Mountain Resort** on **Friday and Saturday, April 20th & 21st, 2018**. We hope to see you there! 

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The Importance of Liability Insurance for Riparians

By Clifford H. Bloom, Esq.

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Liability insurance is certainly important for anyone in Michigan who owns property, runs a business, has a vehicle or simply interacts in the modern world. Good liability insurance is even more important for those people lucky enough to own a waterfront property.

Obviously, the potential hazards associated with a waterfront property are generally greater than for conventional properties. People can drown in lakes and rivers, be injured while diving off boats and docks, be hit by a boat, be injured by nails or screws and sharp corners on docks or swim rafts and face a variety of other potential hazards along the waterfront. Whether the riparian property owner is negligent or not, good and sufficient liability insurance is very important. If a riparian is sued, found liable and owes a large judgment, the riparian landowner's life savings could be wiped out if there is no insurance coverage or the insurance coverage is inadequate. Even if the riparian potentially successfully defends against a lawsuit, good liability insurance will cover the attorney fees and costs incurred in defending against the liability claim in most cases.

In today's litigious society, a liability insurance policy for a waterfront property with maximum coverage of \$300,000 or even \$500,000 is probably not enough. Ideally, the liability insurance coverage for a riparian property should be at least \$1,000,000, \$2,000,000 or even more. Quite often, a riparian property owner can purchase an umbrella liability policy that "goes on top of" the underlying liability insurance.

It is often prudent for a riparian landowner to meet periodically with their insurance agent for an "inventory" of

all the various items and activities that should be covered by the insurance policy.

Vacant waterfront property should also be insured, particularly if a dock, swim raft or boat is involved. Sometimes, a homeowner's policy for the property owner's main house will cover a vacant waterfront property located elsewhere, but not always. Such coverage should also be reviewed with the riparian's insurance agent to ensure good and adequate insurance coverage for the vacant waterfront parcel.

It is also important to clarify with your insurance agent what matters and items are covered for liability insurance purposes. In addition to the cottage or cabin on a waterfront property, the liability insurance should also cover the waterfront itself, any dock or pier, private roads utilized jointly, swim rafts and other waterfront accessories. In most cases, a general homeowner's liability policy will not cover boats or watercraft, which typically requires either a separate insurance policy or a special policy rider.

Good liability insurance can cover thousands of different situations or scenarios that a riparian property owner could not possibly envision. Good liability insurance can give a riparian property owner piece of mind. *R*

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