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PUBLISHER: Sharon Wagner Phone: 989-831-5100

E-mail: swagner@mlswa.org

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From The Publisher



Happy New Year

We are excited to debut the PBWOA (Portage, Base & Whitewood Owners Association) and Portage Chain of Lakes located in Washtenaw and Livingston Counties as our cover story. This is the first time we have run a story about not one but seven lakes! Their story is BIG and Part II will continue in our next issue.

In this issue of *The Michigan Riparian* magazine, the PBWOA explains how the Chain of Lakes SAD was launched, their partnership with the University of Michigan Sail Club, the infamous Mute Swan problem, and water quality --just to name a few.

The PBWOA is proud of its strong membership, rich history and active volunteer board which are the top reasons they have had so much success. With a chain of seven lakes and connecting to eight miles of the Huron River, we found the PBWOA story fascinating.

This issue of *The Michigan Riparian* magazine covers many topics that are relevant to lake home owners. Read about common road end issues and current challenges on page 28. Cliff Bloom tackles the topic of living next to a dump on page 17, and shares a case of bottomland ownership and boating on page 41.

Are you involved in your lake association, township meetings, or future plans for your lake? Are you an advocate for your lake? Read the article, Lake Advocacy, on page 19.

European Water Clover is a continued threat to inland lakes. Read the latest on page 34.

The Michigan Riparian magazine is making exciting plans for 2018. We are currently exploring alternative ways to read and receive the magazine in the near future. We will keep you informed.

Keep writing us and sending your pictures of your beloved lake and lake events. Summer is not the only time to enjoy lake living. Share with us what you're up to on your lake this winter. We would love to hear from you.

Have a safe and happy New Year!

-publisher, Sharon Wagner Send your information to: 300 N. State St., Ste A, Stanton, MI 48888 (989) 831-5100 swagner@mlswa.org

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William Scott Brown, Executive Director

sbrown@mlswa.org

OFFICERS

PRESIDENT - Dick Morey

50230 East Lake Shore Dr., Dowagiac, MI 49047 269-424-5863 rdm@sisterlakescable.com

VICE PRESIDENT - VACANT

SECRETARY - Nancy Beckwith

264 Paris SE., Grand Rapids, MI 49503 616-459-6536 lbeckwi@sbcglobal.net

TREASURER - Beth Cook

1171 190th Street, Morley, MI 49336 231-856-8910 rcook@tricountyschools.com

DIRECTORS

Paul Sniadecki

23949 N. Shore Dr., Edwardsburg, MI 49112 269-329-8320 psniadecki@yahoo.com

John Wilks

11898 Highview Shores, Vicksburg, MI 49097 269-649-0616 johnwwilks@aol.com

Lon Nordeen

11268 Hieber Rd., Manchester, MI 48158 734-657-1983 lonnord@aol.com

Mark L. Teicher

6245 Wellesley Drive, West Bloomfield, MI 48322 markIteicher@aol.com

Jennifer L. Jermalowicz-Jones

18406 West Spring Lake Rd., Spring Lake, MI 49456 616-843-5636 jenniferj@restorativelakesciences.com

Mike Gallagher

10670 Wildwood Drive, Richland, MI 49083 mgallagher@gallagheruniform.com



PBW A

Portage, Base & Whitewood Owners Association & Portage Lake Chain

PART I

THE PURPOSE OF THE PBWOA

By Mark Teicher, PBWOA President

I am thrilled that the Portage, Base & Whitewood Owners Association (PBWOA) and the Portage Chain of Lakes is the featured front page story in this issue of *The Michigan Riparian*. First, thank you to Sharon Wagner, *The Michigan Riparian* and the ML&SA Team for asking the PBWOA to contribute to the magazine. Second, thank you to a very dedicated and involved PBWOA Board of Directors and everyone who has contributed an article, photographs, information and support and especially Jon Waitz who has been chairperson, writer wrangler and organizer for this effort.

The PBWOA is very lucky to have a wonderful all volunteer Board of Directors from five lakes in our chain of lakes and the Huron River. In addition, we have a volunteer Science Advisor who gives of his time and expertise, along with our "retired" board members who stay on as Directors Emeritus.

The Association continuously engages in numerous efforts to protect our chain of lakes - our waters, shores, lake flora and fauna, property values and recreational opportunities through things such as the establishment of a Special Assessment District, hosting speakers from DEQ, DNR and many of our local agencies and governmental officials, publishing and gathering, sharing and disseminating to our members important pertinent information and partnering with our local supporting businesses and working and communicating with local township and county governments. The PBWOA has been involved with CLMP lake monitoring, educating members about the effects of fertilizers, lake frontage improvements and naturalization, birding, fishing, boating safety, invasive animals, invasive plants, algae, an excellent website, local accessory building ordinances, zoning, legal issues and area history, along with social events such as our annual pizza party.

We hope you enjoy the story of PBWOA and the Portage Lake Chain.



Big Portage, Little Portage, Base (aka Baseline), Zukey, Strawberry,
Whitewood and Gallagher.

(Continued from page 5)

Overview:

The Portage/Zukey chain of lakes is a watershed of the Huron River that spans two counties and four townships in Southeast Michigan. Its southeastern edge is about 15 miles northwest of Ann Arbor. There are seven main lakes in the chain: Big Portage, Little Portage, Base (aka Baseline), Zukey, Strawberry, Whitewood and Gallagher. Navigation between these lakes via no-wake portions of the Huron, which are lovely undeveloped stretches of the river lush with trees. While these undeveloped stretches are lush with vegetation and as peaceful as any spot in nature, one can only imagine how beautiful traveling the chain must have been back in 1877 when Eli Moore, a Pinckney resident, traveled the chain by row boat. He later wrote, "the change of scenery from lake to river and river to lake was beautiful beyond description to a lover of nature."

Though not traditionally included in the list of chain lakes, Loon Lake is also connected and is a popular spot for deep lake swimming. Two other lakes, Tamarack and Ore, are connected but are only accessible from the chain by small watercraft. Ore Lake, in particular, is difficult to reach, as it is quite a journey up the river and the waterway is quite shallow in spots.



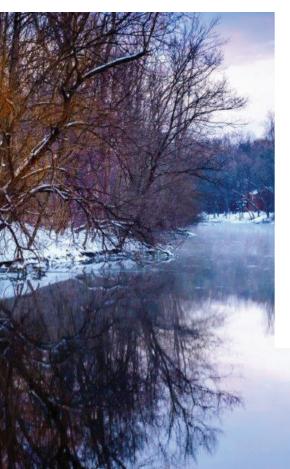
Huron Chain
Photo Credit: Jack White, Photographer

The largest lake on the chain is Big Portage Lake, which is 680 acres and 84 feet deep at its deepest point. It is known to be a good fishing lake, and is a very popular spot for sailing. The entire chain of lakes is very popular with recreationists, who flock to the area on summer weekends to boat, fish, waterski, tube, and just hang out with family and friends at one of several sand bars.

All of the lakes in the chain are known to be good for fishing. While there are over 90 species of fish found here, some of those regularly caught include Bluegill, Pike, Bass, Perch and Walleye. Many lovely birds also flock to the water, including Great Blue Herons, Sandhill Cranes, Ospreys, Canada Geese and swans. Bald Eagles can also be seen; in fact, there is a Bald Eagle that nests between Whitewood and Gallagher Lakes that is regularly spotted swooping down to snatch fish out of the water.

There is only one public marina offering gas to boats on the chain (Klave's Marina), but there are a number of dining options accessible from the water. At the top of the chain, Zukey Lake Tavern is a popular spot for boaters to stop and get a bite to eat. Many residents and visitors travel up the chain to the huge sand bar on Zukey Lake, and then dine

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Above and Middle Picture: Lakeland Train Depot Picture below: Lakeland Pavilion

(Continued from page 6)

on the roof top at the Tavern or pick up a pizza at the dock to eat on the boat. Further down the chain, pizza can also be picked up at Riverside Pizza on the canal between Baseline and Portage, while the Portage Yacht Club on the south end of Big Portage offers finer fare as well as a beach area for members and mooring slips.

Given the chain's size and all it has to offer, the shoreline has been heavily developed, and there are few buildable lots left. While there are still many old summer cottages lining the shores, there are also many big new homes. The best properties on the chain tend to sell immediately, and chain of lakes homes garner much higher prices than houses on nearby lakes off the chain.



LAKELAND, MICH

(Continued on page 8)

Overall Lakes Description & History

(Continued from page 7)

History:

The birth of the Portage chain of lakes can be traced back 14,000 years to the last glacial retreat. The lakes in the chain are glacial kettle lakes, which formed when large blocks of ice split off from the retreating glacier and melted.²

Evidence of human inhabitation along the river can be traced back some 10,000 years. Both the Wyandot (later called Hurons by the French) and the Potawatomi established villages along the Huron River.³ Prior to the arrival of European explorers, the area was inhabited by a number of Native American tribes, such as the Mohawk, Chippewa and Fox. When European fur traders arrived, the Iroquois drove these other tribes out in an effort to monopolize the fur trade with the French. Famous explorer Robert Cavelier, Sieur de LaSalle, was perhaps the first nonnative to travel the Chain of Lakes, which he did in the spring of 1680. He chose this remote northerly route to try to avoid Iroquois war parties.⁴

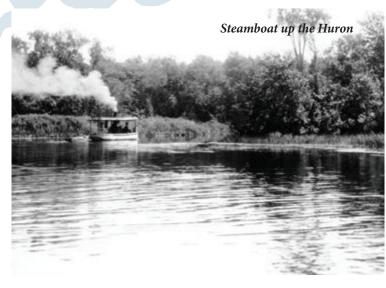
By the 1720s, Europeans had begun to develop the area in earnest, and were building dams, saw mills and grain mills along the riverway.⁵ In the 1880s, two railroads came through the area. Prior to this time, transportation was by foot, horse and wagon along old Indian trails and a few narrow roads. The arrival of the railroads led to a boom in employment opportunities and development.

One very popular stop on the railroad was at the north shore of Zukey, at the top of the chain of lakes. Summer vacationers would deboard at Lakeland and then transport their suitcases and supplies to cottages around the chain via wagon, canoe, row boat or steam boat. Prior to refrigeration, this railway stop was also a prime source of ice for other communities: ice was cut from Zukey Lake and transported via rail to Ann Arbor, Detroit, Pontiac and Toledo. The old Grand Trunk Railroad line has recently been put to great use as the Lakelands Trail, which is part of the Rails-to-Trails project, which will link Lake Michigan to Lake Huron via beautiful trails perfect for walking and bicycling. The Lakeland Trail is a very popular feature in the area; every day, local residents can be seen getting in some fresh air and exercise on this lovely nature trail.⁶

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The lakes in the chain are glacial kettle lakes, which formed when large

blocks of ice split off from the retreating glacier and melted.

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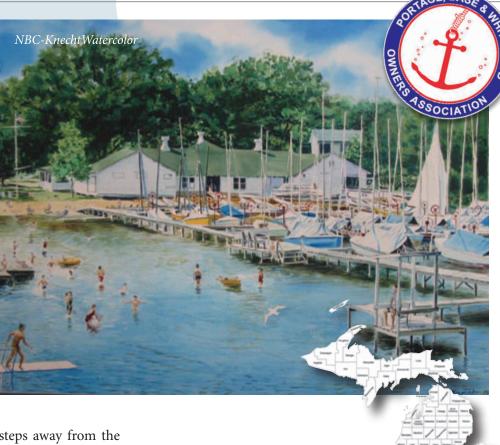
Another major attraction in Lakeland is Zukey Lake Tavern, which opened when Prohibition ended in the 1930s. The original proprietors, the Girald brothers, would regularly take a motorboat up and down the chain to pick up customers and bring them back to the tavern. Zukey Lake Tavern is still a very popular dining spot on the chain of lakes, and many visitors still arrive by boat today.

Icon in the community and longtime resident, Tom Ehman, who owns the Portage Yacht Club, is a wealth of information regarding changes that have taken place over the years. He first visited the lakes in 1937 as a small child. He then bought a cottage in 1957, and became a yearround resident in 1962. He says that in 1937, all of the residences on the chain were seasonal, and they had an

outhouse on the back porch or a few steps away from the house. He remembers that back in the day, you would put a sign in the window telling the ice man how much ice you wanted, and by 8 pm at night, the electricity was shut down. It was only after WWII when DTE bought up the company that had been generating power at a location on the east shore of Big Portage that electricity became available 24/7.

The invention of the automobile no doubt contributed a great deal to residential development around the chain of lakes, as many cottages were built in the 1920s and following years. Most of these were summer homes. After WWII, however, construction of I-94 and US-23 made living on the chain and commuting to nearby cities feasible, at which time many cottages were winterized or torn down and replaced by year-round residences.⁷

A major turning point in the development of the chain came in the late 1980s when a sewer system was put in. Prior to this point, all the houses on the chain had septic fields, many of which were failing. Because lake lots tend to be small, there was no place on these lots to relocate the septic fields. As a result of this, banks would not issue mortgages for these properties; they could only be sold on land contract. After much struggle, eventually cooperation between two counties, four townships, and countless residents was attained, and the great majority of the houses lining the shores of the chain were hooked up to a community sewer system. Today, the Portage chain of lakes is considered one of the nicest areas in Southeast Michigan to live on the water, given its natural beauty, cleanliness, proximity to Ann Arbor, and exceptional recreational opportunities.



The Portage, Base & Whitewood Owners Association

The lower end of the chain of lakes is blessed to have a very active owner's association, the Portage, Base & Whitewood Owners Association (PBWOA). Prior to this association coming into being, there were some other organizations that sprang up to address the various problems and issues that lake communities tend to experience.

One of the greatest achievements of the PBWOA was the development of the sewer system in 1989. The association was instrumental in this coming into being, as it circulated petitions throughout the community, and campaigned with local governing bodies to get a special assessment district created. Prior to the development of the sewer system, some residences were draining sewage directly into the lake, and many septic fields were failing, which was causing widespread contamination. The creation of the sewer system has naturally led to better water quality, and as mentioned previously, has fostered greater development as now banks will issue mortgages for chain of lakes properties.

Prior to the current association, the Portage and Base Lakes Association did tremendous service to residents of

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the chain by campaigning for the construction of the John Fluke Dam. In 1946 and in 1957, the area experienced major flooding. MacGregor road was underwater, and all of the cottages on the east side of Big Portage had furniture floating in them. This of course also prevented the septic systems from functioning properly. It was a big problem.

Tom Ehman led the charge in researching the source of the problem and possible solutions. It was eventually determined that a dam was needed to control the water level. In the summer of 1963, a team of 11 men circulated petitions to form a special assessment district in order to dig out the river and build a dam. (Tom Ehman still has the box of signed petitions in storage!)



Fluke Dam

Plans were set in motion, and by April of 1966, the dam was operational. Ehman says the first year, they experienced their first disaster when mist froze the top of the dam, and then a thaw came with heavy rains in January. The dam was frozen but badly needed to be opened, so Ehman and the man who operated the dam took hammers, sledge hammers, torches, and everything they could think of to try to get it open. After three days of strenuous effort, they at last succeeded. After this, it was determined that the smart thing to do was to let the lake down three feet every November so that when heavy winter rains came, the lake would be able to accept the rain. To this day, the water level is lowered every fall, though it is no longer let down three full feet.

Currently the PBWOA is involved in some initiatives designed to improve the ecology of the chain. Foremost is the weed control project, which is designed to tackle the problem

of weed overgrowth and promote ecosystem stability. The goal is to control invasive and nuisance aquatic weeds through mechanical harvesting and chemical treatment. It is hoped this effort will enhance the recreational environment and make the chain more aesthetically pleasing.

The DNR is also making an effort to control the goose and swan populations in order to reduce waste pollution on land and in the water. Swans are also being culled because they have been aggressive to the point of being a serious problem.

Finally, the PBWOA has recently put together a committee designed to educate lake residents on how to promote better lake ecology. This effort has partially arisen in relationship to the weed control project, because a big contributor to the weed problem is run-off from fertilized yards.

There are some other best practices that the association is hoping to see put in place. They recommend that homeowners:

- Don't burn leaves at the edges of lakes.
- Don't throw yard trimmings or leaves into the water.
- Don't feed waterfowl by the lake.
- Don't put chemicals like fertilizers on lakeside lawns.
- Do clean up after pets.
- Do create a green belt at the shoreline as a buffer between the yard and water.
- Do remove weeds and leaves from the lake.

It is particularly important to make sure yards are clean of pet waste, chemicals, and anything else that could pollute the water just prior to big storms, when the run-off impact is greatly magnified. These may seem like small efforts, but experts say that if everyone consistently adopts these practices, the ecology of the chain would see significant improvements over time.

The Huron River is considered to be the cleanest urban river in Michigan.⁸ With the combined efforts of the PBWOA and chain of lakes residents, it should grow to be an even lovelier place to live and play in the future.

Sources

- 1. http://historypbw.org/early-travel/
- 2. http://historypbw.org/huron-watershed/
- 3. http://historypbw.org/native-americans
- 4. http://historypbw.org/lasalle/
- 5. http://historypbw.org/native-americans
- 6. http://historypbw.org/railroads/
- 7. http://historypbw.org/early-travel/
- 8. http://historypbw.org/huron-watershed/

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Fishing the Chain

We love our Portage Chain of Lakes. It's ours to enjoy, improve, and protect

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Whether it's participating in the numerous Bass fishing tournaments, simple bobber and worm fishing for pan fish or everything in between, the Portage Chain of Lakes offers good fishing for everyone. As I write this during early morning, already there are bass boats crisscrossing Portage Lake in search of the best locations. Among the most popular game fish are Largemouth and Smallmouth Bass, Northern Pike, Walleye, Sunfish, Bluegills, Rock Bass, and Crappie, all of which are certainly catchable, however Walleyes can be somewhat of a challenge.

Each lake and their connecting waters offer a variety of ecosystems. Some lakes are deep water structures, sand and gravel bottoms with sunken islands, providing plenty of drop-off contour where most fish feed, and some are very shallow with gradual contours and extensive vegetation growth with adjoining deep water canals. The variety is endless, and after fishing these waters for over 50 years I'm surprised year after year with yet a new fishing discovery, be it huge largemouth bass caught in a couple feet of water, or giant bluegills suspended just a few feet deep over thirty foot depths. There's always something new, something that "doesn't make sense" – but works. It's constantly interesting.

Being a popular chain with plenty of boat traffic, like most public lakes, choosing the right time of day is important. Avoiding the busiest times, usually weekends from noon to about dinner time is advised. Those who will get up early and start fishing about dawn, or heading out just before dark, have the best chance to catch fish. Plus, April, and May, September and October, are wonderful times to fish on the Chain, as fish are very active during these "off season" times. It's peaceful, cool, and it just takes a little bundling up to stay warm, but it's so worth it.

The Portage Chain is a type of fishery requiring a somewhat different approach than usual. This fishery breaks the rule about "being patient". To figure out how to catch fish on any given day requires, well, a rather impatient approach. Perhaps more than other lakes, changing locations, depths, lures, bait, time of day, etc. frequently is the best bet. Staying in one place, watching a bobber for hour and waiting for the fish to come to you rarely works (by the way is a sure way to discourage a young angler). We rarely stay in one place longer than five to ten minutes. There have been times



Huron Chain
Photo Credit: Jack White, Photographer

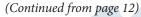
when we've tried many combinations of techniques, depths, and locations, only to abandon the entire lake and fish in the connecting river waters and had great success. This is Portage Chain fishing.

It's also important not to get caught up in the "magic lure" idea. There isn't one. Simplicity is best, and catching fish on the Portage Chain has far more to do with changing locations, depth, time of year and time of day rather than using the perfect lure. Experimentation and trying different approaches is the key to this fishery, and perhaps many others in this wonderful state.

We do use simple plastic lures such as worms, tubes, lizards, crayfish, and live bait often too. When we do we always use circle hooks for conservation purposes. The circle hook is a wonderful invention, and hooks fish in the corner of the mouth an amazing 97% of the time, allowing easy release of unharmed fish you do not intend to keep. Plus, they are safer, as they don't snag things and people nearly as often as the traditional "J" hooks do. Circle hooks are highly recommended in almost all fishing conditions for all lakes.

The time honored method of trolling can be effective too, but early or late in the year are advised times, as like

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many other freshwater lakes in our State the motorboats tend to chop up aquatic vegetation which floats on the surface making it difficult to keep the weeds from sliding down your line and tangling lures.

Ice fishing the Chain is fun and productive. For some reason, the bigger lakes go sort of dormant, are difficult to ice fish successfully, so we concentrate on the smaller lakes, bays, and canals to catch fish consistently. Interestingly, and even more importantly, the same rules apply as for spring, summer, and fall, that being the importance of moving frequently, trying different locations, depths, etc., and again especially if there are kids on the outing. Long gone should be the days of sitting on a bucket in one spot, freezing, not catching any fish.

We often recommend individual conservation responsibility when fishing the Chain. Mostly, we release unharmed all Bass, Pike, and other top level predators, as they keep the fish population balanced and healthy. The State of Michigan's possession limits of 25 pan fish have been in place for generations, but it doesn't mean we have to keep that many. We suggest a self-imposed limit, that of keeping what you need for a good dinner as opposed to "limiting out", or "filling the freezer". We enjoy the honor and healthy fish populations from those before us who would say "leave some for someone else", and just took what they needed. It just makes sense to pass that on to our future friends, children, and grandchildren, doesn't it?

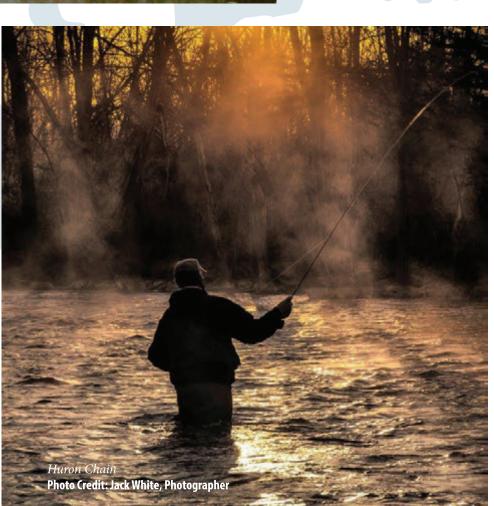
We love our Portage Chain of Lakes. It's ours to enjoy, improve, and protect. An essential part of fishing or any type of recreation on these waters has to include a consciousness of being a good steward as we enjoy this wonderful and fragile resource we are borrowing from future generations. We need to return it to them in great shape so they can enjoy it as well. There are simple things you can do

when fishing the Chain which will help. To prevent transporting destructive invasive species of weeds to and from the Chain, such as when launching or removing our boats from the water checking and making sure we don't have any weeds hanging from our boat, props, or trailers and clean out our live wells. Never dump our extra bait out in the lake. Check out the Michigan Lake and Stream Associations website for more.

There are so many other things to enjoy when fishing the Chain. It has been said that fishing is an excuse to get out into great places with great people. Well, it's true, and the Portage Chain is a great place: we'll leave the great people part up to you. While fishing the Chain, you will also notice your aerial fishing partners such as Bald Eagles and Osprey. During your navigation from lake to lake, it's not uncommon to see deer, turkeys, and an array of other wildlife, flowering trees and bushes, and a natural wild setting along the Huron River connecting waters, much of which is protected. After 50 years of very active living on this Chain of Lakes, this writer believes he's just getting started in discovering all it has to offer.

(Continued on page 14)





The Birds and Waterfowl of the Chain of Lakes

(Continued from page 13)

By Raburn Howland

The Chain of Lakes and its adjacent land provide a wonderful area for bird watching. The Huron River, with its many lakes and tributaries, neighboring woodlands and fields has one of the most diverse collections of habitats in this area of Michigan. It is a remarkable region that makes it a great place to visit and explore, especially with children who might get a chance to see some spectacular birds, up close and personal.

For bird watchers, an added bonus is that the Huron runs between two of the best birding sanctuaries that one could wish for, and they quite accessible. The first is Hudson Mills Metro Park on North Territorial Road just east of Dexter Pinckney Road. It has miles of walking and hiking trails and is often referred to as a "warbler trap" by local birders, given the number of these very colorful birds that can be seen in and around the park. Just recently a paved path was completed along the river from Hudson Mills to Dexter that provides many wonderful views of the river as well as the local wildlife including wandering flocks of wild turkeys, Sandhill Cranes, Turkey Vultures, and local raptors including Bald Eagles and Red Tail Hawks.

The second area is the large and heavily wooded Stinchfield Woods, a University of Michigan preserve just west of Hudson Mills along and north of North Territorial road. There are many trails, some of which can be challenging but worth the effort because it is a major nesting area for a variety local birds.

The Huron River with its many lakes, large and small, provides habitat for many waterfowl such as Mallards, Canada Geese, Wood Ducks, Great Blue Herons, and Kingfishers to name a few of the more common ones. They all can be easily seen from anything that one can find to float down the river in, including inner tubes! The current is gentle, the depth is quite shallow in most areas and the water is warm, most of the time.

During migration seasons in the early spring and late fall/early winter these waters are major stopping off places for a much greater variety of birds and waterfowl as they participate in one of truly special spectacles of our natural world. On Portage Lake and Baseline Lake there are often flocks of many hundreds of Canada Geese, and several dozen different varieties of ducks. They are often being

(Continued on page 15)



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Heron



(Continued from page 14)

watched from the sky and shoreline by resident Bald Eagles looking for a meal. This especially true during freeze up when the open water on the lakes is greatly reduced concentrating the waterfowl into ever shrinking pools of water. In the depths of winter when everything freezes and some of the Mute Swans don't survive the cold they become food for the eagles, hawks and crows.

One of the later migrants is the Common Loon. One or two spend several days in May and November on Portage Lake. For me their haunting call is without equal. One of the things that make being on the Chain of Lakes so special.

Birds identified on the chain:

By Paul & Zara Rivera

Common Loon Horned Grebe Pied-billed Grebe Canada Goose Mute Swan Trumpeter Swan

Gadwall Mallard

Common Pintail

Wood Duck Canvasback Redhead

Lesser Scaup Greater Scaup Black Scoter

Common Goldeneye Barrow's Goldeneye

Bufflehead Ruddy Duck

Common Merganser

Red-breasted Merganser Hooded Merganser

American Coot

Herring Gull

Great Blue Heron

Great Egret Snowy Egret

Black Crowned Night Heron

American Bittern Sandhill Crane

Killdeer

American Woodcock

Common Snipe

Wild Turkey

Ring-necked Pheasant

Red-Tailed Hawk

Bald Eagle

Osprey

Turkey Vulture

Mourning Dove Belted Kingfisher

Ruby-Throated Hummingbird

Rufous Hummingbird

Pileated Woodpecker

Common Flicker

Red-Bellied Woodpecker

Downy Woodpecker

Barn Swallow Tree Swallow

American Crow

Northern Raven

Blue Jay

Black-capped Chickadee

Tufted Titmouse

White-Breasted Nuthatch

Eastern Bluebird American Robin Yellow Warbler

Red-Winged Blackbird

Common Grackle European Starling

Northern Oriole

Northern Cardinal

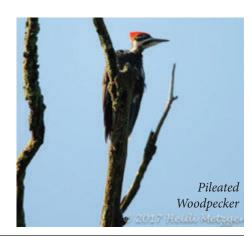
American Goldfinch

Red-Breasted Grosbeak

(Continued on page 16)







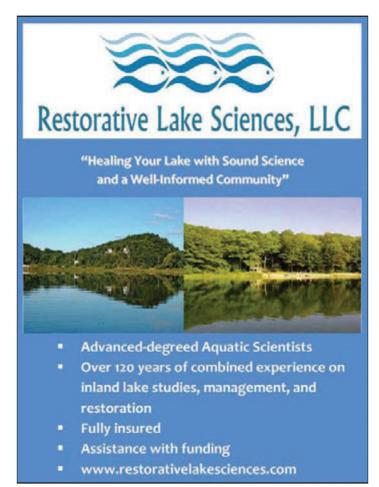
Proactive Challenges & Solutions (Continued from page 15)

The Portage, Base & Whitewood Owners Association (PBWOA) represents owners on a series of lakes and connecting waters commonly referred to as the Huron River Chain of Lakes. Most PBWOA members reside on Little Portage, Portage, Baseline (Base), Tamarack and Whitewood Lakes. Other lakes on the Huron River Chain include Gallagher, Long (Loon), Strawberry and Zukey. There are several smaller lake associations serving individual subdivisions or waters. Each lake has its own personality and as with every lake and lake association there are ongoing challenges - some issues carry over from year to year and some are relatively new to the 'problem' pile. The PBWOA realizes this is a continual endeavor and hopes to address issues and include as many riparian owners - as well as temporary 'users' – as possible to help protect and preserve what we have. This chain of lakes serves a multitude of consumers, and is centrally located within driving distance to several large metropolitan areas providing employment, including Ann Arbor, Lansing, Brighton, Novi and others. It has become a very popular location for commuters who love the water and what that brings to their lifestyle.

The considerable area that these waters encompass involve six governmental bodies –townships of Putnam, Dexter, Webster and Hamburg as well as two counties – Livingston and Washtenaw. The mere size coupled with these different governments presents a multitude of challenges when approaching common problems. It seems everyone has differing views of what the lakes should be and what their individual roles might be in maintaining them.

So, sleepy summer cottage lake areas have given way to year-round homes and municipal sewer systems have replaced failing septic fields. As a result we have seen increased noise and more people on the lakes on a daily basis. Very few vacant lots remain. The diversity of the population and demands on the waters lends itself to growth issues and other problems with no universal answer. The PBWOA hopes to draw attention to our challenges, seek input from members, help educate riparians AND find

(Continued on page 23)





ATTORNEY WRITES

"I Live Next to a Dump..."

Unfortunately, many lake communities throughout Michigan have certain blighted properties, whether the problem is outdoor junk, a dangerous or dilapidated building, old trailers or boats that have not been used in decades or old building materials that never get used. Such blighted properties are not only eyesores, but they can also adversely impact the value of adjoining or nearby lakefront parcels and, in some cases, can actually present a hazard to the environment due to leaking chemicals, old tires that breed mosquitoes, and polluting items in general.

What can a lakefront property owner do to help prompt an adjoining or nearby property to be cleaned up? A fed up property owner has two potential avenues of remedy. First, in some cases, the property owner can file a private nuisance lawsuit to abate the problem. Second, the local municipality might have one or more ordinances that can be used to fight the blight.

Unfortunately, the first remedy (i.e. a private nuisance lawsuit) is often not feasible for a variety of reasons. Such lawsuits can be expensive. Furthermore, in Michigan, the American rule of attorney fees applies – that is, in most cases, win, lose or draw, each party pays their own attorney fees without reimbursement by the other. Even if a property owner is found to have created a severe blight problem and loses in court, that losing party normally does not have to reimburse the other side for attorney fees. In Michigan, the prevailing party in court is usually able to obtain reimbursement of their "court costs," but those costs tend to be fairly limited and generally do not include attorney fees. Furthermore, it is sometimes difficult to prove that a blight situation rises to the level of a nuisance which the court must abate.

WHAT CAN A LAKEFRONT PROPERTY
OWNER DO TO HELP PROMPT AN
ADJOINING OR NEARBY PROPERTY
TO BE CLEANED UP?





In most cases, municipal ordinance enforcement efforts are much more effective in cleaning up blighted properties. Most municipalities in Michigan (i.e., cities, villages and townships) have a variety of different ordinances on the books which can be used to fight blight. Typically, those ordinances include some or all of the following:

- 1 The zoning ordinance.
- 2 A dangerous and dilapidated buildings ordinance.
- 3 A junk control ordinance.
- 4 An inoperable and junk motor vehicle ordinance.
- 5 Miscellaneous environmental ordinances.
- 6 Nuisance or blight ordinances.
- 7 A property maintenance code.

Ordinance enforcement efforts by municipalities in Michigan have become much easier since the mid-1990's, with the advent of municipal civil infraction tickets for nontraffic matters. Pursuant to a municipal civil infraction ticket/ citation and the follow-up legal enforcement proceedings, a district court in Michigan has a variety of remedies that can be applied if a property owner is found to be responsible for an ordinance violation. A district court can order the imposition of fines and penalties, enter an injunction ordering the property owner to clean up his or her property and to comply with the ordinances, order the violator to pay some or all of the prevailing municipality's attorney fees and court costs and secure any attorney fees or costs involved by a lien on the property involved. Typically, before a municipal ticket/citation is issued, a municipality will send one or more violation notices or letters to the property owner involved. Court action tends to be a "last resort."

Unfortunately, given tight municipal budgets and other matters, some Michigan municipalities are reluctant to enforce local ordinances regarding blight. When such reluctance appears, the old adage "the squeaky wheel gets the grease" often applies. If a municipality will not enforce its ordinances to clean up a blighted property, oftentimes the lake community involved (including a local lake association) can pressure the municipality into taking action. Any such lobbying should be firm, but polite. In addition, in a few cases, a lake association or the local community will donate funds to the municipality involved in order to lower the costs

(Continued on page 18)



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Membership dues of \$45 entitles you to a year's membership and subscription to *The Michigan Riparian* magazine as well as other benefits. **Mail check payable to ML&SA to:**

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"I Live Next to a Dump..."

(Continued from page 17)

incurred by the municipality when enforcing its ordinances against a particular property.

If a municipality will not take action pursuant to its ordinances when there is a clear blight violation, can an adjoining or nearby property owner enforce the ordinance via court action? Although the Michigan appellate courts have reached different conclusions regarding whether a private property owner has "standing" (i.e. the authority to pursue a private civil lawsuit to enforce a municipal ordinance without joining the municipality in the lawsuit), it is likely that private individuals do have the ability to bring such lawsuits if they can prove "special damages." See Towne v Harr, 185 Mich App 230, 232 (1990); Cook v Bandeen, 356 Mich 328, 330-334 (1959); *Jones v DeVries*, 326 Mich 126, 128-135 (1949); Baura v Thomasma, 321 Mich 139, 142-143 (1948) and Schall v City of Williamston (unpublished decision by the Michigan Court of Appeals dated December 4, 2014; Case No. 317731; 2014 WL 6860265). In order to pursue a private lawsuit to enforce a municipal ordinance, the property owner bringing the lawsuit typically must prove that the complained-about behavior or condition on the blighted property injures or damages the complaining person in a special way, which is different than the harm to the general public. See Lansing Schools Education Association v Lansing Board of Education, 487 Mich 349 (2010).

REPRINTING Articles from the Magazine

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

If you or your organization wishes to reprint an article from *The Michigan Riparian* magazine, please contact us at (989) 831-5100 or info@mi-riparian.org. If approved, we will notify you by email or letter. When permission is granted, the following language <u>must</u> appear just before or after the reprint:



By Carol Westfall,
Pleasant Lake in Freedom Township, Michigan

How are lake protections implemented in your township and zoning conflicts resolved? Do lake residents and officials partner well on behalf of your lake? Securing strong lake protection can be a challenge. I know. I learned the hard way.

Don't get me wrong. Our township has done some terrific things to protect our 200-acre lake in southeast Michigan. A Lake District was included in the township's Master Plan and a SAD (Special Assessment District) was voted in to manage invasive species. Keyhole protections were updated and a Board resolution opposing a public boat launch was passed. In 2017, a lake resident was even added to the Planning Commission.

The problem: Our lake residents were invited by township officials to provide input into a new Master Plan and Zoning Ordinance but only a few showed any interest. That was *our* first mistake. Lake residents were later caught by surprise when some parts of the new zoning ordinance did not reflect our lake's needs. Changes have now been made but not without enormous lake resident effort.

LESSON #1: Lake advocacy starts and ends with YOU, the lake residents. Do not depend on officials to wholly represent your lake interests. Get involved – early and often.

For years, a neighbor preached the importance of lake residents attending township Planning Commission and Board meetings, "... so they know we're watching and involved; that we care about their decisions affecting the lake; to be better educated about township government and to know our officials," she would say. *Oh*, *no*, I thought. *Not more meetings!* Surely, we should be able to trust others to act in the best interests of our lake.

Not necessarily. Upon returning home the end of December, 2014, I opened the door to a 6-foot wall of wood. A fortress-like structure neighbors had installed between our two, small waterfront lots was ominous – a 6-foot privacy fence without

privacy. Our grade is higher. We can still see them; they can still see us. The fence was unlike any other approved fence on our lake. *Surely our zoning ordinance doesn't allow this*, I thought.

It didn't. A process error had led to the approval and three months later, the fence was ruled non-compliant. Months passed and a garage was added to move the front building line and make the fence compliant. Officials promised to fix the zoning ordinance for *waterfront lot* fences but that didn't happen.

NOTE: I later learned that 4-foot, see-through fences on waterfront properties were the fence standard in the township's *previous* ordinance – but not the *new* one. An oversight? An intentional change? I'll never know, as that question was never answered.

LESSON #2: Study your zoning ordinance and how each section affects lake properties. Educate yourself! Even better, get lake residents on your Board, Planning Commission and committees. CONTACT: MSU Planning and Zoning Center- www.canr.msu.edu/landpolicy/program/planning; 517-432-2222.

It took a fence zoning issue to get my husband and me to Planning Commission and Board meetings (we are now regular attendees). We voiced our concerns and pleaded for help; repeatedly tried to resolve the problem in favor of view preservation and protecting the rural, hamlet character of our lake area. Michigan's Denton Township, for example, limits all fences within 500 feet of a lake to 4-foot or less – Township of Denton, MI District Regulations. 310-21 Lakefront Residential District. F(2).

(Continued on page 26)

Learn about MICHIGAN'S LAKES ONLINE

By Bindu Bhakta and Paige Filice, Michigan State University Extension

Register today for this opportunity to learn about inland lakes from MSU Extension and participants across the Midwest.

The Introduction to Lakes course is being offered again in January 2018, and registration is open now. This popular six-week course is offered in a convenient self-paced online format. Introduction to Lakes is designed for anyone interested in lakes, including lakefront property owners, lake users, local government officials, lake managers and educators. The course schedule allows for regular online communication with classmates and course instructors through discussion forums and live Ask-an-Expert webinars.

Introduction to Lakes is taught by lake experts from Michigan State University Extension. Students have week-by-week, 24/7 access to six online units complete with video lectures, web-based activities, discussion forums, three biweekly live webinars and quizzes to assess learning. A certificate of completion is awarded to those who complete assignments and quizzes.

A new perk of the Introduction to Lakes course is that students who complete the course get a free one-year membership to ML&SA including 4 editions of *The Michigan Riparian* magazine.

Over the last two years, 235 lake enthusiasts across Michigan and numerous surrounding states have enrolled in the course. Here are some examples of feedback from past participants:

"After Unit 3, Lakes and Their Shorelines, I implemented a project in my classroom to help students understand what they can do to decrease shoreline erosion."

"I learned I was incorrect in much of my pre-course assumptions, i.e., the importance of beneficial aquatic plants, evaluating the actual "health" of our lake, riparian rights, etc."

"I have implemented a buffer zone on our condo association's lakeshore; approximately 1,200 feet of frontage. I have, of course, had opposition (we have 78 units), but the knowledge obtained from the Introduction to Lakes course has helped my credibility."

Here is a glimpse into the content covered in Introduction to Lakes:

• Lake ecology. Understanding lakes starts with a clear understanding of lake ecology and the relationship between the organisms and chemical and physical components of a lake system.

- Lakes and their watersheds. No two lakes or watersheds are alike, and understanding watershed components and potential community partners leads to effective local watershed management and ultimately healthier lakes.
- Shoreline stewardship. Whole lake management considers the shoreline including upland areas, buffer zones, the shoreline and the lake itself.
- Michigan water law. An understanding of water law and the permitting processes regulating lake activities is necessary for lake protection and enjoyment.
- Aquatic plant management. Lakes teem with a diversity of aquatic plants. Learn to appreciate beneficial native plants, and about the identification and management of nuisance and invasive species.
- Citizen involvement. Learn how to engage in lake management planning, project implementation, and citizen science programs such as the MiCorps Cooperative Lakes Monitoring Program. You will also gain insight into encouraging involvement of others in your community.

The 2018 course begins on January 23 and will run through March 9. The Ask-an-Expert webinars are scheduled from 12 to 1 p.m. on Feb. 7, 21, and March 7, 2018. The cost of the course is \$115 per person.

To register visit Michigan State University Extension online at www.msue.anr.msu.edu and search for "Introduction to Lakes". Registration ends January 16, 2018.

Fourteen Michigan Department of Rural Development Pesticide Applicator Recertification credits, 14 Michigan Department of Education State Continuing Education Clock Hours (SCECH), and 6 Master Citizen Planner Education Credits are available for this course.

Please contact Bindu Bhakta at bhaktabi@anr.msu.edu for more information.

This article was published by Michigan State University Extension. For more information, visit http://www.msue.msu.edu. To have a digest of information delivered straight to your email inbox, visit http://www.msue.msu.edu/newsletters. To contact an expert in your area, visit http://expert.msue.msu.edu, or call 888-MSUE4MI (888-678-3464).

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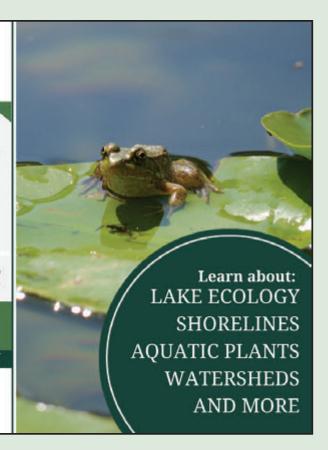
Anyone who works and/or plays on Michigan's 11,000 inland lakes

Enrollment : 1/16/18

For course dates & details, search MSUE for "Introduction to Lakes" WWW.MSUE.ANR.MSU.EDU

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Waterfront owners are the final defense of their lakes and streams.

Waterfront owners are the final defense of their lakes and streams. The MWA is <u>the</u> waterfront voice in Michigan politics

Annual dues for individual membership in Michigan Waterfront Alliance are \$50.00 per year. Dues for lake or stream associations are \$100 per year. Commercial and individual donations are needed and appreciated.

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Township Lake and Stream Association		Check here if you would like to donate to the legal defense fund	
Make checks Payable to Michigan W	aterfront Alliance		donate to the legal defense fund.
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□ I am not ready to join yet	t. Please send me more	information	

Dear Friends of Michigan's Lakes,

As of November 19 the Michigan Waterfront Alliance and the Michigan Department of Natural Resources Parks and Recreation Task Force have yet to have its first meeting. Progress has been ongoing with a number of conversations between Parks Chief Ron Olson and myself regarding the wording of the joint letter we are to sign that would set up the task force. I had hoped that by now I could have included that letter with this report. So far, we have agreed that the Michigan Waterways Commission, Parks and Recreation, your Michigan Waterfront Alliance, DNR Legislative Liaison and possibly law enforcement would be represented on the task force.

Hopefully Chief Olson and I will have agreement on the letter, that it will meet MWA Board approval and we will have had the first Task Force meeting by the time the MWA December Newsletter is published. All in all, we are making very good progress in starting to achieve the goals set forth by the

MICHIGAN WATERFRONT ALLIANCE

P.O. Box 369 Fenton, Michigan 48430-0369 www.mwai.org



MWA "Call to Arms" White Paper that many lake associations and individual riparians have signed and sent to the MWA lobbyist, Karoub and Associates.

Following are a sample of some of the additional issues of concern to Michigan riparians that the MWA is attentive to:

-Michigan lawmakers have voted to weaken a policy that prohibits oceangoing cargo ships from releasing ballast water at state ports until it has been treated to kill invasive species, despite Gov. Rick Snyder's opposition to the legislation.

-The U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), and the U.S. Forest Service (USFS) recently announced a new memorandum of understanding (MOU) with the Association of Fish & Wildlife Agencies

(AFWA), the American Sportfishing Association (ASA), the National Marine Manufacturers Association (NMMA) and the Recreational Boating & Fishing Foundation (RBFF) that will pave the way for increased fishing and boating access and participation.

-The waves generated by water ballasted large wake-making boats are causing havoc on Michigan's smaller inland lakes near shore areas.

Sincerely, Bob Fry, President Michigan Waterfront Alliance



Proactive Challenges & Solutions

(Continued from page 16)

common workable solutions. We hope to make a difference by looking ahead, being proactive in our approach and educating our constituents all at the same time. The mere size of our area and ways of reaching everyone is perhaps the biggest challenge. A few years ago, we had overwhelming response from our membership that invasive weeds were their major concern. We contacted a company to analyze our situation and made recommendations for treatment. At first we were uncertain how to include the entire chain, not just our membership area because the problem clearly affected the entire waterway. Hamburg Township got on board and suggested to the other townships that it was a critical issue to support. Once all townships agreed, we jointly brought it to the attention of both counties. Washtenaw County agreed to take the lead since they had established successful lake cleanups in the past. This is now our first of a five year Lakes Improvement Project funded by our tax dollars (a special assessment); and, while it is not without its own hiccoughs, it is proving to be instrumental in attacking the issue. This will be a consistent, coordinated 'single' approach with a central biologist on board to monitor and assess. It also considers a 'fairness' factor with every taxpayer - riparian, back lot owners, businesses – all contributing to the cost with varying degrees of assessment. We are excited to see where this will lead.

With the weed issue being addressed, it is important to tackle the reason why this happened and to look at potential future causes. The challenge of people fertilizing lawns is paramount to the success of keeping our weeds under control. Many waterfront homeowners don't understand that while they are maintaining their lawns to be in pristine and weed-free competition with subdivision lawns, they are also



Purple loosestrife (Lythrum salicaria)

fertilizing and maintaining the weeds in the lakes. The runoff from well-meaning residents goes directly into the waters. Lawn service companies either don't care about the well-being of the lake or are blissfully ignorant on the recommended distance they need to be away from the water. One salesman for a lawn care company kept reiterating to me that their fertilizers were all 'organic' – and wouldn't harm anything – not understanding that fertilizer for grass leaches directly into the water and feeds the weeds whether it's 'organic' or not.

Another source for weeds entering the waters is boats entering at various launch sites – both public and private, mostly unmonitored. There is a State of Michigan public launch site that handles 30 or so boats each day. None of the sites provide washing stations to clean watercraft – nor even information that it should be being done at all. The

state provides no support to help with this washing effort and also bears no cost associated with cleanup.

With the influx of permanent residents and additional homes being added plus the popularity of social media, a phenomenon of sand bar parties has emerged. This is not unique to the Huron River Chain of Lakes, and there is no easy answer. Some residents have allowed friends or relatives to use 'docking' space and the several marinas are also using their shorelines to accommodate those who want to use the waters but who are not necessarily concerned about their care or condition. These boaters who have no shoreline or beach of their own are taking residence on sandbars and having weekend parties to the chagrin of the local homeowners. A meeting was held a few years back with both sides expressing concerns - littering, loud music, infringing on property from the homeowners and conversely the boaters expressing concern over their rights. A joint committee was unable to reach a solid solution but conceded that these people were allowed to be there and the nearby homeowners also were entitled to their privacy. Washtenaw County and Hamburg Township are providing more patrol power to monitor noise levels and objectionable behavior. The growth of these parties has spilled into the mouth of the river impeding navigation between the river and Base Lake as well encouraging unsafe crossing from those who may park along the shore, cross private property and attempt to wade across the river to awaiting boats. More oversight is needed and better communication with the state as to appropriateness of this problem.

(Continued on page 24)



Proactive Challenges & Solutions

(Continued from page 23)

The PBWOA is proud of where we've been and looking forward to being a catalyst for better education and preservation efforts for this important beautiful body of water. We have discussed and are implementing many methods of education such as a Community Bulletin Board with current information; a Facebook page to inform and generate interest; an updated user-friendly website with current and historical postings; a 300+ member email list, partnering with real estate agents with information for 'new' lakefront buyers; new PBWOA brochure to encourage additional membership and involvement and involved a Scientific Advisor in our decision-making process. We recently printed PBWOA Boat Stickers to identify members and encourage additional membership. Currently we are at an all-time membership high with a goal to reach many more riparians. An informational brochure/ booklet is in the works to help educate all water residents on how to be better stewards for our waters. The committee is working on the best way to target certain groups - longtime home owners, young owners, new owners, established businesses and how to disseminate information in a proactive way.

We also support and have a board member on Michigan Lake and Stream Associations and sponsor a board member's attendance at their Annual Conference. We are members of the Michigan Shorelands Steward Program and have a board member who qualified her home as a silver-level shore land. A board member is attending the Leader's Institute for Michigan Lake and Streams with a lengthy commitment for participation. We have had three board members participate and graduate from the MSU Introduction to Lakes Course. We also support and interact with

the Huron River Watershed Council and Legacy Land Conversancy. By schooling our board members, we feel we are better able to provide education to the surrounding community and offer sound advice as needed.

The eleven member PBWOA Board of Directors meets monthly and encourages questions and attendance of concerned members. While the board is totally volunteer, we have an email site and a telephone where members can ask questions or voice concerns. There is also a Business Meeting in May where all members are encouraged to attend. The meeting reviews what we have accomplished over the past year and where we hope to be in another year. There are usually speakers and

short reports from the Marine Patrol and the PBWOA attorney on ongoing issues. We also encourage attendance for a Pizza Party in August initiated five years ago where members and board members casually interact on issues and concerns. This has turned into a very popular event.

Just as the board was instrumental several years ago in initiating better water quality with the implementation and introduction of sewers to the area and, more recently, taking on the task of cleaning up the invasive weed problem, we must be forward-thinking on educating and providing educational information, involving many more people. This is a long-term commitment with no quick fix.

(Continued on page 25)

The PBWOA Board of Directors

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John Hale-Treasurer
Chris Brenner-Board Member
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Mark Purol-Emeritus Board Member
Paul Tryon-Emeritus Board Member

Hamburg Township Supervisor cites the PBWOA for its success.

(Continued from page 24)



The Huron River chain of lakes through Hamburg Township in southeast Livingston County is a natural jewel. This focal point of Hamburg Township was the catalyst that propelled Hamburg Township to the distinction of being the fastest growing municipality in Michigan prior to the 2008 recession. Beginning after the Civil War, the hamlets of Lakeland and Hamburg Village, with rail service from Toledo, Ohio, and Detroit, Michigan, gained notoriety as a recreational destination in the summer months, and with their spring-fed lakes coursing into the Huron River, a center for commercial ice production during the winter months.

With six miles of beautiful meandering river, and eight sparkling lakes, the area remained a recreational destination through the mid-1970s. Beginning after the 1973 oil embargo, the area experienced a 30 year transition from a summer cottage community to an upscale single family bedroom community. Progressive planning practices like the establishment of a Natural River Zoning District in 1978, and the first Open Space Zoned Community in Michigan in 1992 have truly preserved the natural beauty of Hamburg Township and the Huron River chain of lakes.

Much of the residential growth has been riparian. The Portage Base and Whitewood Owners Association Inc. (PBWOA) has been instrumental in organizing and educating riparian property owners along the Huron River chain of lakes. The benefits of this organization to residents, local government, recreational opportunities and the environmental quality of the Huron River chain of lakes cannot be overstated. For example, beginning in August of 2015, board members of PBWOA contacted local government officials seeking support for a four-township, two-county Lake Improvement Special Assessment District (SAD) for weed and alga control aimed primarily at the management of invasive species. With support from the Washtenaw County Office of the Water Resource Commissioner the process of establishing an ACT 185 SAD began in the fall of 2015. This five year SAD, encompassing seven of the eight lakes in the Huron River chain, was approved and implemented in the spring of 2017. In January of 2017, PBWOA initiated a three township invasive Mute Swan Control Resolution allowing the Department of Natural Resources, and the U. S. Department of the Interior, to implement a population management program for the invasive Mute Swan. With the leadership of the PBWOA, three other large lakes in our township have also successfully implemented a Mute Swan Control Program.

As a local Township Supervisor, it is a pleasure, and an asset to our community, to have a professional and progressive lake association like the Portage Base and Whitewood Owners Association Inc. I believe they establish a gold standard for all riparian based associations to emulate.

Pat Hohl Hamburg Township Supervisor

Editor's Note: Part II of PBWOA & Portage Lake Chain will be in the spring 2018 issue of *The Michigan Riparian* magazine.

Lake Advocacy: It All Starts with You

(Continued from page 19)

A Zoning Board of Appeals (ZBA) hearing remained our only option but once filed, there were new obstacles – multiple revisions required of our application; recommendations that we drop the appeal; told that we wouldn't win; critical background materials not forwarded to ZBA members. Time and money being spent to fight when all we wanted was a fair hearing and to protect the lake.

LESSON #3: Build relationships with elected and appointed officials. Actively participate in Planning Commission and Board meetings. Learn how officials conduct business ... BEFORE you have a problem.

As predicted, we lost the ZBA appeal. But that's not the end of this story. I returned to the Planning Commission the next month and asked for a change to the waterfront property fence zoning – a return to the 4-foot see through standard as in the previous zoning ordinance. Unfortunately, no action.

I then took the request directly to the Board. Lake resident support became critical and a few of us collected signed letters from lake residents. The letters stated opposition to large fences on waterfront properties and asked for greater lake zoning protections. Some residents wanted no fences allowed on waterfront lots; some didn't want to get involved (fearing retribution on their future zoning requests); others said simply, "We don't sign things." The county states there are about 138 homes/properties with lake access at Pleasant Lake. We delivered more than 100 letters to the Board.

LESSON #4: Don't give up! Build a coalition of lake residents who will support your lake advocacy efforts. Find qualified Michigan zoning and planning experts to serve as your coaches.

Surely, it should now be easy to fix the fence zoning, I thought. It wasn't. Some officials were unsure all the signatures were valid and wanted to hear directly from lake residents. They called a special meeting; then, a public hearing. A small unnamed opposition group emerged, so officials sought more and more "proof" before recommending changing the waterfront fence zoning ordinance back to four feet, seethrough. I learned how quickly a vocal few can undermine the efforts of an active majority and how easy it is to blame us lake advocates as troublemakers.

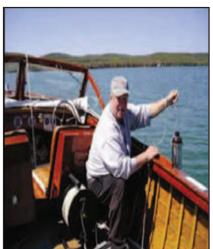
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Michigan's Inland Lakes, Ours to Protect





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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.
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To enroll on-line, visit www.micorps.net/lake-monitoring/become-a-volunteer/

(Continued from page 26)

Our persistence finally paid off. The Board intervened with the Planning Commission on behalf of lake residents. The fence change resolution at last made it to the Board, but not without one last surprise: In addition to limiting waterfront fences to 4-foot, see-through and no closer than 50 feet from the shoreline, a new lake zoning change was slipped in: *Reduce setbacks from 50 feet to 25 feet!* With regional, state and national setback trends going in quite the opposite direction, we were shocked and once again had to call our lake resident coalition into action and the next Board meeting was packed. The Board approved the fence zoning change but vetoed the setback change.

LESSON #5: Lake advocacy is not for the timid! Strengthen your lake association and long-term lake protection plans then stick with your strategy. Adapt as needed when obstacles are put before you. Don't give up! Be persistent.

Did you know – the State of Michigan ranks dead LAST in the country for government ethics and transparency (http://www.freep.com/story/news/politics/2015/11/09/michigan-ranks-last-laws-ethics-transparency/75288210/)? No Board of Ethics; no State Ombudsman; no place to appeal. In the midst of our conflict, our state representative suggested three options: take the township to circuit court, elect/appoint new officials, and take concerns to the media.

We took our story to the media. Let the public know what was going on; the resistance faced; the unnecessary time and money spent fighting vs. working together toward the betterment of lake protections. Two small local newspapers showed interest in our lake issues and kept the topic in the public's eye. Articles and letters were published. Reader after reader came forward to tell us their stories of past conflicts; to express appreciation for our efforts; to say they're cheering for us. As a result, our lake resident coalition became more empowered, more outspoken, and more visible lake advocates.

Our lake association was also actively involved in a water protection conference held in late 2016 at our township hall. It was co-sponsored by Michigan State University, the Huron River Watershed Council, Washtenaw County, and other groups. The highly successful event attracted over 75 participants and included lake residents and township officials from as far as 200 miles away.

LESSON #6: Use the media. Partner with other lake associations, townships, and water protection organizations. Build alliances and support. Educate fellow lake residents, local governments, and also let the public know what's going on.



I'm proud of our improved lake protections but sad about the enormous effort and conflict required to get them. Our lake zoning challenge lasted more than two years and cost way too much time and money. At more than one heated meeting, I slipped my husband a note: We need to move! But after a good night's sleep, I was back at it. Lake advocates are change agents and must do what is needed on behalf of our Michigan lakes. Someone must take the lead. Why not you?

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WHAT'S HAPPENING ON YOUR END...? ROAD END THAT IS!

Paul J. Sniadecki ML&SA Board Director

OVERVIEW

Traveling and meeting with many Michigan riparians during 2017, three topics were of recurring concern around the state. The most common issues centered around: 1) Problems at Public Roads and Alleys, 2) Controlling infestations of the Aquatic Invasive Species (AIS) Starry Stonewort, and 3) Implementing and/or Managing Special Assessment Districts (SAD) to deal with AIS infestations. Since each of the major concerns are complex, this article will focus on only one of the recurring concerns. It is hoped that this review will also encourage riparians to focus attention on what is happening on their end... Road End that is.

After listening to many riparians relate the conditions at public road ends around their lakes, it became clear that

some local municipalities have fully complied with the provisions of MCL 324.30111b, while other municipalities have not. For the municipal jurisdictions that are not helping riparians, the main problems generally fall into two categories: Improper Use/ Access and the Conduct/Behavior of people using the public road end/alley.

IMPROPER USE/ACCESS

Current non-compliance with this aspect is somewhat confounding. This is the case because the restricted use of public road ends and alleys had been governed by the "Common Law" in Michigan for decades. The "Common Law" (i.e., Circuit Court, the Court of Appeals, and Michigan Supreme Court decisions) were usually consistent over the many years,

despite periodic attempts by "back lot" property owners to reverse the many riparian favorable judicial holdings. To codify the essentially "settled matter" about the use of Public Road Ends/ Alleys, a group of pro-active Michigan Legislators introduced Senate Bill 778 in October 2011, which later became law as Public Act 56 of 2012, passing the Michigan Senate by a 31 to 7 vote and passing the Michigan House by a 96 to 11 vote. The Michigan Waterfront Alliance (www.mwai.org) also assisted the codification of the Common Law with its ability to effectively influence Michigan's legislative process through lobbying,

The year of 2017 marked the fifth anniversary of the enactment of Public Act 56 of 2012 (Effective: 3/22/2012) which amended Part 301 (Inland Lakes and Streams) of the Natural Resources and Environmental Protection Act (NREPA) to specify that, unless a recorded deed, recorded easement, or other recorded dedication expressly provided otherwise, a public road end could not be used for any of the following purposes: construction,

(Continued on page 29)

installation, maintenance, or use of boat hoists or boat anchorage devices; mooring or docking of a vessel between midnight and sunrise; or any activity that obstructed ingress to or egress from an inland lake or stream.

A public road end also could not be used for the construction, installation, maintenance, or use of a dock or wharf other than a single, seasonal public dock or wharf, which was authorized by the local unit that had jurisdiction over the public road. This provision does not prohibit any use that was expressly authorized by a recorded deed, recorded easement, or other recorded dedication, but would not permit any use that exceeded the uses authorized by the deed, easement, or dedication, or a court order.

A local unit with jurisdiction over a public road can prohibit a use of a public road end that violates the 2012 law. That can be accomplished with a local civil/municipal ordinance. Interestingly, a violation of the 2012 law is a misdemeanor crime punishable by up to 90 days' imprisonment and/ or a maximum fine of \$500. Each 24hour period in which a violation exists constitute a separate violation. A peace officer can issue an appearance ticket, as authorized in the Michigan Code of Criminal Procedure, to a person who violates MCL 324.30111b. So, the road end law treats violators as common criminals and imposes a penalty far more severe than for a boat entering a Michigan lake with aquatic invasive species attached (see MCL 324.41325 Boat, boating equipment, or boat trailer with aquatic plant attached; placement in state waters prohibited; order to remove aquatic plants; notice; posting; violation as civil infraction; penalty; definitions.) The 2012 law further specifies that it does not prohibit a person (generally an adjoining riparian property owner) or agency (generally a governmental agency with legal standing) from commencing a civil action (non-criminal) for conduct that violates the law.

The 2012 law further defines "public road end" as the terminus of a public road at an inland lake or stream. Further, "Public road" means a county road or a township, city, or village street that is open for use by the public.

Subsequently, due to conflicts between certain Road Commissions and Townships, Villages, and Cities (i.e., municipalities) MCL 324.30111b was amended in 2014 to clearly eliminate Road Commissions from regulating the use of public road ends/ alleys.

Since at least 2014, the practice of Michigan municipalities has been to implement the law using these options:

- Prohibit Docks at Public Road Ends/Alleys
- Install One (1) Public Dock Owned, Insured and Maintained by the Municipality, contingent on obtaining a Minor Category Permit #49 Docks on Public Land, from the MI DEQ-WRD
- Specifically Authorize a Property Owners Association, or Other Responsible Party, to Apply for a single, seasonal Public Dock Permit under Minor Category Permit #49 Docks on Public Land, from the MI DEO-WRD

(NOTE: Applicants act as agents of the municipalities and provide "additional insured" insurance coverage for the local government)

Keep in mind that any public dock that obtains the required Minor Category Permit from the DEQ-WRD, is still subject to all the requirements and prohibitions contained in MCL 324.30111b.

If you have improper uses at your nearby public road end/alley, it is advisable to first work with your municipality and local police department/sheriff to secure enforcement of MCL 324.30111b. It is "The Law" after all, and governmental officials and police are duty bound to uphold the law. Some, what could be called "model municipalities", take the road end law very seriously and go so far as to post reported violations on their websites as they occur. Subsequently, the website posts the disposition of the action taken.

If proactive action by you does not achieve the desired result, ML&SA has a toolkit reserved for access by ML&SA members only. ML&SA members in good standing, needing additional tools, can contact the ML&SA Executive Director, or myself.

It is interesting to note a colleague of mine, with a public road end problem, recently contacted all of the townships in the county and learned that all but one had adopted the option of "No Docks at Public Road Ends/Alleys" at lakes in their townships. When asked why, the general response was essentially, "Why create problems?"

(Continued on page 31)

COMMON PUBLIC ROAD END/ALLEY ISSUES

- ▶ Mooring Watercraft at Public Dock for A Few Hours
- ▶ Mooring Watercraft Between Midnight and Sunrise
- ► Anchoring Watercraft Directly Off-Shore at Road End for a Few Hours or Overnight
- ► Installing Poles in Road End Area to Moor Watercraft
- ► Installing a Dock Without Required DEQ Permit
- ► Storing Watercraft in the Road End Area
- Picnicking That Obstructs Entering & Egress



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On-line registration for the ML&SA 57th Annual Conference will begin on **Monday**, **January 15th**, **2018** and will be available by visiting www.mymlsa.org

WHAT'S HAPPENING ON YOUR END...?

ROAD END THAT IS!

(Continued from page 29)

CONDUCT/BEHAVIOR

Whether the municipality authorizes docks, or not, the riprians interacted with in 2017, report increasing instances of Conduct/Behavior problems at public road ends/alleys. (Whether this is an emerging societal condition symptom is left to the reader's conclusion/opinion). But the fact remains fellow riparians are reporting more situations that adversely impact the peaceful and safe enjoyment of their property and neighborhood. The reported behavior somewhat mirrors the issues talked about in previous editions of *The Michigan Riparian* relative to ballast boats.

The encouraging fact is when it comes to behavior/conduct at road ends/alleys, municipalities have the legal power to implement ordinances for the "Health, Safety and General Welfare" of its citizens. Here again, proactive municipalities with the fewest reported problems have ordained specific civil/municipal ordinances for their public road ends/alleys, with signs posted describing what the provisions and restrictions are. These "model municipalities" have taken a comprehensive approach to ensuring the reasonable enjoyment of Michigan lakes and streams.

While there are too many to list here, a quick internet search for "road end ordinances" will reveal many that can be modified for use by any municipality. Riparians can work with their local governments to implement local rules that work for everyone and ensure the Health, Safety, and General Welfare of their community.

While some elected officials may suggest "Lets just let the general concept of disorderly conduct or disturbing the peace" control conduct at public road ends/alleys, they are missing the reality of many District Court rooms that are filled with skilled defense attorneys. Those defenders are quite adept at confusing the issue of what is "disorderly" or "disturbing the peace." Rather, when an offender is charged with the violation of specific actions, as listed in an ordinance and posted at the road end, the chances for "justice to prevail" are increased significantly. When municipalities successfully enforce their ordinances, the "word" gets out on the street, and much conduct/behavior "modification" follows, which is the desired outcome.

SUMMARY

The use of, and the placement of docks at, public road ends/alleys can be described as generally a "settled matter" for Michigan's inland lakes and streams due to MCL 324.30111b. Even though some elected officials and back lot owners might want to change the long standing court decisions and

the current law, the Michigan Attorney General issued AG Opinion #7211 on January 30, 2008, advising that any such change would have the potential to impact existing property rights and would be subject to the constitutional protections against the taking of property without due process and just compensation (specifically addressing platted areas in the Opinion)

Riparians still experiencing issues, or encountering new issues, at Public Road Ends/Alleys need to work with local officials on enforcement. Many municipalities have fully embraced MCL 324.30111b, and further implemented local ordinances to provide for comprehensive care for public road ends/alleys. There are municipalities who have adopted their legal right to have no docks at public road ends/alleys.

Riparians are encouraged to become involved and find out what's happening on their end...Road End that is!

(NOTE: This article does not provide legal advice, nor should it be considered legal advice in any form. Riparians and lake associations should always consult with an attorney when legal matters are involved)





Free Fishing Weekend

How about a free fishing weekend? The State of Michigan offers its residents and out-of-state visitors free fishing on **February 17 and 18, 2018**. All fishing licenses will be waived, but fishing regulations still apply. Enjoy great fishing on inland lakes and all five Great Lakes.

For details, visit the DNR website: michigan.gov/dnr

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Send us your lake association newsletter or special announcements electronically. We love hearing from your lake. We will continue to use and spread the interesting and informative things happening on your lake in *The Michigan Riparian*.

Please send your lake association newsletter to: swagner@mlswa.org.

A Mute Swan Management Program (and Why it is Necessary)

By PBWOA (Portage, Base & Whitewood Owners Association) Board Members

Washtenaw and Livingston Counties

It is often proffered that beauty is in the eye of the beholder. There is no doubt there is beauty in a shoreline vista painted purple with loosestrife or the regal appearance of a mute swan couple with signets, but underlying this appearance is the truth of the damage invasive species can cause. As riparians, we are frequently made aware of invasive plant species and zebra mussels and the need to prevent their spread. The issue becomes muddled with emotional response when dealing with charismatic megafauna such as

the mute swan. The damage to biodiversity and the integrity of the ecosystem in our lakes and streams in nonetheless at risk. A reasoned and scientific approach to the management of our natural resources should always be the goal underlying any program dealing with invasive species.

Most people do not realize that the mute swan is not native to North America. The population in Michigan is derived from swans imported and released in Charlevoix County in 1919, and by 2015, the population in Michigan had increased to over

15,000 birds and continuing in an exponential manner. These birds have several negative influences on riparian habitat. They damage submerged vegetation upon which native waterfowl and fish populations depend. They endanger native wildlife, actually killing smaller waterfowl and discouraging nesting by other species. Additionally they drive off native species such trumpeter swans (a threatened species) tundra swans, loons, and native ducks. Mute swans also endanger humans having been known to attack humans in the water and on land especially during their nesting season when they are exceedingly aggressive.

Fearing the population explosion could result in well over 20,000 birds by the year 2015, the DNR promulgated a management plan established in 2012. (This can be viewed at the DNR invasive species pages at http://www.michigan.gov/dnr/0,4570,7-153-10370_12145_59132---,00.html along with further information about the species – in particular a comparison with native swan species for identification – but the orange beak is a giveaway).

The DNR has faithfully carried out the control program on state owned properties with great success, but is unable to address the privately held lands along the river without the help of owners. The prevalence of mute swans on waters surrounded by private land

not accessible to the DNR became abundantly apparent on the chain of lakes in early spring of 2015 when the only open water in the ice cover was literally filled with mute swans. No other waterfowl or swan species would land there. It became obvious that control of this invasive species was needed when a survey of the chain of lakes revealed over 125 adult birds. To this end, the PBWOA brought the issue to the attention of the township governments along the river's course through the chain of lakes



in Livingston and Washtenaw Counties. Their passage of resolutions by local government to approve the control program allows the DNR to issue permits and the USDA/APHIS Wildlife Services can carry out implementation under funding from both state and the federal governments. In particular, funding under the Great Lakes Restoration Initiative (GLRI) has greatly facilitated these programs thereby illustrating the desirability of continued funding for the GLRI. It should also be noted that our efforts to establish

this program and the necessity of controlling this invasive species were supported by several conservation organizations including Ducks Unlimited and Michigan United Conservation Clubs.

The initiation of the program in the spring of 2017 has already shown a significant effect. The oiling of eggs during the nesting season has decreased the number of signets seen to less than a half dozen. With continuation of the program for several more years, it expected that the number of swans will be reduced to the goal of the DNR management plan of fewer than 2,000 birds statewide.

The chain of lakes on the Huron River, a newly designated addition to the National Water Trail System, is one of the premier natural habitats in SE Michigan. Flowing through a number of public parks and residential areas, the river provides a bounty of outdoor recreational opportunities. It is incumbent upon the human riparian population to work to conserve this wonderful resource and the control of invasive species is essential in this effort.

All About

EUROPEAN WATER CLOVER

(Marsilea quadrifolia)

By Jordan Bentley, Restorative Lake Sciences and Dr. Jennifer L. Jermalowicz-Jones, ML&SA

INTRODUCTION:

Invasive species threaten Michigan's freshwater ecosystems by reducing biodiversity and imposing substantial economic costs. As organisms enter ecosystems beyond their native range, a combination of life-history characteristics, physiology and prevailing environmental conditions often dictate the probability of becoming established and causing ecological and economic harm. European Water Clover (EWC), Marsilea quadrifolia (Figure 1), is a floating-leaved/ emergent aquatic fern of global distribution, inhabiting the tropical and warm temperate regions of Europe, Asia, and North and South America (Husak and Otahelova 1986). Its main habitats are paddy fields, irrigation ditches, and ponds. It is an amphibious leptosporangiate fern (their sporangia arise from a single epidermal cell and not from a group of cells as in eusporangiate ferns) that is characterized by unusual reproductive structures and heterospory (the production of spores of two different sizes and sexes) (Bruni et al. 2013). Sporocarps possess a unique evolutionary history linked to clonal reproductive strategies which has likely played a critical role in the establishment of this species outside of its native range. EWC is often selected for commercial ornamental use because it can be easily cloned and grown in a greenhouse. Nevertheless, colonization events could occur via animal dispersal. Bruni et al. (2013) reported that sporocarps are eaten by waterfowl and pass through the digestive tract undamaged.

INVASIVENESS OF EWC:

In India, Southern Europe, and Central Asia, EWC has been increasing and is considered a noxious weed, often occupying areas that experience frequent flooding (Husak and Otahelova 1986). A stress-tolerant species, EWC displays an invasive character by forming dense colonies in sluggish water. The Michigan Department of Environmental Quality (DEQ) has reported this species in similar environments

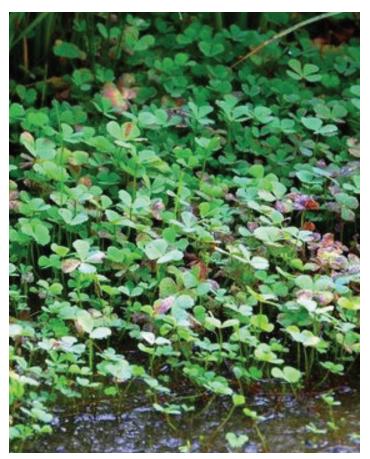


Figure 1 European Water Clover (EWC)

(e.g., Barton and Argo Ponds) (Steen 2016). However, in many European countries its population is in decline and considered threatened, as well as extinct (e.g., Northern Poland and Spain) (Bruni et al. 2013). Recent sightings have been reported in the Clinton River Watershed in Southeast Michigan (Steen 2016), likely an unintentional release from ornate use.

NATIVE CHARACTERISTICS AND GROWTH HABIT OF EWC:

In its native range, EWC grows in moderately eutrophic waters of a slightly acid to neutral pH and compact loam-clay soils with sufficient minerals and little organic matter (Husak and Otahelova 1986). Optimal growth occurs at a water level that fluctuates within the limits of +/-0.24 m, although it can tolerate depths > 0.5 m and persist on soil without water (Husak and Otahelova 1986). In addition to water depth, sediment conditions play a key role in controlling the distribution patterns of ECW. Bolpagni and Pino (2017) found that growth peaked in slightly eutrophic waters, while persisting, though inhibited, under elevated

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nutrient levels. Eutrophication causes an increase in organic matter and mineralization rates which may lead to an accumulation of phytotoxic compounds in sediment top layers along with rapid oxygen depletion, stressing rooted aquatic plants. However, stoloniferous taxa, such as EWC can escape the negative effects of toxic sediments through clonal growth (Bolpagni and Pino 2017). Fluctuating water levels and moderately eutrophic sediments may strongly favor EWC.

To cope with variable environmental conditions encountered in shallow aquatic habitats, EWC has developed heterophyllous submerged, floating, and emergent leaves. When completely submerged, the plant produces four elongated fork-like leaflets and when the leaflets are emergent, they expand, resembling a four-leaf clover (Lin et al. 2007). Lin et al. (2007) suggest carbon gain as one of the driving forces for the development of heterophylly, possibly a morphological acclimation of EWC to aquatic and terrestrial environments. The presence of trichomes on terrestrial leaves is imperative to reducing water loss when leaves become emergent during dry conditions, reflecting light and protecting against the damaging effect of photoinhibition (Wu and Kao 2009). EWC is not only able to adjust leaf characteristics in response to transitions between aquatic and terrestrial environments, but is also able to adjust leaflet angle in response to changes in the position of the sun's direct beam (Kao and Lin 2010). Diurnal phototropic leaf movement, representing a transition from aquatic to terrestrial conditions, maximizes the interception of light to increase carbon gain. Morphological and environmental plasticity contributes to the ability of EWC to occupy a continuum of habitats from terrestrial soils to continuously flooded littoral zones (Garbey et al. 2004).

The colonization of aquatic habitats by heterosporous ferns has led to one of the most sophisticated reproductive systems, comprising of both asexual and sexual reproduction. Sporocarp dispersal maximizes sexual reproductive success by releasing both micro- and megaspores simultaneously (the equivalent of sperm and egg) to stimulate the development of the micro- and megagametophytes (Schneider and Pryer 2002). Upon the release and dispersal of spores, fertilization ensues at the surface, then developing embryos sink and adhere to the substrate, quickly changing from rhizoids to roots (Schneider and Pryer 2002). Asexual reproduction occurs via adventitious lateral roots that arise from nodes on the rhizome (Lin and Raghavan 1991). The formation of lateral roots is an important feature in the ontogeny of parent plants and the ability of EWC to persist and form monocultures over time (Bruni et al. 2013). Additionally, viable sporocarps can remain dormant in the substrate for long periods of time, along with overwintered rhizomes.

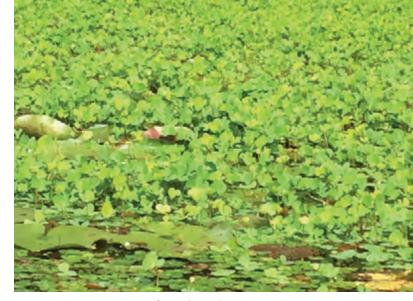


Figure 2 European Water Clover (EWC)

EWC IMPAIRMENTS TO INLAND LAKES:

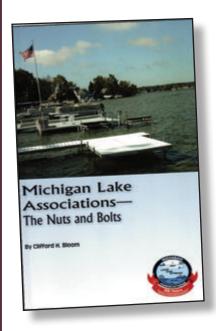
Michigan's freshwater ecosystems have experienced significant ecological damage and economic costs from aquatic invasive species. Currently, a lack of species-specific data for EWC, such as competition and predation, generates much uncertainty regarding the invasiveness of this species. In an Illinois (IL) stream system, Henry (1983) concluded that EWC had not been highly aggressive in its spread or migration, traveling only one mile in 35 years. He found distribution to be widely scattered, usually in sluggish water at stream edges near a lake (Henry 1983). In Arkansas, Simpson et al. (2008) found a single patch in sluggish water where a river broadened. It was inferred that its appearance was a recent introduction by waterfowl. Recent investigations suggest that both cultural (Herbicides and Eutrophication) and environmental (Sediment Dynamics and Water Current) constraints could impose limits on population expansion. According to the Midwest Invasive Species Network, water clover is not listed as an invasive species in IL but is listed as invasive in Michigan, and accordingly on the state's watch list. While presently available for sale and possession in Michigan, the best way to avoid potential adverse impacts, is to identify, monitor, and control newly established populations.

MANAGEMENT OF EWC:

Lake Angelus is a 477-acre mesotrophic lake located in Oakland County, Michigan. EWC was first found along the shoreline of a lagoon on the lake in 2015 (Figure 2) and had been treated with aquatic herbicides such as diquat and flumioxazin. The diquat resulted in better control of EWC and sustained a reduced population through an entire season. Other natural methods of control should also be pursued as management options. As described above, the plant should be managed to reduce the threat to other native shoreline aquatic plant species that are necessary for a biodiverse aquatic ecosystem.

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Two Books Written by Clifford H. Bloom and Published by ML&SA to Benefit Lakefront Property Owners In Michigan!

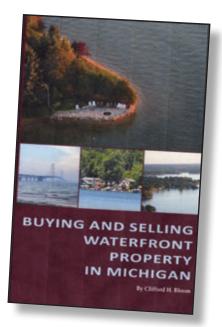


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All About EUROPEAN WATER CLOVER (Marsilea quadrifolia)

(Continued from page 35)

References:

Bolpagni, R., and F. Pino. 2017. Sediment nutrient drivers of the growth dynamics of the rare fern Marsilea quadrifolia. Hydrobiologia 792:303-314.

Bruni, I., R. Gentili, F. De Mattia, P. Cortis, G. Rossi, and M. Labra. 2013. A multi-level analysis to evaluate the extinction risk of and conservation strategy for the aquatic fern Marsilea quadrifolia L. in Europe. Aquatic Botany 111:35-42.

Garbey, C., G. Thiebaut, and S. Muller. 2004. Morphological plasticity of a spreading aquatic macrophyte, Ranunculus peltatus, in response to environmental variables. Plant Ecology 173:125-137.

Henry, R. D. 1983. Spread of Marsilea quadrifolia in McDonough County, Illinois. American Fern Journal 73:30-30.

Husak, S., and H. Otahelova. 1986. Contribution to the Ecology of Marsilea-quadrifolia L. Folia Geobotanica & Phytotaxonomica 21:85-&.

Kao, W. Y., and B. L. Lin. 2010. Phototropic leaf movements and photosynthetic performance in an amphibious fern, Marsilea quadrifolia. Journal of Plant Research 123:645-653.

Lin, B. L., and V. Raghavan. 1991. Lateral root initiation in Marsilea-quadrifolia. 1. Origin and histogenesis of lateral roots. Canadian Journal of Botany-Revue Canadienne De Botanique 69:123-135.

Lin, C.-H., B.-L. Lin, and W.-Y. Kao. 2007. Leaf Characteristics and Photosynthetic Performance of Floating, Emergent and Terrestrial Leaves of Marsilea quadrifolia. Taiwania 52:195-200.

Schneider, H., and K. M. Pryer. 2002. Structure and function of spores in the aquatic heterosporous fern family Marsileaceae. International Journal of Plant Sciences 163:485-505.

Simpson, J., D. Crank, and J. H. Peck. 2008. Two exotic ferns, Dryopteris erythrosora and Marsilea quadrifolia, newly naturalized in Arkansas. American Fern Journal 98:111-112.

Steen, P. 2016. Searching for European Water Clover. Huron River Watershed Council. Huron River Report.

Wu, T. C., and W. Y. Kao. 2009. The Function of Trichomes of an Amphibious Fern, Marsilea quadrifolia. American Fern Journal 99:323-332.

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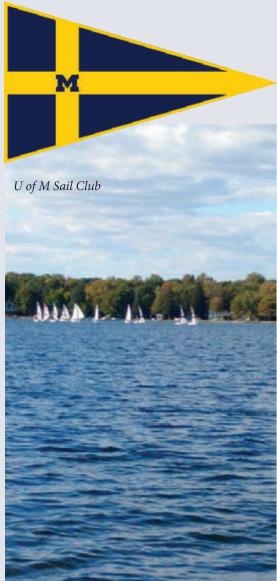
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University of Michigan Sail Club

By PBWOA (Portage, Base & Whitewood Owners Association) Board Members Washtenaw and Livingston Counties



One of the joys of living on Baseline Lake is watching the sailboat practices, meets and regattas of the Michigan Sailing Club. The University of Michigan Sailing Team is part of the club and is affiliated with the U of M Department of Recreational Sports.

The undergraduate sailing team has new sails this year – with the Block M very visible as the boats line up to compete with each other in practice and with other university teams. They sail in almost any weather and are fun to watch as they learn to maneuver around each other.

The Michigan Sailing Club is also open to all members of the community. The club provides sailboats, wind surfers, canoes, kayaks and stand-up paddleboards. It organizes a busy but informal schedule of sailing lessons, races, picnics, and swimming. For several years, the club has also hosted the Huron River Watershed Council's annual swim across the lake in July. The club's website is www.michigansailingclub.org

The University of Michigan has owned land between Portage and Baseline Lake since 1929, using the land for its observatory at Peach Mountain and for other research purposes. The Peach Mountain Observatory is open to the public during open houses hosted by the University Lowbrow Astronomers.

The U of M Zoology Department provided the land for the sailing club in the early 1950's. Before that the club, founded in 1938, sailed on Whitmore Lake. The property is now managed for the School for Environment and Sustainability.

We are indeed fortunate to have the U of M as a neighbor. The university preserves many acres of native shoreline, providing fish and wildlife habitat and other ecological benefits.

For a detailed history of the Michigan Sailing Club, please visit our web site: www.PBWOA.org

ASK THE EXPERTS

If you have a question about water related issues, riparian rights, and/or lakes and streams, etc., let us know by email or snail mail.

Email: swagner@mlswa.org Mail: The Michigan Riparian 300 N. State St., Suite A, Stanton, MI 48888 **Question:** What is the Cooperative Lakes Monitoring Program (CLMP)? How will it help my lake?

Answer: The Cooperative Lakes Monitoring Program (CLMP) is Michigan's statewide volunteer lake monitoring program. Started in 1974, it gives anyone the opportunity to monitor the health of their lake. Parameters that can be monitored include: water clarity ("Secchi depth"), total phosphorus (a key nutrient in the growth of algae and aquatic plants), chlorophyll-a (an indicator of algae in the water column), dissolved oxygen/temperature, shoreline habitat quality, and aquatic plants (either invasive or native).

A key feature of the CLMP is that it is a long-term monitoring program. For most parameters, a minimum of a few years of sampling is needed to draw conclusions or guide lake management. Corey Lake in St. Joseph County, and Long Lake in Iosco County, are outstanding examples of long-term lake monitoring. Both lakes have been enrolled in the CLMP since the program began in 1974! Due to the dedication of volunteers, these lakes have 43 years of data, which show changes over the decades, and help inform lake management and protection activities.

Anyone can enroll in the CLMP. There are nominal fees for each parameter. The CLMP is part of the Michigan Clean Water Corps (MiCorps), a program of the Michigan Department of Environmental Quality, in partnership with the Great Lakes Commission, the Huron River Watershed Council, Michigan State University, and Michigan Lake and Stream Associations. MiCorps staff provide volunteers with all the training and equipment they need to succeed. To learn more and to enroll, visit www.micorps.net, or contact Jean Roth with Michigan Lake and Stream Associations at 989-257-3715.

By Dr. Jo Latimore, Michigan State University and Jean Roth, CLMP Program Administrator

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.



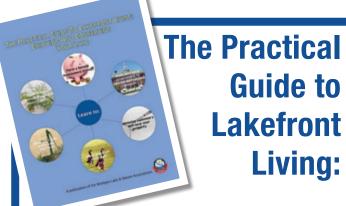
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Lake ecology, natural shorelines, swimmers itch, fishing with conservation in mind, e-coli bacteria, dock placement, riparian rights, algae blooms, Michigan boating law, watershed management, aquatic invasive species and Special Assessment Districts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

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

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Mooring One's Boat Over the RIPARIAN BOTTOMLANDS of Another

By Clifford H. Bloom, Esq.
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In Michigan, a lakefront property owner typically owns the bottomlands under an inland lake to the center of the lake. See *Hall v Wantz*, 336 Mich 112 (1953) and *Gregory v LaFaive*, 172 Mich App 354 (1988). And, in most cases, only the riparian property owner can install a dock, tether a floating raft and moor, dock or anchor boats or watercraft overnight, seasonally or permanently on their own bottomlands – others cannot do so without the express permission of the owner of the riparian bottomlands. *Ibid*.

There has, however, and remains, somewhat of a question regarding whether the owner of an adjoining waterfront property (or the beneficiary of a lake access easement with dockage rights) can moor or anchor a boat seasonally or overnight that encroaches onto or over the riparian boundary line of the neighboring lakefront property without that riparian owner's permission. The Michigan Court of Appeals appeared to indicate that such encroachments can lawfully occur in some instances in West Michigan Dock & Market Corp v Lakeland Investment, 210 Mich App 505 (1995). In that case, the Court of Appeals allowed a commercial vessel to be unloaded and be moored over the bottomlands of a neighboring waterfront property for limited periods of time without permission. It is possible that West Michigan *Dock* is actually a relatively narrow holding by the Court of Appeals regarding overnight or seasonal moorings partially over the bottomlands of another riparian landowner and that the Court did not intend that case's so-called "balancing test" to be applied widely or in all but a few extreme cases. The facts in West Michigan Dock were unusual and may limit the "reach" of that appellate decision. In West Michigan Dock, for many years a riparian landowner allowed the ships of the adjoining riparian property owner to be docked or moored partially over the consenting riparian's bottomlands. Once permission was later withdrawn, due to the topography of the lakefront and existing docks and wharves, it was difficult for the ships of the encroaching riparian landowner to dock solely over the bottomlands of that party. It should also be pointed out that the trial court (which was upheld by the Court of Appeals) attached conditions to the ability of the one riparian land owner to dock its boats over the bottomlands of the other riparian property owner without permission. The trial court only allowed boats to be loaded and unloaded, prohibited the boats from being anchored to the bottomlands and prohibited an encroaching vessel from docking for more than one week without the permission of the owner of the underlying riparian property. The trial court also required the trespassing riparian land owner to pay the other riparian landowner \$5,000 to allow defendant trespasser's improvements to remain in place as a slight encroachment. The trial court found that the encroachment was only a few feet, at most. The trial court appeared to invoke

equitable principles to allow for the limited boat encroachment on the bottomlands of the other riparian property owner. The Court of Appeals upheld the trial court. Therefore, it is possible that the balancing test mentioned in *West Michigan Dock* could be applied only in highly unusual cases. That would make sense, as a neighbor on dry land is not allowed to encroach on his or her neighbor's land without permission – why should riparian landowners be any different?

Conversely, the Michigan Court of Appeals in *Heeringa v Petroelje*, 279 Mich App 444 (2008) seemed to indicate that no one can anchor or moor a boat or watercraft overnight or seasonally even partially on or over the bottomlands of another without permission. The *Heeringa* Court stated:

Any erection which can lawfully be made in the water within those lines belongs to the riparian estate. And the complete control of the use of such land covered with water is in the riparian owner, except as it is limited and qualified by such rights as belong to the public at large to the navigation, and such other use, if any, as appertains to the public over the water." Ryan v Brown, 18 Mich 196, 207 (1869). "And this right to the covered lands in front has always been held to exclude any adjacent claimant from intercepting in any way the full extent indicated by the width at the shore, without reference to whether the tract approaches the shore at right angles or diagonally." Clark v Campau, 19 Mich 325, 328 (1869). Although "the private right must yield to the public right," otherwise that private right extends even to considering it a trespass for another party to construct something on that bottomland. Ryan, supra at 209. Therefore, a riparian landowner's riparian rights to watercovered bottomlands are, other than the public's right of reasonable access to the water itself, indistinguishable from ordinary fee ownership of dry land. Heeringa at p. 451.

(Continued on page 42)

Mooring One's Boat Over the Riparian Bottomlands of Another

(Continued from page 41)

The Michigan Court of Appeals again discussed this topic in the recent unpublished case of Gunther v Apap that was decided on October 17, 2017 (Case No. 333169; 2017 WL 4654975). In that case, the lakefront property owner sued several backlot property owners who claimed usage rights in a 9-foot wide strip of land next to the riparian property owner's lakefront lot. The Court of Appeals was unable to ascertain whether the backlot owners actually owned the strip of land, had an access easement right in the land or had no rights in the narrow land strip whatsoever and remanded the matter back to the trial court on those issues. The Court of Appeals noted that it would be improper for an adjoining waterfront property owner or a beneficiary with lake access via an easement to unreasonably interfere with the riparian rights of the neighboring waterfront property owner. The Court of Appeals quoted approvingly from both Heeringa and West Michigan Dock. Nevertheless, the Court appeared to adopt the reasoning from West Michigan Dock, indicating that a boat or watercraft partially moored overnight or seasonally over the bottomlands of the adjoining riparian land owner without permission is not necessarily unlawful. The Court seemed to indicate that a balancing test should be used. However, that appears to contradict the ruling in *Heeringa*. It will likely take further appellate cases to definitively answer whether a partial boat encroachment over the riparian boundary lines of another riparian without permission is always prohibited or can occur in certain cases if it is "reasonable."

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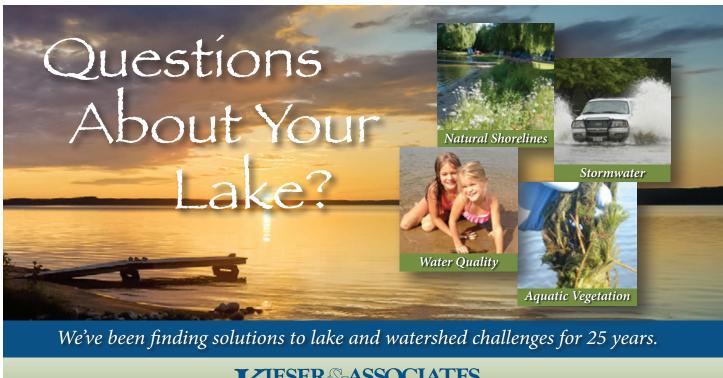




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