

FALL
2012



Vol. 47 No. 4

THE MICHIGAN RIPARIAN

www.mi-riparian.org

RIPARIAN (ri-'pair-ee-en) adj. Relating to or living or located on the bank of a natural watercourse, such as a river, or of a lake or a tidewater.

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MAGICIAN LAKE

Magician Lake is located six miles northwest of Dowagiac. It covers approximately 524 acres with 85% in Cass County, and the remaining 15% in Van Buren County. The lake is spring fed with an average depth of 20 feet and is 60 feet at its deepest point. An abundance of warm water fish includes bluegill, yellow perch, walleye, bass and northern pike. With three islands covering nearly 70 acres of the lake, Magician Lake is magic, indeed!

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THE MICHIGAN RIPARIAN (ISSN 0279-2524) is published quarterly for \$3.50 per issue by the Michigan Lakes and Streams Foundation, a Michigan non-profit corporation. Periodical postage is paid at Lansing, Michigan, and additional mailing offices.

POSTMASTER:

Send address changes to:

The Michigan Riparian
300 N. State St., Suite A, Stanton, MI 48888

THE MICHIGAN RIPARIAN is the only magazine devoted exclusively to the protection, preservation and improvement of Michigan waters and to the rights of riparian owners to enjoy their waterfront property.

THE MICHIGAN RIPARIAN magazine is published quarterly and is mailed to subscribers in the Winter, Spring, Summer, and Fall each year.

THE MICHIGAN RIPARIAN
PUBLISHING OFFICE
300 N. State St., Suite A
Stanton, MI 48888

PUBLISHER • Sharon Wagner
PHONE 989-831-5100
E-MAIL swagner@mlswa.org

SUBSCRIPTION RATES (4 issues/year)
Individual annual subscription: \$14
Lake association quantity subscriptions: \$8

ADVERTISING RATES
Advertising rates sent upon request
or available on website.

DEADLINES: August 15 for Autumn issue
Dec. 15 for Winter issue
March 15 for Spring issue
May 15 for Summer issue

Printed by Spartan Printing, Lansing, Michigan

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FROM THE PUBLISHER

Let me tell you about my **LAKE**



One of the goals of every issue of the Michigan Riparian is to bring current challenges and concerns to your attention and to equip you with solutions to address them. Our experts are represented in many areas of aquatic stewardship, and they generously share their specialized knowledge with us.

There is one other source that provides us with valuable information, problem-solving and insight that should be recognized, and that is our readers. Your stories, rich histories, struggles and solutions (along with some very interesting pictures) equip us even more. This issue is no exception. It was such a joy to work with all the people from Magician Lake, hear about their passion and love for their lake and the many tales they all hold near and dear to their hearts.

So I encourage you waterfront owners of lakes, streams and rivers to drop us a line. Share with us your lake or stream's unique history. Tell us the fascinating stories that have been passed down through the generations. Send in pictures of the beauty that you are fortunate to view every day. Wouldn't it be great to see your lake on the front page or featured in the Love My Lake or Lake Happenings sections of The Michigan Riparian? I look forward to seeing them!

-publisher, Sharon Wagner

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MAGICIAN LAKE

Publisher's Note: The story of Magician Lake is told from several sources; the Magician Lake website, long-time residents Charlotte Poole and Dick Judd; Kay Dukesherer, Magician Lake board member, and Jim Sullivan, Magician Lake Association President.

The origin of the name "Magician Lake" has confounded residents for years and multiple answers have been given. Here's another theory but it may be the most feasible as it actually comes from an article titled "Looking Back in Dowagiac" in the Dowagiac Daily News, dated January, 1916. In 1916 there were still occasional Indian camps on the lakes according to at least one grandfather.

"Magician Lake is a strange body of water, for while ice formed to a thickness of 12 inches at its east end this winter, it has not attained a thickness of more than six inches at the west end. The lake has no inlet and the variation in temperature comes from big springs which are numerous at the bottom and along the sides and very numerous over the western half of the lake.

It is said the Indians were afraid of the lake in winter, for its ice was treacherous and unsafe. They seldom fished through the ice at the upper end and seldom crossed the lake there in the winter, for wherever there was a spring underneath the ice was thin and drownings frequent.

From their superstitions connected with the lake, for they knew not the cause of these accidents, they gave it the name which, in time, grew to be 'Magician' in the white man's tongue. It has always gone by that name with the exception of a short time when it was known as Gould's Lake after the pioneer Gould who settled at the east end, and father of Gilbert Gould. Two ice houses were filled at Magician Lake last week, the one at Gregory's beach and the one at

Joseph Conklin's, the latter being for private use."

The earliest property to be developed on Magician Lake was 'Magician Beach Resort' on the north side of the lake. This later became known as 'Happyland' according to an article in the March 2, 1910 Dowagiac Daily News. A.E. Gregory... "coming to Michigan in 1846 with his parents he located in Keeler Township. The old map of Cass, Van Buren, and Berrien Counties published in 1860 shows the Gregory's....owners of a section of land on the north shore of Magician Lake". He developed 'Magician Beach Summer Resort', owned by him and leased to the resorters. "In the early 1890s, ten men, mostly Dowagiac citizens, banded together and erected a clubhouse on lands leased to them by Mr. Gregory. Soon after, cottages were built and in the space of a few years Magician Beach became a lively little resort."

Just a couple years later, in 1895 nine Dowagiac businessmen formed an Association to purchase Maple Island for their private resort. They bought the island from Bartholomew and Meemy Jones for \$700. They subsequently purchased from Patrick Curran, for \$300, a right-of-way to the Island and a strip of land along the mainland. The original purchasers were: T.W. Jones, Frederling Lee Colby, W.H. Palmer, Will F. Hoyt, Fred H. Baker, John A. Root, William F. Judd, Volney A. Osborn, and A.B. (Archie) Gardner.

The development of Magician Lake property was underway with more resorts to come. (Editor's Note: Of these nine original families, the families of Dick Judd Jr., and that of his sister Judy Judd Sullivan, are the only ones still residing on Maple Island).

Looking Back in History

Did you know that **Midway Marine** on the west end of Magician Lake was once called **Melody Gardens** and further back than that, **The White Elephant**? Driving or rowing the fishing boat to Melody Gardens



Here is a 1915 view of Happyland Resort taken from the pier. The boathouse has two boats in it, with one having an early outdoor motor mounted on the back. The shape of the boats was to help them glide through the water. The ladies are in their fashionable bathing suits of the time.

was always a "big deal" for teens as a first excursion across the lake to go pick up some bread or milk. Melody Gardens has been a marina, roller-skating rink, dance hall, grocery store, a speakeasy with slot machines (during prohibition), and ice cream parlor.

It was said to have been built in the early 1930's and had one of the first clear span roofs in the Midwest.



Take a look at the top of Midway Marine today and note this unusual roofline. In the rear of the building there was a bandstand that housed bands for the dance hall and during Midway Marine's last remodeling, dances figures and musical notes were found on the ceiling.

Whatever the case, many "old timers" have fond memories of hanging out at Melody Gardens as children and teens and meeting fellow teens that walked over from Dewey Lake as well.

-From the Magician Lake website

Located in the southwest corner of Michigan is Magician Lake, the easternmost lake in a group of lakes known as Sister Lakes. They include Round, Big Crooked, Little Crooked, Dewey and Cable Lakes. Magician Lake is highly developed and is the largest lake. It is part of the greater Sister Lakes area and is located in Cass and Van Buren Counties as well as Silver Creek and Keeler Townships. Either for good or bad, Magician Lake is governed and



An aerial view of Magician Lake from John and Kay Dukeshere's plane.

protected by a number of agencies and contingents associated with township and county government.

The lake covers approximately 524 acres, is spring fed, has three islands (two accessible only by boat) and an outlet called Silver Creek. For the most part it is a shallow lake (10-12 ft.) with deep holes up to 60 ft. deep. The lake is considered to be an "all sports lake" and is in the "excellent" category when it stands up to CLMP standards.

Magician Lake has a rich history that began in the late 1800's. There are at least six stories about how Magician Lake got its name. We tend to let folks pick their favorite.

People settled on the north and east shores and on one of the islands, by starting up resorts known as Gregory Beach, Happyland and Maple Island Resort Association. One of the earliest properties to be developed on Magician Lake was "Magician Lake Resort" on the north side of the lake. Later, it became known as "Happyland". A. E. Gregory developed another resort, which became known as Gregory's Beach Summer Resort. It started in 1916 with three cottages which grew to 23 cottages that stand today.

In even earlier days, it was inhabited by Native Americans (Pokagon Potawatomi) who gave it one version of its original name of Silver Lake, because of its marl bottom that turned white every spring. Because of the springs which made it

treacherous to cross with the winter ice, Native Americans also thought the lake to be superstitious or "magical". Thus, the name evolved into Magician Lake.

As with all names, there is also another theory that a group of "magicians" (probably vaudevillians) once lived at Happyland, an old-time resort, and entertained people in the area. Since this was the lake where Magicians resided, it became known as Magician Lake.

Because of the resort origins of the lake, there have been of a number of lake associations rather than one lake association. To name a few, there are Curran's Beach, Rainbow Park, Gregory Beach, Gilmore Beach and Maple Island Resort Association. In more recent history, we now have the Magician Lake Improvement Association, which was formed to create an additional association which encompasses the entire lake and has voluntary membership.

Early history of Magician Lake could not be written without the story of the businessmen from Dowagiac, Michigan, who were looking for nearby water recreation and a respite from summer's heat. The businessmen and their families ventured out in horse and buggy for a day's drive (10 - 15 miles) and later established homes on Magician Lake. Eventually, clubhouses were erected on the mainland for group entertainment with music, dancing, card playing and socialization.

(Continued on page 6)

MAGICIAN LAKE (Continued from page 5)

In those days it was also the accepted way to go fishing and boating with white shirts and black trousers and white blouses and long skirts. Can you imagine paddling a canoe in a long skirt or dress, or fishing with a white shirt and black trousers while pulling in a bass, northern pike, bluegill or perch, which are still in abundance today?

As time passed, people from northern Indiana and the Chicago area began to “discover” Magician Lake. Around 1910, many began travelling by boat to the Benton Harbor/St. Joseph area and then by Interurban train to the Sister Lakes area. The train looked like a streetcar with an overhead wire that made 14 stops including the lakes between Benton Harbor/St. Joseph and Dowagiac. Families have gathered here for many decades as their summer retreat. Where once bonfires were built and baseball games were played, now water skiing, tubing, jet skiing and an occasional kayaker or paddle boarder have expanded the summer fun. Today we find that approximately 30% Michigan residents and of the out of the state owners, there is 50% from Illinois.

Local grocery stores and marinas now stand where speakeasies, taverns, dance halls, roller rinks and soda fountains once stood. The “ice houses” (which once stored ice from the lake), milk trucks, the ice cream man, the temporary “hammock” summer camps on the “boat only” accessible islands, swims across the lake, turtle hunting in the bays and channels, and having all day excursions with your 2 ½ horsepower motor have been replaced. Now we have power boats, jet skis, and pontoon boats with an occasional sailboat, kayak, canoe or paddle boat. The average lake homeowner now has approximately 2.5 boats, and there are approximately 535 homes along Magician Lake’s seven miles of shoreline. Outhouses, horse barns, and lakeside boathouses have been replaced by indoor plumbing, a sewer system, multicar garages and shore lift stations.

There have been a number of disputes and disasters throughout the years over such things as road right-of-ways, road ends, invasive species, public accesses, boating accidents and deaths. Tragically, there was even a Navy plane that crashed in the lake a long time ago when a Chicago area pilot “buzzed” his girlfriend on the north side and dipped a little too tight to the water which caught his wing.

Fast moving storms and straight-line winds have created havoc over the years as well. Downed trees, overturned

boats, smashed cars and homes, extended power outages and lack of phone service have all been experienced if one has been a resident for an extended number of years. However, through all of these difficulties “coming to the lake” has withstood the test of time and people “cope”. Some would say that cell phones, high speed Internet, electronic notebooks, cable TV and other technical devices have brought more convenience but a loss of something intangible, too.

Just about every three months of the year something changes. We enjoy four seasons of recreation, quietness, and experiences with nature. After the very busy summer season comes the quietness of “after Labor Day”, followed by the bright colors of autumn, the return of the October loon making its way south, the first snowfall, the first ice, the Christmas eagle glistening in the sun on a bright winter day, the icehouse fishermen, the snowmobilers, the first signs of spring with the light green buds of the willow trees, the voices of the wood duck coming from above, the mink who is looking for eggs along the shoreline, followed by the annual task of putting in all those boats, piers, and shore stations. Culminating all the heightened activity of “summer on the lake” is the celebration of the 4th of July and all that goes with it. Now we have come full circle.

Throughout all these years, Magician Lake appears to have weathered changes in the shoreline, recreational watercraft, the environment and our population. If our lake is to pass its long-standing legacy on to future generations, it will be through vigilant individuals and lake associations who are the mentors and advocates for continued sustainability. May Magician Lake have many more years of history to replay, as we look toward its future in southwestern Michigan.



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A Not So Bland Experience

by Kim Bradley-Davidson

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They say that things happen in life for a reason. We may not know why, but in due time it all makes sense. Such was the case for me this past winter when I decided to take a class on amphibians and reptiles for fun! Little did I know that chilly January morning how much I would put my newfound knowledge and resources to use this summer at my family's cottage on Maston Lake in Spencer Township near Trufant, Michigan.

The class I took was offered as a supplemental class through the Kent County Master Naturalist program that is run by Michigan State University Extension. David Mifsud, a wetland ecologist and herpetologist, someone that studies reptiles and amphibians, taught it. He is also the owner of Herpetological Resource and Management, a Michigan-based company that specializes in protecting, restoring, and creating wetland habitats.

When I left the class I had a new appreciation for all the snakes, frogs, toads, salamanders, and turtles that inhabit Michigan's wetland areas. I also had four pages of notes, some neat DNR posters, and a website address for the Michigan Herpetological Atlas, a publicly accessible database of reptile and amphibian observation records in Michigan. As I packed up my things I was glad to have taken the class. Being a full-time horticulturist on a golf course and nature lover at heart, I have always enjoyed learning new things about the natural world around us;

but I had no idea how much I was going to be impacted by the information I had just gained.

Five months after taking the class on that chilly January morning and setting my notes and posters in "the pile" on my desk, my husband Scott and I had an interesting encounter while kayaking at my family's cottage on June 23, 2012.

It was a gorgeous, calm, early evening; and we decided to go for one last paddle in Muskellunge Lake which connects via a small channel to Maston Lake where my family's cottage is situated. As we wandered along the cattails into a little inlet area and started to explore the aquatic world around us, my husband yelled over to me, "Come here and look at this turtle!" As I paddled over to him, he proceeded to reach in and pick the turtle up out of the water. It had been pre-occupied eating a dead bass.

We realized it wasn't the usual painter or snapper. Its lovely long neck, that was yellow underneath, and its yellow speckled shell intrigued us. I had my camera with me and had Scott pose with the unusual reptile so we could identify it when we got back home. Then we let the turtle get back to its disrupted dinner of bass.

When we returned home I immediately went digging in "the pile" for the Michigan DNR turtle poster that I received from the class. It took all of five seconds to identify our mystery turtle. It turned out to be a Blanding's Turtle; and as I read about it out loud to Scott, I couldn't believe that we had had the opportunity to see one. It turns out that they are considered to be a species of special concern in Michigan because of increased habitat fragmentation and not enough young surviving into adulthood due to predators!

I immediately went into nature geek mode and thought to myself, "This is so cool, our lake association should know about this!" I sent an email to the vice president / treasurer who is also our neighbor; and she, in turn, forwarded it to the president. Then the storm of emails started! I had no idea how much excitement one turtle could cause, but it was great! Our association's president sent my email and photos to the Michigan State University Fisheries and Wildlife Department, and they confirmed our sighting. Scott had definitely come upon an adult



Blanding's Turtle. The MSU staff were delighted to hear about our encounter and recommended that we record it on the Michigan Herpetological Atlas website- the one that I learned about in the class. Needless to say, it was a full circle moment. Five months ago I didn't even know about the Herp Atlas or much about Blanding's Turtles and now I was about to go to the Atlas to record a sighting of one! It was definitely a neat experience and helped to reinforce my belief that you can never stop learning new things!



Scott and I have spotted many fauna on the two lakes this summer...Sandhill cranes, the friendly loon, a map turtle that needed to have a fishing hook and line removed from its mouth, and lots of others; but we have not seen the Blanding's Turtle since that fun evening in June. We are always keeping an eye out for it though! Hopefully it will live a long, happy life (up to 77 years) and continue to keep smiling (another i.d. trait - look it up!) through the ups and downs that Mother Nature may deal it. Thank you, special turtle, for making me appreciate even more all the wonderful things that our lakes have to offer! There was nothing Bland about you!

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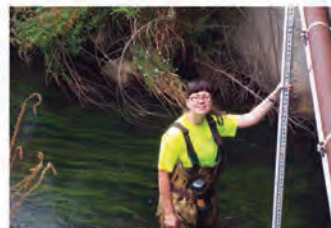
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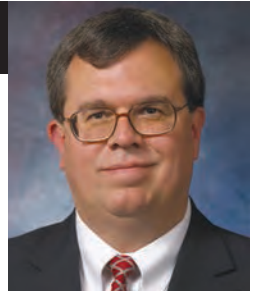
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Potpourri

By Clifford H. Bloom, Esq.

Bloom Sluggett Morgan
15 Ionia SW, Suite 640
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This column deals with three interesting recent Michigan Court of Appeals cases.

A statutory lake improvement board in Michigan is a local government agency created pursuant to the Inland Lake Improvements Act, being MCL 324.30901 et seq. (the "Act"). Statutory lake boards can be created by one or more adjoining townships, as well as one or more adjacent counties, within which a particular lake is located. They are semi-independent bodies that are typically created to remedy lake problems, including the control or eradication of aquatic weeds or invasive species, dredging, improving watersheds or similar purposes. Unfortunately, the Act is not a model of clarity.

The Act has two lake classifications – public inland lakes and private inland lakes. A public inland lake under the Act is any lake that "is accessible to the public by publicly owned lands or highways contiguous to publicly owned lands or by the bed of a stream ...". All other lakes are "private" for purposes of the Act. With a public lake, there are two ways to create a statutory lake board. First, the governmental unit (or units) within which the lake is located can create a statutory lake board (for example, one or more township boards or one or more county boards of commissioners). Second and alternately, a statutory lake board for a public lake can

be created by signed petitions representing two-thirds of the "freeholders owning lands abutting the lake." MCL 324.30902(l). However, a statutory lake board can be created for a private inland lake only via a two-thirds petition; that is, a lake board for a private lake cannot be created unilaterally by the local government or governments. MCL 324.30904.

Crane v Director of Assessing for the Charter Twp of West Bloomfield, unpublished decision by the Michigan Court of Appeals dated April 19, 2012, 2012 WL 1367692 (Case No. 301878), involved Upper Long Lake, a private inland lake. In 1984, the Upper Long Lake Improvement Board was created via property owner petition to eradicate aquatic lake weeds. In 2005, the two townships involved expanded the lake board authority to include dredging. In 2007, the lake board proceeded to impose a special assessment district for a significant dredging project. A property owner within the district challenged the actions of the lake board in establishing a new special assessment district for dredging without having expanded the lake board's authority by landowner petitions. The Court of Appeals sided with the objecting landowner. The Court held that the lake board could not initiate a new project (here, dredging) on its own or with only local government approval, without a new petition being circulated and signed by two-thirds

of the property owners authorizing the new project. Although the Court recognized that a project for a private lake could be for a multi-year duration (as the aquatic weed treatments had occurred for over twenty years), an entirely new project could not be authorized absent new property owner petitions. That limitation does not apply to public inland lakes, as the statute allows the creation of an entirely new statutory lake improvement board (or the expansion of the powers of an existing lake board) pursuant to the approval of the local governmental unit or units. Left unanswered is the question of whether or not a statutory lake improvement board for a public lake originally authorized by a two-thirds property owners' petition can initiate new projects based simply on the approval of the local governmental unit(s), or whether a new petition would have to be utilized since the property owner petition initiated the original lake board.

Given the number of statutory lake improvement boards which exist in Michigan and the ambiguity of many portions of the Act, it is important for a lake board (or its constituents) to work with an attorney who is knowledgeable about statutory lake improvement boards when questions arise.

2000 Baum Family Trust v Babel, 488 Mich 136 (2010), involved a public

(Continued on page 12)

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Dear MWA Members,

The Michigan Department of Natural Resources Fisheries Management and Resources Division has an ongoing program regarding the removal of dams in the state of Michigan. See this link to find out more: www.michigan.gov/dnr.

The Muskegon River Watershed Assembly has received funds for evaluating the hydrological and ecological impacts of potentially removing the Higgins Lake level control structure. More about this study is found on www.mrwa.org/project-higgins.

I feel the removal of many of the lake-level control structures on Michigan's inland lakes and streams may indeed lead to perhaps a better fishery resource; it may also lead to a reduction in the quality of boating and water recreational use on our lakes and streams.

The Michigan Waterfront Alliance board of directors has not taken a position on this issue, but I am sure it will be discussed at

length. Following is my personal position statement regarding the removal of the Higgins Lake level control structure:

When I was president of HLPOA (Higgins Lake Property Owners Association), I was and still am in favor of lowering the lake level to the winter legal level, and even below the court-ordered winter level, if it can be brought back to the court-ordered summer level through wise use of the dam. This position of early draw-down was quite controversial. To get the lake lower in the winter, the dam would have to be opened earlier in the fall. I felt and still feel this is a good plan for preventing beach erosion. Thus the motto: Low water annoys-high water destroys.

I also support and have always supported keeping the legal level in the summer. I was a supporter of at least three dam improvements, and I personally helped install one of those improvements.

Higgins Lake is a prime recreational resource for its riparians and all the citizens of Michigan. Removal of the dam would most likely un-do the legal water levels, which the circuit court has set up to maintain a known level of Higgins Lake. Dam removal could very likely result in a drop of over 10 inches from average levels of the past 50 years. Higgins Lake in many near-shore areas could become a marshy wetland. The risks to removing the dam far outweigh the rewards, if Higgins Lake is to remain a premier boating and water recreational resource.

With the current mindset of the regulatory powers in the state government, I believe if the dam were removed, it would be very difficult to get a permit to rebuild it.

Sincerely,

Bob Frye, President

Michigan Waterfront Alliance
skibones@aol.com

Potpourri

(Continued from page 10)

road right-of-way created by plat dedication that ran along the shore of Lake Charlevoix. As shown on the original plat map, there was no land intervening between the lake and the public road right-of-way. The Michigan Supreme Court held that the dedication of the road to the public created a glorified road easement in favor of the Charlevoix County Road Commission but that the first tier of lots adjacent to the public road are deemed to be riparian (and thus run under and “through” the public road easement and to the lake).

What about a similar situation where a road right-of-way is dedicated along an inland lake in Michigan, but the dedication is private and only benefits the owners of lots within the plat? That was the situation in the recent Michigan Court of Appeals decision in *Bedford v Rogers*, unpublished decision by the Michigan Court of Appeals dated April 17, 2012, 2012 WL 1314165 (Case No. 299783). In that case, the plat dedicated a fairly wide private road called “Lakeway” to the owners of lots within the plat. Lakeway ran parallel to Crystal Lake, between the lake and the first tier of lots. The Court of Appeals confirmed that the first tier of lots adjacent to Lakeway are riparian and run to the lake, subject to the private road right-of-way for Lakeway. The main issue in the case was whether the owners of a first tier (riparian) lot could build a boathouse adjacent to the lake (and the owner’s lot) but within the private road right-of-way for Lakeway. In the plat, many boathouses had been built over the years within the Lakeway private road right-of-way

for the benefit of adjacent first tier lots. In fact, the first tier lot at issue had long had a boathouse for its benefit within the private road right-of-way. A controversy arose when the owner of that lot tore down the original boathouse and built a larger one within the “footprint” of the first boathouse. The owner of an adjoining first tier lot filed a lawsuit and claimed that while first tier lot owners are riparian, they cannot place or build obstructions within the private road right-of-way for Lakeway. The Court of Appeals held in favor of the lot owner who had built the new boathouse. While the Court recognized that the easement beneficiaries (in this case, each owner of a lot within the plat) have paramount rights of usage with regard to the easement area, the owners of the land under the easement can also make use of that land so long as it does not unreasonably interfere with the use of the easement. The Court did not believe that the construction of the new boathouse significantly interfered with the rights of the other lot owners in the plat to walk up and down Lakeway. It is unclear how the Court of Appeals would have decided the case had Lakeway been dedicated to the public rather than simply to lot owners within the plat as a group.

Finally, the Michigan Court of Appeals issued an important decision in *Banacki v Howe*, unpublished decision dated March 20, 2012, 2012 WL 934019 (Case No. 302778). The plat or subdivision at issue borders Magician Lake. Two lakefront areas approximately 25-foot wide, labeled on the plat as

“East Court” and “West Court,” are located between other conventional riparian lots. Both East Court and West Court have approximately 25 feet of frontage on the lake and also have frontage on a private road in back. The defendants were off-lake or backlot property owners who installed a dock, boat lift, and decking upon East Court and out into the lake. The dedication on the original plat indicated that the courts were dedicated “to the use of persons owning land adjacent to said courts.” The trial court held that the defendants’ use of East Court for dockage, boat moorage, and other uses exceeded the scope of the dedication. The trial court found that the backlot property owners could not engage in what essentially amounted to riparian uses on East Court. The trial court also rejected the defendants’ claims that they had a prescriptive easement to utilize East Court for dockage, boat moorage, and similar uses. The Court of Appeals upheld the trial court. All parties agreed that the backlot property owners only had an easement for usage across East Court and that they did not co-own that property. The Court of Appeals found that a “court” is not a park, but, rather, a short street. Accordingly, the dedication in the plat implies passage and access, not park uses. The Court of Appeals stated that the burden rested with the defendants to establish that anything other than mere access to the lake was intended by the dedication.

The Court of Appeals indicated that the only evidence the defendants could present to expand the usage

(Continued on page 13)

rights of the courts would be evidence of expanded usage at the time the plat was created in 1941. Evidence of activities years later is not admissible.

The Court of Appeals also noted that the defendants' interpretation could lead to overcrowding of the two courts and interfere with the proper scope of usage rights. The Court of Appeals stated:

"There is no indication that the plattors intended, at the time East Court was dedicated, that all lot owners would have essentially unlimited use of East Court or that any individual lot owners could monopolize East Court by permanently mooring boats and installing decks and boat lifts, or by storing such items on East Court,

because such use would impair the other lot owners' ability to use East Court. Indeed, as the trial court observed, if a few individuals build their own docks and boat lifts or keep such property on the court, they are effectively appropriating East Court for their own private use, which would impede the other lot owners' use of East Court and access to the lake. A review of the photographs of East Court reveals that the terminus of East Court was, in fact, monopolized by defendants." Slip Op at pp. 5-6.

Interestingly, the Court of Appeals in *Banacki v Howe* also held that there could be no prescriptive easement right for dockage and boat moorage by the backlot landowners since they already had the use of East Court through the dedication.

Over the next year, I will be speaking to numerous groups regarding my new book. Buying and Selling Waterfront Property in Michigan, particularly realtor groups. If you would be interested in attending any of those seminars or if you want to inquire about a presentation before your group, please contact Sharon Wagner at ML&SA at (989) 831-5100 or swagner@mlswa.org.

-Cliff Bloom



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300 N. State St., Suite A,
Stanton, MI 48888

Question: Is it legal for someone to build a cottage so that it interferes with my view of the lake?

Answer: Generally, yes. Some states have a so-called "right of view." In those states, there are limits regarding structures and buildings that can be built on one property that would obstruct the view from another property of a significant feature, such as a lake, mountain range or forest, or diminish light from shining onto a property. In Michigan, there is no common law right to a view. See *Hasselbring v Koepke*, 263 Mich 466 (1933); *Desai v Rabbani*, (unpublished decision of the Michigan Court of Appeals dated January 5, 2001, Case No. 216333; 2001 WL 792195). Nor is there any Michigan statute according such a right. However, local zoning regulations in some municipalities can indirectly protect views (although very few, if any, directly regulate views). For example, some municipalities have height regulations on buildings, fences, and other structures located within a certain distance of a lake, river or other body of water. Such regulations can indirectly protect the views from adjoining properties.

– Clifford H. Bloom
Attorney at Law

* * * * *

Our experts include our riparian attorney, a biologist, a limnologist, an engineer, a college professor and a state agency official. They look forward to responding to your question.



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Protecting our lake from invasive species

By Patrick J. Nagy

Wolverine Lake Management Board Member

The Village of Wolverine Lake Water Management Board (WMB) has had a lot of positive response to the Boat Disinfecting Station (BWS) that was installed at the DNR site on our namesake lake. (See Wolverine Lake Disinfection Station article in the Summer 2012 issue of The Michigan Riparian.)

Not only local residents/boaters/fisherman but local members of the National Bass Anglers Association (NBAA), who have tournaments on our lake, understand what we are trying to do and support our efforts.

In addition to the Station, we are also encouraging boaters to support the Clean Boats-Clean Water initiative. Boaters are also asked, after retrieval, to insure that all areas of their watercraft and trailer are free from any plants, sediment or aquatic life, and to drain live wells at the site tie down area and dispose of unwanted bait in the trash. These efforts will help to prevent invasive species from possibly infecting other bodies of water.



Boat washing station.



Monofilament recycling collection station

The WMB has also installed a monofilament recycling station next to the Boat Disinfection Station to allow fisherman to properly dispose of old line. This is sponsored by the Boats U.S. Foundation who provides the signage and pipe.

We mounted and agreed to send the line to them for recycling for a two-year period.

For more information about
Clean Boats Clean Waters program contact
Jo A. Latimore, Ph.D., Outreach Specialist (MSU F/W)
Latimor1@msu.edu; 517-432-1491

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ML&SA NEWSLETTER



Michigan Lake & Stream Associations, Inc.
300 N. State St., Suite A
Stanton, MI 48888
Phone 989-831-5100

E-mail info@mlswa.org, sbrown@mlswa.org
Web sites www.MyMLSA.org, www.micorps.net
William Scott Brown, Executive Director

OFFICERS

PRESIDENT - Sondra (Sue) Vomish
52513 Twin Lakeshore Drive, Dowagiac, MI 49047
Phone 269-782-3319 E-mail vomish@comcast.net
VICE PRESIDENT - Richard Morey
50230 E. Lakeshore Drive, Dowagiac, MI 49047
Phone 269-424-5863 E-mail rdm@sisterlakescable.com
SECRETARY - Nancy Beckwith
264 Paris SE, Grand Rapids, MI 49503
Phone 616-459-6536 E-mail lbeckwi@sbcglobal.net
TREASURER - Tom Murphy
24 Chateaux Du Lac, Fenton, MI 48430
Phone 810-750-0088 Email chateaux24@aol.com

REGIONAL REPRESENTATIVES

REGION 1 - Mark L. Teicher
6245 Wellesley Dr, West Bloomfield, MI 48322
Phone 248-851-4327 E-mail marklteicher@aol.com
REGION 2 - William Scott Brown
11250 Riethmiller Rd, Grass Lake, MI 49240
Phone 517-914-1684 E-mail sbrown@mlswa.org
REGION 3 - Sondra (Sue) Vomish
52513 Twin Lakeshore Drive, Dowagiac, MI 49047
Phone 269-782-3319 E-mail vomish@comcast.net
REGION 4 - Jennifer Medema
7549 Ravin Dr. NE, Belding, MI 48809
Phone 616-691-7057 E-mail mlswa.region4@gmail.com
REGION 5 - Virginia Himich
1125 Sunrise Park Dr., Howell, MI 48843
Phone 517-548-2194 E-mail himichv@michigan.gov
REGION 6 - Ron Cousineau
1875 Long Pointe Dr., Bloomfield Hills, MI 48032
Phone 248-335-8353 E-mail rjcousineau@aol.com
REGION 7 - John Hood
5913 Shirley Ann Dr., Harrison MI 48625
Phone 248-760-0853 E-mail jmh371@juno.com
REGION 8 - VACANT
REGION 9 - Sarah and Mike Litch
8282 S. Dunns Farm Rd., Maple City, MI 49664
Phone 231-334-3612 E-mail saralitch@gmail.com
REGION 10 and REGION 11 - Cecile Kortier
18200 Valerie Dr., Hillman, MI 49746
Phone & Fax 989-742-3104
REGIONS 12, 13, and 14 - VACANT
REGION 15 - Amy Domanus
N 4176 Kari-Brooke Ln, Watersmeet, MI 49969
Phone 906-358-9912 E-mail armydr@gmail.com
BOARD MEMBER AT-LARGE
Richard Morey, V.P. Coordinator
50230 E. Lake Shore Dr., Dowagiac, MI 49047
Phone 269-424-5863 E-mail rdm@sisterlakescable.com
NEWSLETTER EDITOR
Sharon Wagner
304 E. Main St., Stanton, MI 48888
Phone 989-831-5100 E-mail swagner@mlswa.org

EPA Creates Harmful Algal Bloom Focused Web Resource

The United States Environmental Protection Agency has created an information rich and useful on-line resource dedicated to Cyanobacteria associated Harmful Algal Blooms (HAB). Cyanobacteria, also known as blue-green algae, are of particular concern because of their potential impacts on drinking and recreational waters. In freshwater based resources, cyanobacteria can produce unsightly conditions along shorelines and in open waters degrading aquatic habitats and posing a health risk to humans, pets or wildlife.



The newly created on-line resource includes information on freshwater harmful algal blooms and their various effects to help inform the general public about potential impacts of toxic algal blooms in freshwater.

This information rich resource can be accessed by visiting <http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/cyanohabs.cfm>

HELP PRESERVE OUR INLAND WATER RESOURCES AND PROTECT YOUR RIPARIAN RIGHTS

by Scott Brown, ML&SA Executive Director

Did you know that for over 51 years Michigan Lake and Stream Associations and Michigan Waterfront Alliance have worked hard to be an effective state-wide advocate for the preservation and protection of Michigan's inland lakes and streams and your riparian rights?

The amicus brief filings in the Michigan Court of Appeals and in the Michigan Supreme Court are filed by our attorney in the interest of protecting your riparian rights. These critical court filings cost our organization several thousands of dollars per year. Did you know that Michigan Lake and Stream Associations- and Michigan Waterfront Alliance-sponsored amicus briefs have been instrumental in positively influencing court decisions on behalf of Michigan's riparian property owners going back 50 years?

Both organizations have also served effectively as your unified voice in Lansing. They have played an important role in achieving many legislative successes including the recent passage of Public Act 56 – a law which helped bring civility and sanity back to the thousands of inland lake public road ends that had been

(Continued on page 18)

MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.

ML&SA NEWSLETTER



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- Inland Lakes Management
- Inland Lake Fisheries Assessment and Classification
- Aquatic Invasive Species Management
- Lake Friendly Shoreline Management Techniques
- Annual Michigan Riparian Rights Review
- Lake Friendly Planning and Zoning Ordinances
- Cold Water Streams Habitat Management

Save the dates !

Join us in Bay City as we celebrate 52 years of working to protect and preserve Michigan's inland waters. Your participation in our 52nd Annual Conference will help make this a very special occasion !



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MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.

ML&SA NEWSLETTER



HELP PRESERVE OUR INLAND WATER RESOURCES

(Continued from page 16)

used as illegal private marinas for decades.

Many of you have expressed appreciation of our continued major successes in the courts and in Lansing on your behalf. You appreciate the value of more peaceful and civil inland lake neighborhoods and the protection of riparian property rights that you can enjoy every day as an inland lake homeowner.

It is our mission and goal to continue to work to preserve and protect Michigan's inland waters and your riparian rights. With so much at

stake now and in the near future, we encourage you to support both the Michigan Lake and Stream Associations and the Michigan Waterfront Alliance. Your donation goes specifically to funding the projects that directly impact preservation of our freshwater resources and protection of your riparian rights.

Regardless of the amount of your donation, your generosity will help ensure that we are able to continue working on your behalf and on behalf of Michigan's inland lakes and streams.

For more information on how to donate to each of these worthy organizations, visit their respective web sites: www.mymlsa.org www.mi-riparian.org www.mwai.org

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Cooperative Lakes Monitoring Program

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- Building a constituency of citizens to practice sound lake management at the local level and foster public support for lake quality protection.
- Providing a cost effective process for the MDEQ to increase baseline data for lakes state-wide.



A man in a white shirt and cap is on a boat, holding a sampling device over the water.

**Enrollment for the Cooperative Lakes Monitoring Program
2013 season begins on October 1.**

**Contact Program Administrator, Jean Roth at 989-257-3715 or
e-mail jroth@mlswa.org. To enroll on-line visit**

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SHELTER SINKING ON HUBBARD LAKE

Contributed by:

Dan Betlej, President of Hubbard Lake Sportsman & Improvement Association and the Hubbard Lake website Alcona, Michigan

Dan Betlej offered a quick tutorial about shelter sinking. Every May, a small army of volunteers gets together to build fish habitats in various locations around the lake. Because Hubbard Lake is so clean, a permit is requested from the DNR to build and sink the shelters to provide inviting hideouts, especially for walleye.

The shelters are constructed of cedar and are 4' to 5' long by 3' to 4' wide. Each shelter is loaded up with left over Christmas trees donated by local tree vendors along with about 300#

stones. It takes 50 shelters to fashion the three reefs that are built each year. The shelters are moved by local barges to different locations and tipped into Hubbard Lake.

For more information about Hubbard Lake and its annual shelter sinking project, visit their website at www.hlsia.com



These hardy souls loaded the rocks necessary to sink the shelters. Then they went and built the end frames. A good morning's work.

At the North End Launch, shelters are loaded onto the Hubbard Lake Marine barge to be sunk at two locations in the North or West Bay (it is known by two names).



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Bankson Lake

by Janice Banks
Van Buren County

We are pleased with the condition of our lake right now. A few years ago we adopted an integrated management plan that uses a data driven approach to guide our use of both chemical and biological controls in weed management. We believe we have found the right balance of chemicals and weevils to control the invasive weeds, the fishing is good, the water is clear.

The Weed Committee, a sub-committee of the Bankson Lake Association, works closely with our lake management team to keep control of the unwanted aquatic plants that threaten the native species. Every spring and fall our consultant comes to survey the lake. He invites any residents, up to two, to accompany him to ask questions and respond to concerns we might have. He then maps the areas of invasive weeds needing treatment; recommends specific chemicals for each species, and indicates areas of Eurasian milfoil for planting weevils. After our review, it is sent to one provider for chemical treatment and another for the weevils.

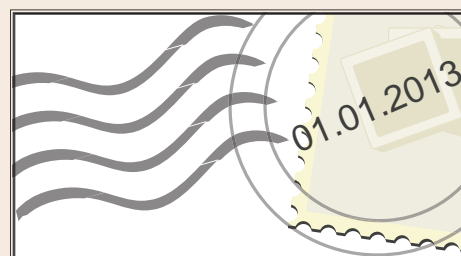
Cabomba, a recent invader, and an especially troublesome plant, took hold in a shallow cove. Hand pulling was not enough, harvesting only spread it and until recently there were no viable chemical or biological methods of control available. Finally, the DNR permitted applying flumioxin, commonly called "Clipper", an herbicide used in Canada on other nuisance plants. It seems to be working well and it can be applied focally to limit exposure to just those areas needing treatment.

We have a Specific Assessment District (SAD) millage that is adequate for these treatments. It also covers our management group's doing the Cooperative Lakes Monitoring Program (CLMP) tests. Our residents took these samples for a number of years, but it finally became too burdensome.

Since all our households are on septic systems, once a year after a particularly busy weekend, we take water samples around the lake to be tested for E coli. These have always shown a very minimal amount of the bacteria.

One of our residents recently gathered information on the

number of generations of some families still living on the lake. Her results named 24 second generation families, six three generation, and two fourth generation residents who still like it enough to continue living or vacationing here. We aim to keep it healthy and well-managed.



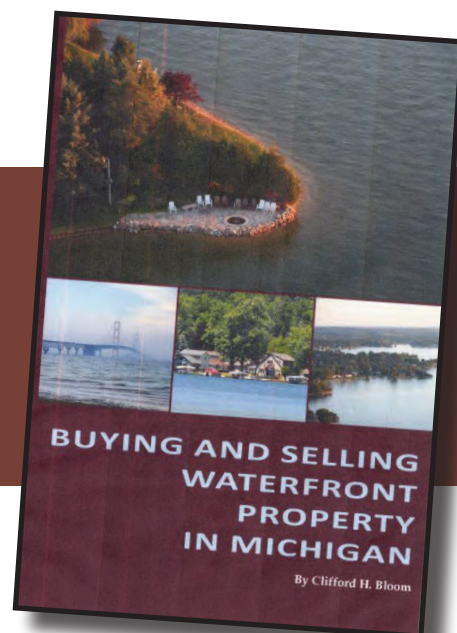
To keep pace with rising postage and printing costs, The Michigan Riparian must raise its subscription rates for lake associations. (Individual subscriptions rates were raised a year ago and will remain unchanged).

Lake association rates will change beginning January 2013. The new subscription rates will be listed with your renewal forms.

A NEW BOOK FROM THE MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.

BUYING AND SELLING WATERFRONT PROPERTY IN MICHIGAN

AUTHORED BY GRAND RAPIDS ATTORNEY
CLIFFORD H. BLOOM



The Michigan Lake & Stream Associations, Inc. ("ML&SA") is pleased to announce its new book entitled *Buying and Selling Waterfront Property in Michigan* by Grand Rapids Attorney Clifford H. Bloom. This is the second book from ML&SA, the first being the 2009 book called *Michigan Lake Associations—The Nuts and Bolts* (also authored by Cliff Bloom).

This new book is a "must" for anyone who is interested in waterfront property in Michigan. The list of people who should purchase the book includes not only riparians (and would be riparians) but also realtors and real estate agents, attorneys, government officials, surveyors and teachers. This book is a "how to" publication that deals with numerous real estate and waterfront issues, including:

Riparian issues
Due diligence
The purchase/sales agreement
Contingencies

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Financing
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The closing
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Real estate forms
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The purchase price is \$20.00 plus postage. Bulk rates are available. The following is an order form that you can use to purchase one or more copies of the new book. If you are interested in obtaining pricing for group or bulk purchase

discounts, please use the form below or online at www.mymlsa.org.

Everyone at ML&SA is excited about *Buying and Selling Waterfront Property in Michigan*. The book will also make a good birthday, graduation, holiday or other event gift to anyone who is interested in waterfront issues in Michigan.

To order *Buying and Selling Waterfront Property in Michigan*, please complete and mail the order form with payment to:

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More than just pretty flowers— The scientific argument for naturalizing lake shorelines

Natural shorelines are increasingly being recognized for the benefits they provide to the health and quality of lakes. A natural shoreline involves maintaining native plant species along the lake border, instead of mowing turf grass right up to the water's edge. Native plantings create buffer zones between homeowner lawns and the lake. These buffers filter runoff before it enters the lake, help stabilize the shoreline, provide habitat, and can enhance the landscape of a lakeshore property.

A study conducted in 2007 determined that poor lakeshore quality was the biggest problem facing lakes in the United States. This study, conducted by the U.S. Environmental Protection Agency (US EPA), randomly assessed 1,028 lakes in the lower 48 states. As part of this National Lakes Assessment (NLA), the lakes were examined for eight stressors. More than one-third of these lakes were identified as having poor shoreline habitat. The assessment also revealed that lakes with poor lakeshore quality were three times more likely to exhibit poor biological health (US EPA, 2009).

Water Quality Benefits of Natural Shorelines

Individual lake homeowners can make a substantial difference in the health of their lake by enhancing the natural quality of the shoreline. Many owners opt for closely mowed turf grass right up to the water's edge. While this might be aesthetically pleasing to some, it might not be in the best interest of the lake. Planting deep-rooted, diverse native vegetation along the shoreline is a much healthier alternative to mowed turf.

Native buffers act as a natural defense mechanism for the lake. They both slow and filter stormwater runoff, trapping sediments and filtering other pollutants before they can reach the lake. During rain events, runoff picks up contaminants such as fertilizer, pet waste, grass clippings, fire pit ashes, and goose droppings. Without an effective buffer, these can enter the lake along with stormwater runoff. Several of these contaminants are capable of accelerating the growth of undesirable aquatic plants and algae. Others might increase muck accumulation or contribute harmful bacteria.

Buffers planted with native

vegetation also can help stabilize the shoreline. Turf grass has a relatively shallow root system, which is less effective at holding soil in place when compared to plants with larger root systems. This can lead to erosion along the water's edge. Some native plants have root systems that can reach several feet deep, which can help substantially reduce erosion and stabilize banks.

Extending the native plant buffer into the water also can buffer erosive wave action caused by wind and boating. Combining vegetation with a variety of root systems (e.g., tap, fibrous) can minimize shoreline erosion without using hard structures such as seawalls and riprap.

Along with erosion control, another benefit provided by vegetated shorelines is that these buffer zones act as a natural deterrent for Canada Geese. Geese prefer unrestricted access to the water so they can easily see and flee from predators. Manicured lawns provide this easy access to the water, along with a preferred food source and resting area. Besides being a nuisance, droppings from geese and other waterfowl can contribute to excessive plant and algae growth (Manny, et al., 1994). Geese are reluctant to move through taller plants; as such, native vegetation can be effective in excluding these waterfowl.

Natural shorelines also provide habitat for desirable wildlife around the lake, both on land and in the water. On land, buffers provide habitat for wildlife such as songbirds, turtles (for basking), and butterflies. In the water, emergent aquatic plants such as pickerel weed, bulrush, and arrowhead provide habitat, protection, and a food source for many species, including fish, frogs, salamanders, and turtles.



Figure 1. A native plant buffer provides habitat, filters runoff, and adds esthetic interest.

Lakes with poor lakeshore habitat are 3 times more likely to have poor biological health.

(US EPA National Lakes Assessment, 2009)

Native vegetation also might improve the efficiency of on-site septic systems if the vegetation is planted between the drain field and the shoreline. Plants can promote oxygen exchange and remove moisture through plant uptake and transpiration (Clemson University Cooperative Extension, 2010). Plant roots also can help remove excess nutrients from septic system leachate (Virginia Cooperative Extension, 2009). However, when planting directly over a drain field, special care should be taken to select plants with shallower root systems that will not damage or clog underground piping. Deeper rooted



Figure 2. Shoreline erosion from mowing up to the waters edge was addressed using a bioengineering option and native plants.

plants placed between the drain field and the lake might be the best approach.

Implementation

Lakeshore owners often ask how much of their yard needs to be converted to a native buffer to realize benefits for the lake. Generally, a wider buffer zone is associated with greater benefits. In an experiment testing the nutrient and sediment removal efficiency in grass and shrub buffers, researchers found that a 26 ft buffer reduced phosphorus and nitrogen in runoff by approximately 92% in terms of mass when adequate infiltration occurred (Mankin, et al., 2007). However, some landowners will not have sufficient land available for something that wide, and any size buffer still can provide some benefits to the lake.

The costs of installing a native buffer will depend on the specific conditions of the shoreline. Factors that influence cost include the size of the area, if erosion issues are present, any ground surface re-contouring needs, and whether a permit is required. For landowners wanting to do it themselves, small projects above the ordinary high water mark can be relatively simple without the need for a permit. Overall, the six main steps to creating a healthier shoreline involve:

1. Planning – select the boundary of the buffer zone and determine if there are areas in the buffer that receive more shade or sunlight during the day.
2. Permitting – in some cases where work will be done below the ordinary high water mark, a permit from the Michigan Department of Environmental Quality will be needed.

3. Preparation – current ground cover and vegetation, such as turf grass, must be removed.
4. Placing the order – select a native plant grower and order the appropriate types and quantities of native plants and seed mixes for the region.
5. Planting – spread seed mixes, install erosion control measures (such as an erosion blanket), and install plant plugs, shrubs, and trees.
6. Protection – the buffer will need to be protected until mature, and then maintained to be successful. This might include fencing out wildlife when plants are young, weeding as plants mature and fill in, keeping young plants watered, and adding additional plants if gaps occur.

As an example, planting a 1,000 ft² area (i.e., 100 ft of shoreline, 10 ft wide) would involve applying a native seed mix that costs approximately \$75 and plant plugs that cost approximately \$300. These costs will vary depending on the desired seed mix, plant size, and who is providing the labor. Site preparation and erosion controls, such as natural fiber blankets, will increase the cost. Larger projects and those requiring work below the ordinary high water mark might require engineering design, shoreline re-shaping, and bioengineering, as well as a permit. Homeowners likely would hire a certified professional to design and implement this type of shoreline improvement.

A good source of information about natural shorelines is the Michigan Natural Shoreline Partnership (MNSP). This organization maintains a listing of professionals certified in their Natural Shoreline Professional program. To find a listing of MNSP certified professionals in your area see: <https://sites.google.com/site/mishorelinepartnership/certified-natural-shoreline-professionals-listing>. With the assistance of a certified professional, lakeshore owners can select a native buffer that will be beautiful, functional, and provide real water quality benefits to the lake.

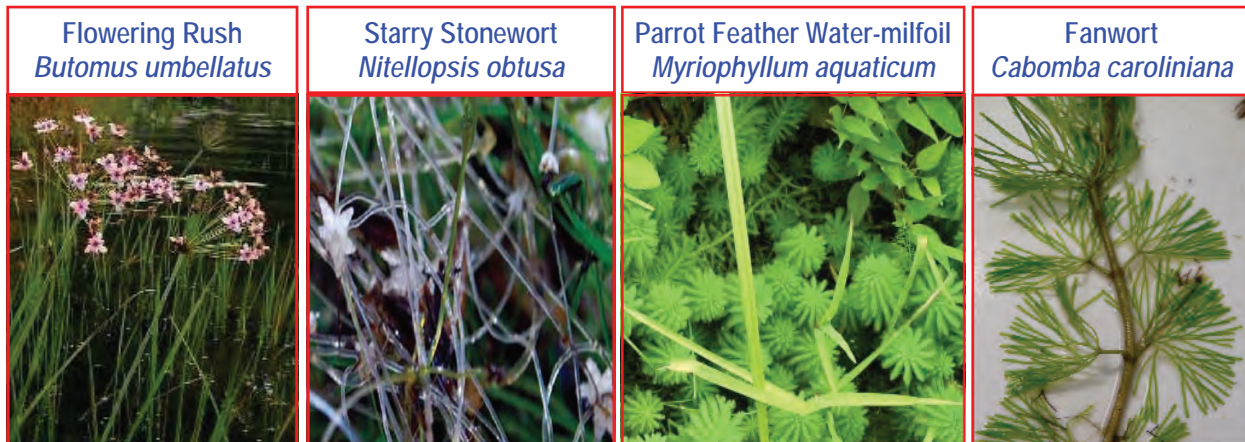
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Most Wanted Aquatic Invasive Plants

Be on the lookout for these invasive species!

Michigan Natural Features Inventory and the Michigan Department of Natural Resources are collaborating on the development of an Early Detection Rapid Response program. The program seeks to locate and eradicate occurrences of the following priority aquatic invaders.

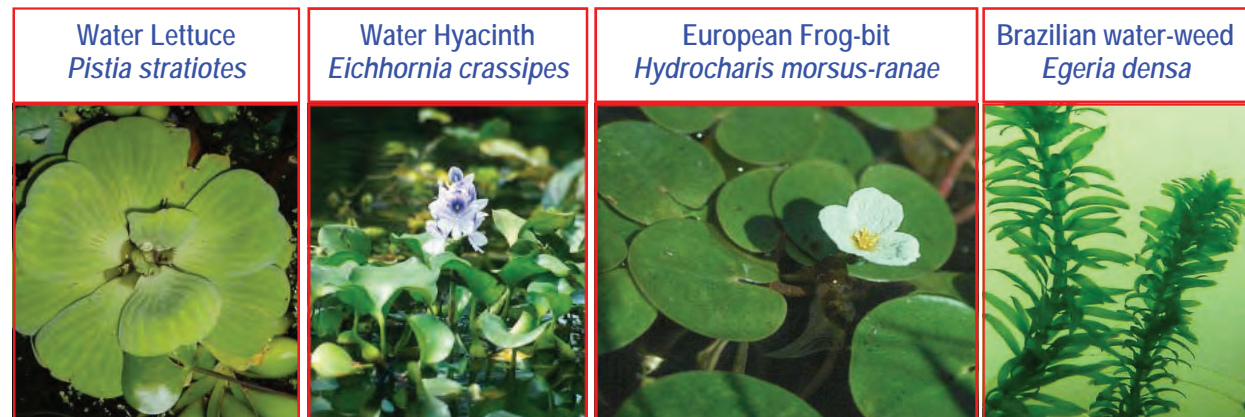


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If you have seen any of these aquatic invasives, note their location and extent and contact:

Matt Ankney

Early Detection and Rapid Response Coordinator

Michigan Department of Natural Resources

Phone: (517) 641- 4903 ext. 260, Email: ankneym2@michigan.gov

Aquatic Plant Control: Things to Consider

By: Tony Groves and
Pam Tynning

Water Resources Group, Progressive AE

Many lake communities are faced with problems related to invasive aquatic plants, and questions often arise about what direction to take to control invasive species. Common questions include: What species should be targeted? What method(s) should be used? How will control measures impact the lake? How will the project be financed? There is a lot to consider. This article covers some of these basic questions and provides an overview of common plant control methods.

Before You Begin

Before embarking on a plant control program, there are several things that should be considered. First, it is important to realize that aquatic plants are an essential part of lakes. Plants in lakes produce oxygen during photosynthesis, help stabilize shoreline and bottom sediments, and provide habitat and cover for fish and other organisms. There are several types of aquatic plants including emergent, floating-leaved, submersed, and free-floating. Each of these plant types provides important ecological functions. Most aquatic plants are beneficial.

Second, excessive removal of aquatic plants can have negative consequences. For example, broad-spectrum herbicide treatments can result in algae blooms and reduced water clarity which, in turn, can be detrimental to the fishery. Maintaining a diversity of beneficial plants is as important as controlling nuisance and exotic species.

Third, not all lakes were created equal. Some lakes will naturally support abundant vegetation while, in other lakes, vegetation is relatively sparse. Different lakes may afford different recreational opportunities.

A lake that naturally supports abundant vegetation may also support a prime fishery, and may not be suited for high-speed boating and water skiing. Many lakes support a variety of uses; however, portions of the lake may be better suited for fishing and more passive recreational uses such as fishing or kayaking. Aquatic plants should not be managed with only one use in mind. Rather, one must strike a reasonable balance between desired lake uses, while preserving the functional value of aquatic plants.

Finally, the distribution and abundance of aquatic plants are dependent on several variables including light penetration, bottom type, temperature, water depth, and the availability of plant nutrients. If conditions are favorable, plants will grow. How you manage your lake shoreland can have a profound impact on plant growth in the lake.

Exotic Plant Species

An exotic species is one that is found outside of its natural range. Outside their natural range, many exotic aquatic plants have no natural competitors or predators to help keep them in check. Exotic aquatic plants often have aggressive and invasive growth tendencies. They can quickly outcompete native plants and gain dominance.

Exotic plant species that are currently a threat to Michigan lakes include Eurasian milfoil (*Myriophyllum spicatum*), starry stonewort (*Nitellopsis obtusa*), hydrilla (*Hydrilla verticillata*), and phragmites (*Phragmites australis*). Eurasian milfoil, starry stonewort, and hydrilla are submersed species, meaning that they grow underwater, and phragmites is an emergent plant that grows along the water's edge.



Eurasian milfoil (*Myriophyllum spicatum*)



Curly-leaf pondweed (*Potamogeton crispus*)



Starry stonewort (*Nitellopsis obtusa*)



Phragmites (*Phragmites australis*)

(Continued on page 26)

Aquatic Plant Control

(Continued from page 25)

Depending on the plant, dispersion can be by fragments, seeds, tubers or through over-wintering buds called turions. For example, Eurasian milfoil was first introduced to the United States in the 1940's and spread rapidly by "vegetative propagation" whereby fragments of the plant break off, take root, and grow into new plants. Eurasian milfoil forms a thick canopy at the lake surface that can degrade fish habitat and seriously hinder recreational activity.

Once introduced into a lake, Eurasian milfoil often out-competes and displaces more desirable plants. Starry stonewort, hydrilla, and phragmites also spread quickly and crowd out native plants.

What Can Be Done to Control Exotic Aquatic Plants?

Prevention is the first defense in exotic species control. However, once an exotic plant has colonized a lake, an "early detection and rapid response approach" is the most effective method to control the spread of the plant. What approach works best in a given situation is dependent on several variables. On a small-scale basis such as individual properties, many approaches can be used. For example, weed rollers, bottom barriers, and suction dredging can effectively prevent or control small-scale infestations of exotic plants, but may not be practical on a large scale due to costs and other considerations. For larger areas, control measures commonly considered include herbicide treatments, mechanical harvesting, and, on some lakes, biological control.

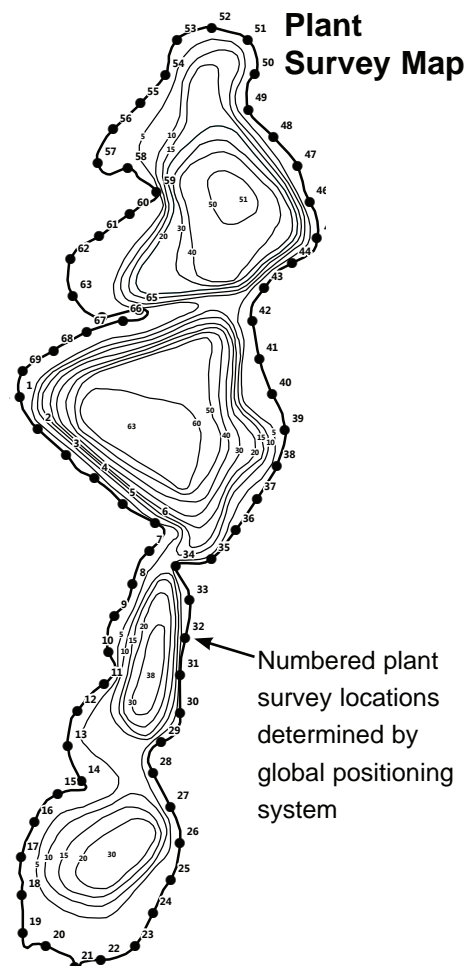
With exotic species, an ounce of prevention is worth a pound of cure!

Many exotic plants are transported on boats and boat trailers. If you trailer your boat from lake to lake, you should wash your boat and trailer before re-launching. This is a simple measure that can have big benefits.

Early Detection and Rapid Response

Monitoring

Monitoring is key to early detection and essential to planning, implementing, and evaluating plant control measures. The Michigan Department of Environmental Quality's (MDEQ) Procedures for Aquatic Plant Surveys provides guidance for conducting surveys. With the MDEQ procedures, assessment sites are established around the perimeter of the lake and the type and relative abundance of plants species within the lake is determined around the entire shoreline. These days, plant surveys are often conducted with a global positioning system that allows the specific location of aquatic plants to be documented. Mapping and monitoring data are used to evaluate the scope of control needed, and to communicate and coordinate with the plant control contractor.



Herbicide Treatments

Herbicides are commonly used to control invasive exotic plants. In Michigan, a permit is required from MDEQ to apply herbicides to lakes. The permit lists the herbicides that are approved for use, respective dose rates, use restrictions, and indicates specific areas of the lake where treatments are allowed. In an attempt to balance recreation use and environmental impacts, MDEQ will generally limit the treatment of native plants to 100 feet of frontage per property out to the 5-foot depth contour or 300 feet from shore, whichever comes first.



Herbicide application

Herbicides must be registered and approved by the Environmental Protection Agency (EPA). There are currently more than 300 herbicides registered with the EPA. Of those, only about a dozen are approved for use in the aquatic environment. In addition to Michigan's permitting system, federal regulations were recently adopted that require herbicide applicators to acquire a pesticide general permit and to prepare and submit a pesticide discharge management plan.

There are two basic types of herbicides: systemics and contacts. Systemic herbicides are taken up by the plant and translocate to the root system which helps to provide season-long control. With systemic herbicides, it generally takes several weeks for plant impacts to become apparent. Contact herbicides only affect the portion of the plant that comes into contact with the herbicide. Plants usually die-back within a week of treatment, but some plants like Eurasian milfoil may grow back later in the season since the roots remain intact.

(Continued on page 27)

Aquatic Plant Control

Unlike systemic herbicides that are somewhat selective, contact herbicides can impact a broad spectrum of plant species, but timing and rate of application can be used to minimize non-target impacts. Deciding which herbicide to use in a particular situation will depend on the plant(s) being targeted, potential impacts to non-target species, costs, use restrictions, and other factors. In general, herbicide treatments should target nuisance exotic species such as Eurasian milfoil and have minimal impacts on most native plant species.

Mechanical Harvesting

Mechanical harvesting involves cutting and removing vegetation from the lake. Harvested plants are off-loaded with a conveyor and disposed in an upland location. Harvesting has the advantage of removing biomass and can help slow the rate at which plant material accumulates on the lake bottom. One potential disadvantage of harvesting is that all vegetation in the path of the harvester is impacted; it is often not possible to selectively remove one plant over another. When harvesting in shallow waters, harvesters have limited operational flexibility and can agitate bottom sediment and temporarily increase turbidity. In some lakes, finding a place to launch harvesting equipment and to off-load plants can be a challenge. Attempts to control certain plant types by harvesting alone may not prove entirely effective. This is especially true with Eurasian milfoil due to the fact that this plant may proliferate and spread via vegetative propagation (small pieces break off, take root, and grow) if the plant is cut.



Mechanical harvesting

Biological Controls

The milfoil weevil (*Euhrychiopsis lecontei*) is an aquatic insect that is native to North America and appears to be common in the Midwest. The weevil has been found to feed almost exclusively on milfoil species, especially Eurasian milfoil. Researchers have documented declines in Eurasian milfoil populations as the result of weevil feeding. These declines have been attributed largely to the burrowing and tunneling action of weevil larvae that cause the milfoil plant to lose buoyancy and fall from the water column. In addition, weevil burrowing can reduce the plant's ability to translocate nutrients and carbohydrates which can further reduce milfoil's competitive edge and ability to regrow the next spring. Stem fragments damaged by weevils have reduced viability and ability to produce new roots. Weevil burrowing may also increase the susceptibility of milfoil to infection by pathogens.



Tom Alwin and MSU Dept. of Fisheries and Wildlife
Milfoil weevil

In a comprehensive review of research on biological control of Eurasian milfoil, Dr. Ray Newman of the University of Minnesota summarized his research findings as follows:

The milfoil weevil...can be effective...if adequate densities can persist through the summer and among years. However, many of the sites investigated have failed to sustain sufficient herbivore [weevil] density to effect control. We currently cannot predict when and where herbivore populations will reach sufficient densities nor when or where declines and suppression will occur. Both adequate agent [weevil] densities and proper plant response are required for predictable control...Further identification and prioritization of factors limiting herbivore populations is needed

and methods to ameliorate these limiting factors must be developed before biological control of milfoil can be reliably applied on a large scale.

Additional research and data are needed to evaluate the full potential of weevil stocking as a long-term Eurasian milfoil control technique. As with herbicide treatments, repeated stocking of weevils will likely be required to effect control.

Integrated Control

Integrated control involves using a combination of control measures. For example, many lakes use a combination of herbicide treatments and mechanical harvesting. Herbicide treatments are performed early in the growing season to control Eurasian milfoil (that can fragment and spread if cut) and harvesting is conducted later in the season to control growth of other nuisance plants. In some lakes, weevils are stocked in certain areas and herbicides are applied in others.

The Bottom Line

Aquatic plant control is an ongoing challenge, and an early detection and rapid response approach is often critical to controlling the spread of invasive aquatic plants. Annual monitoring to detect infestations of invasive aquatic plants is essential to planning, executing, and evaluating control measures.

Many plant control programs in Michigan are organized at the local level by concerned lake residents and local governmental units. Under Michigan law, special assessment districts can be established to finance programs to control the spread of exotic aquatic plants.

The approach or combination of approaches that work best in a particular lake depend on local conditions and the expectations of lake residents. Once an exotic plant has been introduced in a lake, complete eradication is unlikely and a sustained effort is often required to ensure control.

Non-Point Source Pollution and Water Quality Impairment of Michigan Inland Lakes

By: Jennifer L. Jermalowicz-Jones, Water Resources Director, LEI Certified Professional Watershed Manager

Introduction of Non-Point Source (NPS) Pollution

Michigan has over 35,000 lakes and ponds with many of them being developed and thus vulnerable to water quality degradation. Inland waterways are protected under state law through Public Act 451 of 1994, the Michigan Natural Resources and Environmental Protection Act (NREPA), and under federal law from the U.S. Environmental Protection Agency (EPA) under the federal Clean Water Act.

Non-point source pollution (NPS) is the pollution caused when climatic events carry pollutants off of the land and into lakes, streams, wetlands, and other water bodies (Michigan Department of Environmental Quality). Unlike point source pollution which is derived from distinctive discharge pipes, NPS pollution is often diffused in nature. The diffusivity of NPS pollution creates challenges in determining the location of pollution sources which makes mitigation (treatments) a difficult and sometimes impossible task. NPS pollution is regulated by statute and includes categories such as agricultural source runoff (Figure 1) and confined animal feed operations (CAFO's), small urban runoff (populations with less than 100,000 residents), urban storm water runoff from unsewered areas, septic tanks, runoff from abandoned mines, land disturbing activities, and atmospheric deposition. Although regulation exists, it is difficult to regulate NPS pollution at both the federal and local levels. There has been considerable debate among scientists, engineers, and other



Figure 1. Ponded water on a farm that is likely to enter a nearby stream that flows into a lake.

stakeholders regarding the most effective scale for reduction of NPS pollutants. The NPS pollutants of greatest concern to local waterways include nutrients such as nitrogen and phosphorus, sediment, toxic compounds, and pathogens (*E. coli*, among many others). The Water National Quality Inventory (1994) ranked the leading sources of water quality impairment to lakes as primarily agriculture, secondarily municipal point sources, and thirdly, urban runoff.

Impacts of NPS Pollution on Inland Waters

Beginning in 2007 and continuing to the present day, the USEPA Office of Water and Office of Research and Development has partnered with multiple stakeholders at both the state and federal levels to derive comparisons among the nation's aquatic resources which include lakes, wadeable streams, large rivers, coastal estuaries, and wetlands. During the assessment, 1,028 lakes have been sampled along with 124 reference lakes and 100 lakes which were re-sampled. Lakes were selected from the National Hydrography Data Set (NHD) using a set of criteria that addressed trophic status,

locale, and physical characteristics. Water quality indicators such as biological integrity, habitat quality, trophic status, chemical stressors, pathogens, and paleolimnological changes were measured. Although 56% of the nation's lakes possessed healthy biological communities, approximately 30% of lakes had the toxin Microcystin, which is produced by the blue-green algae *Microcystis*. Approximately 49% of the lakes had mercury concentrations in fish tissues that exceeded healthy limits. The key stressors of the lakes were determined to be poor shoreline habitat and excessive nutrients. A favorable outcome of the inventory revealed that half of the lakes exhibited declines in phosphorus levels compared to levels noted in the early 1970's. Despite this observed decline, many of our inland lakes continue to experience degradations in water quality. One reason for this problem is that many lakes have properties that utilize septic systems. Since riparians have little control over local pollutant loading from agriculture to inland lakes, the maintenance of septic systems is critical for water quality protection

Septic Systems and Groundwater

It is estimated that Michigan has over 1.2 million septic systems currently installed with many of them occurring in rural areas around inland lakes. Currently, only seven counties in Michigan (Benzie, Grand Traverse, Macomb, Ottawa, Shiawassee, Washtenaw, and Wayne) require a septic system inspection prior to a property being sold. The number of septic systems

that are a risk to the aquatic environment is unknown which makes riparian awareness of these systems critical for protection of lake water. Construction of new septic tanks require notification and application by the homeowner to the county Department of Public Health and soils must be tested to determine suitability of the system for human health and the environment. It is recommended that each septic tank be inspected every three years and pumped every 3-5 years depending upon usage. The drain field should be inspected as well, and only grasses should be planted in the vicinity of

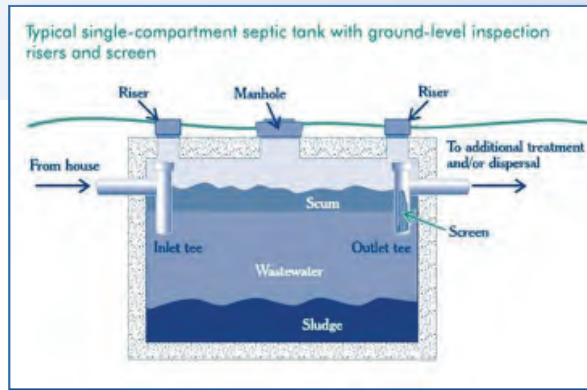


Figure 2. A diagram showing the basic components of a septic tank system (courtesy of the US EPA)

the system since tree roots can cause the drain field to malfunction. Additionally, toxins should not be added to the tank since this would kill beneficial microbes needed to digest septic waste. Areas that contain large amounts of peat or muck soils may not be conducive to septic tank placement due to the ability of these soils to retain septic material and cause ponding in the drain field. Other soils that

contain excessive sands or gravels may also not be favorable due to excessive transfer of septage into underlying groundwater. Many sandy soils do not have a strong adsorption capacity for phosphorus and thus the nutrient is easily transported to groundwater. Nitrates however, are even more mobile and travel quickly with the groundwater and thus are also a threat to water quality.

The utilization of septic systems by riparians is still quite common around inland lake shorelines. A basic septic system typically consists of a pipe leading from the home to the septic tank, the septic tank

(Continued on page 30)





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Non-Point Source Pollution

(Continued from page 29)



Figure 3. A bloom of the blue-green alga, *Microcystis* on an Ottawa County Lake.

itself (Figure 2), the drain field, and the soil. The tank is usually an impermeable substance such as concrete or polyethylene and delivers the waste from the home to the drain field. The sludge settles out at the tank bottom and the oils and buoyant materials float to the surface. Ultimately the drain field receives the contents of the septic tank and disperses the materials into the surrounding soils. The problem arises when this material enters the zone of water near the water table and gradually seeps into the lake bottom. This phenomenon has been noted by many scholars on inland waterways as it contributes sizeable loads of nutrients and pathogens

to lake water. Lake bed seepage is highly dependent upon water table characteristics such as slope (Winter 1981). The higher the rainfall the more likely seepage will occur and allow groundwater nutrients to enter waterways. Seepage velocities will differ greatly among sites and thus failing septic systems will have varying impacts on the water quality of specific lakes. Lee (1977) studied seepage in lake systems and found that seepage occurs as far as 80 meters from the shore. This finding may help explain the observed increases in submersed aquatic plant growth near areas with abundant septic tank systems that may not be adequately maintained. Loeb and Goldman (1978) found that groundwater contributes approximately 44% of the total soluble reactive phosphorus (SRP) and 49% of total nitrates to Lake Tahoe from the Ward Valley watershed. Additionally, Canter (1981) determined that man-made (anthropogenic) activities such as the use of septic systems can greatly contribute nutrients to groundwater.

Poorly maintained septic systems may also lead to increases in toxin-producing

blue-green algae such as *Microcystis*. This alga is indicative of highly nutrient-rich waters and forms an unsightly green scum on the surface of a water body (Figure 3). Toxins are released from the algal cells and may be dangerous to animals and humans in elevated concentrations. Furthermore, the alga may shade light from underlying native aquatic plants and create a sharp decline in biomass which leads to lower dissolved oxygen levels in the water column. Repeated algae treatments are often not enough to compensate for this algal growth and the problem persists.

Critical Source Areas

A specific area within a watershed that contributes any NPS pollutant is referred to as a Critical Source Area (CSA). CSA's can contribute high loads of nutrients and sediments to inland waterways and often escape detection during lake management programs. In vulnerable areas, these pollutants enter lakes after a climatic event such as heavy rainfall or snowmelt. The surrounding landscape is critical for the determination of CSA's as some areas contain high slopes which increase the probability of erosion, while others contain soils that pond and contribute pollutants to the lake via runoff from the land. This information is critical to include in a watershed management program since Best Management Practices (BMP's) should be site-specific and address the pollutant loads at the site-level. Many BMP's will follow recommendations from Low Impact Development (LID) which aims to reduce the amount of imperviousness in developed areas. Since so many lake shorelines are already developed or are being further developed, the use of LID practices will help

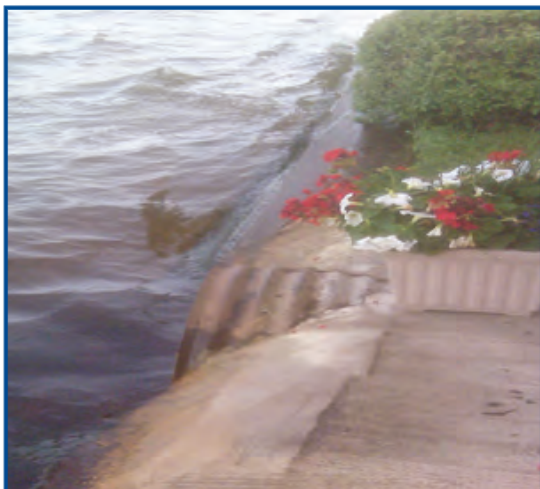


Figure 4. The inlet to Indian Lake, Cass County, Michigan as an example of a CSA.

reduce runoff and protect water quality. An example of an LID practice would be the installation of vegetation buffers along lake shorelines, especially in front of recently constructed homes with impervious surfaces. Inherently, following this protocol will allow for improvements to water quality at the regional scale. An example of this approach is being studied on Indian Lake in Cass County, Michigan. A prominent CSA in the immediate watershed surrounding Indian Lake would include the inlet to the lake (Figure 4) and the areas upstream that contribute loads to the inlet and eventually to the lake. The surrounding watershed is being dissected for each CSA and corresponding BMP's for each area are being offered to improve the overall water quality of the

lake. The lake currently experiences extensive blue-green algae blooms along with heavy submersed aquatic plant growth and loss of dissolved oxygen with depth during stratified periods. An abundance of software exists to determine the location of CSA's and to predict nutrient and sediment loads from these areas to inland waterways.

Concluding Statement

Although NPS pollution is regulated, it is often diffuse and difficult to determine the origin and thus prescribe site-specific solutions. Riparians can begin with improvements to their shorelines with vegetation buffers and also with regular maintenance of septic systems. Since the use of lawn fertilizers that contain phosphorus is already regulated,

these other nutrient sources become more critical to address. The improvement of some lakes since the inception of the Clean Water Act of the 1970's is evidence that regulation has helped clean up our waters. However, there are still many impaired lakes throughout the U.S. and in Michigan that require cooperation from stakeholders at all jurisdictional levels.

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UNUSUAL (BUT POTENTIALLY HELPFUL) LOCAL MUNICIPAL REGULATIONS

By: Clifford H. Bloom, Esq.
Bloom Sluggett Morgan, PC

Many riparian property owners are generally familiar with the zoning regulations of their local township, city or village, particularly with regard to the waterfront. Many municipalities with substantial lake or river properties have zoning or other local ordinance provisions that regulate water access, docks, the setback of new structures from the waterfront, and similar matters. On occasion, however, waterfront property owners “push the envelope” with regards to new and potentially objectionable uses or structures that are not covered by the existing regulations of the local governmental unit involved. This article addresses some of those uses and structures.

Municipal regulations governing docks are fairly common. Typical dock regulations include limits on dock length, width, and the allowed number of docks per waterfront property. Less common are regulations requiring that the docks be roughly perpendicular from the shoreline and be located at least a certain distance or setback from where the side lot lines intersect the waterfront. Some municipalities ban permanent docks or piers in inland lakes. Others disallow built-in benches on docks, as well as deck-like or patio components of docks.

Local swim raft regulations are not very common. A few municipalities regulate the number of swim rafts or water trampolines allowed per waterfront property, the distance that such items can be anchored from shore (often expressed in terms of the depth of the lake), the size of the raft or trampoline, and the maximum height of any such item above the water. A few municipalities require the owner of every raft and dock to prominently display the owner’s name, address, and telephone number on the item.

“Bubblers” are becoming increasingly common for inland lakes in Michigan. Typically, a riparian landowner will utilize a bubbler to prevent ice damage to a year-round dock or pier, and a few property owners even keep their boats in the water in an inland lake year-round by the use of a bubbler. Many people consider bubblers to be severe safety hazards for those who go out on the ice of an inland lake in the winter, since a

bubbler not only causes open water, but also weakens the ice for a significant distance beyond the open water. The drowning potential is particularly significant in the winter when not only is the water frigid, but wintertime visibility conditions can be almost zero due to blowing snow even during the day, thus endangering children, pets, snowmobilers, and those who ride four-wheelers on the ice. Bubblers can also present negative environmental impact issues. Some municipalities have adopted local regulations that ban bubblers altogether.

Some municipalities have enacted regulations to prevent “crowding” or the cluttering up of the lakefront. Most zoning ordinances prohibit dwellings and significant buildings from being located within a certain setback distance from the ordinary high water mark of a river, lake or stream. Some municipalities allow gazebos and small sheds to be located closer to the water (and within the setback areas), but not all municipalities are so permissive. More than a few municipalities prohibit decks, patios (above ground level), swimming pools, and impermeable surfaces within a specified distance of a body of water.

A few municipalities have considered the possibility of buildings or decks being built out into a body of water or being “cantilevered” out over the water. But they often assume that the Michigan Department of Natural Resources or other state agency will always disallow such structures; however, that is not always the case. While a few communities have a proliferation of boathouses at, near or over the water, and approve of those boathouses as a part of the local community’s heritage, most local governmental units do not want any building, item or structure built in or over the water except for lawful docks and temporary, seasonal boat hosts. If structures on, in or over the water are a concern, a local ordinance should address those issues.

On occasion, even boat hoists, boat cradles or shore stations can be overdone. A few waterfront property owners in Michigan have installed boat cradles that resemble boathouses or that have mechanical methods resembling small train track that allows a portion of the

(Continued to page 33)

boat hoist to be ramped up onto dry ground when a boat is in the cradle. A few municipalities have prohibited or strictly regulated such items.

What about floating signs or billboards? Such advertising has popped up in a few other states, but apparently has not occurred in Michigan (or, if so, has occurred only rarely). Should a local municipality attempt to ban or regulate such signage before a problem occurs, or is that an intrusive government regulation that goes too far?

What about the problem on many inland lakes where a number of boaters tie their vessels together on a sandbar or shallow area for hours at a time, party hard, and cause significant heartaches to nearby riparians? To my knowledge, no municipality has an ordinance in place that would regulate or prohibit such activities (although disorderly or criminal conduct, such as indecent exposure, drunk boating, disturbing the peace and similar offenses, can always be prosecuted, regardless of whether or not a boat or watercraft is involved). While such partying activities can cause significant problems for nearby riparian land owners, it would be exceedingly difficult to draft a local ordinance that would help resolve the problem without being unduly vague or overly restrictive, or both.

Some municipalities ban the creation of new canals or channels cut into lakes, but allow existing lawful channels to be cleaned out (but not widened, deepened or extended).

Although local single family zoning regulations likely prohibit the practice of a riparian property owner allowing a friend or relative to keep their boat at the riparian's dock or shoreline for long periods of time, a few municipalities write that specific prohibition into the regulations (typically, the regulation will state that only the then-owner of the riparian property involved can keep boats or watercraft that are titled in the landowner's name at his or her waterfront property).

Occasionally, a lakefront property owner on an inland lake will install their own private boat ramp (and might occasionally allow a friend or relative to use the ramp). For a variety of different reasons, boat ramps for the benefit of one riparian property are likely undesirable and could be regulated or even prohibited by a local ordinance provision.

Surface water diversion from lakes and streams can be a significant problem. While theoretically subject to state licensing requirements, given the tight budgetary constraints for state government, state watchdogs can

sometimes be overly permissive. A local municipality can regulate significant water withdrawals from lakes and streams (for example, for golf course watering or ski slope snow-making purposes) by a local ordinance.

While all-lake boat fishing tournaments, organized ice racing in the winter, charitable ice-fishing events, and similar corporate or charity-sponsored events can be beneficial to a community, they can also cause significant problems due to boat traffic congestion, high risk activities, crowds, and lack of sanitary facilities. Accordingly, some municipalities require prior zoning or licensing approval before such an event can occur. That allows a local municipality to also impose reasonable conditions such as insurance requirements, extra police assistance, sanitary facilities, first aid, trash disposal, and similar safeguards.

What if a dedicated platted road right-of-way, park or other item is located between the waters of a lake and the first tier of lots in a plat? How is a municipality to treat the setbacks from the body of water? First, in most cases, where a platted road right-of-way, park or similar public or jointly used property is located between a body of water and the first tier of platted lots and there was no intervening land shown on the original plat between the platted road, park or other dedicated item and the water, the first tier of lots are deemed to be waterfront or riparian. See 2000 *Baum Family Trust v Babel*, 488 Mich 136 (2010), and *Dobie v Morrison*, 227 Mich App 536 (1998). In other words, the side lot lines of the first tier of platted lots are deemed to go under and extend to or "through" the platted road, park or other dedicated item and to the body of water.

Second, how should a municipality treat setbacks from the body of water for purposes of new buildings, additions or structures on the adjoining platted lots? If the intervening dedicated item is a road right-of-way (whether public or private), alley or similar way dedicated for vehicular traffic, the setback would normally be measured from the edge of such dedicated way to the new structure, addition or dwelling, rather than from the body of water. This normally results in a more significant setback requirement. Why should the setback be measured from the edge of the road or way rather than from the body of water? Theoretically, in the future, a road could be developed in the now-vacant right-of-way for vehicular traffic, and dwellings and structures should be located some distance from any such traffic. What about the setback from a platted walkway, park or beach? Normally, the setback from

(Continued to page 34)

UNUSUAL LOCAL MUNICIPAL REGULATIONS

(Continued from page 33)

those items would be measured from the body of water and not from the edge of the dedicated item, so long as the building or structure is not built within the platted park, walkway or beach.

Third, as a general rule, municipalities should not allow a building or significant structure (apart from driveways, fences, docks and similar minimal structures) to be built within a platted road right-of-way, alley, park, beach or similar dedicated item.

Given the difficulty of ascertaining setbacks where platted dedicated roads, parks, walkways, alleys or beaches are involved, it is normally prudent for a local municipal zoning ordinance to expressly state which rules and regulations apply where such platted items are present.

Some municipalities require private septic systems to be located a certain minimum distance away from the ordinary high water mark of a lake, river or stream (which, in some cases, may be stricter than county or state requirements). Other municipalities prohibit swimming pools from being located between a dwelling and a lake on a waterfront parcel in order to prevent "clutter" in the lake yard and the blocking of the lake views of other dwellings or cottages. Many municipalities prohibit solid fences or fences over a certain height (for example, three feet) from being located within a certain distance of a lake or river.

The examples above are just some of the miscellaneous matters regulated by some municipalities regarding the waterfront. Anticipating new structures and uses that might have negative impacts on the waterfront often requires imaginative municipal approaches. If the proper regulations are not in effect and a new objectionable use commences or an unusual structure is installed, it will normally be too late to prevent that particular use or structure from occurring.



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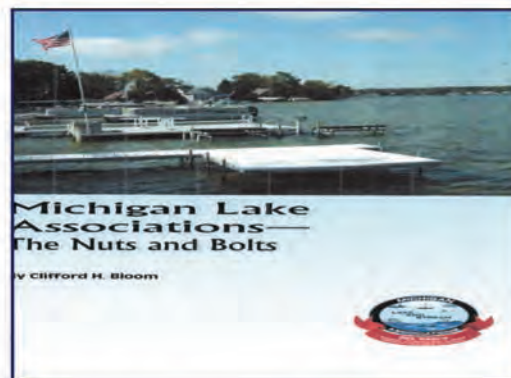
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