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Diamond Lake: The Sparkling Jewel

Nestled in the rolling hills of Southwest Michigan's Cass County in view of the Village of Cassopolis, the clear water of Diamond Lake spans over 1,020 shimmering acres and surrounds an expansive 46-acre island. With plenty of Walleye and numerous species of pan fish, Diamond Lake is truly a gem.

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FROM THE PUBLISHER

**What you'll find in this
issue of the**

**THE MICHIGAN
RIPARIAN**



Well before each quarterly issue of The Michigan Riparian is published, we have the pleasure of talking to lake property residents all over the state. It's fascinating to hear stories about how their lake associations were started, the early history and key people involved.

This issue was no exception. Diamond Lake offers all the elements our subscribers love to read about. We hope you enjoy the rich history, nostalgia and pictures they contributed. Their story reminds us to cherish history as we enjoy living and playing on our lakes today.

Something new starting this issue—a table of contents. Many of you shared with us how you revert back to articles and information time and time again and would like to have a table of contents to quickly guide you.

Some of the topics and issues that concern you most are included in this issue: lake mapping methods and uses, more about Eurasian Watermilfoil, Japanese Knotweed and Giant Knotweed; and you will appreciate Cliff Bloom's article about lakefront myths and lore. Finally, some of the most frequently asked questions are put to rest.

Keep giving us your suggestions, sharing your ideas, solutions, pictures and stories. That's what The Michigan Riparian is all about. Happy Spring!

-publisher, Sharon Wagner

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Diamond Lake: The Sparkling Jewel

As told by the members of the Diamond Lake Association, the Diamond Lake Yacht Club, Diamond Island Assn. and Pathfinders through a careful compilation and culling of historical books, photos, and first-hand memories.
Carl Moraw, President DLA

Nestled in the rolling hills of Southwest Michigan's Cass County in view of the Village of Cassopolis, the clear water of Diamond Lake spans over 1,020 shimmering acres and surrounds an expansive 46-acre island. Like the Great Lakes and many other large lakes, this spring-fed lake ultimately began as a single glistening snowflake many thousands of years ago during the last ice age. One snowflake multiplied exponentially formed a glacier that would, over time, again melt – giving rise to a precious gem.



Diamond Lake Today

Today, Diamond Lake is a thriving community of approximately 650 homes. There are summer residents and a growing number of year-round residents. From the resort area to today, new construction and renovation has considerably evolved the area. Diamond Island retains a seasonal flavor, however, with summer homes accessible on the Diamond Island Queen, a unique four-car paddle barge from April through October.

The fish on Diamond Lake are plentiful. In the last two years, the DNR has stocked the lake with 51,000 walleye fingerlings to balance the population of numerous species of pan fish. Looking out for the interests of the community year-round is the Diamond Lake Association (DLA), an organization of approximately 450 Riparian property owners that have been very active for years.



Diamond Island Queen transports a vehicle to the Island on Diamond Lake.

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Diamond Lake Today

Continued from page 5

The DLA mission is fourfold:

- 1) Promote the education of Riparian property owners and other lake users about water quality, conservation, pollution and safety,
- 2) Support issues which concern the welfare of the lake,
- 3) Support the measurement and evaluation of hydrological data at the lake, and
- 4) Act as a cohesive body to bring issues of interest to our residents and users, and to the attention of governmental entities.

In support of its mission, the DLA executes four important activities:

- 1) Provides the fireworks display for the 4th of July,
- 2) Contracts for the treatment of invasive weeds,
- 3) Takes regular measurements to evaluate and maintain the water quality of the lake, and
- 4) Communicates regularly to its members through the internet and by mail.

Several years ago, Eurasian Milfoil was discovered in some parts of the lake and recently starry stone-wort was also discovered. As the lake actually falls into four different townships, an agreement had to be reached by all four townships to collect a special assessment to pay for the treatment. So far, the treatment is working and the invasive weeds have been kept under control.



Photograph taken in 1868 of the first steamboat ever run on Diamond Lake. It was constructed by Johnny (Jack) Moon. It was built entirely by hand.



An aerial view of Diamond Island in autumn.

A Brief History of Diamond Lake

The Diamond Lake of the 1820s was surrounded by wooded areas and dense brush. It saw dug-out canoes in its waters, as Potawatomi Indians still in the area set out across its gently undulating peaceful rhythm to catch whitefish and pike. Via the Chicago Treaty (1821), an L-shaped area of Southwest Michigan was ceded to the United States from the Potawatomi and two other tribes. Land around the southern coast of Lake Michigan was also included. As a result of the treaty, the original Potawatomi trail became part of the highway between Detroit to Chicago. They also built an underwater stepping stone trail from the north side of Diamond Lake (a settlement that became known as the town of Geneva) partway to Diamond Island.

An important geological and economic entity, Diamond Island has always played a predominate part in the history of the lake. The Island, which is about 46 acres, sits in the middle of the lake. There was a recluse, Job Wright, who was the first full-time lake resident living on the north side of the island from about 1829. He was influential in the development of the area.



Aerial view of Diamond Lake, Diamond Island, and surrounding area.

As narrow trails developed into wider paths, rapid change of the area was set into motion. In 1830, Geneva was the first town platted near Diamond Lake. Oxen trod the path from Detroit to Geneva; the wagons they pulled carried goods for the general store established there. In 1831, the Village of Cassopolis was platted and became the county seat. A double log cabin was constructed there and saw use as a hotel—thus, the humble beginning of the Diamond Lake resort trade was born.

Change and growth of the area was steady over the next several years. The Chicago Road was completed in 1834 (today's M60), making Diamond Lake accessible from Detroit to Chicago. Stage coach service began in 1835, followed by Michigan's entry to statehood in 1837. By this time, many Potawatomi Indians had headed west to Kansas.

By 1843, a general store and schoolhouse were completed in Cassopolis. The county's first newspaper, the Cass County Advocate, began in 1845. Newsworthy at the time was the Underground Railroad that provided secret shelter for slaves seeking freedom in the North—their ultimate destination being Canada. Two safe havens, called

stations, were located in Cass County and manned by “conductor,” Stephen Bogue. As Kentuckians sent raiding parties into Cass County, Quakers in the area helped hide the slaves. Some original Underground Railroad houses still exist in Cassopolis today.

Railroads of the aboveground sort began

stretching out over the area, and by 1870, lines were completed between Cassopolis and Chicago and Cassopolis and South Bend. Passenger and freight service began from the Michigan Central and Grand Trunk Railroads. Soon, there were two depots for the Diamond Lake area guests interested in fishing and picnicking.

The Resort Trade on Diamond Lake

With the accessibility railroads and paved roads offered, five hotels – each with their own history and special features – quickly sprung up in the Cassopolis / Diamond Lake area: Forest Hall, Blink Bonnie Hotel, Diamond Lake Island Hotel, Shore Acres Hotel, and Diamond Lake Hotel.

1872

Forest Hall

This grand three-story building on the north side of Diamond Lake had a wrap-around porch, bowling alley, water side dance floor, steamer, boats, and docks. It became a clubhouse for the Diamond Lake Golf Club in 1926. In 1935, the hall was torn down and the wood

used to build a new clubhouse.



1873

Diamond Lake Island Hotel

Offered lighted amphitheater using electricity, lanterns, and torches. It became the home of the Joliet Club in 1883. The Club built a 300-foot building with doors and porches. This hotel was eventually razed and is now the site of a new cottage.



1890

Blink Bonnie Hotel

Offered 20 rooms in two stories with a large dining room and porch, and later featured a 30-foot tall toboggan slide. It was sold, closed, and replatted as Sandy Beach in 1905, and subsequently purchased by Mr. J.M. Studebaker in 1908. Studebaker sold it to two individuals who each moved one half to other locations – one became part of the expanded Shore Acres Hotel and one to Bogue's farm. The restored farm half currently resides at the Big Rock Valley Farm complex on the east side of Decatur Road, Cassopolis.



1891

Diamond Lake Hotel

In Diamond Lake Park, now known as Park Shore, Diamond Lake Hotel and a boat landing were built. The hotel was later converted into the Anchorage Inn. Just before the Fourth of July holiday in 1938, it became fireworks itself, mysteriously exploding. The burning embers were used to light off fireworks on the actual Fourth by Diamond Lake residents – truly making the best of the situation.

1895

Shore Acres Hotel

Located in the area of today's Howell Point, Shore Acres first became noticed as a great place for a meal. By 1900, it accommodated 33 guests. In 1915, the hotel saw two additions plus a dance pavilion. In 1921, the dance hall was razed and the lumber used to build three houses by the former Diamond Harbor Inn, a popular dining spot until it was destroyed by fire in the 1970s.

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Diamond Lake Today

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On Sunday mornings in the summer months, the Diamond Lake Yacht Club holds nationally-recognized MC sailboat races. They also host a three-day Diamond Lake Invitational Regatta every July.



The Pleasures of Resort-style Living

Billowing puffs of smoke rose from smokestacks as steamboats made 20-cent voyages from Diamond Lake to Diamond Island and back. Campers popped tents on Kamp Kozy. This was the Diamond Lake area of yesteryear.

It was not uncommon then, nor is it yet today, to hear the whizz of reels and see the flash of lines cast upon the waters of Diamond Lake by those eager to catch their dinner in the form of Bluegill, Perch, Crappie, Bass, Walleye, or Northern Pike.

Then and now, slender oars of rowing regattas found purchase in the waters of Diamond Lake; and the whistle, pop, boom, and sizzle of fireworks animated



A growing number of kayaks have also appeared on the lake, usually during the quieter times of day.

Diamond Lake Yacht Club celebrates **75** yrs in August

the sky every Fourth of July, sending shimmering light in every direction, as the surface of the lake mirrors the celebration. Each year, the Diamond Lake Association (DLA) coordinates the fireworks which are provided through donations collected from both members and non-members.

The lighthearted, vacation feel of Diamond Lake lives on. So infectious was the joy, laughter, and delight that reverberated off the shores of this jewel of a lake, that individual cottages and homes began to appear as early as the resort era, when roads and automobiles began to traverse the land. Today, fishing, boat rides, picnics, camping, and events are enjoyed by visitors and residents alike (visitors enter via a public access that's staffed on weekends by the DNR).

Also a very important part of life on Diamond Lake for what will be 75 years this year is the Diamond Lake Yacht Club (DLYC). A number of years ago, the Scow sailing fleet of the DLYC was the largest in the United States. Originally formed to standardize racing and racing classes on the lake, the mission of the DLYC has evolved to include an active social life and impressive youth program. Social events kick-off with a pancake breakfast on Memorial Day weekend and conclude with a hog roast on Labor Day. In between are cocktail parties, theme parties, ladies luncheons, and a family carnival. The youth

program includes swimming lessons, sailing lessons and sunfish races, and tennis and golf camps.

Diamond Lake is Forever

Many families around the lake have been here for generations. Once you spend your childhood summers on Diamond Lake, it gets under your skin. You want to share the experience and bring your own children to spend their summers here, swimming, sailing, boating, skiing, tubing, and making new, lasting friends and memories.

Many years ago, Lois Webster Welch wrote a book about the lake entitled, *A Diamond Sparkles - Diamond Lake* indeed continues to sparkle in the lives of those who live on and around it.

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Lake Mapping:

An Overview of Methods and Potential Uses

by Tony Groves, Pam Tynning and Tory Meyers
Water Resources Group, Progressive AE

Lake Michigan

Silver Lake

A primary use of any map is navigation, but a map can also show prime fishing locations, bottom substrate, plant growth areas, spawning sites, depth and shoreline changes, and a variety of other features. This article provides an overview of historical and current lake mapping methods and how this information may be useful in understanding and managing your lake.

Historical Mapping Techniques

Many of Michigan's inland lakes were mapped by the Michigan Conservation Department (predecessor agency to our present day Department of Natural Resources [DNR] and Department of Environmental Quality). Although some lakes were mapped as early as the 1930's, most of the mapping took place in the timeframe between 1940 and 1970, and focused primarily on public inland lakes (Department of Natural Resources 2000). Depth measurements in those days were often conducted during the winter months. Holes were drilled through the ice and water depths were measured with weighted drop lines (Figure 1). Aerial photography was used to map the shoreline. It was not uncommon for field crews to spend several days on a lake drilling holes and taking meticulous measurements of water depths and bottom substrate. Benchmarks were

typically established to measure lake level fluctuations. Mapping procedures followed strict guidelines and the maps created were of excellent quality and accuracy (see excerpt from DNR manual in text box). Although most of these lake maps were created more than a half-century ago, many remain quite accurate and are in common use today. Conservation Department maps can be found online at www.michigan.gov/dnr. Click on "Press Releases, Maps & Publications," then on "Maps." "Inland Lakes by County" can be found under "Fisheries and Water Resources."

The following is an excerpt from the Department of Natural Resources internal guidance for winter lake mapping (Department of Natural Resources 2000).

The spacing of soundings has an important bearing on both mapping accuracy and speed. Insufficiency of depth records may result in an inaccurate map, or one that does not give adequate information for management. On the other hand, over-intensive sounding wastes time and effort. It is difficult to prescribe a definite pattern for spacing depth measurements because of the variability of lake basins. Good decisions on how frequently soundings should be made increases with experience. The

following is a general guide relating lake acreage to sounding interval when mapping is done on ice: 5-acre lakes - 50-foot intervals; 10-25 acres - 100 foot; 50-300 acres- 200 foot; larger lakes - 300- to 400-foot intervals. Additional soundings are often necessary between shore and the drop-off, in and around shoal areas that occur well out from shore in some fairly deep lakes, and throughout the basins of lakes in which depths are highly variable. Incompleteness of depth data may become evident as a set pattern of sounding is in progress; in such cases additional measurements should be made in the questionable area.

Soft bottom can cause significant errors in depth measurements. The bottom may be so soft that the sounding weight passes through it almost as freely as water. In such areas sounding must be done with extreme care, and the cup which collects bottom materials should be inspected often to determine the top level of the deposits. After some experience, one acquires a "feel" for the difference in descent of the weight through water and through very soft bottom, which helps greatly in locating the boundary between the two strata.

Bench marks are established for measuring lake level fluctuations. They can be very useful. Trees, bridge or dam abutments, and concrete foundations are among the objects that may serve as bench mark monuments. Spikes serve as reference points in trees, and a cold chisel is used to etch concrete or steel objects. Measurements of water elevations are made with either a surveyor's level and leveling rod, or a line level, chalk line, and leveling rod. Plainly record elevation, location, and establishment date for each bench mark on the field map. Bench marks should be established at the time the lake is mapped so that those data can be included on the finished map.



Figure 1. Weighted depth sounding line. (Left: weight; right: line on reel.)

Re-Mapping Silver Lake, Oceana County

Silver Lake is located in Oceana County not far from Lake Michigan. With respect to mapping, Silver Lake is of special interest in that it is bordered on the west by sand dunes that separate Silver Lake from Lake Michigan (Figures 2 and 3). In fact, geological records indicate that prior to the last glaciation some 10,000 years ago, Silver Lake was connected to the big lake (Fisher et al. 2007). An analysis of aerial photography from the 60-year time frame between 1938 and 1998 indicates that the dune has both encroached and receded over the years, with periods of encroachment into Silver Lake more evident during periods of high Lake Michigan water levels (Fisher et al. 2007). In addition to the physical migration of the dune, sand from the dune is frequently carried to Silver Lake with the prevailing west winds off Lake Michigan.

Depth soundings of Silver Lake were first conducted by the Michigan Fish Commission in 1892 (Figure 4). More extensive field surveys were conducted by the Department of Conservation during the winter of 1950, and a detailed depth contour map of the lake was produced (Figure 5). Silver Lake is relatively shallow with a maximum depth of just over 20 feet. A shallow shelf extends out several hundred feet from shore around much of the lake, except along the face of the dune on the west shoreline where the water depth drops rapidly toward the 20-foot maximum.

To evaluate the impact of dune migration, Silver Lake was remapped in 2012. The lake shoreline configuration was traced from 2010 orthodigital aerial photography and depth readings were taken with a GPS-enabled electronic depth finder at geo-referenced grid points spaced at 300-foot intervals across the surface of the lake (Figure 6). At each point, a depth measurement was recorded and computer software was used to create depth contours (Figure 7). The new map was compared to the original 1950 depth map to evaluate changes in the lake bottom (Table 1).

Table 1 shows that the sand dunes migrated 18 acres into Silver Lake between 1950 and 2012. Despite that, the mean (average) depth and lake volume declined only 2% and 5%, respectively. The maximum depth declined by 3 feet, which equates to a fill-in rate of about one inch every 17 years.

Table 1 Comparison of Silver Lake Physical Characteristics 1950 and 2012			
Measurement	1950	2012	Difference
Lake Surface Area (Acres)	690	672	-18 (3%)
Maximum Depth (Feet)	25	22	-3 (12%)
Mean Depth (Feet)	14.9	14.6	-0.3 (2%)
Lake Volume (Acre-feet)	10,287	9,823	-464 (5%)



Figure 2. Aerial view of Silver Lake sand dunes.

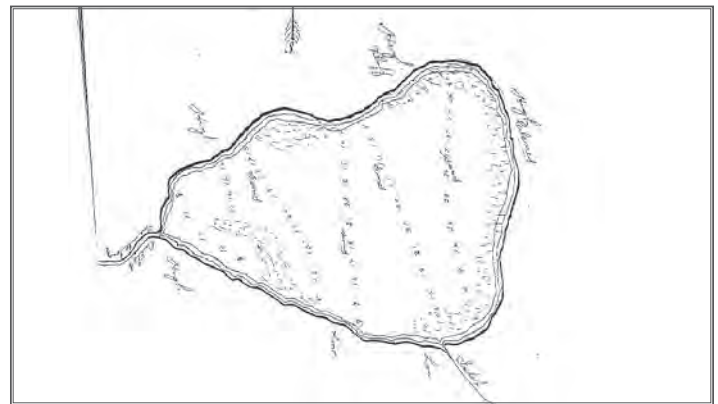


Figure 4. Silver Lake 1892 depth transects (Michigan Fish Commission).

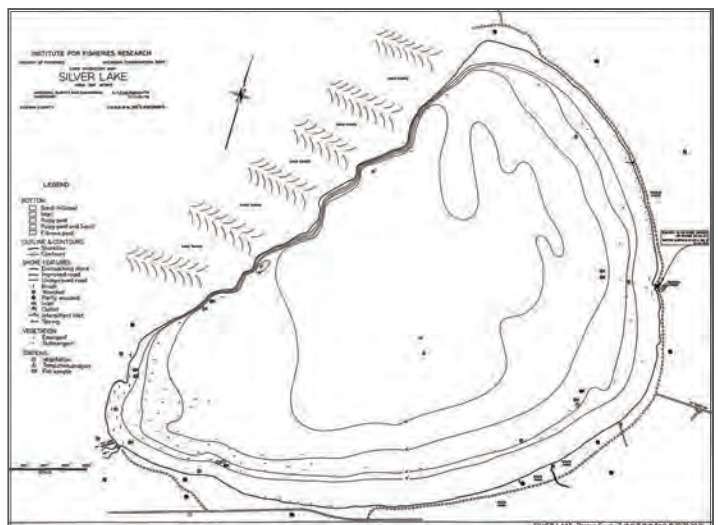


Figure 5. Silver Lake 1950 depth contour map (Conservation Dept.).



Figure 3. Silver Lake sand dunes.

(Continued on page 12)

Lake Mapping: An Overview of Methods and Potential Uses

(Continued from page 11)

Although detailed depth measurements prior to 1950 are not available, aerial photography from as far back as 1938 illustrates sand dune migration into Silver Lake (Figure 8).

General Considerations

Although dated, many of the maps created by the Department of Conservation are still reasonably accurate with respect to depth. In most lakes, the natural rate of sediment accumulation on the lake bottom is imperceptibly slow, and off-shore lake depths would not be expected to change significantly in a 50-year or even a 100-year time frame. However, if a lake is experiencing excessive sediment loading, for example via tributary inflows, sediment accumulation can occur much faster and be more pronounced, at least in the areas of sediment deposition.

While lake depths typically remain relatively static, shoreline configurations often change dramatically over time. On many lakes, extensive channelization and dredging activities occurred prior to modern environmental regulation and, as a result, shoreline configurations today are often much different than when the original lake maps were created decades ago. Some of these changes are profound.

On the old maps, shoreline structures and reference points were often scant and, in the absence of some distinct feature such as a point or cove, it can be difficult to orient to shore features. With today's mapping technology, this issue can be addressed by plotting depth contours on registered aerial photography and/or USGS topographic maps (Figure 9).

While new technology can greatly facilitate mapping, historical standards of accuracy can provide excellent guidelines for today's mapping projects.

Potential Uses

In the case of Silver Lake, a new depth contour map was created to evaluate the impact dune migration was having on the lake. However, an accurate lake depth contour map can provide a myriad of uses, not the least of which is identifying areas of the lake that fish might frequent. With the more widespread use of GPS in recent

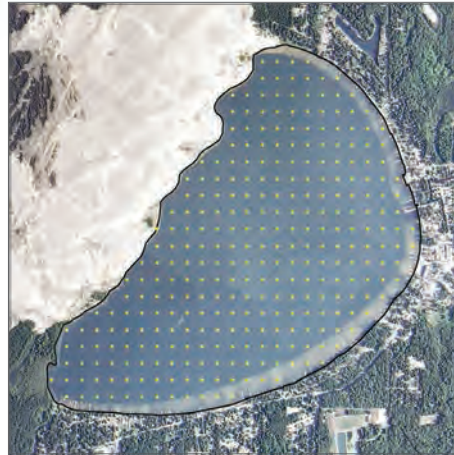


Figure 6. Silver Lake geo-referenced survey points.

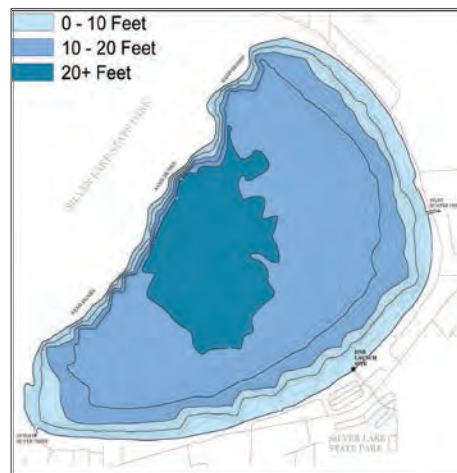


Figure 7. Silver Lake 2012 depth contour map (Progressive AE).



Figure 8. Silver Lake dune migration 1938 to 2010.

years, reference points can be established on a map and used to identify sampling locations, invasive plant species locations, natural shoreline areas, or simply where the “big one” got away. An accurate depth contour map can also be used to perform several useful calculations.

Mean depth is a calculation of the volume divided by a lake's surface area. In general, rooted aquatic plants can grow to a depth of about 15 feet. Silver Lake has a mean depth of just under 15 feet that indicates that about 50% of the lake is shallow enough to support rooted plant growth. Shoreline development factor is a measure of the irregularity of the shoreline. A lake that is perfectly round would have a shoreline development factor of 1.0. Silver Lake's shoreline development factor is 1.2, indicating the shoreline of Silver Lake is 0.2 or 20% (nearly 1 mile) longer than if the lake were perfectly round. Lakes with highly convoluted shorelines have the potential to support much more shoreland development per unit area of lake surface. Wagner (1991) noted:

The ratio of the length of shoreline around the lake to the circumference of a circle with the same area as the lake [shoreline development factor] provides a size-independent measure of the lake shape and indicates much about how motorized watercraft could affect the water body. Higher ratios suggest irregular shorelines with more waterfront per unit area than smaller ratios. Numerous coves may serve to isolate impacts, but there is a greater potential for the shoreline to be affected. High ratios also imply greater safety risks as well as ecological consequences.

The shallowness ratio compares the area of the lake less than 5 feet deep to the total lake area, and indicates the degree to which the lake bottom area is likely to be directly affected by motorized watercraft. Impacts of primary concern would include sediment suspension, turbidity, and destruction of fish habitat. Shallowness ratios range from low (<0.10) for lakes unlikely to be impacted to high (>0.50) for lakes with a high potential for impact. Silver Lake has a shallowness ratio of 0.14 which indicates that the impact of motorized watercraft on the lake is unlikely.

Lake Mapping: An Overview of Methods and Potential Uses



Figure 9. Silver Lake depth contours on registered aerial photography.

Percent natural shoreline is a useful measure to evaluate how much of a lake's shoreline has been physically altered by seawalls and other hard structures. In a recent nationwide study, the Environmental Protection Agency (2010) noted that lakes that have lost natural shoreline vegetation were three times more likely to be in poor biological condition. Thus, periodic measurements of the percent natural shoreline can provide an indication of the overall health of your lake.

An accurate lake map can provide valuable information about your lake.

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Keeping the Family Cottage

New Tax Benefit for Transfers Between Parents and Children

By: Crystal Morgan,
Shareholder
Bloom Sluggett Morgan, PC
Grand Rapids, Michigan



As a result of Proposal A, which was adopted by Michigan voters in 1994, the taxable value of a property (the amount on which a property owner pays property taxes) cannot increase from one year to the next by more than the rate of inflation or five percent—whichever is less—until there is a transfer of ownership. When there is a “transfer of ownership” to a new owner (including a family member), the taxable value of the property generally “pops up” or is “uncapped” to the state equalized value, which is supposed to represent 50 percent of the property’s fair market value. Thus, uncapping the taxable value after a sale or transfer can result in the new owners paying significantly more in property taxes than longtime previous owners of the same property.

Under Michigan’s General Property Tax Act, a transfer of property from one spouse to another, or from a decedent to a surviving spouse, is exempted from the definition of a transfer of ownership. Therefore, such conveyances do not constitute a transfer of ownership for purposes of uncapping the taxable value of the property.

A new law now extends this same protection to transfers between close relatives. Under Public Act 497 of 2012, signed into law in December 2012, the exemption will also apply (beginning December 31, 2013) to a transfer of real property to a person related by blood or affinity to the first degree. Persons related by blood to the first degree include a person’s parents and children (including legally adopted children). Persons related to the first degree by affinity include a person’s spouse, mother-in-law, father-in-law, son-in-law, daughter-in-law, stepson, stepdaughter, stepmother or stepfather. The exemption applies only to property that is classified as residential real property, and only as long as the use of the property does not change following the transfer. MCL 211.27a(7)(s).

This new exception to uncapping in the case of transfers between parents and children is especially important in the case of elderly parents who have owned their home for many years, and whose taxable value has not been uncapped since the cap was first enacted under Proposal A in 1994.

Overall, Proposal A has been beneficial to riparian property owners throughout Michigan who have held onto their land for long periods of time, as waterfront properties have tended to increase in value over the last decade and a half much more rapidly than non-waterfront properties. Waterfront property owners who have owned their riparian property for long periods of time have seen their taxable values (and, hence, their property taxes) grow much more slowly over time than the owners of riparian properties that change ownership frequently. The downside, however, is that senior generation owners may wish to transfer waterfront property to their children, but the uncapping of the taxable value would result in an increased tax bill that the children cannot afford. Unfortunately, this can lead to forced sales of properties that have been in the same family for generations.

While the scope of the new law is narrow, the new law is not limited to homesteads. Thus, it allows parents to transfer cottages and vacation homes that have been under the same ownership for a number of years or decades to close relatives, allowing the property to remain in the family without the fear of an insurmountable tax burden.

It is not yet clear how the Michigan State Tax Commission or local taxing authorities will interpret or apply the new law in certain situations, such as where the property is owned by the parents’ trust, a living trust or by a limited liability company owned by the parents. Further, it is important to remember that this new law does not become effective until December 31, 2013. Thus, it does not have any effect on a property’s 2013 taxes.

However, once in effect, this new law will allow parents for the first time to transfer (i.e., by deed or will) residential real property to their children and step-children without “uncapping” the taxable value. This will result in helping to keep cottage and waterfront home ownership affordable, and allowing Michigan families to retain and enjoy property that has been part of their family’s history for generations.



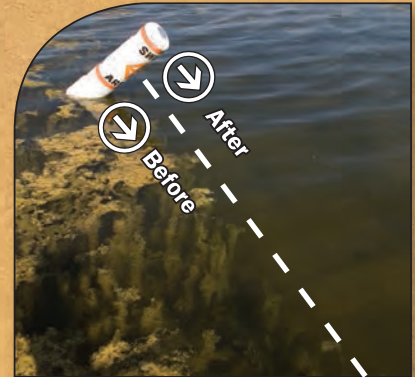
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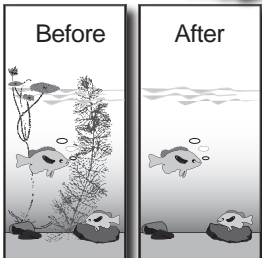
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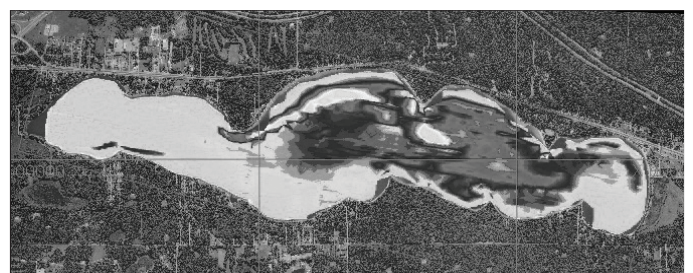
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A Brief Overview:

Jennifer L. Jermalowicz-Jones
Water Resources Director, Restorative Lake Sciences, LLC
Certified Professional Watershed Manager

What Makes Watermilfoil So Invasive?

The Problem: Watermilfoil Invasions

Lake managers throughout the United States and especially in Michigan, have been inundated with inquiries on how to successfully control the growth of milfoils, which mostly includes Eurasian Watermilfoil (*Myriophyllum spicatum*), Hybrid Watermilfoil (*Myriophyllum spicatum* var. another species), and even native watermilfoils such as Northern Watermilfoil (*Myriophyllum sibiricum*) and Variable Watermilfoil (*Myriophyllum heterophyllum*). The latter species (*Myriophyllum heterophyllum*) is considered to be invasive by some scientists and was found to have significant negative impacts on waterfront property values in New Hampshire (Halstead et al., 2003). The relative invasiveness of each milfoil species varies among lakes, reservoirs, ponds, and rivers and depends upon a variety of environmental factors such as light availability, nutrient concentrations in the sediment and water column, existence of strong native aquatic plant communities to fight against infestations (resilience), and the presence of transfer vectors such as public boat launches and other means of

introduction for the spread of the milfoil. However, the majority of exotic aquatic plants (such as milfoil) do not depend on high water column nutrients for growth, as they are well-adapted to using sunlight and minimal nutrients for successful growth. Additionally, milfoils easily colonize disturbed habitats (a pioneering species) which makes their relative abundance much higher than native aquatic plant species in many developed areas and especially in lakes with low biodiversity and neighborhood ponds. Furthermore, the degree of fragmentation varies among lakes and may actually be higher in calm waters since the fragments remain in the water column longer and are transferred to shorelines more readily in lakes with high wave activity.

Eurasian Watermilfoil: A Long-Time Nuisance

Eurasian Watermilfoil (*Myriophyllum spicatum*; Figures 1 and 2) is an exotic aquatic plant first documented in the United States in the 1880's (Reed 1997), although other reports (Couch and Nelson 1985) suggest it was first found in the 1940's. Eurasian Watermilfoil has since spread to thousands of inland lakes in various states

through the use of boats and trailers that contain fragments, seeds, or entire plants; waterfowl that may unintentionally transfer seeds or fragments from an infested water body to another uninfested water body; seed dispersal by wind; and unintentional introduction from aquaria or water gardens (though this practice is rare). Eurasian Watermilfoil is a major threat to the ecological balance of an aquatic ecosystem through causation of significant declines in favorable native vegetation within lakes (Madsen et al. 1991), and may limit light from reaching many lower-growing native aquatic plant species (Newroth 1985; Aiken et al. 1979). Additionally, Eurasian Watermilfoil can alter the macroinvertebrate populations associated with particular native plants of certain structural architecture (Newroth 1985). The diversity of submersed aquatic macrophytes can greatly influence the diversity of macroinvertebrates associated with aquatic plants of different structural morphologies (Parsons and Matthews, 1995). Therefore, it is possible that declines in the biodiversity and abundance of various native submersed aquatic plant species and associated macroinvertebrates could negatively impact the fisheries of inland lakes.



Figure 1. Eurasian Watermilfoil stem, leaves, and seeds.



Figure 2. Eurasian Watermilfoil canopy on an inland lake.



Figure 3. Hybrid Watermilfoil stem, leaves, and seeds.

Hybrid Watermilfoil: Our Biggest Aquatic Plant Management Challenge Yet

When a species hybridizes, it undergoes a process of genetic combination where genes from each plant strain are transferred to the new plant generation. This transfer of genes allows for a robust plant that can withstand more adverse environmental conditions than the original species. This allows the newly hybridized species to rapidly colonize most habitats and quickly out-compete other native species and even the exotic Eurasian Watermilfoil. It is commonly known that hybrid vigor is likely due to increased ecological tolerances relative to parental genotypes (Anderson 1948), which would give hybrid watermilfoil a distinct advantage to earlier growth, faster growth rates, and increased robustness in harsh environmental conditions. In regard to impacts on native vegetation, hybrid watermilfoil possesses a faster growth rate than Eurasian watermilfoil or other plants and thus may effectively displace other vegetation (Les and Philbrick 1993; Vilá et al. 2000).

Hybrid watermilfoil is a serious problem in Michigan inland lakes (Figures 3 and 4). Moody and Les (2007) were among the first to determine a means of genotypic (genes) and phenotypic (appearance) identification of the hybrid watermilfoil variant and further warned of the potential difficulties in the management of hybrids relative to the parental genotypes. This threat has been realized through intense hybrid watermilfoil control efforts throughout the U.S.

Furthermore, the required dose of 2, 4-D or other systemic aquatic herbicides for successful control of the hybrid watermilfoil is likely to be higher since there is much more water volume at greater depths it can occupy and also due to the fact that hybrid milfoil has shown increased tolerance to traditionally used doses of systemic aquatic herbicides. There has been significant scientific debate in the aquatic plant management scientific community regarding the required doses for effective control of hybrid milfoil (Glomski and Netherland, 2010; Poovey et al., 2007). To some extent, we are left with a trial-and-error approach for controlling this new invasive as the race against time continues.



Figure 4. Hybrid Watermilfoil canopy on an inland lake.

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Dear MWA Members,

The Michigan Waterfront Alliance has a new lobbyist, Karoub Associates. According to the Michigan Department of State for 2012, Karoub ranked #3 from the top 200 Michigan lobbyists in terms of spending. The #1 firm is Government Consultant Services, Inc. and #2 is Kelly Cawthorne.

Matt Kurta is our main contact and one of 15 members of the Karoub Associates firm. He has a very real grasp of what Michigan waterfront owners are up against

in the effort to protect the lakes and streams they love so much.

His firm's knowledge and ability to communicate with various Michigan governments gives the MWA a strong ally in our mission to help preserve our members' riparian rights and their expectations of continued enjoyment of Michigan's lakes and streams. The Board of Directors of the Michigan Waterfront Alliance looks forward to working with Matt.

We would also like invite you to attend the MWA annual meeting at the ML&SA Annual Conference, 4:30 PM, Friday April 26, in the Board Room at the Doubletree by Hilton Riverfront Hotel, Bay City, Michigan.

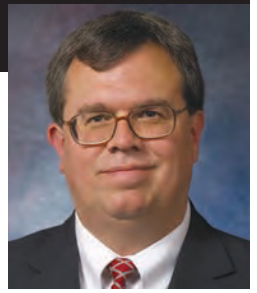
Hope to see you there,

Bob Frye, MWA President

Miscellaneous Matters

Regarding Docks and Swim Rafts

Clifford H. Bloom
Bloom Sluggett Morgan, PC
Grand Rapids, Michigan 49503



I am frequently asked whether docks and swim rafts on private properties on inland lakes are subject to government or other regulations. In fact, docks, swim rafts, boat hoists, and similar items are potentially subject to regulation by both the State of Michigan and local municipalities (that is, a township, city or village). Theoretically, for any given inland lake, there are five levels of regulations that could be applicable to a dock or raft as follows:

- State of Michigan
- Local government police power ordinances
- Zoning regulations
- Deed restrictions/restrictive covenants
- The Riparian Rights Doctrine

For docks and rafts used for single-family purposes only, there are generally two provisions of state law that apply. First, docks, piers, and rafts that are utilized only for single-family purposes and are not permanent (i.e., they are removed from the water during the off-season) generally do not require a state permit under what used to be called the Michigan Inland Lakes and Streams Act (now a part of the Michigan Natural Resources and Environmental Protection Act). See MCL 324.30103. However, where any of those items remain in the water year-round or are utilized by more than one family or for commercial or business purposes, a state permit is usually required. See MCL 324.30101 *et seq.*

Second, a portion of what used to be called the Marine Safety Act was also recently amended to address navigability hazards. MCL 324.80163(1) provides that if an anchored raft, dock, pier or similar item presents a safety problem or hazard to navigation, the Michigan Department of Natural Resources may relocate or remove

the item or order its relocation or removal. If such item is not relocated or removed as required, the State can act and collect the actual and reasonable costs of such relocation or removal from the riparian landowner involved, which can become a lien against the waterfront property. See MCL 324.80163(2).

While many municipalities with lakes inside their jurisdictional limits do have local regulations regarding docks, piers and rafts, that is not always the case. In general, there are two types of ordinances under which local municipalities can regulate docks and rafts – zoning ordinances and general police power ordinances. Pursuant to a zoning ordinance, docks and rafts can be regulated indirectly by side yard setback and use regulations, although zoning regulations sometimes expressly regulate docks and rafts for size, location, etc. Some municipalities have lake access or anti-funneling zoning regulations that also regulate docks and rafts. Certain local municipalities have a separate police power ordinance that regulates docks and rafts either in lieu of or in addition to the zoning regulations. In some instances, county zoning regulations apply in townships that have no zoning ordinance.

Some properties (but not most) are subject to what is commonly referred to as a plat restriction, deed restriction, restrictive covenant or the equivalent. On occasion, such restrictions can regulate docks and rafts.

Finally, Michigan has a common law doctrine sometimes referred to as the “reasonable

use” or “riparian rights” doctrine. Pursuant to that doctrine, riparian property owners can only use their waterfront in such a way that it does not unreasonably interfere with the riparian uses of adjoining or nearby property owners. Accordingly, even if a particular dock or raft complies with all applicable governmental regulations and deed restrictions, the dock or raft could still run afoul of the riparian rights doctrine if, due to the use or placement of the raft or dock, it unreasonably interferes with use by adjoining nearby property owners of their riparian rights. See *Thompson v Enz*, 379 Mich 667; 154 NW2d 473 (1967); *Three Lakes Assn v Kessler*, 91 Mich App 371; 285 NW2d 300 (1979); *Pierce v Riley*, 81 Mich App 39; 264 NW2d 110 (1978); *West Michigan Dock & Market Corp v Lakeland Investments*, 210 Mich App 505; 534 NW2d 212 (1995), and *Square Lake Hills Condo Assn v Bloomfield Twp*, 437 Mich 310; 471 NW2d 321 (1991).

In addition to the above regulations, if a lake is directly tied into one of the Great Lakes by a canal, inlet or other connection, both the Michigan Department of Environmental Quality and the U.S. Army Corps of Engineers have joint jurisdiction over all docks and piers. The permitting requirements for docks or piers in those situations are too detailed to cover in this article.

When it comes to docks and swim rafts on inland lakes, do not assume that a riparian property owner can do anything that he or she desires to do!



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.

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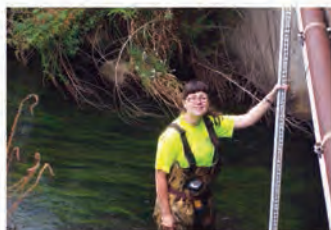
Answer: The easiest way to find out is to check the manufacturer's capacity plate. It will indicate how many persons can be onboard, as well as the maximum weight for people/equipment. The plate also states the maximum size motor for the vessel. Capacity plates are on almost all small boats made today. However, if your boat is older and does not have one, the best way to determine capacity is to contact the manufacturer. You could also do a little math and use this formula to get a rough estimate: multiply the length of your boat by the width and divide it by 15 to figure the approximate number of people allowed onboard. So, if your boat is 19' long by 6' wide, your capacity would be 19×6 divided by 15—allowing 7 people.

Grant Jones
 US Coast Guard Auxiliary
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* * * * *

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Avian Botulism Monitoring

Beach Rangers Closely Monitoring the Increased Bird Deaths in the Great Lakes

Botulism Type E, also known as “avian botulism”, is a paralytic condition in birds, fish, and other wildlife caused by the ingestion of large quantities of the naturally-occurring botulism toxin. During the last 50 years, thousands of birds and fish deaths from avian botulism outbreaks have been documented throughout the Great Lakes. However, the Northern Lake Michigan region has suffered atypically high and alarming losses in recent years.

Since 2007, Tip of the Mitt Watershed Council has taken the lead to coordinate avian botulism monitoring in the Northern Lower Peninsula in an effort to better understand the underlying factors contributing to outbreaks. In the fall of

2012, the Watershed Council continued working with the Emmet County Lakeshore Association (ECLA) and community volunteers to monitor outbreaks of avian botulism along the Lake Michigan shoreline in Emmet and Charlevoix Counties. Twenty-five volunteer monitors, known as Beach Rangers, patrolled over 30 miles of shoreline throughout the fall (Figure 1), collecting data on dead birds and fish, as well as disposing of carcasses. The Watershed Council also received dozens of reports of avian fatalities from the concerned public.

What did the Beach Rangers report during the fall of 2012?

We don’t even need to look at the data to tell you that 2012 was a bad year for avian botulism outbreaks. The number of dead birds reported from certain sections of shoreline was shocking. Over 950 bird fatalities were documented in Charlevoix and Emmet Counties. Loons were hit hardest this year with over 420 reported fatalities (Figure 2). Loon die-offs of similar magnitude were observed along the Lake

Michigan shoreline from Benzie County through the eastern UP this fall, as reported by other monitoring coordinators in the Northern Lake Michigan region. Horned and red-necked grebes were similarly affected.

Figure 3 shows the avian fatalities reported in two-week intervals for the four largest categories of birds. Most cormorant fatalities occurred late-August through mid-October, which is earlier than other affected birds. The peak of documented fatalities for loons, grebes, and most of the other birds occurred in mid- to late-October, which is the time period when avian botulism outbreaks climaxed in past years.

What caused the intense avian botulism outbreaks this past fall?

Do you remember the warm summer weather we experienced last year in Northern Michigan...back in March? And then a long, warm, and dry summer? Although greatly appreciated and enjoyed by many, the nice weather likely contributed to the avian botulism outbreaks. These outbreaks typically occur from late-summer through November, which is when algae and aquatic plants are dying and decomposing, and water temperatures are warmer.



figure 1: shoreline areas monitored by Beach rangers during 2012.

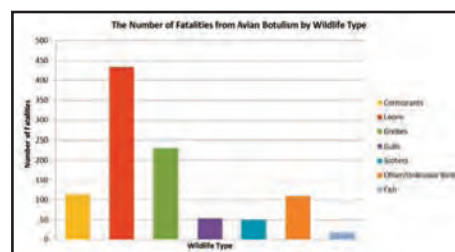


figure 2: the number of fatalities from avian botulism reported by wildlife type.

(Continued on page 22)

Avian Botulism Monitoring

(Continued from page 21)

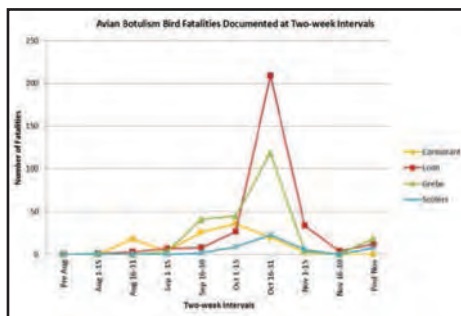


figure 3: avian botulism bird fatalities documented at two-week intervals.

The botulism toxin is produced by a bacterium called *Clostridium botulinum*, which occurs naturally throughout the waters and soils of Northern Michigan. The bacteria produce the toxin under anaerobic (without oxygen) conditions, which can occur in areas of lakes where large amounts of dead algae and other vegetation settle and decompose. In general, toxin production is limited, but the severe avian botulism outbreaks that occurred in the northern Lake Michigan region during recent years suggest an environmental change is contributing to the problem.

Experts believe that recent outbreaks are the results of ecosystem alterations in Lake Michigan brought about by invasive species, in particular zebra and quagga mussels. These filter-feeding mussels have disrupted the lake's natural nutrient cycle by removing nutrients from the water column as they filter-feed on free-floating planktonic algae and subsequently concentrating nutrients, excreted in their waste, at the lake bottom.

This concentration of nutrients, coupled with increased water clarity that allows sunlight to penetrate deeper into the lake, fuels heavier than normal growth of periphytic (bottom-dwelling) algae on the lake bottom. When the algae die and decompose, aerobic (oxygen consuming) bacteria involved in the decomposition process deplete the limited dissolved oxygen stores in the water, thereby creating the conditions necessary for the production of the toxin. Not only do the invasive mussels contribute to botulism toxin production, they subsequently filter the toxin out of the water as they feed and it becomes concentrated in their bodies. When waterfowl feed on the mussels, or on mussel-eating fish such as invasive round gobies, they become intoxicated and die. The toxin-laden fish also die from botulism, which is particularly unfortunate in the case of our native Lake Sturgeon.

Thus, the atypically warm weather during 2012 likely set the stage for the distressing avian botulism outbreak we witnessed. In addition, some suspect that declining water levels in the Great Lakes could be contributing to the problem. The wildlife fatalities documented by volunteers and the public in Emmet and Charlevoix Counties during 2012 are presented in Table 1.

We would like to thank all of our Beach Rangers for collecting data and contributing to regional efforts to better understand avian botulism outbreaks. Our hope is that these efforts ultimately reduce impacts to



birds, fish and other wildlife inhabiting the Lake Michigan coastline.

Becoming a Beach Ranger

An annual Beach Ranger Workshop with ECLA is held each September to train volunteer monitors. If you are interested in becoming a Beach Ranger to help monitor botulism outbreaks, contact Dan Myers at 231-347-1181 or dan@watershedcouncil.org. Volunteer beach rangers generally monitor on a weekly basis from early September through late November. Resources and general information about avian botulism can be found under the "Learn" tab at www.watershedcouncil.org.

Regional Partners

Coordination of avian botulism monitoring is performed regionally by these organizations in the northern Lake Michigan region:

Benzie and Leelanau Counties – Michigan Sea Grant www.miseagrant.umich.edu

Sleeping Bear Dunes National Lakeshore – National Park Service
www.nps.gov/slbe/index.htm

Grand Traverse County – Watershed Center of Grand Traverse Bay
www.gtbay.org

Antrim County – Loon Network
www.loonnetwork.org

Delta, Mackinac, Menominee, and Schoolcraft Counties – Common Coast Research and Conservation
www.commoncoast.org

Northern Wisconsin – Northern Lake Michigan Volunteer AMBLE
www.nwhc.usgs.gov/amble

Table 1. documented wildlife fatalities.*

Wildlife Type/Species	Fatalities	Wildlife Type/Species	Fatalities
Cormorant	113	Canada Goose	3
Loon	431	Common Goldeneye	1
Horned Grebe	77	Long-tailed Duck	13
Red-necked Grebe	109	Mallard Duck	5
Unspecified / Unknown Grebe	45	Unspecified / Unknown Birds	65
Herring Gull	25	Common Carp	6
Ring-billed Gull	15	Burbot	1
Unspecified / Unknown Gull	13	Lake Sturgeon	1
Common Merganser	22	Walleye	1
Red-breasted Merganser	0	Lake Trout	1
White-winged Scoter	45	Salmon**	Omitted
Surf Scoter	5	Unspecified / Unknown Fish	8
Bufflehead	0	Squirrel (unspecified)	19

*reported fatalities not necessarily due to botulism.

**salmon omitted due to the high degree of natural mortality that occurs in their life cycle during the monitoring period.

MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.

ML&SA NEWSLETTER



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ML&SA Region 9 Aquatic Invasive Species Survey Emphasis

Need for Close Lake Monitoring for Exotic Plants and Animals

by Sarah Litch
ML&SA Region 9 Representative

The Water Quality Committee of the Glen Lake Association sent out a survey in January, 2013 to the lake associations, watersheds, and the Sleeping Bear National Lakeshore within Michigan Lake and Stream Associations Region 9 which includes Antrim, Benzie, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee and Wexford counties. The purpose of the survey was to determine the aquatic invasive species that have been identified in their lakes and along their shorelines.

Only two lakes within ML&SA's Region 9 (besides those in the Glen Lake Watershed) do yearly aquatic invasive species surveys. Due to that fact, we recognize that the Michigan Lake and Stream Associations Aquatic Plant Survey data base is probably under reporting the number of aquatic invasive species for many of the lakes.

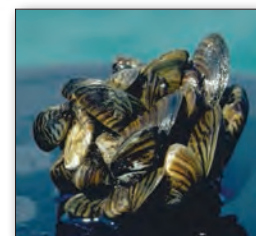
Glen Lake has Zebra mussels as do 66.67% of the lakes reporting. One of the biggest threats to our watershed is Eurasian water milfoil, which was reported by 36.11% of the lakes, though not yet found in the Glen Lake Watershed. It is an aggressive grower and spreads rapidly. The treatment to eliminate Eurasian water milfoil can be very expensive if it is not detected early. An Aquatic Plant Survey has been done for the past ten years in our watershed to facilitate early detection and rapid response if Eurasian milfoil is found, as well as any other aquatic invasive species.

A survey and treatment for both Coltsfoot and Eurasian Phragmites along the shoreline is done each year in our watershed. Curly leaf pondweed has been found in Big Glen Lake and harvested. Since the Glen Lake Association has an active survey/treatment program for both aquatic and shoreline invasives, it is in fairly good shape in relation to other lakes in Region 9. Treatment of Zebra mussels is also being actively explored and may be part of our survey/treatment of aquatic invasive species in the future.

ML&SA Offers Assistance to Members Experiencing Lack of Enforcement of Public Act 56

By Scott Brown
ML&SA Executive Director

For those of you who have reached out to Michigan Lake and Stream Associations for suggestions on how to prompt your local government or local law enforcement agency to enforce the new "public docks at public road ends law", we are pleased to announce that ML&SA now has available a portfolio of sample letter templates that may be presented to various Public Act 56 "offenders". The letters may be mailed or otherwise delivered to possible violators and/or local government or law enforcement agencies refusing to warn or cite those responsible for installing illegal docks at public road ends. Written by ML&SA Chief Legal Counsel Attorney Cliff Bloom, the documents will help clarify the law and offer a sound legal premise for why Public Act 56 must be enforced.



Zebra mussels



Continued on page 24

MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.

ML&SA NEWSLETTER



Lack of Enforcement of Public Act 56

Continued from page 23

Signed into law on March 22, 2012, Michigan Public Act 56 provided statewide codification of twenty-year-old court rulings that limit public road ends to one seasonal public dock (if approved by the local unit of government and the issuance of an MI DEQ permit), forbids overnight mooring as well as the installation of boat hoists. Public Act 56 is now **MCL 324.30111b**, and must now be enforced by state, county, municipal and township law enforcement agencies.

The portfolio of letters will be available to members of Michigan Lake and Stream Associations **only**.

Please contact Scott Brown, Michigan Lake and Stream Associations Executive Director at e-mail: sbrown@mlswa.org if you would like to receive the Public Act 56 enforcement related documents.

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Why Join Michigan Lake and Stream Associations?

By Scott Brown
ML&SA Executive Director

I know I don't need to tell you or the other members of your association how profoundly valuable our "inland seas"- our lakes, big or small, are to the Great Lakes region and to our state in particular. These fragile bodies of water, not yet even 15,000 years old, continue to attract hundreds of thousands of people to Michigan in search of fun and relaxation. The investment you made in your lakefront home and/or property turned out to be a wise one!

Yet, while our lakes continue to serve generation after generation, offering both outstanding recreational and economic opportunities for our citizens, the fact is, we have given little or nothing back to sustain or maintain the health of these living and ever evolving freshwater basins we know as lakes. Rapidly expanding development on and around our lakes as well as overuse and aquatic invasive species threaten to degrade the water quality and the aquatic ecosystems of these priceless freshwater gems. Is the fishing in your lake as good as it was 40 years ago - with few exceptions, the "old timers" will tell you that it is not.

I'm convinced the best way to ensure that our lakes remain healthy and viable for future generations as well as to protect the substantial investment you've made in lakefront property is to join the Michigan Lake and Stream Associations - an organization totally dedicated to preserving and protecting our lakes and streams as well watching out for your rights as a lake-or-stream-front property owner.

With the active support of you and your association members, our organization will continue to educate and train state and local government officials on issues that directly impact you and your lake. We'll continue to work with our partners- the Michigan Department of Environmental Quality, Michigan State University Extension, the Great Lakes Commission and the Huron

River Watershed Council in administering the MiCorps Cooperative Lakes Monitoring Program, which is one of the best all-volunteer water quality monitoring efforts in the country. And with your support, the Michigan Lakes and Streams Foundation, an organization dedicated to ensuring the future of Michigan Lake and Stream Associations, will continue to publish one of the nation's best magazines dedicated to covering subjects and issues of interest to Michigan lakefront property owners - **The Michigan Riparian**.

I won't mince words at this point-the Michigan Lake and Stream Associations needs you and your association to join us in helping to give back-to preserve, to protect and to save our lakes for future generations. We need your active participation in projects that benefit your lake. Quite frankly, without the financial support gleaned through your annual association dues, we are unable to continue to actively support the education, training, and lake monitoring programs that are so critical to preserving our inland lakes and the riparian rights we all enjoy in Michigan.

Please join now and help preserve our inland lakes for generations to come.

Live On A Lake?

Concerned About the Future of Your Water Resources?

Membership dues of \$35 entitles you to a year's membership and a subscription to The Michigan Riparian magazine as well as other benefits.

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MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.

ML&SA NEWSLETTER



Cooperative Lakes Monitoring Program Winners

Did you know that each year the CLMP (Cooperative Lakes Monitoring Program) holds a drawing for the volunteers who entered their lake data into the online MiCorps Data Exchange? One lake is selected randomly from the data entered for each of the CLMP monitoring parameters (except the plant I.D. parameters). They receive a waiver for the next year in that parameter (free enrollment).

This year's winners are:

Secchi Disk Transparency - Ann Lake in Benzie County (volunteer Dave Maxson)

Spring Total Phosphorus - Portage Lake in Washtenaw County (volunteer Jim Collins)

Summer Total Phosphorus - Lake Independence in Marquette County (volunteer Melinda Otto)

Chlorophyll a - Lake Lancer in Gladwin County (volunteer Tim Stegeman)

Dissolved Oxygen/Temperature - Lower Hamlin Lake in Mason Co. - (volunteer Lynn Hoepfinger)

The winners will also be announced at the CLMP training in April held during the 52nd Annual MLSA Conference.



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- Providing a cost effective process for the MDEQ to increase baseline data for lakes state-wide.



To enroll in the Cooperative Lake Monitoring Program for the 2013 season, contact

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

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Welcome to the SAVE the Blue Lake Island Movement

The Tri Lakes are located in Central Michigan and consist of Lake Mecosta, Blue Lake, and Round Lake.

From the Morton Township Tri-Lakes
Association newsletter

Fall/Winter 2012

John D. Williams

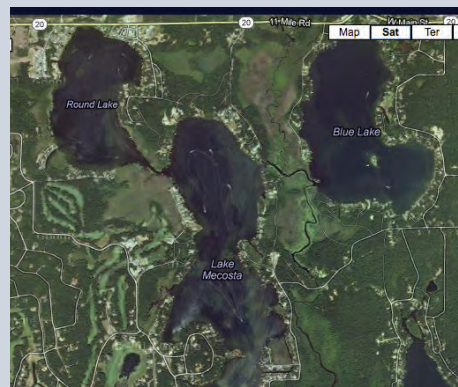
The Blue Lake Island has been a recreation destination for many years. Generations can recall kids camping out there and using the swimming beach. My family has had a cottage on Blue Lake for over 60 years. The island has had a special place in our hearts for all of that time.

When we could swim to the island for the first time, my father bought us a boat. My friends and our girl friends had many wonderful days there also. Since the advent of the pontoon boat (party boat), the Island has become an all-day destination. This is particularly true of those from the other lakes who lack a good beach or are day trippers from the public fishing site.

The majority of the current users of the Island stay for many hours and the Island has become a playground

for children who dig in the sand hill exposing the roots of the trees. When the Island is surrounded with pontoon boats, people tie up to anything they can, including the large oak tree, which has experienced a great deal of erosion from people tying up to it. It appears that some of the visitors to the Island would rather throw their waste into the bushes rather than carry it back home. This lack of respect has resulted in a great deal of trash on the island that detracts from its beauty and forces others to clean up for them. It is hoped that in the future, all of the visitors to our Island will have more respect for such a treasure.

If you have comments on the condition of the Island and suggestions for what might be done to preserve the Island, go to www.thetrilakes.org and submit your comments under the "Contact Us" tab on the home page.



Tri-Lakes



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 - Yellow Perch - Up to 8 inches
 - Northern Pike - Fingerlings
 - Fathead Minnows

Historic Hamlin Cottage Preservation Project

Hamlin Lake Currents
Fall 2012 Newsletter

In honor of Hamlin Township's 150th anniversary, the Hamlin Lake Preservation Society is sponsoring an initiative to move an historic cottage from Hamlin Lake to Historic White Pine Village.

The first phase of this initiative to identify a cottage acceptable for inclusion at Historic White Pine Village has been successfully completed. The Alfred and Donna Boulee family have donated what is believed to be one of the earliest vacation cottages on the lake. Its construction from whole birch logs makes it unique. It is a two-story cottage with a large family area on the ground floor and two sleeping areas upstairs.

The Boulees are also donating the dining table, four chairs, hutch and sink counter. These items are from the 1920s. They are already in the cottage. During the summer of 2012, \$7905.50 was raised. The Hamlin Lake Preservation Society has contributed \$5,000, Hamlin Township contributed \$1,000, individual donations have raised \$1,207, and last summer's swim across Hamlin added another \$698.50. This spring, \$5,000 will be used to prepare the site at the Village, pay the cost of transporting the cottage to the Village, and clean up the site where it is now located.

A significant amount of volunteer labor will be needed in the spring. Given the way the cottage was constructed, it will not be possible to move it in one piece. Instead, it



Boulee Cabin

will have to be disassembled and then reassembled at the Village. Disassembly will require accurate photographs of each of the sections of the cottage and the systematic numbering of each piece as it is disassembled. A call for volunteers will go out in the spring.

Once the building is reassembled at the Historic White Pine Village, the actual exhibit will be designed and installed. How sophisticated this exhibit turns out to be will be determined by how much more money can be added to the remaining \$2905.50 that has been raised so far. Once plans for the exhibit are available, naming opportunities will be developed.

The Hamlin Lake Cottage Preservation Committee (James Clark, Alison Puffer, Virginia Hluchan, Larry Scherer, Judy and John Thorp) is deeply grateful

to the Society, the Township, all the individual donors, and the swimmers.

John Thorp is the contact person. If you have questions about this initiative or would like to donate your time and talent in the spring, please contact him at thorp641@aol.com.



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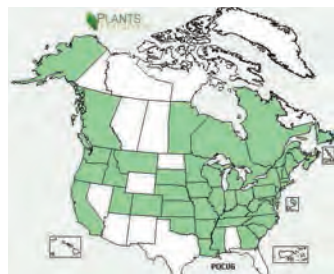
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Invasive Knotweed: Knot Your Average Weed

By Jennifer Buchanan Gelb,
Restoration Ecologist



It's a jungle out there! Dan Myers, Water Resource Specialist at Tip of the Mitt Watershed Council, demonstrates how tall the bamboo-like Japanese Knotweed can grow.



Polygonum cuspidatum
<http://www.discoverlife.org>

Dan Myers,
Water Resource Specialist
documents a large stand of
Japanese Knotweed located
along the Tannery Creek just
east of Glen's Shopping Center
in Petoskey, Michigan.



With leaves measuring up to 6 to 12 inches across, it's easy to see how this towering invasive plant can block out sunlight and suffocate native vegetation.

Photo Credit: Kristy Beyer, Tip of the Mitt Watershed Council

Tip of the Mitt Watershed Council

Two non-native invasive plants that have been gaining a foothold in recent years in Northern Michigan are Japanese Knotweed (*Fallopia japonica*) and Giant Knotweed (*Fallopia sachalinensi*). Both invasive species were introduced from Asia as ornamental plants. Several characteristics make these two perennial, herbaceous shrubs easy to identify including height (Japanese: 3-10 ft.; Giant: 13 ft.) and their hollow stalks, which persist through winter and resemble bamboo. Japanese knotweeds have large, broad leaves that typically grow up to 6 inches long and 5 inches wide, and have abruptly pointed tips and a flat or tapering base. Giant knotweeds have larger, heart-shaped leaves (6-12 in.). Both species have clustered spikes of creamy white flowers that bloom mid-to-late summer.

Knotweeds are semi-shade tolerant but grow best in full sun and can be found along roadsides, stream and river banks, wetlands, wet depressions and woodland edges. The species' deep taproot and extensive network of rhizomes (they can extend laterally 23-65 ft.!) enable them to form dense monocultures and crowd out native plant species. Knotweeds can also sprout from fragments of root and stem material, which are oftentimes dispersed by water and equipment. They are most aggressive on sites with natural or human disturbance, such as roadsides and construction sites, as well as stream and riverbanks. It isn't unusual for the rhizomes and shoots to penetrate asphalt and cracks in concrete!

Unfortunately, controlling knotweed is no small task even with herbicides. Following the recommended treatment protocol for the species is strongly advised because improper treatment may lead to the further spread of the plant. According to the Michigan Department of Natural Resources (MDNR) and the Michigan Natural Features Inventory (MNFI), certain herbicides have been found to be more effective than others, whereas hand pulling, digging, mowing, and burning are considered ineffective and may even be counterproductive. Taking action to control the plant sooner rather than later is key. If you know or suspect either species is growing on your property contact the Michigan Department of Environmental Quality (MDEQ) or the Watershed Council to learn about treatment options and permit requirements.



Tip of the Mitt Watershed Council: *Tip of the Mitt Watershed Council speaks for our members including full-time and seasonal residents, lake associations, and businesses. We work to maintain the environmental integrity and economic and aesthetic values of lakes, streams, wetlands, and ground water in Northern Michigan, as well as statewide and throughout the Great Lakes Basin. As the lead organization for water resources protection in Antrim, Charlevoix, Cheboygan, and Emmet Counties, the Watershed Council is working to preserve the heritage of Northern Michigan – a tradition built around our magnificent waters. www.watershedcouncil.org*



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

BUYING AND SELLING WATERFRONT PROPERTY IN MICHIGAN

AUTHORED BY GRAND RAPIDS ATTORNEY
CLIFFORD H. BLOOM

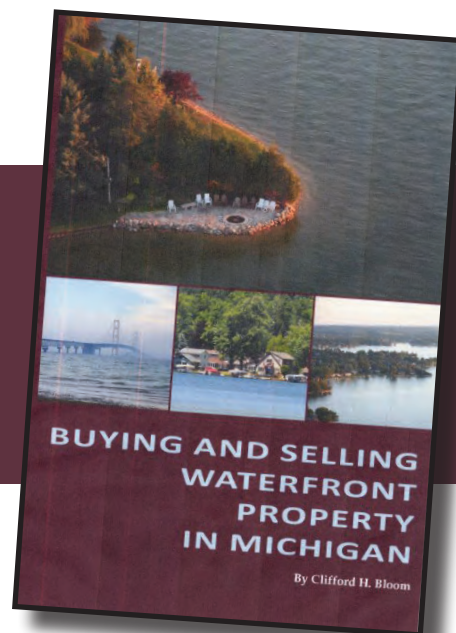
The Michigan Lake & Stream Associations, Inc. ("ML&SA") is pleased to announce its new book entitled *Buying and Selling Waterfront Property in Michigan* by Grand Rapids Attorney Clifford H. Bloom. This is the second book from ML&SA, the first being the 2009 book called *Michigan Lake Associations—The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

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

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Personal Floatation Devices in MICHIGAN BOATING

Whether you operate your boat or PWC on an inland lake or on one of the Great Lakes, having the proper Personal Floatation Devices (PFDs) aboard can make all the difference. Besides being required under both State and Federal Law, lifejackets save lives. According to the U.S. Coast Guard, most boating fatalities occur from drowning with 75% of those deaths attributed to boaters not wearing a lifejacket.

The Handbook of Michigan Boating Laws and Responsibilities states that, "All vessels must be equipped with a personal floatation device for each person on board or being towed". The lifejackets must also be a U.S. Coast Guard approved Type I, II, or III personal floatation device, wearable, and of the proper size for the wearer. In addition to the above requirements, there must be at least one Type IV PFD aboard that is readily accessible. To be considered readily accessible all lifejackets need to be out of the original packaging and stowed where they are easy to retrieve in case of emergency. If the PFD is stowed in a cabin under a bunch of other gear there may be no time to get it out of storage and put it on should an emergency situation arise.

For Personal Water Craft (PWCs) Michigan law requires all persons on board or being towed to wear a PFD. PFD requirements are determined by age. All persons under age 12 must wear a Type I or Type II USCG-approved PFD, while all persons over 12 must wear a Type I, Type II, or Type III USCG-approved PFD.

The law regarding children and PFDs in Michigan recently changed and requires all children under the age of 6 to wear a Type I or Type II U.S. Coast Guard approved PFD while riding on the open deck of any vessel. Federal guidelines suggest that children under 12 years of age wear a lifejacket while on deck.



Type I:
Offshore Life Jacket

There are five types of lifejackets each with their own benefits and drawbacks. **Type I: Offshore Life Jackets** are designed for rough water or remote areas where rescue may take a while. The benefit of the Type I is that it provides the most amount of buoyancy for the wearer and will turn most unconscious wearers face up in the water. The Type I also has a built in head rest that will float the wearer's face out of the water. The drawbacks for the Type I are that it is bulky and not comfortable to wear for long amounts of time, and that they are more expensive than other types of lifejackets.

Type II: Near Shore Vests are similar in design to a Type I lifejacket but provide less buoyancy and will turn a wearer face up in the water. The Type II also sports a head cushion to float a wearer's head above the water. Type II PFDs are probably the most common type of life jacket, and are relatively inexpensive. The



Type II: Near Shore Vest

main drawback to the Type II PFD is that they are uncomfortable to wear for a long period of time.

Type III: Floatation Aids are becoming more popular and have a wide variety of styles and colors to choose from including inflatable PFDs. The benefits of the Type III are that they are more comfortable for longer wear, they are generally less expensive than the Type I, and have the style choices that are not available in a Type I or Type II. The inflatable Type III Floatation Aids do tend to be more expensive and require maintenance that the more traditional styles do not. However, they will often provide more buoyancy when inflated than a Type I and less bulk than a jacket style Type III making it more comfortable to wear for long periods of time. The main drawback is that a Type III will generally not turn an unconscious wearer face up, and they are more expensive than a Type II.



Type III: Floatation Aid

Type IV: Throwable Devices are just that—a throwable PFD. They include both ring buoys and foam boat cushions. The benefits of the Type IV are that they can be thrown to a person in distress. A good idea is to tie a line to the buoy before throwing to a distressed victim to help pull them to the boat or retrieve the buoy and throw it again if you don't get it to the distressed person on the first try.



Type IV Boat Cushion & Ring Buoy

The final style of PFD is the **Type V: Special-Use Device**, these include commercial work vests, deck suits, and some designed for special activities like kayaking and wind surfing. The benefits of the Type V are that some provide hypothermia protection, and some provide excellent freedom of movement. Their drawbacks are that they are only permitted for certain uses and can be expensive.

In conclusion the PFD is the most important piece of safety gear on your boat and the lifejacket needs to be worn to be effective. Which is the best PFD for you? The best answer is the one that you will wear.



Type V: Deck Suit

Grant Jones is the Division 31 Grand Haven, Staff Officer of Public Affairs and a Vessel Examiner in Training with the U. S. Coast Guard Auxiliary.



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LAKEFRONT MYTHS AND OTHER LORE

By: Clifford H. Bloom, Esq.
Bloom Sluggett Morgan, PC | Grand Rapids, Michigan

It is amazing how many myths and other false impressions have arisen over the years regarding lakefront properties in Michigan. As with any other falsehoods, it is important to debunk such myths. This article addresses some of them.

Public versus Private Lakes.

People often refer to a lake as being “public” or “private.” However, under Michigan law, there is no universal definition of what constitutes a “private lake” versus a “public lake.” There are a few statutes that include such definitions, but the application of those definitions is limited to the purposes of those specific statutes only (for example, MCL 324.30901 *et seq.*, the statutory lake improvement board act and MCL 41.418, use of township funds for weed control). Apparently, the distinction that most people try to make regarding “public” versus “private” lakes is whether there is a public access on the lake.

Put the Children on the Deed.

Some people believe that the best way they can pass their lakefront property on to their children is to put them on the deed or title themselves. In almost all cases, that is wrong! Using the services of a skilled estate planning attorney is particularly important for a riparian landowner who desires to pass a lakefront property onto his or her children. “Do it yourself” by simply slapping the names of children or others on

a deed can lead to disastrous results. The bad consequences could include uncapping of the property tax limitations on the property, not being able to sell or mortgage the property in an emergency if all children will not agree, potentially losing a share (and control) of the land during the divorce of one of your children, gift tax issues, and similar calamities.

Walking the Beach.

Many people believe that the public can walk on the shoreline of any inland lake without the riparian landowner’s consent. This is a myth that arises fairly frequently. In most cases, the person making that assertion is confusing the law regarding inland lakes versus the Great Lakes. It is true that on the Great Lakes, due to the public trust doctrine, members of the public can walk lakeward of the ordinary high water mark up and down the shores of any of the Great Lakes in Michigan without the permission of the adjoining riparian landowner. However, that is not the case with most inland lakes. Unless an inland lake has a road right-of-way, walk or similar easement or dedicated area along the shore of the lake, members of the public cannot walk along the shoreline or beach of an inland lake without the permission of the riparian landowner.

Waterfront property can never lose its value.

Until the recent recession, that was pretty much the conventional wisdom. Even during past recessions, lakefront properties normally held their values. However, given the economic stagnation in the recent past, it was sadly demonstrated that even lakefront properties can drop in value. The new conventional wisdom is that the value of lakefront properties does not drop as much during recessions as other properties and will be the first to rebound after a recession.

As a riparian owner, my ownership of the bottomlands radiates to the center of the lake at the same angle as my side lot lines on dry land.

This is a common misperception. While it is true that the owner of a riparian property on an inland lake typically owns a share of the bottomlands to the center of the lake, the bottomlands boundary lines almost never radiate to the center of the lake at the same angles as the side lot lines on dry land. If that were the case, the ownership of bottomlands would severely overlap, with the owners of different riparian parcels owning the same bottomlands.

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LAKEFRONT MYTHS AND OTHER LORE

(Continued from page 33)

I can anchor my boat anywhere I want on an inland lake overnight or all summer long without anyone's permission.

False! Except for temporarily anchoring while fishing or during a storm while the owner of the boat is present in the boat, boaters normally cannot anchor or moor their boat on the bottomlands of another person overnight or seasonally without the permission of the owner of the underlying bottomlands.

A local government's jurisdiction ends at the water's edge.

While a local municipality's jurisdiction beyond the water's edge is questionable on the Great Lakes, a municipality can have full zoning and other ordinance jurisdiction over all parts of an inland lake. Of course, if the inland lake straddles two or more municipalities, a particular municipality's jurisdiction ends at the portion of the lake where the other municipality's geographical boundary begins.

I do not have to worry too much about the purchase/sales agreement that I will be signing regarding the purchase of a piece of property in Michigan, since many of the details can be worked out later even if not expressly mentioned in the agreement.

Wrong! In almost all cases, a signed purchase/sales agreement for real estate in Michigan is a fully binding contract that cannot be varied or supplemented without the express written consent of all parties to the contract.

Every lake in Michigan has a public access site. Or, another variation of this myth is that every lake in the state of Michigan has a public road end (often called a "section line road") that affords public access to the lake, even if it is not known or is well-hidden.

That is false. While it is true that many lakes in Michigan have public access sites, including public roads which terminate at the lake and accord limited public access, not every lake in Michigan has such public access points nor is there any requirement that every lake have a public access point or site. It is amazing how often I hear people assert this myth. To date, however, no person reciting this myth has ever been able to show me a statute or any court case which supports this myth.



For more myth debunking, please see the August and November, 2006, editions of the Michigan Riparian Magazine. Back issues available for \$4.00 per issue.

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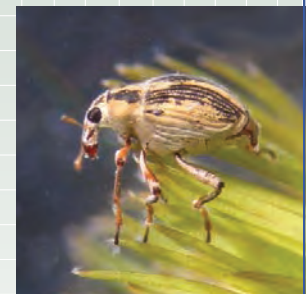
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