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The Michigan Riparian

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FROM THE PUBLISHER



One of the changes at *The Michigan Riparian* magazine that was mentioned in the fall issue has come to fruition. Your December (winter) copy of the magazine arrived! The next mailing of the Riparian will be in the spring of 2017--followed by the summer and fall issues, then wrapping up with the winter issue arriving December, 2017.

This change will allow the mailings to coincide with the beginning of the seasons and will go as follows:

March-spring issue

June-summer issue

September- fall issue

December- winter issue

These changes will not interrupt your subscriptions. You will still receive all four of your magazines, no matter when you started your subscription.

I am so excited about this December issue of *The Michigan Riparian*. It is filled with great stories and current topics chosen to pique your interest. On page 13, Cliff Bloom gives a comprehensive explanation of title insurance and the latest technological advances for lake mapping is found on page 9.

WANTED: Leaders to protect Michigan Lakes and Streams. Turn to page 23 to see how you can enroll in the 2017 Lake Leadership program. The Love My Lake feature highlights a creative and innovative approach to handling lake debris found on the shores of Muskegon Lake. A problem was turned into art and an effective partnership was formed that benefits the lake, area artists and a downtown business (Page 28). Have you or your neighbors had muskrats in your boats? We have had that experience in the past. Muskrats can be a real problem for lake residents. Solutions on page 17 meet the challenge.

According to the Farmer's Almanac, we're in for a snowy winter. We love our winter wonderland. If you have pictures of your lake's activities or photos you just have to share of a wintry landscape in your area, please send them our way. We always love to hear from you.

Hope your holidays are surrounded by family and friends. Happy Holidays!

-publisher, Sharon Wagner

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Why Lake Associations and Lake Property Owners Need to Review Their Protection From Liabilities!

By Lon Nordeen
Michigan Lake & Stream Associations board member

Our lake association, along with most others, has to deal with tight budgets and limited funding resources. Recently some of our board members questioned why we carry costly lake association insurance and asked what we get out of paying these expensive premiums each year?

As readers are aware, we live in a legal world full of risks. To protect against risks, we choose to carry insurance. So... to answer why we need to carry costly lake association insurance and what we get out of it, here's why: In the event our lake association is sued due to an accident or some other issue, we do not want to be personally at risk because we volunteer to support our lake.

LAKE ASSOCIATIONS NEED THE FOLLOWING PROTECTION FOR THESE REASONS:

General Liability--includes bodily injury or property damage to third parties. Claims can be small nuisance lawsuits or they can be large, multi-million dollar allegations involving injury or death in which the lake association was perceived to be negligent in some way.

Examples of liability claims include:

1. A child is injured while playing at an association meeting or event
2. A guest gets ill from food eaten at an association event
3. A person drowns while swimming on a premise owned or maintained by an association

Even if the association is NOT negligent in any of the above cases, individuals can claim negligence and file a lawsuit, and the association would have to defend itself in court. These types of lawsuits can result in thousands of dollars of defense costs and take years to settle.

Areas of protection to consider----

♦ Directors and Officers Liability

- Directors and officers liability exposures include "wrongful acts" allegedly committed by directors and officers of the association. Since claims are usually allegations of wrongful acts, here are some examples:
- Mismanagement allegations (failure to carry out objectives of the organization)
- Misappropriation of funds to administer costs which have been allotted to providing the goals of the association
- Improper expenditures/imprudent investments of organization's assets
- Breach of employment contract
- Conflict of interest
- Exceeding authority granted by charter or by-laws

Even if the allegations are weak, the cost to defend the association could be very expensive

♦ Auto Liability

This exposure includes bodily injury or property damage or both to third parties while operating a motor vehicle on association business. Ex.: a child is injured while someone is parking a car at an association picnic or meeting. Even though a personal auto policy should cover the driver, the personal insurance carrier would not defend the lake association in the event an attorney sues that organization

♦ Other Potential Association Risks

Other areas of exposure might include workers compensation, building issues, personal property,

(Continued on page 6)

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Why Lake Associations and Lake Property Owners Need to Review Their Protection From Liabilities!

(Continued from page 5)

bonding, watercraft, tools, equipment, computers, libel, and slander, loss of valuable papers and records and special event liability.

So what happens if we are not covered???

EXAMPLE 1: A large lake in Eastern Michigan served by three different lake homeowners associations with two of the three having insurance including Directors & Officers coverage. All three associations engaged with a dredging company to perform operations on the lake. As a result of that contract, a loss was sustained, and the respective boards of each association were sued. The Directors & Officers policies for the two insured associations paid the judgment and expenses of the suit, while the uninsured board had to use PERSONAL family funds to pay same (approximately \$20,000 for each board member).

EXAMPLE 2: An uninsured lake association was sued by the estate of a snowmobiler killed during the winter on the ice-covered lake. The suit centered on a paragraph in the by-laws stating the association's mission was to promote safety and welfare on the lake. All legal fees and judgments were born by the association members.

So you can see it would be wise to make sure your lake association structure, charter and insurance needs and coverage are reviewed--just in case! It is also a good idea for all lake property owners to be sure their personal protection for their home, property, boats etc. is also up-to-date because these nice, lake properties also present unique risks!



NOTE! Insurance companies need to play their part and do their best to make sure policies cover the needs of lake associations and that policies are affordable. Insurance agents and brokers need to support their clients! This means regularly connecting with the insurance firms they work with and suggesting ways to make policies affordable and up-to-date! Our lake association has less than 60 members, and payment of the annual insurance bill can take nearly half of our total annual income!

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COMMENTS FROM RIPARIAN ATTORNEY, CLIFFORD H. BLOOM


Liability insurance is very important for lake and property owners associations. To the extent that your association sponsors a boat regatta, ice cream social or similar event, liability insurance is an absolute necessity. Incorporation provides only limited liability protection, particularly if the corporation is undercapitalized. Furthermore, incorporation of a non-profit association gives little protection to the individual officers and directors should someone be killed or injured pursuant to an association-sponsored event and if there is no liability insurance. In addition, in most situations, liability insurance for an association is relatively inexpensive.

Members of the board of directors and the officers of an association can shore up their defenses against potential personal liability by ensuring that the association is properly set up as a Michigan nonprofit corporation. (Please see my earlier column on the benefits of such incorporation in the February 1997 issue of *The Michigan Riparian*). Ensuring that a property owner's association is a Michigan nonprofit corporation in good standing will help insulate against potential liability for officers and directors, but *will not completely eliminate all potential for personal liability*. In fact, there are at least two different ways where an association's corporate status may not protect against personal liability. The first situation occurs where the association has little or minimal assets or insurance. In that case, a court will sometimes "pierce the corporate veil" of an undercapitalized association and potentially pursue personal liability against officers or directors.

The second situation may come into play where an officer or director is sued personally for potential liability and damages (often in addition to the corporation, and potentially other officers and directors, being sued) since the particular officer or director involved personally participated in the event which gave rise to the injury. (For example, the corporate officer helped build the association's swing

set which collapsed on a child or personally libeled or slandered another individual regarding an association-related matter). Thus, while incorporation of a property owner's association can help diminish the potential for personal liability of officers and directors, the risk of personal liability is not eliminated altogether.

Malpractice or "errors and omissions" insurance for association officers and directors is a different matter. Such insurance can be expensive. Although, it is fairly rare for an officer or director of a non-profit lake or property owners' association to be sued for malpractice, breach of fiduciary duties, etc., it can happen.

Based on the above, it is important that proper insurance be in place. Unfortunately, most insurance *policies for individuals* do not cover damages or liability related to the person serving as an officer or director of an association (whether the injury is based upon physical injury or alleged malpractice or misconduct). Therefore, to the extent that there will be any insurance coverage, it will likely have to be contained in an insurance policy or policies covering and purchased by the association. For a fuller discussion regarding insurance coverage for riparian landowners in general, please see the August 2004 issue of *The Michigan Riparian* magazine. 

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Technological Advances in Lake Mapping

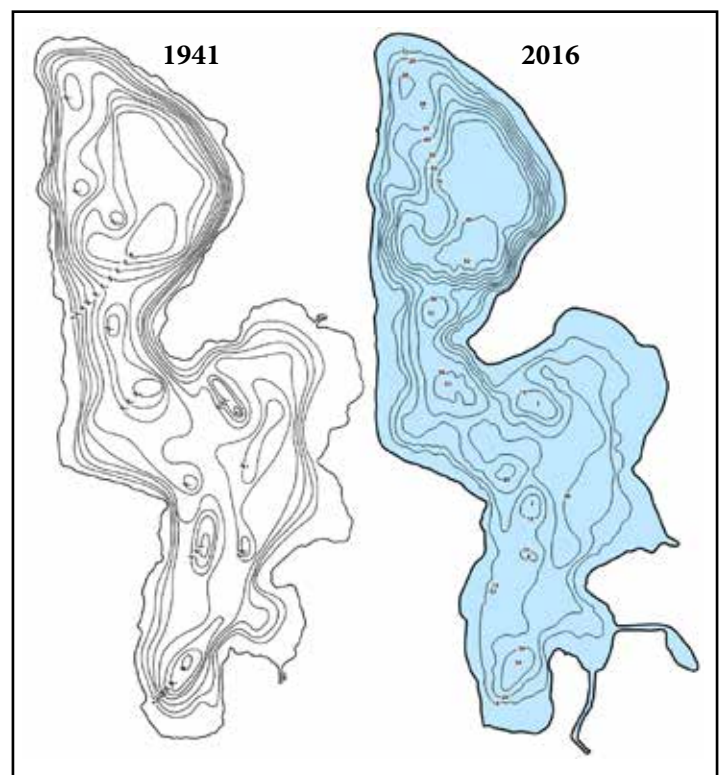
By: Tony Groves, Pam Tynning, and Tory Meyers
Water Resources Group, Progressive AE

Advances in technology have helped make lake mapping much easier. In the not too distant past, lake mapping was done by hand. Holes were drilled through the ice and weighted drop lines were used to measure depths and collect bottom samples. This was a laborious process that often took many days to complete. Much of this mapping was conducted by the Michigan Conservation Department Institute of Fisheries Research in the 1940 to 1970 timeframe.

Computer software is now available that allows hydro-acoustic soundings collected with a depth finder to be used to create highly accurate depth contour maps. In addition to water depths, measurements of plant bio-volume (i.e., the height of plants in the water column) and bottom hardness are also possible. Navico BioBase is one of the companies that helps users convert their hydro-acoustic (SONAR) data into digital maps. Below are some examples of maps created with this technology and some interesting side notes.

LAKE DEPTHS

There is a common perception that lakes quickly fill-in with sediment and become shallower. However, most lakes appear to be filling in at a very slow, almost imperceptible rate. Often, lake depths shown on historical maps from many years ago are nearly identical to present day lake depth measurements. An exception to this general observation might be an impoundment receiving a substantial sediment load or the portion of a lake at the mouth of a tributary where sediment accumulates.



On Ryerson Lake, Newaygo County, the water depths in 1941 were almost identical to the depth measured in 2016, some 75 years later. In the 1941 map, the maximum depth shown is 80 feet. In the 2016 map, the maximum recorded depth is 82 feet.

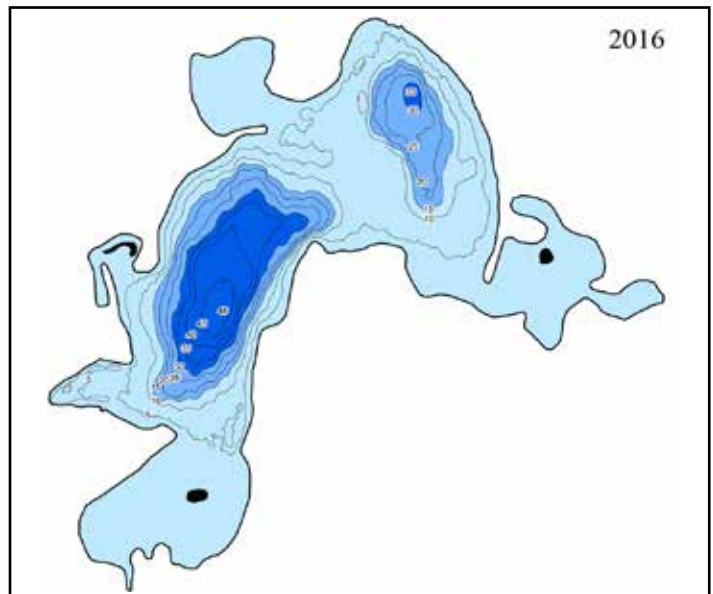
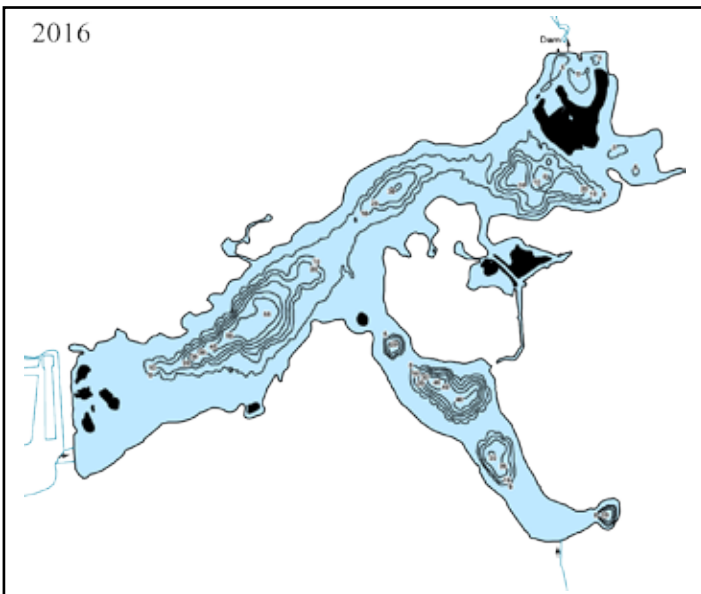
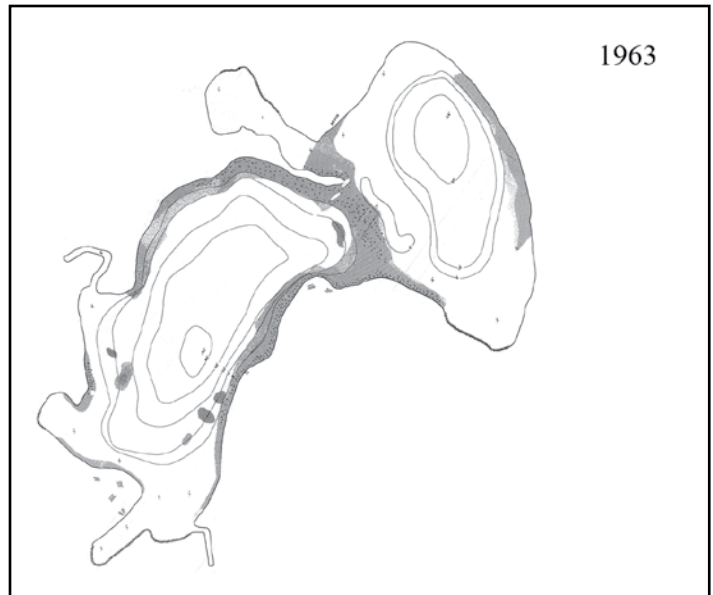
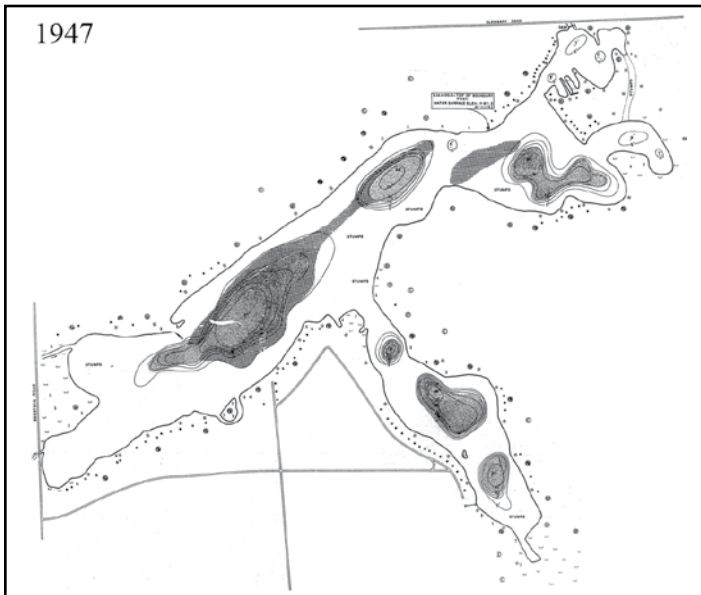
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Technological Advances in Lake Mapping

(Continued from page 9)

However, when comparing present-day maps with historical maps, changes in shoreline configuration are often observed. These changes are often the result of channelization and other shoreline alterations that occurred primarily in the 1950s and 1960s as development pressure on lakes increased. Most dredging and filling activities around lakes ceased with the enactment of Michigan's Inland Lakes and Streams Act and the Wetland Protection Act in the 1970s.

Natural fluctuations in water levels can also affect shoreline configuration. In lakes prone to considerable fluctuations in water level, shoreline configurations can change as lake levels rise and fall. In some lakes, fluctuations in water level can be so great that the lakes can be substantially larger during periods of high water than during periods of lower water levels. When mapping lakes, the lake level should be noted at the time of the survey.



In Wolverine Lake, Oakland County, the depths measured in the deep holes in the lake in 2016 were nearly identical to the measurements conducted in 1947. However, the shoreline configuration in the 2016 map is dramatically different than the 1947 map, especially at the east end of the lake.

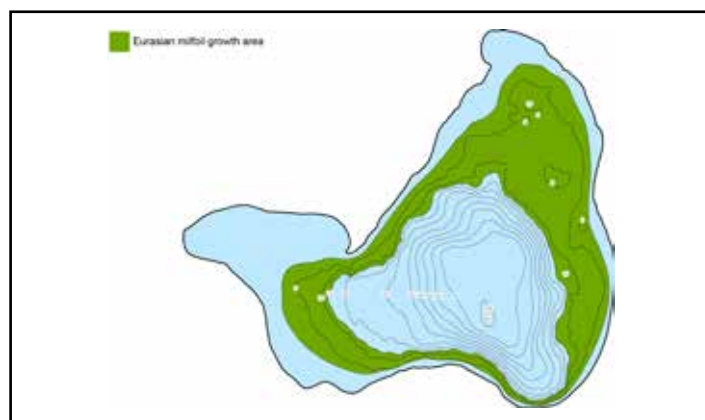
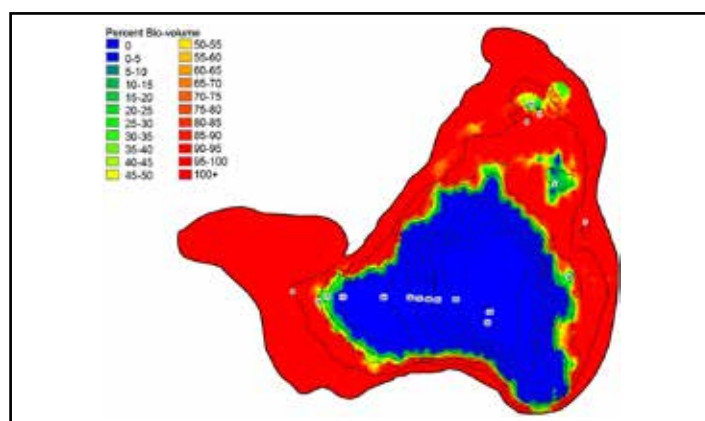
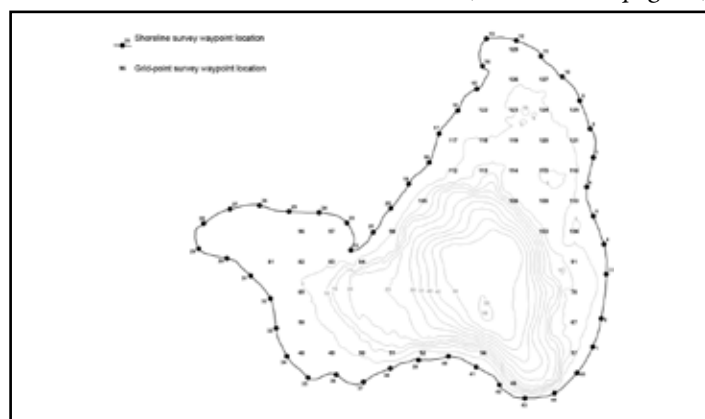
Bankson Lake, Van Buren County, was mapped in 1963 and again in 2016. The 1963 mapping was conducted at a time when water levels on Lake Michigan were near historic lows, while the 2016 mapping occurred during a prolonged period of above-average Lake Michigan water levels. Water level fluctuations in Bankson Lake appear to mimic water level fluctuations in Lake Michigan. When comparing the 1963 and 2016 maps, Bankson Lake appears dramatically different, both in shoreline configuration and size.

PLANT BIO-VOLUME

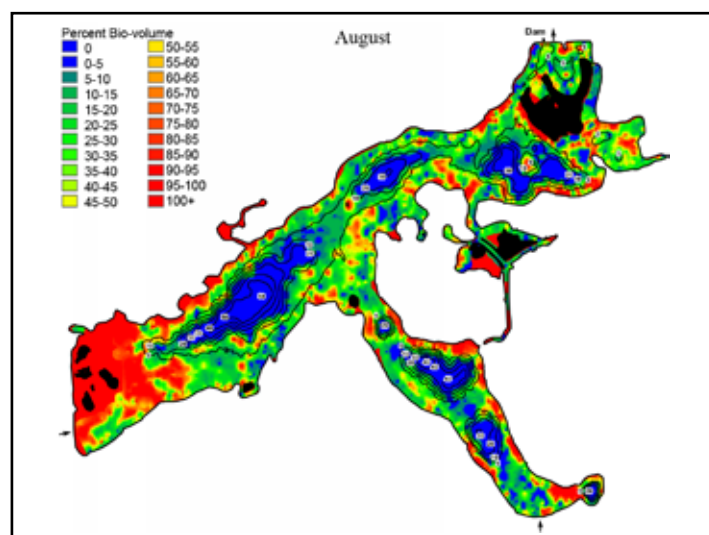
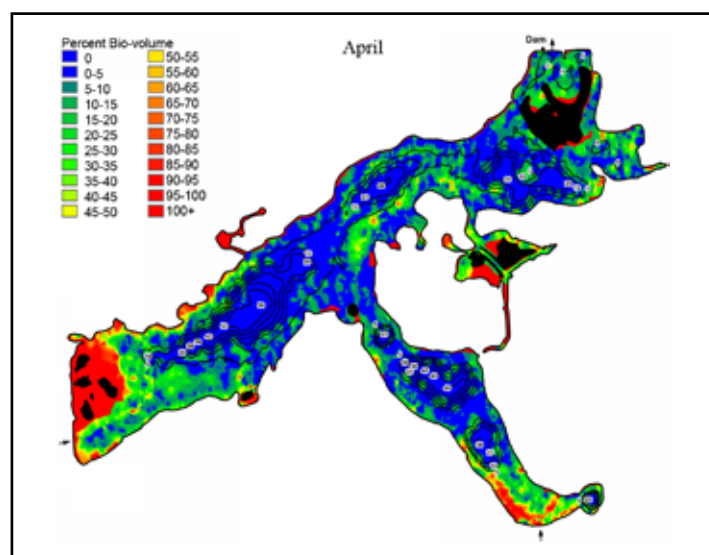
Bio-volume is a measure of the height of plants in a lake. In shallow lakes, plants can grow over much of the bottom while, in deeper lakes, plants are generally restricted to portions of the lake less than about 15 feet. Changes in bio-volume can be expected both seasonally and year-to-year. Generally, plant growth is sparser in the spring and, as summer progresses, plants are found over a greater portion of the lake and growing higher in the water column. Year-to-year changes can be evident due to variability in weather, variations in water level, or other factors. Greater bio-volume would be expected after a mild winter or a warm summer, while less bio-volume would be expected after a harsh winter or cooler summer. Similarly, plant bio-volume during periods of prolonged high water levels would be expected to be less than during periods of low water levels. When evaluating plant bio-volume over time, climatological and lake level fluctuations should also be considered.

From a lake management perspective, another important use of bio-volume measurements is to evaluate the impact of exotic plant invasions. Infestations of exotic species such as Eurasian milfoil or starry stonewort can increase bio-volume as these plants tend to grow higher in the water column than many native plants. These plants may also colonize areas of the lake that were formerly free of plants. While bio-volume does not reveal which plants are in a given lake, bio-volume measurements can be supplemented with plant identification surveys to evaluate plant types.

(Continued on page 20)



On Stone Lake, Cass County, a point-intercept plant survey was conducted to determine what plants were present in the lake. At each reference point, plant samples were collected and plant type determined. Most of the off-shore areas with plant growth to the surface (shown in red on the bio-volume map) were dominated by the exotic plant Eurasian milfoil.



In Wolverine Lake, Oakland County, seasonal variability in bio-volume is apparent with much more vegetation measured in August compared to April.

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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Question: What is all of that lake foam we see near the shore of our lake?

Answer: While it may be true that some foam could originate from soaps, detergents, or surfactants, the most likely explanation is the presence of dissolved organic carbon (DOC) in the water column. DOC usually consists of decaying aquatic plants and algae since those aquatic ecosystem components are high in organic carbon and release carbon into the waters upon decay. DOC also enters lakes and streams from the soils in the surrounding watershed that are also high in organic carbon. Lakes that have adjacent wetlands or that are stained with tannins are especially likely to experience DOC foam events. As sediment particles are added to the foam with movement of water, the foam will appear brown-ish in color. Also, the foam may appear more prevalent after heavy rainfall or storms since these events transport more carbon to the lake ecosystem.

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

* * * * *

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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"Title Insurance"

In Michigan, it is foolish to purchase riparian or waterfront property without having a title insurance commitment done by a title insurance company for the prospective purchaser to review before closing and for the purchaser to have title insurance on the property once the closing occurs.

In the "old days," there was no title insurance for purchasers of real property in Michigan. Rather, real estate buyers (or their attorneys) reviewed abstracts or attorney opinions regarding title. An abstract was generally just a listing of all prior recorded documents regarding the property involved going back a certain number of years. Abstracts told lay people very little. A lawyer's opinion dealt with whether or not the seller had proper title and any limitations upon that title. Neither the old abstracts or attorney title opinions were insurance as such, nor did they really constitute reliable guarantees of proper title to the purchaser.

Insurance companies eventually introduced a product often referred to as "title insurance." Title insurance is very important for almost all real property purchases, but particularly so where a waterfront property is involved. The issuance of title insurance is a two-step process. Almost all real estate purchase/sales agreements require the seller to provide to the buyer a "title insurance commitment" before closing and a title insurance policy after closing. Typically, both are issued in an amount equal to the purchase price. A title insurance commitment is usually issued by a title insurance company before closing and allows the prospective purchaser (and potentially, his or her attorney) to see whether the seller has good title, whether there are any encumbrances on the property, what the property taxes are annually, any requirements for closing, and similar matters. Before issuing a title insurance commitment, the title company does a title search of the property, looking for relevant documents recorded with the local county register of deeds regarding the property. Once a title insurance commitment is issued, the title company is affirming that it will issue a final title insurance policy in favor of the buyer after closing with all of the requirements, exceptions and limitations contained in the title insurance commitment. Typically, the seller pays for both the title insurance commitment and the eventual title insurance (although there is generally one overall fee for both), unless the purchase/sales agreement provides otherwise.

By Clifford H. Bloom, Esq.
Bloom Sluggett Morgan, PC
Grand Rapids, Michigan
www.bsmlawpc.com



A formal final title insurance policy is usually issued (and sent) to the buyer a few months after the closing. The buyer should take great care to preserve the original of the title insurance policy forever. Furthermore, it is often prudent to make copies of the actual original title insurance policy and to store the copies at a different location than the actual original document for safe keeping (that is also true with the deed or land contract after closing and recording). Title insurance insures good title, lack of encumbrances, etc., apart from those items which are expressly "carved out" or exempted in the title insurance commitment and title insurance policy. Normally, the title insurance will pay for attorney fees and costs for an attorney provided by the title

**TITLE INSURANCE IS VERY IMPORTANT
FOR ALMOST ALL REAL PROPERTY
PURCHASES, BUT PARTICULARLY SO
WHERE A WATERFRONT PROPERTY IS
INVOLVED.**

insurance company to the buyer to defend the buyer's title if challenged as well as any damages that might be incurred by the buyer resulting from a title defect or other matter covered by the title insurance policy.

It has also become very common for real estate closings in Michigan to occur at the offices of the title insurance company (or its agent or affiliate) and for the title insurance company to provide many of the closing documents (the deed or land contract, any mortgage, a closing statement, etc.) for additional fees.

Why is it so important for title insurance to be provided for riparian properties? There are multiple reasons. First, title insurance verifies that the prospective purchaser will have good and marketable title for the waterfront property

(Continued on page 16)



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LAKE HAPPENINGS

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.



The State of Michigan offers its residents and out-of-state visitors two **Free Fishing Weekends** per year. According to the Michigan Fisheries Department (517) 373-1280, the **Free Fishing Weekend February date is always the weekend before President's Day**. For both days (**February 18 and 19**), all fishing licenses will be waived, but fishing regulations still apply. Enjoy great fishing on inland lakes and all five Great Lakes.

INFORMATION PROVIDED BY THE MICHIGAN.GOV/DNR WEBSITE.

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"Title Insurance"

(Continued from page 13)

involved. Second, it is not uncommon for waterfront properties to have encumbrances such as deed restrictions or an easement, which a prospective purchaser of a waterfront property should know before closing. Third, if the waterfront property is not located on a public road, it is always best to have the title insurance cover and insure any private road or access easement for the property. Fourth, title insurance insures the legal description involved and quite often legal descriptions are proof that a property is waterfront. Finally, title insurance helps give the prospective purchaser "peace of mind".

Unfortunately, title insurance policies almost never warrant or guarantee riparian rights or the riparian nature of the parcel involved. On occasion, a special rider on an insurance policy can be purchased to cover riparian issues, but those riders tend to be fairly rare and can be quite expensive.

In Michigan, one should almost never buy waterfront property without obtaining a title commitment prior to closing and title insurance for the property that becomes effective at and after closing. 



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A close-up photograph of a muskrat swimming in a body of water. The muskrat's head is above water, showing its eyes, ears, and whiskers. Its body is partially submerged, and its long, dark, scaly tail is visible. The water is dark and rippled, with some dry reeds or grasses visible in the background.

Musk rats are adept swimmers and can stay underwater for 12-17 minutes.

Credit: D. Gordon E. Robertson, Wikimedia Commons.

MUSKRATS IN THE LAKE & IN YOUR BOAT

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

Musk rats are semi-aquatic mammals commonly spotted by riparians, particularly in the evening. They prefer locations with four to six feet of water and are found in ponds, lakes, and swamps. Musk rats make a valuable contribution to aquatic communities. By harvesting plants for food and den sites, they create open water for ducks, geese, shorebirds, and other wildlife. In addition, a variety of animals—including snakes, turtles, frogs, ducks, and geese—use muskrat lodges and platforms to rest and nest in. Finally, muskrats and their young are a valuable food source to predators such as foxes and eagles.

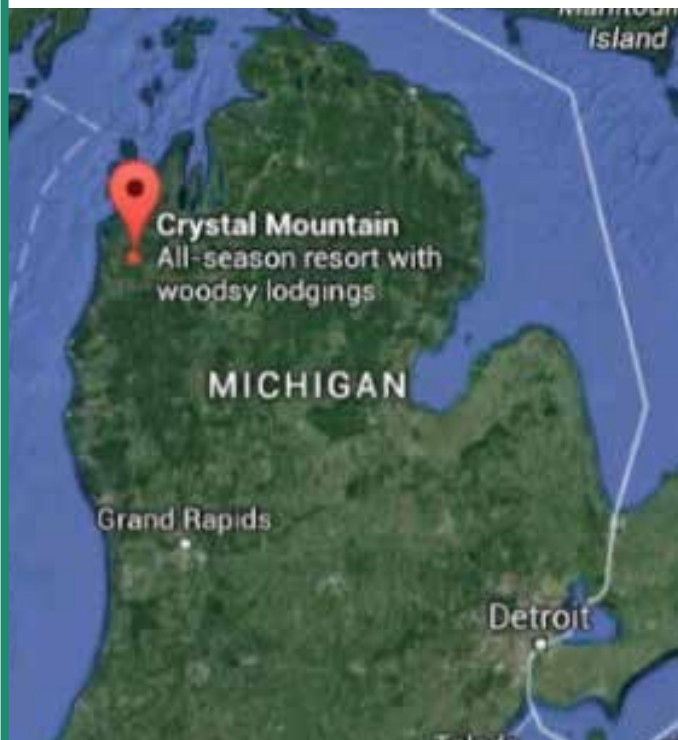
While a native part of Michigan's lakes and streams, they can be a nuisance to many riparians. They reproduce quickly (2-3 litters of 6-8 young in a season) and large numbers can overwhelm shoreline areas. Musk rats use burrows and nests that they build for shelter, and their burrowing activity can cause shoreline erosion and destabilization. In addition, muskrats are among the few animals that regularly defecate

in water, and their droppings can cause a flu-like infection, which old-time trappers referred to as "beaver fever." Finally, more than one riparian has come down to their dock on an evening, expecting to go for a sunset cruise only to find the boat won't start. Upon inspection, it turns out the various parts of the wiring have been chewed through even on boats that are on a hoist and completely out of the water. Musk rats can chew everything from carpeting to transducer cables, and love to chew any and all types of wiring. Musk rats have even been responsible for sinking boats after chewing through the exhaust.

How to prevent muskrat damage? Michigan Lake and Stream Associations never condones violence toward aquatic animals, but it does recognize some animals can become a severe nuisance. There are several options that will prevent damage while leaving the muskrats unharmed. As many of their natural predators (coyotes, fox, eagles) have disappeared

(Continued on page 19)

Save the Dates!



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56th
ML&SA
Annual
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MUSKRATS IN THE LAKE & IN YOUR BOAT

(Continued from page 17)



Muskrats often chew through exhaust pipes.
Credit: Hurley Marine.



Muskrats have long claws for digging extensive burrows in the banks of lakes, ponds, river and streams.

Credit: Linda Tanner, Wikimedia Commons.

due to human development, their populations are often unnaturally high. One action that can at least reduce population pressure is to keep burrows away from your dock and boat. Muskrats are wary animals and will try to escape when threatened. When new burrows are discovered early on, the entry holes can be stuffed with rocks, balled-up window screen, and/or rags sprinkled with predator urine (mink, coyote, or bobcat—available from trapper supply outlets and over the internet) or ammonia. Exposing their tunnels from above may also work. The success of this type of control depends on persistence from riparians and thus is often short-lived.

Another option is to install a muskrat guard on your boat. These install in the exhaust and have threaded bars that can be adjusted to hold it firmly in place. At \$245 to over \$400, depending on the size of your exhaust, they're expensive but much cheaper than replacing your

boat. Note: many insurance policies typically exclude damage caused by "vermin," which includes muskrats – riparians should check their coverage and consider working to getting muskrat damage covered if there is a problem in your area.

Have you experienced muskrat damage to your boat? Please send stories and especially photos of the damage to alishad@mlswa.org. We would like to share these on the ML&SA website.



Muskrats make themselves at home in exhaust pipes.

Credit: Hurley Marine.

Technological Advances in Lake Mapping *(Continued from page 11)*



SEDIMENT CHARACTERISTICS

Hydro-acoustic soundings can also provide a generalized view of hard versus soft sediment in a lake. Most often, near-shore areas or wind-swept portions of lakes have firmer sediments while deeper areas or isolated coves have softer bottom sediments. In some lakes, changes in bottom hardness appear to be related to seasonal influences with softer sediments measured in shallow areas after ice-off and firmer sediments measured later in the season. This difference may be due to wind and wave action during ice-free periods and scouring of soft sediments from near-shore areas as a result of summer boating activity.



In Big Crooked Lake, Kent County, firmer sediments are generally more common in near-shore areas while softer sediments are found in off-shore and deeper water areas. The soft sediments near the shore at the north end of Big Crooked Lake are adjacent to a large contiguous wetland area.

CONCLUSIONS

Advances in lake mapping technology are having a significant impact on lake research and management projects. These advances are making data collection and monitoring efforts less time consuming and more cost-effective. If you do not have a map of your lake or want to update an existing map, there is now a relatively easy way to do it.  

COOPERATIVE LAKES MONITORING PROGRAM *Winners!*

Since 2008, the Cooperative Lakes Monitoring Program (CLMP) has held an annual drawing for the volunteers who enter their lake data into the online MiCorps Data Exchange. The lakes are selected randomly for each CLMP monitoring parameter to receive a waiver for FREE enrollment in that parameter for 2017.

This year the winning lakes are:

- ♦ Bear Lake (Manistee County) for Chlorophyll monitoring
- ♦ Horsehead Lake in Mecosta County for the Spring Total Phosphorus monitoring
- ♦ Earl Lake in Livingston County for Dissolved Oxygen/Temperature monitoring
- ♦ Middle Straits in Oakland County for Summer Total Phosphorus
- ♦ Lake Angelus in Oakland County for Secchi Transparency.

On behalf of the CLMP Steering Committee, we thank all the volunteers for participating in the CLMP. We appreciate that you take time from your busy schedules to collect important water quality data on a Michigan lake. We are especially grateful for the dedication of our volunteer monitors who cooperate in data entry. The online MiCorps Data Exchange allows volunteers to view and download a complete history of monitoring data from their lake, and facilitates statewide lake management and research efforts. Thanks again for all you do. ~ CLMP Steering Committee



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Make checks Payable to Michigan Waterfront Alliance

Send Dues and Contributions to: Michigan Waterfront Alliance, PO Box 369, Fenton MI 48430

☐ I am not ready to join yet. Please send me more information.

Dear Michigan Waterfront Alliance
Members and Friends,

I hope everyone had an enjoyable summer on Michigan's lakes and streams. There is no better place on this earth that I know of to be on a hot summer day! Amazingly, up through the first week in November, the fall has also been quite spectacular!

I would like to welcome Joe Bondra to the Board of Directors of the Michigan Waterfront Alliance. Joe is the Chairperson of the Michigan Aquatic Managers Association Legislative Committee. He brings a wealth of knowledge to MWA regarding the threat of aquatic invasive species and associated remedy options. I'm sure Joe will help us to hold accountable the Michigan Waterways Commission and DNR for their failure to prevent the spread of invasives.

My brother, the doctor, is an avid duck hunter and has taken me to Ducks Unlimited Fundraisers on

MICHIGAN WATERFRONT ALLIANCE

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occasion. I have been most impressed with the legislative impact Ducks Unlimited has made for the preservation of duck habitat and the wellbeing of ducks, in general. My brother, the lawyer, is an avid pheasant hunter and is a strong supporter of Pheasants Forever. They, too, have legislatively impacted the preservation of pheasant habitat and the wellbeing of pheasants. The same is true for similar organizations such as Trout Unlimited, Whitetails Unlimited, Ruffed Grouse Society, Bass Unlimited and many more. These organizations are excellent examples of people uniting for the betterment of a common cause and often lobby to help further their goals through the legislative processes as part of their effort.

The Michigan Waterfront Alliance is your organization. It is your nonprofit corporation formed to protect, preserve and promote the wise and sustainable use of your inland waters in the state of Michigan. You are in the same boat with the other outdoor organizations. It is only by your uniting for the betterment of Michigan's lakes and streams, and by being a member of the Michigan Waterfront Alliance that we can protect and preserve what we love.

Have a great snowy winter!

Bob Frye
MWA President



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Rowing out to conduct water chemistry testing on Wintergreen Lake.

Credit: Linda Ortiz



Wanted:

Leaders to Protect Michigan's Lakes & Streams

Jo Latimore, Aquatic Ecologist and Outreach Specialist
Michigan State University

Have people in your community ever disagreed about what is best for your lake? Do you ever wish you knew more about how lakes and rivers work? Have you wondered what resources are available to help protect and manage your lake or waterway? Here in Michigan, lake and stream protection decisions begin at the local level. However, members of the local community may not have a strong background in water resources or the rules and regulations that govern them. Lake and watershed management issues may lead to conflict within communities, and those involved may not have the skills to resolve those conflicts and arrive at decisions that the community can support.

Good news! The Michigan Lake and Stream Leaders Institute provides an opportunity for citizens, local leaders, and water resource professionals to develop these necessary skills.

The Class of 2017 will be the 7th session of this popular program. Participants develop their technical and people skills in an atmosphere of openness, trust, and camaraderie, with guidance from expert instructors. Citizens, students, and professionals are all encouraged to apply.

LEARNING BY DOING

- Study fish, insects and habitat in Michigan lakes and rivers
- Develop conflict resolution and communication skills
- Discover new resources and partnership opportunities
- Explore Michigan water law, regulations, and programs
- Apply your new knowledge and skills in an independent project

(Continued on page 25)

A brown trout collected by Institute participants during an electrofishing experience in Augusta Creek.

Credit: Linda Ortiz



MiCorps included in Michigan's new Water Strategy

By Paul Steen
Huron River Watershed Council
MiCorps Program Manager



On October 18th, the Michigan Office of the Great Lakes (OGL) officially rolled out Part 4 of their Water Strategy at a press event in Owosso. OGL Director, Jon Allan, spoke on the importance of water monitoring and the need for a long-term, sustainable funding source for groundwater and surface water quality monitoring. Friends of the Shiawassee, a river advocacy group

based in Owosso and a member organization of MiCorps, hosted the event.

MiCorps program leaders Paul Steen and Laura Kaminski were also on hand to discuss the accomplishments of MiCorps over the last 12 years. The Water Strategy specifically mentions MiCorps as playing “an important role in supporting and contributing to state water management programs and achieving long-term outcomes.” The Water Strategy also recognizes that reliable funding is needed to continue MiCorps’ important work at the grassroots and community level. One of the stated outcomes of the Water Strategy is to “secure long-term funding for the MiCorps program and evaluate opportunities to expand the scope of monitoring activities” by 2018.

MiCorps would like to thank the Office of the Great Lakes for their recognition of MiCorps contributions to the citizens and water resources of Michigan.

You can learn more or read the entire Water Strategy here:

http://www.michigan.gov/deq/0,4561,7-135-3313_3677_76614—,00.html



Michigan's Inland Lakes, Ours to Protect



- *Providing baseline information and document trends in water quality for individual lakes.*
- *Educating lake residents, users and interested citizens in the collection of water quality data, lake ecology and lake management practices.*
- *Building a constituency of citizens to practice sound lake management at the local level and foster public support for lake quality protection.*
- *Providing a cost effective process for the MDEQ to increase baseline data for lakes state-wide.*

Registration for the 2017 monitoring season began on October 1, 2016.

Contact Jean Roth, Program Administrator, at 989-257-3715 or jroth@mlswa.org

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

An Institute participant preparing to sample aquatic plants on Gull Lake.

Credit: Lois Wolfson



Investigating lake health at Kellogg Biological Station.

Credit: Jane Herbert



Sharing project results during Institute graduation.


Credit: Lois Wolfson.

Wanted: **Leaders to Protect Michigan's Lakes & Streams**

(Continued from page 23)

Each participant conducts an independent project outside of class. These projects give you an opportunity to explore a topic of personal interest and exercise your new leadership skills. Examples of past participant projects include:

- Developing and delivering an educational program about the benefits of natural shorelines for lakefront residents
- Investigating and promoting the construction of a boat washing station to prevent introduction of aquatic invasive species
- Training elementary teachers how to explore lakes and streams with their young students
- Sharing results and benefits of participation in the volunteer Cooperative Lakes Monitoring Program
- Recruiting volunteers to mark storm drains in an urban neighborhood to raise awareness about nonpoint source pollution

The Michigan Lake and Stream Leaders Institute is sponsored by Michigan Lake and Stream Associations, Inc., Michigan State University Extension, and the Michigan State University Department of Fisheries and Wildlife, and is endorsed by the Michigan Inland Lakes Partnership. 

APPLY FOR THE MICHIGAN LAKE AND STREAM LEADERS INSTITUTE – CLASS OF 2017!

The Institute is conducted in three sessions that include classroom learning and field experience.

June 2-3: Kettunen Center, near Cadillac

August 18-19: Kellogg Biological Station, near Kalamazoo

October 6: Michigan State University, East Lansing

Sponsors cover most of the costs of the Michigan Lake and Stream Leaders Institute. The participant registration fee of \$400 covers the remainder of the cost. Scholarships are available.

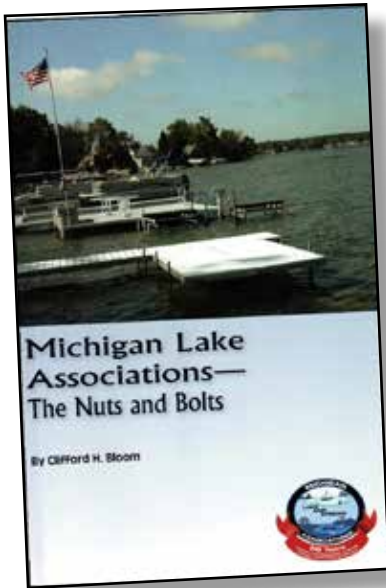
Applications and more information are available online: <http://www.bit.ly/MSU-LSLI>. You can also contact **Dr. Jo Latimore** at MSU: latimor1@msu.edu or 517-432-1491.

The application deadline is March 30, 2017.



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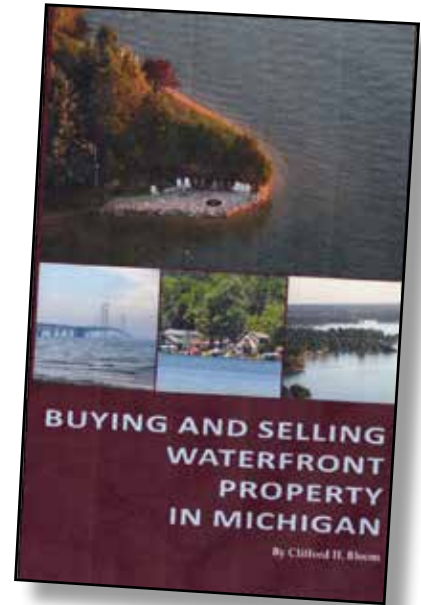
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Megan E. Cook

June 3, 1999 † November 13, 2016

With heavy hearts, we ask for your prayers and support for Randy and Beth Cook, part of our ML&SA family. Randy and Beth have been avid volunteers and have had various roles in the ML&SA organization over the past 20 years.

Many of you know the Cooks from ML&SA's annual conference. Sadly, they recently lost their beautiful 17 year old daughter, Megan, in a car accident. We hope you can join us offering your prayers, love and support for the Cook family during this very difficult time.

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The 4th Annual Muskegon Lake Project

ART INCORPORATING DEBRIS COLLECTED FROM MUSKEGON LAKE

By Ruth Bolles, Director
Muskegon Lake Project



"Five Fish" by Jan Grant



"Oxi Moon" by Ginny Gilbert



"Unfortunate Beauty" by Ruth Bolles



An innovative and effective approach to good stewardship for one of Michigan's inland lakes is the Annual Muskegon Lake Project. Bringing together a wonderful collaboration of the Muskegon Center for the Arts and the Muskegon Lake Watershed Partnership, the Muskegon Lake Project was born. The formation of the Muskegon Lake Project became a reality through a series of events.

Ruth Bolles, the MLP director, noted that in 2013, Susan Lomuto (Daily Art Muse) collected storm debris after Hurricane Sandy. Ms. Lomuto then sent a box of debris to artists whom she selected, and the art created from the collections was exhibited online in the "Peace by Piece" art project. Seeing a similar project conducted by an artist on the West Coast, Ruth developed the concept into a full-fledged annual event for Muskegon and for several area artists. The Muskegon Lake Project had brought about good things for Muskegon Lake and downtown Muskegon.

Every spring, volunteers organized through the efforts of the Muskegon Lake Watershed Partnership pick up debris along the banks and shores of Muskegon Lake. The "harvest" is cleaned up and boxed. Notification is sent out with a "Call to Artists" at the Red Lotus Gallery, located in downtown Muskegon. These imaginative creatives then go to work transforming the boxed collections into fantastic works of art. (The Muskegon Center for the Arts is a community-based membership of artists and dedicated citizens focused on local art in West Michigan. It hosts the annual Muskegon Lake Project. The Muskegon Center for the Arts goal is to

create a cultural epicenter in downtown Muskegon. The organization has hosted many other shows, openings and creative events for the community).

The Muskegon Lake Project opened a division for youth in 2015. Twenty-three artists plus seven youth participated. A “problem” developed early on for this year’s event. It turns out that there was less debris to collect this time around. The solution was to simply collect debris from other areas of the lake. Artists were also encouraged to gather a group together to go on their own clean-ups which led to even more good stewardship practices.

The opening reception, hosted by Muskegon Center for the Arts, is held at the Red Lotus Gallery the first part of September and the artwork is displayed for the entire month. A percentage of all sales from the Muskegon Lake Project is donated to the Muskegon Lake Watershed Partnership to further their endeavors of keeping the local waterways clean and healthy for future generations and for sustained economic use.

You can see how the circle of events brings about positive results for all involved. Muskegon Lake gets cleaned up; youth get involved, artists sell their creations at the Red Lotus Gallery and the Muskegon Lake Watershed Partnership receives money from the proceeds of the sales to help fund their other projects. It’s a positive endeavor with positive results.

Does the Muskegon Lake Project sound interesting to you? Think your lake association would like to take on its own project? Contact Ruth Bolles at fragments1@comcast.net.

"Window to the Lake"
Lauren Beebee-youth



"Up" by Trish Hamman



"Noir Crux" by Catherine Swiatek



"Spotted Fish" by Destiney Pickard -youth



The Muskegon Lake Watershed Partnership

A community-based, volunteer partnership organization which supports grassroots, local, state, regional, federal and international programs to restore Muskegon Lake and the Great Lakes. For more information about the Muskegon Lake Watershed Partnership contact

Kathy Evans, *MLWP Support Coordinator*
kathy@muskegonlake.org

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Impacts of Climate Change

By Jennifer McKay
Tip of the Mitt Watershed Council



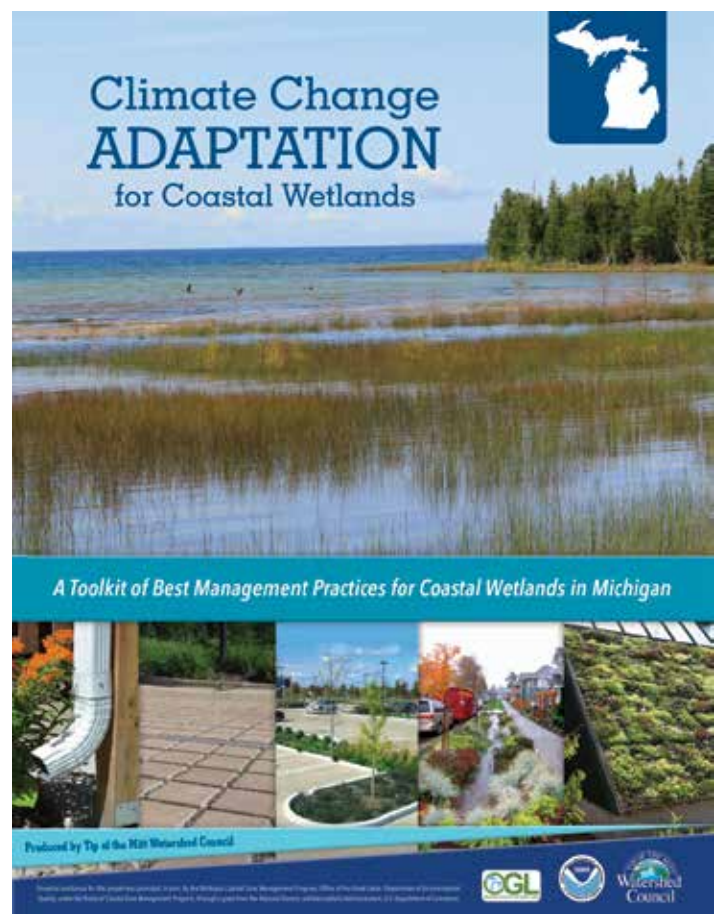
For many part-time residents, summers in Northern Michigan represent a reprieve from the sweltering days experienced in other parts of the country. Year-round residents look forward to pleasantly warm summer days punctuated by cool nights and misty mornings on the water. This past summer was perfect for water recreation lovers, with some days in the 90's and an unrelenting sun overhead. In fact, summer 2016 was abnormally hot across the globe, including here in Northern Michigan. According to the National Oceanic and Atmospheric Administration (NOAA), July 2016 was 1.57° F above the twentieth-century average and was the hottest July in recorded history.

With so much of Michigan's economy based in outdoor activities, the hot and clear weather was a boom for many local businesses. Campgrounds, outfitters, restaurants, and retailers were among those reporting increased traffic. While hot summer weather may benefit our local economy, it also has an impact on water resources.

At the most basic level, higher air temperatures and more sunlight mean warmer water. According to the Great Lakes Environmental Research Lab, the average surface temperature of Lake Michigan peaked at 75.6° F on August 18th. This was 6.2° F warmer than the long-term average for that date. Many of our inland lakes reached the upper 70's and low 80's during late summer. Data from our Volunteer Lake Monitoring Program show warmest surface water temperatures this summer were on Walloon Lake and Thayer Lake, with readings topped out at 82.4° F.

What did this mean for water quality and the life within and around our lakes? For one, warmer water promotes biologic activity, meaning that plants and algae grow better in warmer waters. The Tip of the Mitt Watershed Council received many reports of purple loosestrife, Eurasian watermilfoil, Phragmites, and other aquatic invasive plant

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To view or download the Toolkit, visit our website at www.watershedcouncil.org/climate-change.html.

Impacts of Climate Change

(Continued from page 31)

species growing more heavily than normal this past summer. While these invasives can inhibit recreation and lakefront views, more damaging are the ecological impacts. One of these impacts includes monoculture growth, resulting in decreased biodiversity and less food for waterfowl and gamefish.

One curiosity of warmer weather is the appearance of a freshwater jellyfish. “Blooms” of these freshwater jellies coincide with heat waves and this summer, the Watershed Council received reports from boaters and swimmers who found the jellyfish in Crooked and Burt Lakes. Despite the sightings, there is no need to worry. While the tentacles have the ability to sting, they are far too small to be felt by humans.

These warmer air and water temperatures are just one of many effects of climate change already apparent in the Great Lakes region. We have seen a number of observable changes in temperature, precipitation, and extreme weather events over the last century, including:

- ◆ Average temperatures in the Great Lakes region increased 2.3 degrees Fahrenheit between 1968 and 2002,
- ◆ Average annual ice coverage on the Great Lakes declined 72% between 1973 and 2010,
- ◆ Total precipitation has increased 11% since 1900 in the eight Great Lakes States,
- ◆ From 1975 to 2004, the annual number of days with land snow cover decreased by 15 and the average snow depth decreased by 2 inches, and
- ◆ The frost-free season lengthened by 9 days in the Midwestern U.S. between 1958 and 2012.

These trends are expected to continue along with changes in the frequency of intense storms, extended droughts, and heat waves. These changes to regional climate pose increased risks to our water resources, built environment and infrastructure, ecosystems, and recreation and tourism sectors. As a result, many

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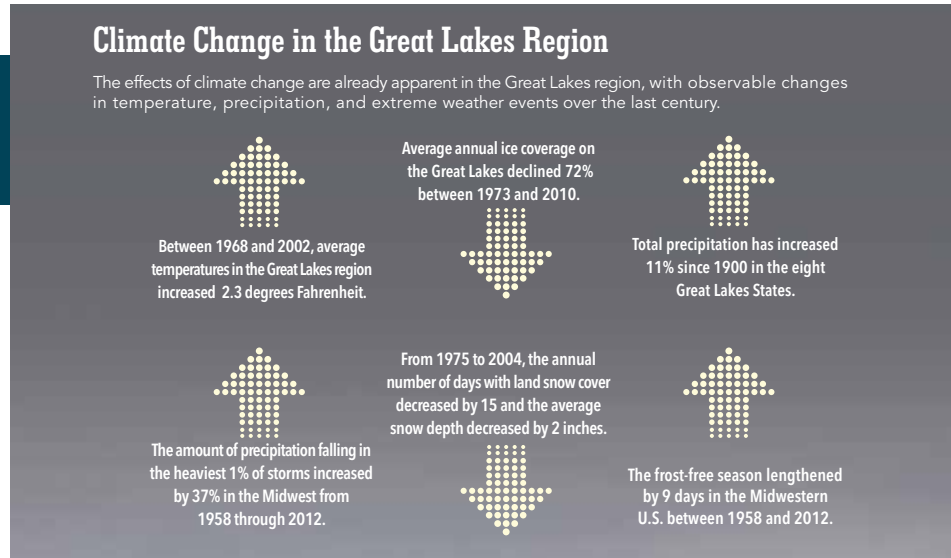
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Great Lakes states, communities, organizations, and individuals are taking steps to manage or adapt to climate change impacts to protect coastal communities. These can be technologies, procedures, practices, and behaviors taken in anticipation of impacts or in response to impacts. They are practical steps to help avoid or reduce climate change consequences and protect communities from the likely disruption and damage that will result from effects of climate change.

In an effort to help you protect our coastal assets, the Watershed Council developed a publication, *Climate Change Adaptation: A Toolkit of Best Management Practices for Coastal Wetlands in Michigan*. The Toolkit provides information about climate



change adaptation best management practices that can be implemented on an individual, local, or regional level to address many of the potential impacts of climate change. It can be used by almost anyone in Michigan, including homeowners, developers, municipalities, organizations, and water and wetland resource managers. We encourage you to use the publication to help ensure the health of our Great Lakes and coastal communities in the future as climate changes continue to impact our region.

To view or download the Toolkit, visit our website at www.watershedcouncil.org/climate-change.html. For hard copies contact Jennifer at jenniferm@watershedcouncil.org or 231-347-1181.

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