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FROM THE PUBLISHER



Summer At Last!

It was worth the wait! Summer is here, and it's time to enjoy beautiful weather and all that our lakes have to offer. For many of us, it's the busiest and best time of the year.

Crockery Lake in Ottawa County is our summer feature. As their story unfolds, we get a good peek at what makes a lake association a thriving success. They generously share their history and detail their approach to collecting dues; managing lake levels and invasive species, all while keeping their members informed and involved.

Wake boats are a hot topic. Cliff Bloom tackles the wake boat issue again and advances our understanding of the challenges they generate. Cliff never fails to clarify the problem; but, even more importantly, he offers ideas for solving the problem.

PFAS are definitely an ongoing health and environmental threat. Last spring, we launched the first in a series about PFAS. In this issue, the situation is viewed from another perspective from experts in the field. We will continue to run this series in the future from a variety of sources to keep you abreast of the latest developments.

Have you ever considered getting your lake association involved in a life jacket loaner program? White Lake, in Muskegon County, has done it--not once--but twice. Read all the details about how it's done. Can you imagine knowing that a life was saved because your lake took action and put a program in place?

Oakland County has great things happening with the Cooperative Lakes Monitoring Program (CLMP). A very successful coalition was formed that resulted in a positive outcome for Oakland County lakes. A county commissioner shares her involvement.

Be sure to catch Cliff Bloom's article about local government transparency and the Freedom of Information Act--a powerful tool that may help your area obtain information it needs to preserve and protect your lakes.

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

Enjoy the summer!

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OAKLAND COUNTY SUPPORT FOR THE COOPERATIVE LAKES MONITORING PROGRAM —An Excellent Model—

By Lon Nordeen, MLSA Board of Directors

In 2018, the Oakland County Board of Commissioners, in partnership with the Health Division and Michigan Clean Water Corps (MiCorps), launched the Oakland County Healthy Lakes initiative, which provided Oakland County residents with free training and equipment to monitor lake water quality during the summer.

The 2018 CLMP's (Cooperative Lakes Monitoring Program which is a water quality monitoring program) goal was to:

- Provide baseline information and document trends in water quality for individual lakes
- Educate lake residents, users, and interested citizens in the collection of water quality data, lake ecology, and lake management practices
- Build a constituency of citizens to practice sound lake management at the local level and to build public support for lake quality protection
- Provide a cost-effective process for the Michigan Department of Environmental Quality (now Department of Environment, Great Lakes & Energy) to increase baseline data for lakes state-wide, expand marketing and outreach to find and interest potential Oakland County volunteers, provide free program registration and equipment
- Provide in-person group training specifically for Oakland County residents
- Hire a summer intern whose primary job would be to visit and train residents on their own lakes.

Project background and timeline: Oakland County Commissioner Marcia Gershenson, in July 2017, met with a group of several environmental organizations to better understand what programs and tools are available for Oakland County. Commissioners Marcia Gershenson and Dave Woodward worked with the Board of Commissioners (BOC) to allot \$50,000 towards a partnership between the CLMP, Huron River Watershed Council (HRWC) and the BOC to manage the program.

December 2017: HRWC worked with BOC staff in promoting the newly named "Oakland County Healthy Lakes Initiative" (OCHLI) to its residents through outreach and media coverage. Two informational meetings were held with county residents to answer questions about the program and to sign up participants. Seventy seven lake groups signed up. In May, 2018, HRWC and Michigan State University led a lake monitoring training attended by 55 Oakland County resident participants.

May-September 2018: Oakland County residents conduct water quality monitoring across the state. HRWC intern, Nik Krantz, visits and teaches lake residents on their lakes to provide volunteer experience and increase knowledge and data quality.

October 2018-March 2019: The field season ends, and all samples go to the Michigan DEQ water quality laboratory.

Prior to the formation of Oakland County Healthy Lakes Initiative, only 14 Oakland County lakes were registered in the CLMP. After OCHLI was started, 77 lakes in the county registered as part of the program. The program was deemed a success and continued into 2019. "Lakes face many environmental challenges, from stinky and unsightly algae blooms to invasive plants that crowd out fish and native plants and stop us from boating and swimming," said Paul Steen from MiCorps. Dr. Steen stated, "The first step in maintaining good water quality is collecting scientific data to forecast problems before they are too big to stop. There are not enough professional scientists to do this job. We need volunteers to play an active role in fighting to protect our lakes. We are very excited about the fivefold increase in Oakland County lakes participating in water quality monitoring this year over last." He continued, "Our partnership with Oakland County has helped expand this important program which will result in gathering important data that we can use to better protect our lakes now and in the future."

(Continued on page 7)

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The Michigan Riparian magazine is announcing a new rate change for all lake association subscriptions. This new rate will take place with your next lake association subscription order/renewal.

The Michigan Riparian has not had a rate increase for lake association subscriptions in over 8 years.

Due to the increased costs for postage, printing and distribution over the last several years, we are forced to raise the rate to \$14.00 per year. We hope you understand and will continue to enjoy a magazine that educates, provides insight, keeps you informed on current events and provides valuable information that benefits your lake association.



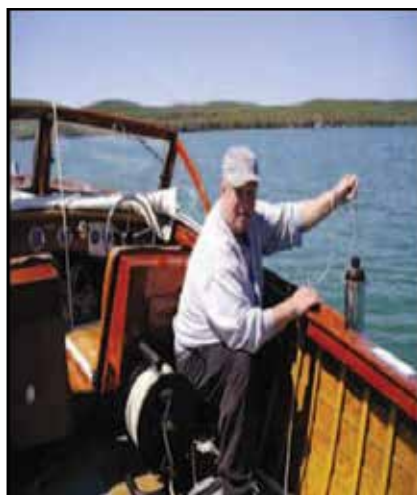
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- Educating lake residents, users and interested citizens in the collection of water quality data, lake ecology and lake management practices.
- Building a constituency of citizens to practice sound lake management at the local level and foster public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



**Registration for the 2019 monitoring season
will begin on October 1, 2019.**

**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/**

OAKLAND COUNTY SUPPORT FOR THE COOPERATIVE LAKES MONITORING PROGRAM — An Excellent Model—

(Continued from page 5)

The CLMP has been an important component of Michigan's inland lakes monitoring program for over 40 years, making it the second oldest volunteer monitoring program for lakes in the country. From mid-May through mid-September, volunteers will take weekly samples and conduct a survey of aquatic invasive plants.

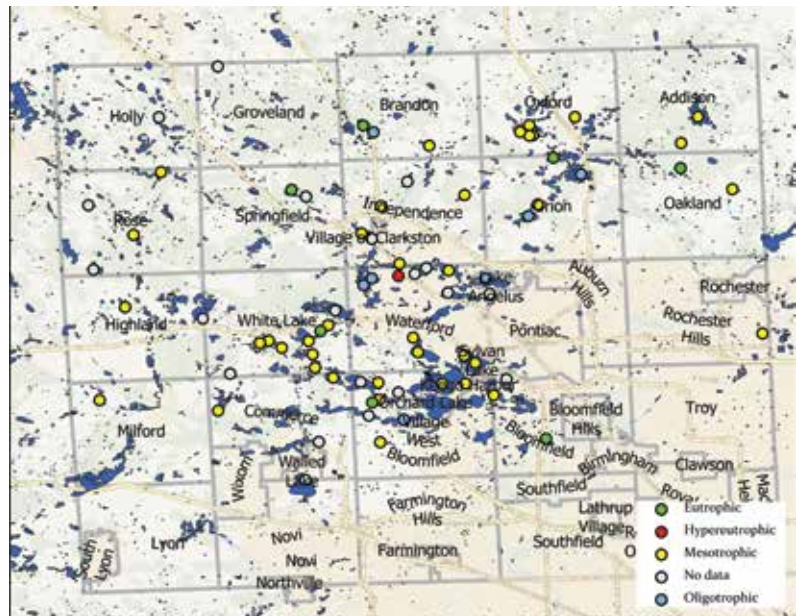


Marcia Gershenson, Oakland County Commissioner

Photo courtesy of Oakgov.com

so many volunteers were willing to come forward to collect important data on the health of their lakes, and now we have a much more comprehensive picture of conditions on Oakland County lakes. We evaluated the program and positive lake resident response to the 2018 effort and saw that it was helping to improve the resident support for our lakes—which are a critical economic, and natural resource of Oakland County. Our team decided to continue the concept into 2019 and send many more citizen volunteers through the training.”

Commissioner Marcia Gershenson commented, “Water is one of Michigan's greatest resources. This program will help reassure residents that our lakes are safe places to swim and fish. I view healthy lakes as key quality of life and economic elements of our county. We were excited to see that



The Commissioner concluded, “It is an honor to serve as a representative for the residents on the Oakland County Board of Commissioners. We are always working to build on the excellent quality of life we enjoy in Oakland County, which is a great place to live, work, play and raise a family. I welcome your questions or comments, and invite you to share your feedback with me about our Oakland County Healthy Lakes initiative.”

For a copy of the full report, “2018 Report on the Oakland Healthy Lakes Initiative” contact Dr. Paul Steen at (734) 769-5123 X 601 or psteen@hrwc.org. He is the Aquatic Ecologist for Huron River Watershed Council.



Dave Woodward (Pictured Left), Marcia Gershenson (Pictured Middle) and Bindu Bhakta (Pictured Right) MSU Extension, at the Healthy Lakes Training

Photo courtesy of Oakland County Board of Commissioners website/photo Gallery



Dr. Paul Steen, MiCorps and Huron River Watershed Council

Photo courtesy of HRWC website

Publishers Note: It is exciting to see the leadership from Oakland County Board of Commissioners support the development and funding for a program to secure and train volunteers to improve the condition on their lakes! Perhaps this could serve as a model for others to duplicate.



LAKE HAPPENINGS

White Lake Opens Second Life Jacket Loaner Stand

By Dave Hays, President
White Lake Association

White Lake, located in the heart of scenic Western Michigan, has announced the opening of its second Life Jacket Loaner Station.

The White Lake Association (WLA), in partnership with the Sea Tow Foundation, now offers this potential life-saving service at two launch ramps in the 2,571-acre lake. The stations hold life jackets that local boaters may borrow and use, free of charge. Boaters simply return the jacket(s) to the stand after a day of boating.

Available in sizes ranging from infant to Adult XL, these life jackets help to ensure that each of a boat's passengers has access to necessary safety equipment. This is especially crucial for children under 13 years of age, who are required to wear a life jacket at all times while a boat is underway.

In 2017, WLA submitted a grant request to the Sea Tow Foundation for its first loaner station, located at the busy Montague Municipal Boat Launch and Fish Cleaning Station. The grant was approved, and WLA received the permanent stand, weatherproof signage and 48 new USCG-approved life jackets in 2018. Boaters used and appreciated the free program which WLA volunteers regularly monitor and maintain.

A ribbon cutting was held in early August, with representatives from the White Lake Area Chamber of Commerce,

the U.S. Coast Guard, dignitaries from the sister cities of Whitehall and Montague, the media and the WLA attending.

In late 2018, another grant proposal was submitted to the Sea Tow Foundation; and upon approval, the second life jacket loaner station was opened in May at the popular Scenic Drive launch ramp, located near the channel into Lake Michigan.

Isaac Johnson prepares to buckle up his Sea Tow life jacket. He and his brother, Caleb know to wear their life jackets when near the water. Both brothers said the new life jacket loaner station was "pretty cool!"



This sturdy life jacket loaner station, courtesy of the Sea Tow Foundation, contains jackets sized from infant to XL.

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.





Caleb Johnson, wearing his Sea Tow life jacket, gets ready to reel in the big one from the Montague launch ramp.

What's next? The WLA hopes to see the Sea Tow Life Jacket Loaner Program spread up and down the Western Michigan shoreline.

"The Sea Tow Foundation offers this awesome program, which spans more than 400 locations across the U.S.," said Dave Hays, WLA president. "What lake association and its riparians would not want to embrace such a great benefit? Educating folks on the program is key to expanding it."

For information on the Sea Tow Foundation's Life Jacket Loaner Program, go to Boatingsafety.com and click on this program for all the details.

And for additional information on the very active WLA, visit whitelakeassociation.org. Of special interest is the link to the article on White Lake and the WLA in the spring 2019 issue of *The Michigan Riparian*, as well as WZZM-TV coverage of the first loaner station ribbon cutting.

WLA consists of hundreds of members who promote WLA activities and actions that preserve the natural amenities of the lake, as well as the public trust. In addition to the life jacket loaner stations, WLA conducts ongoing water sample testing; maintains the weather station and video cam at the White River Light Station, partners with the Steelheaders to install and maintain "No Wake" buoys on White Lake and works to make boat launching convenient and safe at several locations. *R.*

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

Email: swagner@mlswa.org

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

Question: Where can I find data and information about my lake? I am curious about water quality, and thinking about what can be done to protect my lake.

Answer: There is a lot of good data out there. The challenge is knowing where to start! Consider these excellent sources as starting points:

1. Data from the Cooperative Lakes Monitoring Program is found in the MiCorps Data Exchange. Visit www.micorps.net and select "Data Exchange". This website contains every piece of data collected by CLMP volunteers since the program began 45 years ago. You can search by the name of your lake. Types of data include water clarity ("Secchi depth"), shoreline habitat quality, aquatic plants (invasive and native), total phosphorus (a key nutrient in the growth of algae and aquatic plants), chlorophyll-a (a measure of algae in the water column), and dissolved oxygen and temperature. If you are unsure what the numbers mean, there are handy fact sheets about each type of data on the MiCorps website – just go to "Lake Monitoring" then "CLMP Documents".
2. Check out the brand new Lake Conservation Planner website (<http://midwestglaciallakes.org/resources/conservationplanner>). It includes lake and fish information for nearly every Michigan lake. The information is a combination of collected data and statistical predictions of the expected conditions on those lakes for which real data are not available. It is an excellent starting point for conversations about protection or restoration needs for your lake. The Conservation Planner is a product of the Midwest Glacial Lakes Partnership, and its development was led by several staff with the Michigan DNR.

Some additional sources of data and information include the Michigan Surface Water Information Management System (MiSWIMS), the Michigan DNR's Status and Trends Inland Lake Habitat Viewer, and DNR's inland lake maps – which can all be found through an internet search or visiting www.mi.gov/dnr. Your lake may also be included in a watershed management plan; check with your county Conservation District, watershed organization, or your local Nonpoint Source staff with the Michigan Department of Environment, Great Lakes, and Energy (www.mi.gov/nps).

Dr. Jo Latimore,
Aquatic Ecologist and Outreach Specialist,
Michigan State University

* * * * *

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.



By Clifford H. Bloom, Esq.
Bloom Sluggett, PC
Grand Rapids, Michigan
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Local Government Transparency

In Michigan, local government (whether it be a township, city or village) can be a true friend of lake communities. Such governments can protect lakes via zoning ordinances, regulatory ordinances (such as dock and boat ordinances, wetlands ordinances, anti-fertilizer ordinances, blight ordinances and green belt ordinances), obtaining water quality grants, creating special assessment districts to protect and improve lakes and promoting lake – friendly policies. Unfortunately, however, an uncooperative local government not only misses out on many opportunities to protect area lakes, but can also be an actual detriment to a lake community.

Quite often, it is difficult for lake associations and property owners to ascertain what local governments are doing to protect lake communities without obtaining and reviewing relevant municipal documents, records and data. Although many governments tout their “transparency,” in fact, a number of local governments try to improperly manage what information gets out. Happily, Michigan has the Freedom of Information Act, being MCL 15.231 *et seq.* (“FOIA”).

FOIA is relatively easy for members of the public to use if a few basic rules are followed. First, the overwhelming majority of documents, records, minutes and other writings in the possession or control of a local government in Michigan are subject to FOIA and must be disclosed to a member of the public when a proper FOIA request is submitted. Unless a document is expressly exempted under FOIA, a copy of the document must be made available for inspection or copied when a proper FOIA request is made. Exempt documents can include privileged and confidential communications with a municipal attorney, certain documents subject to privacy laws (for example, social security numbers) and some real estate agreements.

A FOIA request to a local government must be in writing. Most municipalities have FOIA forms that must be utilized. When submitting a FOIA request, it is very important for the requesting party to be precise. The FOIA request must be such that a reasonable person can understand what document or documents are being requested. Furthermore,



if possible, a date range should be included in the FOIA request. For example, a poorly-drafted FOIA request might state “I request all records from Acme Township about Scout Park.” A better FOIA request would be “I request all documents, maps, records and writings that mention, show or pertain to Scout Park located at 123 Main Avenue and which record, document, map or writing was dated, created, received or generated at any time between January 1, 2010 and January 1, 2019.”

Under FOIA, a municipality can charge a reasonable fee for retrieving the documents requested and for copying and mailing costs. However, such amounts are strictly regulated and limited by statute. A municipality is also obligated to have an official fee schedule available. Local governments in Michigan are also required to adopt written FOIA policies and procedures.

In most cases, the local government must produce the documents requested within five business days (i.e. Monday through Friday), but, for a significant number of documents requested, a municipality can invoke an additional ten-day grace period, for a total of 15 business days.

In most cases, a written FOIA request should be directed to the municipal clerk or the municipal Freedom of Information Act Coordinator.

(Continued on page 14)

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Contamination sites from chemicals found in common household products and used in several industries have been identified in several places throughout Michigan.



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PERFLUORINATED CHEMICALS:

What they are and what you should know about them

By Lois Wolfson and Ruth Kline-Robach, Michigan State University
Article from MSU Extension News, April 2018

Publisher's note: This is the second in a series of articles addressing PFAS. See the Spring 2019 issue of The Michigan Riparian for a feature written by Richard Rediske Ph.D entitled PFAS Contamination in Michigan.

A group of chemicals used in common household products have received increased scrutiny due to environmental concerns.

The chemicals, synthetic perfluorinated chemicals (PFCs) or more specifically per- and polyfluoroalkyl substances (PFAS), have been widely used in both industrial and consumer products to make those products waterproof, stain and grease resistant. Common products that contain these chemicals include stain-resistant fabrics and carpets, water and oil repellents, foams used in fighting fires, metal spray plating and some types of nonstick cookware. Other products that have been manufactured with forms of PFAS include food packaging paper and cardboard materials, insecticides, paint and plumbing tape.

PFAS chemicals have been used since the 1950s, but have received increased attention in recent years as the environmental footprint gets larger and environmental impact becomes clearer. Several authors have noted global widespread occurrence of PFAS in both wildlife and humans (Giesy and Kannan 2001; Hansen et al. 2001). Two well-studied forms of PFAS are PFOS (perfluorooctane sulfonate) and PFOA (perfluorooctanoate). They are a concern because of the potential health impacts associated with them.

(Continued on page 15)

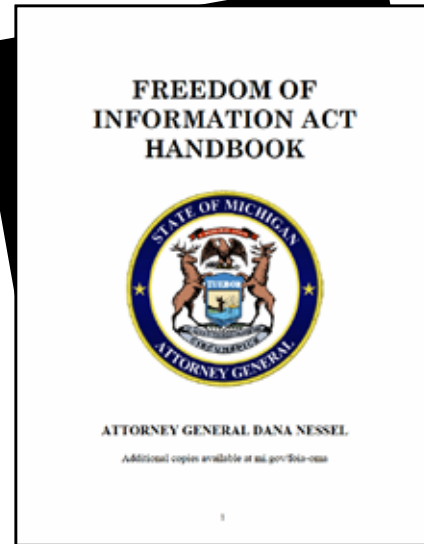
Local Government Transparency

(Continued from page 11)

FOIA request properly filed with a municipality requires all officials, employees, officers, agents, departments, boards and commissions within that municipality to search all of their respective records for the documents requested.

If a municipality violates FOIA and the requesting party files a lawsuit, the municipality may have to not only provide the documents requested, but in some cases it is also obligated to reimburse the requesting party for that party's attorney fees and court costs.

It is always best to work with the local municipality involved regarding a FOIA request. If the municipality requests a reasonable further time extension, it is normally prudent to agree to that. Or, if the municipal official involved has questions, it is usually the best practice to reasonably accommodate that municipal official and answer questions to the degree that such questions are appropriate.



For a comprehensive publication regarding FOIA, the Michigan Attorney General has compiled a document called the "Freedom of Information Act Handbook" which is available at https://www.michigan.gov/documents/ag/FOIA_Handbook_2019_644053_7.pdf. [R.](#)

A Sandy Beach in One Day!

ELIMINATE THE PROBLEMS OF MUCK AND WEEDS

A detailed diagram illustrating the "Sand-Pro" beach sanding process. It shows a large body of water (lake) with a sandy beach area. A truck is shown dumping "SAND & WATER MIX" into a hopper. A conveyor system then transports the mix to a "DROP-OFF" point on the beach. A "WATER FROM LAKE" line is also shown. The diagram includes labels for "ANCHOR", "TYNAR", "FABRIC", "GAS & WATER PRESSURE", and "TRAPPED WEEDS & MUCK". A box at the bottom left states "GUARANTEED SANDY, STABLE LAKE BOTTOM REGARDLESS OF EXISTING CONDITIONS". A box at the bottom right states "NO SITE DISTURBANCE".

A photograph showing a completed sandy beach area with a stone retaining wall and a small building in the background.

A photograph showing the sanding process in action, with a large area of water being treated and a sandy beach area visible.

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PERFLUORINATED CHEMICALS

(Continued from page 13)

While some of the PFAS chemicals such as PFOA and PFOS were voluntarily phased out of production between 2000 and 2002 in the U.S. and 2006 in other countries, there are thousands of PFAS chemicals still being produced globally (Wang et al. 2017; EPA 2017b). More so, PFAS chemicals still exist in the environment because they are not easily broken down or degraded. They are toxic, persistent (stable) and can bioaccumulate in organisms.

PFAS contamination is often found near sites where it was produced or used by industries and on military bases. PFAS contaminants are water-soluble and easily infiltrate the soil into groundwater (ATSDR 2017) and find their way into adjacent waters.

PFAS chemicals can be ingested by drinking contaminated water, eating contaminated fish or using some consumer products that may still contain the chemical. According to the Agency for Toxic Substances and Disease Registry (ATSDR 2017), PFAS are not readily absorbed through skin and are considered a minor exposure pathway when showering or bathing in PFAS-contaminated water.

When humans and other animals consume water or food containing PFAS, these chemicals can remain in the body for many years after exposure (Bruton and Blum 2017). The ATSDR has reviewed multiple studies and identified possible impacts from exposure to PFAS in water and food, including effects on growth, developmental effects to fetuses, interferences with hormones, increases in cholesterol, immune system effects and an increased risk of liver, kidney and testicular cancer. In animals, potential health effects may include renal and liver toxicity cancer, immune suppression, reproductive and developmental effects and mortality and delayed development of offspring (Bruton and Blum 2017). However, no one can say with certainty that exposure to PFAS chemicals will result in these health effects.

LEVELS OF EXPOSURE

The U.S. EPA has set a lifetime health advisory limit (LHAL) for PFOA and PFOS combined at 70 parts per trillion (ppt) (EPA 2017a). However, some studies have suggested even lower levels for each of these chemicals (Grandjean 2015), and some state health departments, such as Vermont and Minnesota, have established lower health advisory and guidance values. A nationwide survey of larger public water supplies (PWS) found that EPA's lifetime health advisory (70 ppt) for PFOS and PFOA was exceeded in 66 PWS serving 6 million U.S. residents (Hu et al. 2016).

The LHAL is the level in drinking water below which no harm to human health is expected even after chronic exposure. Advisory limits do not exist for other PFAS chemicals. Michigan recently adopted the same 70 ppt limit for PFOA and PFOS in drinking water. Because these chemicals can bioaccumulate in aquatic ecosystems resulting in higher levels in fish tissue, the health advisory for surface waters is 11 to 12 ppt.

PFAS chemicals have been identified and confirmed in multiple communities at 61 sites in Michigan. A complete list of these PFAS sites and accompanying map can be found at www.michigan.gov/pfasresponse.

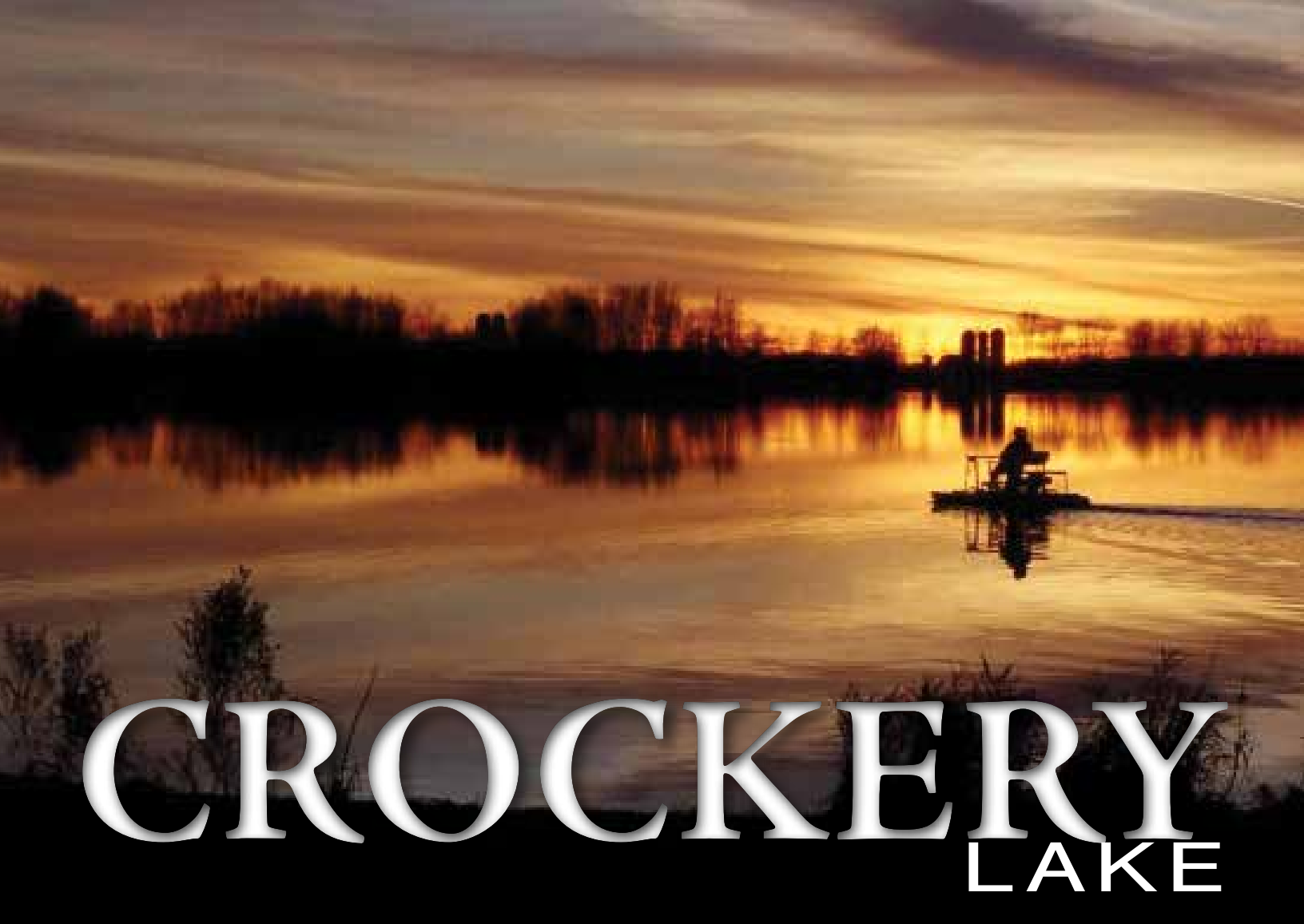
MICHIGAN RESPONSE TEAM

In November 2017, an executive directive was issued by then Gov. Rick Snyder to establish a comprehensive approach to dealing with PFAS contamination across the state. The directive established the Michigan PFAS Action Response Team (MPART). The team includes representatives from 10 state agencies and has been tasked with providing a coordinated and comprehensive response to address sites across Michigan that have been contaminated by PFAS. Working with local, state and national partners, the group is focusing on areas impacted by PFAS, communications and mitigation activities. The directive can be viewed at Michigan.gov.

State of Michigan laboratories do not currently have the capability to test for PFAS but are hoping to do so in the near future. Tests for PFAS contaminants in drinking water can cost hundreds of dollars per sample (EPA 2017a). If you have been notified by your local health department that PFAS chemicals have been detected in your water supply, you may be given access to an alternative water supply or in-home filtration at no cost.



(Continued from page 27)



The occasional sound of mooing cattle and the purr of a small motor boat provide a peaceful backdrop to Crockery Lake.

By Linda Lane



THE BEST KEPT SECRET IN OTTAWA COUNTY

Crockery Lake is a 108-acre lake located in the northeastern corner of Ottawa County. Dubbed “The jewel of the township”, Crockery Lake has it all, but on a small scale. There is a county park at the east end of the lake which has a swim beach and a public boat access on the south side. Even though it is one of the few lakes in Ottawa County, most people have never heard of it—and we are not complaining.



Photo Credit: Diane Thornton



Photo Credit: Linda Lane



Conklin, Ravenna and Sparta are the closest towns—each about five miles away. Other than the lake residences, Crockery Lake is totally surrounded by farms, fields, woods and wetlands.

The maximum depth of the lake is 54 feet, with the majority of the lake being 30 feet. A weir on the west end of the lake, together with many underground springs, keeps the lake at a consistent water level, even during most dry periods. Wetlands are found at both ends of the lake, together with one in the north cove. Sightings of eagles, blue herons, hawks, and deer are everyday events.

Since the 1970's, most cottages have been converted to year-round homes. Currently, there are 115 homes on the lake. There is only one undeveloped lot.

(Continued on page 18)



Photo Credit: Betsy Ludwick

CROCKERY LAKE

(Continued from page 17)

TIMES PAST

From the early 1800's until the early 1900's, the earliest settlers were two native American Indian tribes with campsites located on the east and west ends of the lake. According to one long-time deceased resident, they (the Indians) slept by day and trapped by night. The 1870 census shows one home on the north side of the lake. By 1876, there were two homes—one on the south side and one on the north side.

According to a relative of land owner John Mauterstock, during the 1880's, a 36 x 60 sailboat was moored on the north side of the lake. For five cents, you could cruise the lake. Because of the lack of wind on the lake, it was decided to outfit the boat with a steam engine. It took six oxen to pull the engine from Muskegon. At the boat landing, a pavilion was built where parties, ox roasts and dancing took place. All this came to a tragic end when the boat was torched by an arsonist and sank to the bottom of the lake.

Until the 1940's, the majority of the south side of the lake was a cow pasture, and the north side remained relatively undeveloped with a few corn fields. By 1948, the lake's property had been divided up into small lots and vacation cottages were being built.

In 1943, a low-land area on the north side of the lake was dredged for its marl. The marl was used as fertilizer and sold to local farmers for \$1 per yard. Even though part of the low-land had been platted to be sold as lake lots, the property owner felt the land was more valuable if sold as fertilizer. Consequently, the "lots" are now part of the bottomlands of the lake. The dredging created the north bay which is approximately five acres in size.

A small store was operated out of a home on the north side of the lake until the late 1960's. They sold gas, some food items, and bait. Small fishing boats could also be rented. Each of the six fishing boats was named for a kind of fish that could be caught in the lake—"The Sunfish", "The Bluegill", etc.



Photo Credit: Linda Lane



Photo Credit: Linda Lane



Grose Park walking trails
Photo Credit: Flo Nitz

A LAKE REWARDED WITH DAILY WILDLIFE EXPERIENCES

Crockery Lake is usually a very quiet lake—that’s why we see many types of animals and birds on a regular basis. Blue herons, bald eagles, fox, coyotes and mute swans call this lake their home and can be seen year-round. In the spring, we are visited by loons and coots. There are tons of turtles—especially snappers in the north cove and near the outlet. Rumor has it that a water skier just missed hitting a snapper the size of a small table several years ago. Last year I counted 40 turtles sunning themselves on logs at the same time! Canada geese are a problem, but residents have found ways to outsmart them—fake coyotes, electric fences, and natural water’s edge plantings.

Anglers can expect to catch a variety of fish—including largemouth bass, northern pike, bluegills, and yellow perch.

GROSE PARK

In 1976, Ottawa County purchased the 40-acre homestead of Grace (Grose) Ritter which sits on the most northeast corner of Crockery Lake. The land touts a beautiful creek and many mature hardwood and pines in a natural setting.

The county installed a few basic necessities—public restrooms, a bridge over the creek, playground equipment and a small swimming beach. Grose Park seemed to remain a secret for many years too—with few



Grose Park
Photo Credit: Karen Elliott

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CROCKERY LAKE

(Continued from page 19)

visitors. In 2000, the county obtained a grant to improve the park. Lots of time and planning went into renovating the park—paved walkways, handicap accessible swim area, six walking trails, a softball field, new bathrooms, a fishing dock, plenty of parking, two outdoor playgrounds, and two roofed shelters. Grose Park has become a popular destination for school and church outings.

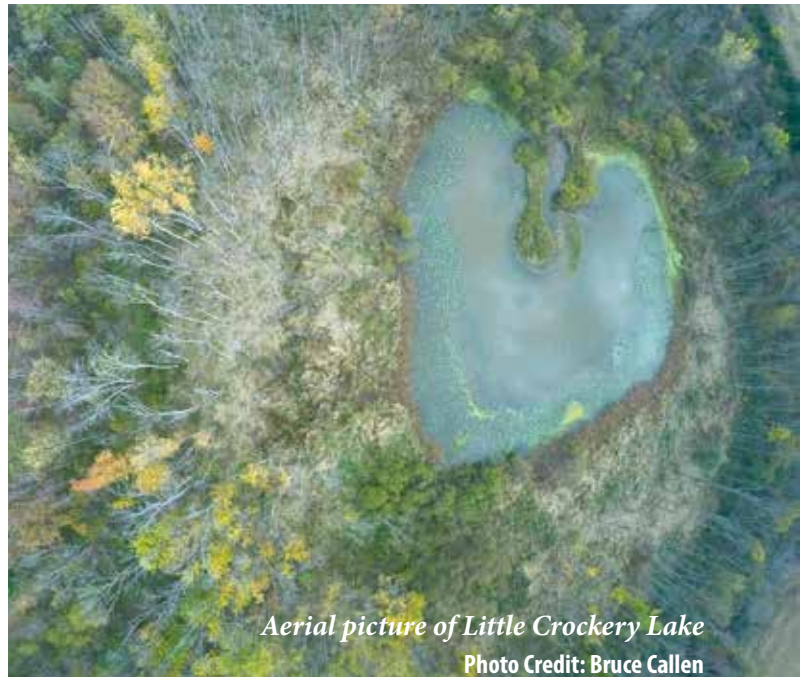
LITTLE CROCKERY LAKE AND SURROUNDING WETLANDS

On the far northeast end of the lake, surrounded by protected wetlands, is Little Crockery Lake. Most residents are unaware of its existence. The five-acre lake is located on private property so access is restricted. No homes are located on the tiny lake. Little Crockery serves as an important part of the main lake's ecosystem. It helps filter water from upland portions of the watershed before it hits Crockery Lake. Until 20 years ago, Little Crockery was left undisturbed. Soil erosion due to farming practices has taken its toll on Little Crockery. Efforts were made to correct this problem, but the damage remains extensive. With the small lake's limited ability to filter, soil is eroding into Crockery Lake at an alarming rate.

In January of 2018, a drain assessment district was created which includes the entire watershed for Crockery (and Little Crockery) Lake. We are hopeful that with the Drain Commission's help, we will be able to stop this erosion and possibly revive Little Crockery to its original state.

Little Crockery Lake in the winter

Photo Credit: Linda Lane



Aerial picture of Little Crockery Lake

Photo Credit: Bruce Callen



There is a second, smaller wetland on the north side of the lake. The township and CLA (Crockery Lake Association) have been diligent in protecting this wetland. A conservation easement was granted, but there are many restrictions on the property including prohibiting any structures, disruption of the soil and dock placement, to name a few.

THE WEIR

Approximately every 10 years, for as long as residents can remember, Crockery Lake experiences a temporary flood condition. The flooding usually lasts 3-4 days. During that time, many houses on the south side of the lake experienced water in their basements. In 1976, a weir was installed in the outlet at the west end of the lake. The weir has helped in keeping a consistent lake level, but is not always useful during flooding events.

In 2015, the lake experienced one of its worst flooding events. The water rose more than four feet above the established high water mark and showed no signs of dissipating. The lake residents, in panic mode, inundated the Drain Commissioner's Office with phone calls, emails and pictures. To his credit, he took quick action and the



A weir was installed in 1976 in the outlet on the west side of lake. The simply designed weir makes all the difference!

Photo Credit: Linda Lane

creek behind the weir was cleared of fallen trees and debris so the water could escape. The Drain Commissioner now has our drain on a permanent clean out plan. We love this guy!

(Continued on page 22)

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CROCKERY LAKE

(Continued from page 21)



New Sign for Crockery Lake Association

Photo Credit: Linda Lane

CROCKERY LAKE ASSOCIATION

Crockery Lake Association was created in 1973 to solve the lake level problem and fish restocking issues. Dues back then were \$10 for regular members, \$5 for seniors. Our dues haven't changed much—they are only \$35 per year, per household.

Membership in the association fluctuates between 50 and 80 percent. The Board meets once a month March-September. We are an eight-member board, but it is not uncommon for us to operate with less than eight members for a stretch of time. We have been a member of Michigan Lake & Stream Associations since 1980 and have found them to be a very valuable source of information over the years.

We consider ourselves to be a very active board with as many as 15 items on our agenda each month.

Newsletter. We have a newsletter that is published five times a year and is distributed to all landowners within 300 feet of the lake. Articles include a fishing report, updates on upcoming events, township information involving lake residents, reminders of boating rules, current water testing results and information on ways to improve lake health.

Website. We have a website (www.crockerylake.org.) which includes links to various government entities, previous CLA newsletters, lake ordinances, CLA Board minutes, calendar of upcoming events, a "thermometer" showing the

current amount of funds collected for fireworks, and Board members' contact information.

Lake Store. We have an on-line store where tee shirts, mugs, and other items can be purchased with the Crockery Lake logo. (www.crockerylake.org.)

Welcome Packet. When a new resident moves in, we supply them with a "Welcome Packet" which contains contact information of their CLA board representative, copies of ordinances, boating rules, and handouts (many from Michigan Lake & Stream Associations given out at their annual meeting encouraging responsible ways to care for the lake).

"Like Us on Facebook". We have found that our Facebook site (Facebook/CrockeryLake) gets lots more hits than our website. It is a great way for lake residents to keep connected—even during the winter months. Comments are made; pictures are posted; questions are answered. It is an excellent way to quickly alert residents to problems on the lake.

Water testing. CLA has been water testing since 1981. Water testing is very high on our priority list. We are part of the CLMP program and test for phosphorus (spring and summer), dissolved oxygen, temperature, chlorophyll, and secchi disk transparency. We also do independent observations of weed growth and type. This will be our second year for Score The Shore testing.

Fireworks. For many residents, the July 3 Fireworks display is the most

important activity we coordinate. CLA secures the fireworks contract, obtains the permits and collects the monies needed for the show. The show runs approximately twenty minutes and last year's cost was \$4,350.

We coordinate it with the boat parade and "ring of fire".

Annual Meeting. Our annual meeting is held in May where new board members are elected. We use the annual meeting as a way to further educate the lake residents on a variety of topics— boating safety, weed treatments, environmental issues. A free meal is served to all who attend. Approximately 35 people show up for the annual meeting which is held at Grose Park.

Latest Project. Last fall sorely needed new "Welcome" signs were created and erected on both sides of the lake. It has taken us many years to build up our savings to be able to afford the signs.

OUR FAMOUS FUNNELLING ORDINANCE

All lakes are under tremendous pressure to add more houses with lake access. Our lake is surrounded by farm land that could have been sold and turned into housing developments with some sort of lake access.

To circumvent this possible problem, in 1993, Chester Township created one of the very first funnelling ordinances (Township of Chester, Ottawa Co. Ord #1993-10-01) in the State of Michigan. CLA hired Cliff Bloom, Esq. to create the ordinance. Our funnelling ordinance has been used as a model by Michigan Lake & Stream Associations when lakes seek to create such an ordinance.

The ordinance limits each resident to one dock, three licensed watercraft, and bars multi-family uses. At the present time, we are making some slight modifications to our ordinance—but the most important section remains the same—one dock per piece of lakefront property.

(Continued on page 24)



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CROCKERY LAKE

(Continued from page 23)

TOTAL FERTILIZER BAN

In 1998, CLA also worked with the township to create an ordinance (Township of Chester, Ottawa Co., Ordinance #99-2-1) banning the total use of fertilizer on lands within 300 feet of the lake. Residents are reminded yearly about the ban and certified letters have been sent to lawn companies in the area informing them of a \$500 fine for violation.

SOCIAL ACTIVITIES ON THE LAKE

The July 3 activities are very popular with everyone, and it is the busiest day/night of the year! Since 1981, we have held a boat parade, ring of fire, and fireworks display.

The funding of the fireworks is dependent solely on donations from lake residents. CLA created a “Go Fund Me” page to boost donations, which has been quite successful. To save on costs, several of the lake residents have become certified as pyro technicians and shoot off the fireworks.

July 3 is the only official social event for our lake. As the number of households with children decline, so has the number of social events. But residents regularly meet at the west end of the lake and drop their anchors for pontoon swim time. One or two ski boats are out most nights, together with fishermen and kayakers.

THE WAR TO SAVE OUR EUTROPHIC LAKE

Crockery Lake was officially labeled as a “eutrophic” lake in the mid 1970’s—the same time most cottages were changing into year-round homes.

Our lake is small, and we struggle more than the larger lakes when it comes to maintaining good water quality. Other problems are erosion, septic replacement, wetland deterioration and shoreline congestion.

Battle of the Weeds. The weed wars started in the 1970’s and have continued ever since. We have waffled between using professional applicators and certified lake residents to perform the weed control treatments, mainly due to cost constraints. In 1990, a special assessment district was created to pay for the treatments. The cost is shared by the



4th of July Boat Parade

Photo Credit: Dennis Arms

residents, the township and the county. We have been using a professional company to treat our weeds since then.

The shallow bays are havens for most of the current invasive and native species found in our lake—milfoil, coontail, curly leaf pondweed, eel grass, and filamentous algae. Luckily we do not have any zebra mussels. In the last three years, eel grass has completely taken over all three bays and some of the other shorelines. Unfortunately, no chemical has been developed to kill eel grass. Machine cutting would need to be done every two weeks throughout the summer, and that is cost prohibitive. Unfortunately, at this time, the residents’ only recourse is to hand pull it.

The CLA has made it a priority to educate themselves as to the types of weeds and various treatment options available. One member of the Board faithfully attends several seminars/classes a year to keep current on new invasive weeds and possible treatments. We do not rely on our applicator to dictate the amount or type of chemicals to apply to the lake. Instead, each year after consulting with our professional applicator, the CLA Board makes the treatment decisions. We are currently using Diquat, Aquathol, and Renovate products. Treatment decisions involve week-to-week monitoring of the lake quality; coordination with the chemical applicator, and many weed surveys done by our lake board.

We are very proud of the fact that we are able to control the overabundant weeds; and, at the same time, keep residents happy by strategically treating only five percent of the lake with chemicals—usually with only one or two applications a year. Cost and environmental savings for all!



The bays are treated three times a year with muck reduction pellets. We are seeing some reduction in muck. Less muck leads to less weeds. Residents are also able to purchase pellets to treat their swim area and have seen excellent results.

Battle of Deteriorating Water Quality and Clarity— Our secchi disk tests reveal our water clarity continues to decrease. Our average clarity is now only four feet. We continue to educate residents on how their actions impact the lake—runoff, leaf burning, mowing too close to the water, etc. Wave erosion is a big problem. Most residents have now edged their shoreline with large rocks, which is helpful.

Our spring phosphorus readings have significantly increased since 1996. Too many drains dump into the lake: six drains feed into the lake, carrying nutrient-loaded soil from neighboring farmland. Every rainfall event triggers a brown plume of contaminants that takes days to dissipate. Drains need to be re-routed to sediment ponds. We are working with the new Drain Commissioner and are confident with funds from the recently created drain assessment district that we can curb this problem.

BATTLE OF OUTDATED SEPTIC SYSTEMS

In 1973, then Township Supervisor, Jim Meerman, predicted Crockery Lake would have a sewer system within five years. Forty years later, we still do not have a sewer system.

But it is not because the lake association board has not tried. Actually, residents have been asked many times over the years to approve installation of a sewer system. Each time the subject met with such resistance, the township would not put it up for a vote.



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A SUCCESS – 2019 MLSA CONFERENCE

By Paul Sniadecki

Treasurer, MLSA Board of Directors

Traveling from all parts of Michigan, and as far away as Texas and South Carolina, 318 people made their way to Crystal Mountain Resort to experience the 58th Annual MLSA Conference.

President Mike Gallagher and Vice President John Wilks opened the Friday, May 3, General Session to a standing room only assembly. Michigan Governor Gretchen Whitmer also welcomed participants via an exclusive digital video. The Governor also thanked riparians for the work they do to protect Michigan's surface water.

Keynote Speaker Dr. Alan Steinman, Director of Annis Water Institute,

Grand Valley State University, then energized the conference with his concept of managing Michigan's water resources on both the individual watershed and macro-area watershed basis. Dr. Steinman's presentation provided the basis for many of the following break-out sessions focused on innovative lake stewardship.

Over 90% of the attendees welcomed the Friday evening changes, which featured elimination of the banquet in favor of snacks followed by Hors d'oeuvres (really a buffet), expanded cash bar time, and three hours to visit exhibitors and network with fellow riparians. Everyone enjoyed the new Saturday morning "Breakfast with

Cliff Bloom, Riparian Law Expert" opportunity to learn the most recent developments in Riparian Law.

MLSA experimented with Digital Video Recording of several break-out sessions and collected many PDF copies of the presentations. Access to these resources are limited to conference registrants, as well as to Lake Association, Organization/Corporation, and Individual MLSA Members in good standing.

The fall issue of *THE MICHIGAN RIPARIAN* magazine will provide more in-depth coverage of the 2019 MLSA Conference. [R.](#)



Dr. Alan Steinman

Photo Credit: Grant Jones



Socializing at the conference

Photo Credit: Grant Jones



Cliff Bloom

Photo Credit: Grant Jones

REPRINTING Articles from the Magazine

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

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

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PERFLUORINATED CHEMICALS

(Continued from page 13)

TREATING YOUR WATER

For residents treating their own water, there are several ways to reduce some of the PFAS compounds. Drinking water treatment units that are able to reduce PFOS and PFOA to below 70 ppt and that have been certified by NSF International, include point-of-use carbon-based systems, such as activated carbon, reverse osmosis and nanofiltration systems. Conventional treatments utilizing coagulation, flocculation, sedimentation and filtration will not remove PFAS. Oxidants and disinfectants have also been shown to be ineffective in controlling these chemicals in drinking water (NSF International 2017).

The Michigan Department of Environment, Great Lakes and Energy (formerly MDEQ) has developed a fact sheet that addresses point of use treatment. A PFAS website has also been developed by the State of Michigan to address questions.

This article was reviewed by Dr. Courtney Carignan - Department of Food Science and Human Nutrition

Steven Hussey and Megan Sprague - Michigan Department of Agriculture and Rural Development. 

CITED REFERENCES:

ATSDR - Agency for Toxic Substances and Disease Control. 2017. Per- and Polyfluoroalkyl Substances (PFAS) and Your Health. Agency for Toxic Substances and Disease Registry (ATSDR). Online at: <https://www.atsdr.cdc.gov/pfas/index.html>

Bruton, Thomas A., and Arlene Blum. 2017. Proposal for coordinated health research in PFAS-contaminated communities in the United States. Environmental Health 16:120. Online at: <https://doi-org.proxy2.cl.msu.edu/10.1186/s12940-017-0321-6>

EPA (Environmental Protection Agency). 2017a. Drinking water health advisories for PFOA and PFOS Online at: <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>

EPA. 2017b. Basic Information on PFAS. Accessed online at: <https://www.epa.gov/pfas/basic-information-pfas>

Giesy, John P. and Kurunthachalam Kannan. 2001. Global Distribution of Perfluorooctane Sulfonate in Wildlife. Environ. Sci. Technol. 35: 1339–1342.

Grandjean, P. and R. Clapp. Perfluorinated Alkyl Substances: Emerging Insights into Health Risks. New Solut. 25(2): 147-163.

Hu, Xindi C. et al. (2016). Detection of Poly- and Perfluoroalkyl Substances (PFASs) in U.S. Drinking Water Linked to Industrial Sites, Military Fire Training Areas, and Wastewater Treatment Plants. Environmental Science & Technology Letters. 3(10), 344-350.

Hansen, K.J., L.A. Clemen, M.E. Ellefson, and H.O. Johnson. 2001. Compound-specific, quantitative characterization of organic fluorochemicals in biological matrices. Environ. Sci. Technol. 35: 766–770.

NSF International. 2017. PFOA/PFOS in Drinking Water. Online at: <http://www.nsf.org/consumer-resources/water-quality/drinking-water/perfluorooctanoic-acid-and-perfluorooctanesulfonic-acid-in-drinking-water>

Wang, Zhanyun, Jame DeWitt, Christopher Higgins and Ian Cousins. 2017. A Never-Ending Story of Per- and Polyfluoroalkyl Substances (PFASs)? Environ. Sci. Technol. 51(5): 2508-2518. Accessed at: <https://pubs.acs.org/doi/full/10.1021/acs.est.6b04806>



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CROCKERY LAKE

(Continued from page 25)

Photo Credit: Lesha Gustin

In 1975, the Ottawa County Health Department acknowledged the problem on our lake. In a letter to Township Supervisor Meerman, they stated, “[s]mall lots, poor soils and fluctuating water levels are among the problems encountered in trying to find a solution for the troubled residents of this area.” The soil around most of the lake does not adequately filter septic waste. There are many outdated, poorly working septic systems that regularly leach into the lake. There is no way to monitor the septic systems except when the property is sold.

The CLA Board is not giving up hope. We are working on obtaining a grant so we can have an updated water quality assessment report. A sewer system is imperative for the health of our residents and the lake. We are confident the results from the study will persuade residents to agree to fund a sewer system.

BATTLE OF SHORELINE CONGESTION


Residents continue to increase the size and amount of water “toys”, boats and docks. Recent changes to our ordinance include setbacks for placement of docks, boats, and shore stations so as not to interfere with neighbor’s riparian rights. 



Photo Credit: Linda Lane

Sources:

Chester Township, Ottawa County website
([www.Chester-Twp.org/regulations and ordinances](http://www.Chester-Twp.org/regulations%20and%20ordinances))

Interview with Alice Laughton

Michigan Department of Natural Resources website (www.Michigan.gov/DNR)

Ottawa County, Michigan website (www.miottawa.org.)

Ottawa County Health Department letter from 1975

2016 CLMP Data Report (www.micorps.net/lake-monitoring)
www.Lake-link.com

M Live

Crockery Lake Association Board Minutes
(www.crockerylake.org/wp/archives)



WAKE BOATS, AGAIN!

By Clifford H. Bloom, Esq.
Bloom Sluggett, PC | Grand Rapids, Michigan
www.bloomsluggett.com

Wake boats (also known as ski boats, wakeboard boats, bladder boats or wave boats) continue to be one of the “hot topics” among lakefront property owners throughout Michigan. To date, I have authored three prior articles for this magazine on wake boats – (the Fall, 2013 article entitled “Of Mosquitoes and Killer Bees,” the article called “*The Killer Bees Appear to be Winning – An Update regarding Wake Boats/Bladder Boats*” in the Fall, 2017 issue of the magazine and the article entitled “*More on Wake Boats*” in the Fall, 2018 issue). Wake boats are clearly a “hot topic” in Michigan.

On May 4, 2019, at the annual convention for the Michigan Lakes Stewardship Associations (“MLSA”) at Crystal Mountain, there was a very interesting symposium on wake boats. In addition to presentations by a professor of Ecology and Evolutionary Biology, two boating industry representatives also spoke. The presenters were both candid and knowledgeable. The video clip of that presentation can be viewed by contacting Melissa DeSimone melissa.desimone@mlswa.org.

There appears to be no major dispute that wake boats can generate huge waves and the wakes from wake boats can be destructive to the shoreline, swimmers and other boaters if a wake boat is not properly used. The key appears to be the amount of distance between the wake boat (when the wave producing mechanisms are deployed) and the shoreline, other boats or kayakers and swimmers when the boat produces waves. Currently, Michigan law only requires a 100 foot isolation distance. MCL 324.80146 and 324.80149. Other states either have or are considering much greater distances such as 200 feet, 300 feet, 500 feet or even more. At the symposium, a boating industry study was cited that indicated most of the waves from a wake boat dissipate at between 200 and 300 feet from the boat (although the impacts are greatly

reduced by 200 feet) and almost completely dissipate at the 500 foot mark.

Given the computerized nature of most wake boats, the wake producing mechanism can be turned off and on by the boat captain. Presumably, it should be fairly easy to add a computer component to wake boats to tell the boat captain how far away from shore the wake boat is located at any specific moment given GPS technology.

Another increasing problem associated with wake boats is noise from radio or audio player speakers. Apparently, the “towers” on wake boats provide a good platform for high intensity loud audio speakers. And, given that sound often carries a great distance on water, music blasting from a wake boat can annoy both area people and animals and birds as well.

It has become apparent that the boating industry realizes that the huge waves and music noise from wake boats is becoming an increasing problem on many lakes throughout the nation and certainly does not want to see wake boats banned. Therefore, the industry is prudently putting more time and resources into education campaigns urging operators of wake boats to be more courteous, only engage the wake/wave producing mechanism far off shore and away from other boats, minimize audio speaker noise and not engage in repetitive swings near the shore. Accordingly, if a wake boat captain tries to dispute the desirability of boating courtesy, only engaging the wake/wave mechanism far away from shore, turning down the speaker noise and not engaging in repetitive trips in the same area over and over again, one need only point to the boating industry itself and industry publications to prove the complaining wake boat operator wrong.

(Continued on page 30)

WAKE BOATS, AGAIN!

In the opinion of this author, the best solution (or at least partial solution) to the problems caused by wake boats is for the Michigan Legislature to increase the minimum distance from shore, swimmers and other boaters or kayaks within which a wake boat can utilize its wave-making ability. Currently, Michigan law sets that distance at only 100 feet. That distance should be increased to at least 200 to 300 feet, and arguably 500 feet for wake boats. Of course, that will eliminate the ability of wake boats to utilize their wave making capacity in some small lakes. However, that does not seem unreasonable. You would not think of driving a Ferrari on a gravel road or within a quiet residential neighborhood or launching or using a cigarette boat in a five acre pond. Likewise, there are certain small lakes or lake conditions whereby a wake boat should not be operated. Furthermore, wake boats could still be used in smaller lakes akin to a speed boat, but the wave making mechanism could not be engaged.

It is unclear under Michigan law whether a local city, village or township can impose a greater “no wake” area on lakes for boating purposes or whether that area is preempted by state law. Regardless, it would be best if any increase in the 100 foot “no wake” law for wake boats be implemented at the state level. With regard to loud audio speakers on boats, however, local municipalities likely have full authority to regulate such noise via decibel levels under the appropriate ordinance. Loud speakers could also be considered a “disturbing the peace” offense under certain circumstances.

The issue of liability for wake boat operators for the destruction of natural shorelines, seawalls, docks and other shore area structures also came up at the symposium. In general, a boat operator is responsible and potentially liable for the impacts of his or her specific boating activities (including waves). And, if there is definitive proof that the wake from a specific wake boat and its operator caused damage to a dock, a swimmer to drown or some other direct injury, the liability and damages would likely attach to that boat operator. However, damage to shorelines, seawalls, docks and other shore area structures caused by cumulative wake boat use would make successful litigation difficult, as the damages could be caused by multiple or many different wake boat operators. In that case, it is possible that the

injured party could file a mini-class action lawsuit against all wake boat operators on the lake involved, or a group of riparians could potentially bring a class action lawsuit against all wake board operators in the state or the boating industry in general, although it is unclear whether such litigation is feasible or could be successful. Hopefully, such lawsuits will not be necessary if wake boat operators use common sense and simply engage in courteous boating behavior. *R.*

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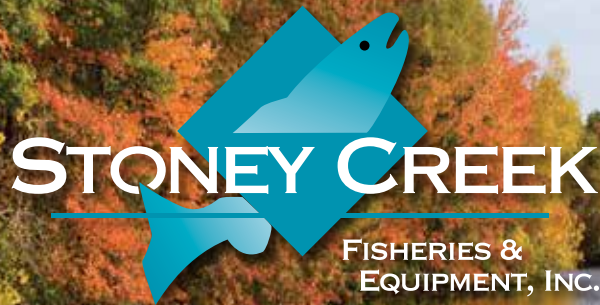
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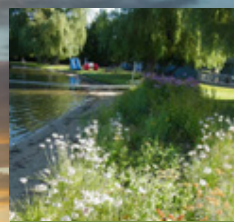
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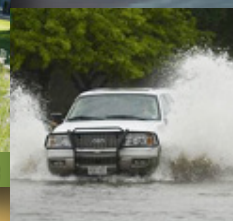
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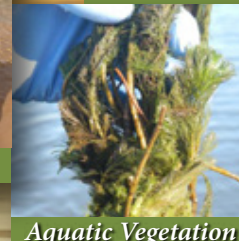
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