

NALMS Notes



July 2013

President's Message

It's July! Happy Lake Appreciation Month! We'd like to hear from our affiliates and members throughout North America - what are you doing to celebrate? Are you organizing a lake or watershed or shoreline cleanup? A fishing rodeo? An educational event to curb transfer of invasive or exotic plants and animals? Share your ideas and photos and perhaps you will inspire others to do the same! Most of all, enjoy the lake in a safe and sustainable way. Let us know what you're up to on our [facebook page](#) or on our [Linkedin group page](#).



It is definitely time to make your plans for the NALMS Annual Conference in San Diego! Follow this link for information on registration, sponsorships and exhibitions: [click here](#). See you there!

WITHIN NALMS

Membership in Motion

On June 29 NALMS officially achieved our goal of reaching 1,000 members! Unfortunately a number of memberships promptly expired on June 30th – so we still have some work to do. If you are one of the 70 members who haven't renewed yet please do so soon. Earlier this month we also sent out membership renewal letters and invoices for those memberships that will expire on September 30th. If your membership has recently expired, or will soon, you can renew [here on the NALMS website](#) or [fill out a Membership Registration Form](#) and send it to our office. Call me at 608.233.2836 or email me at garenz@nalms.org if you have any questions.

Here is a big “THANK YOU” to the list of members below that renewed their memberships or joined NALMS during the last month.

New NALMS Individual Members: Kevin Bierlein, Rhonda Birdnow, Brett Branco, Jesse Filbrun, Rebecca North, Donald Roeder, Steven Steinberg, Patricia Valdespino Castillo, Christopher Wright

New NALMS Corporate Members: Fluid Imaging Technologies

Renewing NALMS Individual Members: Jae Abel, David Buetow, John Burgess, Richard Chase, Lyn Crighton, Marlene Evans, Federation Of Vermont Lakes And Ponds, Rolland Fulton, Sherm Garrison, Wendy Gendron, Thomas Grizzard, John Hanish, Ronald Harris, Michael Hartshorne, Barb Horn, George Izaguirre, Mark Jakubauskas, Robert Johnson, John Jones, David Jude, Scott Lowe, Fred Lubnow, Terry McNabb, Fernando Molina OM, Sara Peel, Andrea Plevan, Curtis Porterfield, Ellen Preece, R. L. Raschke, Andrew Schaedel, Megan Skinner, Therese Thompson, Daniel Tufford, Bill Vernieu

Renewing NALMS Corporate Members: Ecosystem Consulting Service, Inc.

Finally, as you all start thinking about registering for our upcoming Symposium in San Diego I'd like to remind you that one of your member benefits is a conference discount. Please be sure to take advantage of this reduced pricing when you register for the conference. [Click here to see this year's savings.](#)

And as always, if you have any questions about this benefit or any others please contact me.

Greg Arenz
Membership Services Coordinator
garenz@nalms.org

NALMS Office Notes

Between recently returning from vacation and the heat wave here in Madison, my brain's a bit fried so this month's NALMS Office Notes will be in bite-sized chunks:

- Continuing the social media theme of last month's article, NALMS now has an actual Twitter account, @NALMStweets (@NALMS was taken). This joins our account for the San Diego symposium (@NALMS2013).
- Lakes Appreciation Month is almost over. How have you celebrated Lakes Appreciation Month this year?
- Registration for the San Diego symposium is in full swing. A preliminary program will be posted soon and you can register online at <http://www.cvent.com/d/gcqzyb>. Early Bird rates are available until September 6.
- We are accepting abstracts for the 9th National Monitoring Conference, which will be held in Cincinnati, Ohio April 28 – May 2, 2014. Visit the conference website at <http://acwi.gov/monitoring/conference/2014/> to submit your abstract. The deadline is September 20.



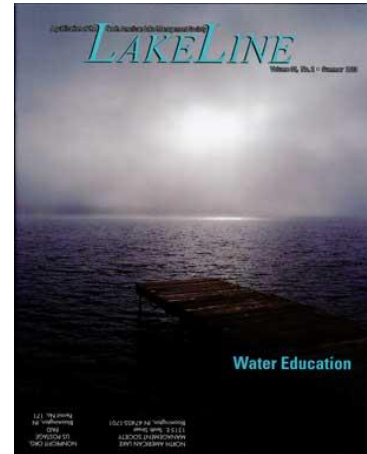
Go out and appreciate a lake!

Philip Forsberg
Program Manager

What's New in LakeLine?

NALMS is proud to announce the summer issue of the 33rd volume of LakeLine magazine. This issue of LakeLine has the theme of Water Education and features the following articles:

- *Seven Habits of Highly Effective Lake Science Communicators* by Mary Ann McGarry, Steve Kahl, and Maggie Shannon
- *Social Marketing – Making Clear Choices or Clean Water* by Lyn Crighton
- *Catfish Fisheries Pose Threat to Amazon River Dolphins* by Vanessa J. Mintzer.
- *Building Environmental Literacy Through Hands-on Science* by Anne Burnett and Rachel Vallens Benditt.
- *Bridging a Racial Divide Through Aquatic Education* by John Winters.
- *2012 Rio Rancho Children's Water Festival* by Lynn Kronowit and Marian Wrage.
- *Nitrogen Game: Successfully Bridging the Gap Between Educational Learning and Fun* by Dana Bigham, Julie Collins, and Teri Balser.
- *Using Service Learning to Teach Limnology* by Frank M. Wilhelm.
- *Re-visiting Middle School: My Experience as a Science Mentor* by Lindsey Witthaus.
- *Worldviews: Hello, from Finland* by Anne-Mari Ventaelä.
- *Literature Search* by Bill Jones

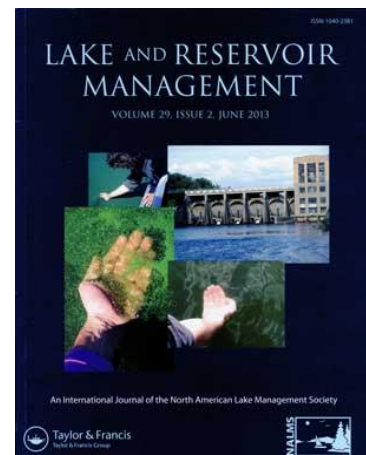


LakeLine is a quarterly publication of the NALMS. Every NALMS member receives the magazine and as such NALMS uses it to inform and educate readers about current issues related to lake management as well as to keep NALMS members informed on the Society's business and activities.

What's New in LRM?

NALMS is pleased to announce the second issue of the 29th volume of the International Journal Lake and Reservoir Management (LRM). The newest issue of LRM includes the following papers:

- *Lakes without Landsat? An alternative approach to remote lake monitoring with MODIS 250 m imagery.* Ian M. McCullough, Cynthia S. Lftin, and Steven A. Sader.
- *NOTE: Comparing rapid and culture indicator bacteria methods at inland lake beaches.* Donna S. Francy, Rebecca N. Bushon, Amie M.G. Brady, and Christopher M. Kephart.
- *Dynamics of Aphanizomenon and Microcystis (cyanobacteria) during experimental manipulation of an urban impoundment.* Kahli E. McDonald and John T. Lehman.
- *Effect of reducing allochthonous P load on biomass and alkaline phosphatase activity of phytoplankton in an urbanized watershed, Michigan.* John T. Lehman, Jonathan P. Doubek, and Elliot W. Jackson.



- *Simulating hedging rules for effective reservoir operation by using system dynamics: a case study of Dez Reservoir, Iran.* Farshid Felfelani, Amir Jalali Movahed, and Mahdi Zarghami.

While all papers relevant to lake management are welcomed as submissions to LRM, we are interested in receiving enough papers on specific topics to support a themed issue for those topics. Several papers, including review articles, have been solicited, but there are surely more research efforts that we would like to showcase. Topics which we feel warrant greater exposure include:

- **Cyanobacterial toxins**
- **Oxygenation and circulation as lake management techniques**
- **Phosphorus inactivation**
- **Use of florescence in monitoring**
- **Remote sensing and lake management**
- **Cost of lake management**

Published quarterly, LRM issues original, peer-reviewed and previously unpublished studies relevant to lake and reservoir management. Papers address the management of lakes and reservoirs, their watersheds and tributaries, along with the limnology and ecology needed for sound management of these systems.

UPCOMING CONFERENCES & EVENTS

NALMS 33rd Annual Symposium Information

October 30 - November 1, 2013

San Diego, California

Lake Management in an Era of Uncertainty



- [Click here to register](#)
- [Click here for Exhibitor information](#)
- [Sponsorship Packet](#)
- [Past Symposia](#)

Important Dates

- **August 16, 2013** - Registration and payment from presenters of accepted abstracts due.
- **September 27, 2013** - Last day conference hotel rate available.
- **September 6, 2013** - Early bird registration ends
- **October 18, 2013** - Regular registration ends

Contact Information

- **Todd Tietjen** - Symposium Co-Chair - todd.tietjen@snwa.com
- **Imad Hannoun** - Symposium Co-Chair & Sponsor/Exhibitor Chair - hannoun@wqsinc.com
- **Bill Taylor** - Program Chair - lakefixer@yahoo.com

- **Jeff Pasek** - Local Arrangements Chair - JPasek@sandiego.gov
- **Jeff Schloss** - NALMS Conference Advisory Chair - jeff.schloss@unh.edu
- **Greg Arenz** - NALMS Office Sponsor Support - garenz@nalms.org
- **Philip Forsberg** - NALMS Office Exhibitor Support - forsberg@nalms.org

Sponsorship Highlight: NALMS 2013 Symposium

The following companies have committed to sponsoring our 2013 Symposium in San Diego, California. Please visit them on the web and express your appreciation by clicking on their logos. We still have a number of sponsorship opportunities available. [So if you are interested in sponsorship please click here!](#)



- [Tennessee Valley Authority](#)



- [Princeton Hydro](#)



- [Freese and Nichols](#)



- Water Resource Services



- [PhycoTech](#)

PhycoTech



- [HAB Aquatic Solutions](#)



- [Santee Lakes Recreation Preserve](#)

Call for Abstracts – 9th National Monitoring Conference

Working Together for Clean Water

9TH NATIONAL MONITORING CONFERENCE ■ April 28 – May 2, 2014 ■ Cincinnati, Ohio



The National Water Quality Monitoring Council's (NWQMC) 9th National Monitoring Conference, to be held in Cincinnati, Ohio from April 28 - May 2, 2014.

This conference focuses on the many facets of water quality and quantity monitoring for improved understanding, protection, and restoration of our natural resources and communities. This centerpiece forum attracts water practitioners from all backgrounds, including federal, state, local, tribal, volunteer, academic, private, and other water stakeholders. Attendees exchange information about water monitoring, assessment, research, protection, restoration, and management; learn about new findings on the quality of the Nation's streams and rivers, groundwater, estuaries, lakes and wetlands; and develop new skills and professional networks.

The conference includes presentations, panels, poster sessions, exhibits, hands-on interactive workshops, field trips, the Fluid 5K run, as well as time for after-hours meetings and networking.

Please refer to the "Call for Abstracts" at: <http://acwi.gov/monitoring/conference/2014/CFA.pdf> for specifics on themes and potential topics of interest. For additional conference information or to submit an abstract go to: <http://acwi.gov/monitoring/conference/2014/index.html#>. All abstracts must be received no later than September 20, 2013. Please feel free to distribute this announcement to your colleagues

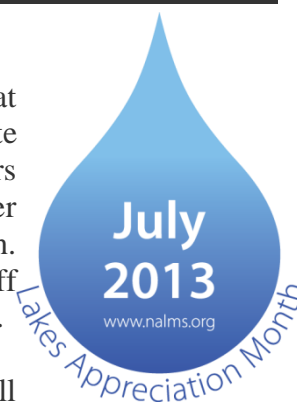
LAKE NEWS & INFORMATION

July is Lake Appreciate Month - So Get Out There and Appreciate!

Source: Aquarius Systems – Solutions Water Matters

Americans love to spend July, especially the Fourth, on the water, at beaches, and on lakeshores. Boating, fishing, and swimming are favorite recreational uses of American lakes and reservoirs. Lakes and reservoirs also play other vital roles: They provide drinking water and irrigation water for agricultural fields and are a source of electricity and power generation. They also serve the important function of absorbing rainfall and runoff from land, help to prevent floods, and provide homes for precious wildlife.

The North American Lake Management Society (NALMS) is requesting all U.S. states to officially declare July Lake Appreciation Month. Twenty states have made such a proclamation, but the rest need to follow suit to show their support in this priceless natural resource.



Join the Search for a Superweed!

Source: Northeast Illinois Invasive Plant Partnership, the Chicago Botanic Garden, and the Lake County Health Department - Lakes Management Unit. <http://niipp.net/>

The ***Hydrilla Hunt!*** program solicits help of Illinois' lake and river enthusiasts to discover invasive aquatic plant



Boaters, anglers, swimmers, and others who enjoy Illinois' lakes and rivers are keeping their eyes peeled this summer for an aquatic "superweed." Through the ***Hydrilla Hunt!*** program, citizen volunteers are on the lookout for a highly invasive aquatic plant named *Hydrilla verticillata*, or simply "hydrilla."

Recognized as one of the world's worst weeds, hydrilla can grow an inch per day and form dense mats of vegetation at the water surface. Hydrilla is already a noxious weed in the southern United State; as of May 2013, it's been found in the graphic's green-shaded states.

Within the past few years, hydrilla has been discovered in Wisconsin and Indiana, and it is expected to arrive in Illinois very soon. Illinois' desirable native aquatic plants, sport fishing, native wildlife, waterfront property values, and recreational uses might all be seriously impacted.

"Illinois could save millions of dollars in control costs if we're able to detect hydrilla early-on," noted Bob Kirschner of the Chicago Botanic Garden. "Once a waterway becomes infested with hydrilla, experience from other states shows that it's nearly impossible to control. Our hope in Illinois is to identify the plant at the earliest possible stage when populations are still small enough to eradicate and manage," adds Bob.

The monoecious strain of hydrilla that's been found in the northern United States is believed to have originated in Korea. It grows on mucky as well as sandy bottoms of lakes and rivers, and from very shallow water to depths of 20 feet or more. It can be spotted snagged on fishing lines or on boat anchors, or by noting plants seen while boating or growing along the sides of a pier. Hydrilla spreads quickly, since just a small stem fragment of hydrilla can sprout roots and grow into a whole new plant. Hydrilla also produces tubers that can remain viable for many years at the bottom of a lake or river.

Anyone can participate in Illinois' ***Hydrilla Hunt!*** program. Volunteers are encouraged to take a more detailed look at aquatic plants they encounter while out and about on Illinois' waterways. A Hydrilla Identification Sheet (available for download [here](#)) can be used to differentiate hydrilla from look-alike plants such as Brazilian elodea and American elodea. Volunteers who suspect they may have found hydrilla are asked to take several digital photographs and email them to the ***Hydrilla Hunt!*** program for verification.

For more information including how to become a *Hydrilla Hunt!* volunteer, a Hydrilla Identification Sheet, and other resources, visit www.niipp.net/hydrilla. The *Hydrilla Hunt!* program is coordinated by the Northeast Illinois Invasive Plant Partnership, the Chicago Botanic Garden, and the Lake County Health Department - Lakes Management Unit.

Summer Webcast Series to Build Awareness about Harmful Algal Blooms and Nutrient Pollution

Source: www.epa.gov/watershedwebcasts

Join us on July 25, 2013, for "**Perspectives on the Impact to Public Health of Harmful Algal Blooms (HABs)**," the second in an exciting series of summer webinars about this worsening environmental problem and public health threat.

Lorraine Backer with the Centers for Disease Control (CDC) and **Andy Reich** with the Florida Department of Health will continue the series with a discussion of the various ways HABs threaten the health of people and animals, and what the public can do to stay healthy. Lesley Vazquez-Coriano, a HAB expert in EPA's Office of Science and Technology, will moderate.

1 1/2 hour Webcast

1 p.m.-2:30 pm Eastern

12 p.m.-1:30 p.m. Central

11 a.m.-12:30 p.m. Mountain

10 a.m.- 11:30 am Pacific

- [Register for the Webcast](#)
- [Flyer for the July 25th Webcast](#)(1 p, 452K, [About PDF](#))

Eating Buffalo Fish Linked to Rare, Serious Disease

Source: *Clarion Ledger* July 11, 2013

<http://www.clarionledger.com/article/20130712/NEWS01/307120023/Eating-buffalo-fish-linked-rare-serious-disease>

Mississippi Outdoors magazine editor Mark Beason (left) and Nick Wallace, chef at the King Edward Grill in Jackson, show off fresh buffalo fish caught in the Big Black River. / Special to The Clarion-Ledger

When Delta native and blues great B.B. King visited Jackson in June and stayed at the downtown Hilton Garden Inn, he made a special request.

“He called before he got here, and he said, ‘I just came back from Vegas. Call the chef, and see if he can get some buffalo fish.’” Nick Wallace, chef at the hotel’s King Edward Grill, recalled Thursday.

“I called Mark (Beason) at 8 that morning, and he was at my doorstep with a catch from the Big Black River by 9:30 a.m.,” Wallace said, referring to the Mississippi Outdoors magazine editor and sportsman.



He fried the fish — the preferred way to serve buffalo — and delivered it to King in his room at 2 that afternoon.

The fish has a huge audience in the Delta and other parts of the state. It doesn't have a reputation for making anyone ill, Wallace and others say, although those who cook and consume it need to be aware of its many bones.

The buffalo, however, has made three Mississippians sick with a very rare syndrome that occurs when the fish is consumed, state Department of Health officials report. Haff disease is a serious illness caused by a toxin that results in severe muscular pain.

The three Mississippi cases are members of one family and are linked to the consumption of cooked buffalo fish harvested in Mississippi waters, Department of Health officials said today. They're the first recorded cases in Mississippi, although Haff disease has been associated with consumption of buffalo fish in other areas of the country.

The department is not releasing where the three live, "but the family is fine," said Liz Sharlot, department spokeswoman. "The fish was caught in the Yazoo River, and it was purchased from a store and consumed," she said.

Symptoms of Haff disease, which typically occur within 12 hours of consuming the fish, include muscle weakness and pain, dry mouth, chest pain, nausea, vomiting, confusion, and dark urine. Intravenous fluids and other treatments can help resolve symptoms. Severe symptoms typically resolve quickly, although some patients complain of fatigue for months following acute stages of the illness. Anyone experiencing symptoms after eating buffalo fish should immediately seek medical care, Sharlot said.

Buffalo fish are found in large numbers in many rivers in Mississippi, Arkansas and Louisiana, and the Yazoo River should not be considered any more problematic for diseased fish than anywhere else, Sharlot said.

Most Mississippians who eat buffalo fish won't get sick, the department says. If a buffalo fish carries the syndrome, officials say, cooking it won't reduce the risk of disease.

The Bowie Lane Fish Market in Greenwood does big business with the Delta staple, its manager says.

"We probably go through 300 pounds a week. It's great," said Josh Downs, whose wife Michelle owns the 26-year-old family business.

Downs said he's never heard of anyone getting sick from buffalo fish, be it caught locally, bought at a market or consumed at a fish house.

Wallace, too, says he doesn't hear much in culinary circles about illness borne by the buffalo. The bones are a more pressing concern.

“My grandma used to always say that it needs to be cooked, that you always want to eat it piping hot,” he said. “She used to boil buffalo and pick the bones out of it and make buffalo cakes out of it.

“Once it starts cooling off, it doesn’t eat as well, and the bones hide inside the flesh. You have to be very careful.”

Be careful what you wish for when managing aquatic weeds

*Posted on July 9, 2013 by Dan O’Keefe,
Michigan State University Extension
http://msue.anr.msu.edu/news/be_careful_what_you_wish_for_when_managing_aquatic_weeds*



Shallow lakes often suffer from excess nutrient inputs. Dense growth of aquatic plants can result, but plant management efforts can sometimes result in loss of water clarity and long-term problems with algae growth.

Merriam-Webster alternately defines “weed” as a plant that is not valued where it is growing or any aquatic plant. The first definition acknowledges that human values determine which plants are deemed weeds, while the second could be taken as proof that many people do not place much value on aquatic plants.

Aquatic ecologists tend to avoid the term “weeds” when referring to macrophytes – the rooted aquatic plants that many swimmers and boaters disdain. These plants provide food for waterfowl and habitat for fish, but they can also play a critical role in maintaining water clarity.

This is especially true in shallow lakes and ponds. In ecology, the alternative stable states concept acknowledges that ecosystems can sometimes have more than one stable equilibrium point. Many lakes and ponds have two stable states: weedy and clear or devoid of weeds and muddy. This leaves riparian landowners and lake managers with a choice between two undesirable endpoints when nutrient levels are intermediate.

Nutrients (primarily phosphorus) have an important role in determining the balance between rooted plants (“weeds”) and the suspended phytoplankton (algae) that contributes to turbidity (“muddiness”).

At low nutrient levels, the rooted plants win out because water is clear and plenty of light reaches the bottom of the lake. At high nutrient levels, the algae win out and effectively shade out rooted plants – this means extremely low water clarity and sometimes harmful algal blooms. At intermediate nutrient levels, things get a bit tricky. In this case, lakes can be pushed in one direction or the other – sometimes inadvertently.

In these intermediate lakes, additional nutrient inputs (perhaps from septic fields or urban and agricultural runoff) can push a lake past its threshold and result in “catastrophic transition” to a muddy and algae-dominated state. When this happens, it can be very difficult to restore water clarity and rooted plant communities.

Weed management might also push a lake over its threshold point. One [study](#) used computer simulations to investigate the outcome of various management strategies and found that management for intermediate vegetation density can be impossible in certain lakes. While intermediate levels of rooted vegetation are often ideal for fish, wildlife and human users, they can be impossible to attain in shallow lakes with intermediate nutrient levels.

While this might sound complex, reasons for the loss of water clarity following aquatic plant control are straightforward. Rooted plants prevent mucky bottoms from being stirred up by wind-driven currents, boating activity, and other disturbances. They also suppress algae growth by taking up nutrients. Some plants even release chemicals that further impede algae growth.

When rooted plants are destroyed, mucky bottoms get stirred up and re-suspend nutrients. Competition with algae ceases and foul blooms occur. If plant biomass is not mechanically removed, the rotting vegetation further adds to nutrient availability, turbidity, and algae growth.

If you are concerned about water clarity, be wary of large-scale vegetation control programs on shallow lakes. In other words, be careful what you wish for.

This article was published by Michigan State University Extension. For more information, visit <http://www.msue.msu.edu>.

Significant Harmful Algal Bloom Predicted in Western Lake Erie

Source: The Fish Site - 11 July 2013 <http://www.thefishsite.com/fishnews/20698/significant-harmful-algal-bloom-predicted-in-western-lake-erie%23sthash.QodkMQtT.dpuf>

US - NOAA and its research partners predict that the 2013 western Lake Erie harmful algal bloom (HAB) season will have a significant bloom of cyanobacteria, a toxic blue-green algae, this summer.

The predicted bloom is expected to be larger than last year, but considerably less than the record-setting 2011 bloom. Bloom impacts will vary across the lake’s western basin. This marks the second time NOAA has issued an annual outlook for western Lake Erie.

“This annual forecast and NOAA’s weekly bulletins provide the most advanced ecological information possible to Great Lakes businesses and resource managers so they can save time and money on the things they do that drive recreational activities and the economy,” said Holly Bamford, PhD, NOAA’s assistant administrator for the National Ocean Service.

Harmful algae blooms were common on western Lake Erie in the 1960s and 1970s. After a lapse of nearly 20 years, they have been steadily increasing over the past decade. As an early warning system, NOAA has issued weekly HABS bulletins for western Lake Erie since 2008 through the

National Centers for Coastal Ocean Science (NCCOS). The weekly bulletins will continue in 2013.

"This information is critical for tourists, coastal businesses, water treatment plant operators, state and regional natural resource managers and scientists throughout Ohio, the region, and the country," said Jeff Reutter, PhD, director of Ohio State University's Sea Grant program and Stone Laboratory. "In Ohio, as part of our Phosphorus Task Force II, we have used information from the NOAA model to help us target reductions in the amount of phosphorus going into the lake that would eliminate, or greatly reduce, the HABs."

"The timing, size and location of blooms heavily impact our charter businesses," said Captain Rick Unger, owner of Chief's Charters and president of the Lake Erie Charter Boat Association. "I use the weekly bulletins to plan my trip routes and fuel costs, but more importantly they help me get our visitors out of their hotel rooms and onto the water."

The 2013 seasonal forecast, made possible using NOAA models developed by NCCOS scientists, uses an 11-year data set of nutrients flowing into Lake Erie, collected by the Heidelberg University's National Center for Water Quality Research, and analysis of satellite data from the European Space Agency's Envisat. In addition to the satellite monitoring of the lake, NOAA's Great Lakes Environmental Research Laboratory, Ohio State University's Sea Grant Program and Stone Laboratory, Heidelberg University, the University of Toledo, and Ohio EPA will be collecting key measurements from the lake as the summer progresses. Those results will provide valuable information to regional managers and assist NCCOS scientists in further refining the accuracy of this forecast's models.

"Issuing and evaluating this seasonal forecast allows us to develop ways to help resource managers plan for conditions that will occur later in the summer," said Richard Stumpf, PhD, NOAA's ecological forecasting applied research lead at NCCOS.

"Through partnerships with Heidelberg University and Ohio Sea Grant, we bring live tools to regional managers currently facing HAB challenges, but we are also constantly re-calibrating and evolving our forecasting products to meet changing HAB conditions."

The NOAA forecast models and analyses draw on several sources, including nutrient data from Heidelberg University's National Center for Water Quality Research and satellite data from MERIS and NASA's Moderate Resolution Imaging Spectro-radiometer. Funding to support the program was provided through NCCOS, NOAA's Center of Excellence for Great Lakes and Human Health, and NASA's Applied Science Health and Air Quality Program.

The Lake Erie forecast is part of a NOAA ecological forecasting initiative that aims to deliver accurate, relevant, timely, and reliable ecological forecasts directly to coastal resource managers and the public as part of its stewardship and scientific mandates for coastal, marine and Great Lakes resources. Additionally, NOAA currently provides, or is developing, HABs and hypoxia forecasts for the Gulf of Maine, Chesapeake Bay, the Gulf of Mexico and the Pacific Northwest.

TheFishSite News Desk

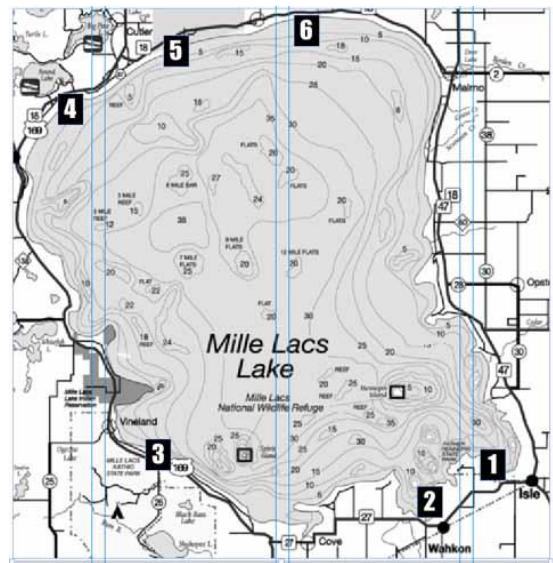
- See more at: <http://www.thefishsite.com/fishnews/20698/significant-harmful-algal-bloom-predicted-in-western-lake-erie%23sthash.QodkMQtT.dpuf>

Watershed moment: The History and Ecology of the Big Lake

Source: By MATT McMILLAN Posted: Saturday, June 22, 2013 6:00 am
http://www.messagemedia.co/millelacs/outdoors/article_f72259da-d827-11e2-b2a0-001a4bcf6878.html

For many centuries, people have been coming to this area. As experts recently told a tour from the Mille Lacs Lake Watershed Management Group or MLLWMG, the Mille Lacs, eastern Crow Wing and southern Aitkin county area lies at the intersection of three biomes.

The pine forest, prairie and hardwood forest meet right here in the central part of the state's lakes region. Minnesota is the only state and region that can boast such an intersection.



Why is that important? Location, location, location. People have congregated here because of the diversity of abundant forest animals, agricultural prairies and lakes.

Well before Minnesota became a state in 1856, Daniel DuLuth and Father Hennepin were here in 1679 and 1680 documenting more than 40 villages around the lake with thousands of native residents who called the area Izatys.

That history is noted at the Vineland historical marker along U.S. Hwy. 169. The marker itself is historic, built in the 1930s by the Civilian Conservation Corps.

While the lake's ancient and more modern history is important to know, its current health is the concern of the MLLWMG. The group was organized in 1997, and is made up of individuals, agencies and businesses interested in enhancing the water quality of the lake. It meets monthly featuring speakers talking about restoring shorelines, invasive species such as zebra mussels, rain gardens, purple martens and much more.

There is no charge to join the group and anyone interested can attend a meeting. Those attending two or more meetings during one year are eligible to vote.

For group secretary Marlene Knight, participating in the group has been enjoyable. About the spring meeting Knight said, "It was very well received, people were impressed and surprised by the options available for shoreline restoration. What is done on the shoreline affects the water quality of the lake."

Participating in the watershed group is the modern way to care for the big lake. As the historical sites show, these current caretakers follow in the footsteps of centuries of people who have come here before to appreciate this rare natural intersection.

Navajo Nation Declares Drought Emergency

[Source: The Associated Press 07/02/2013 11:54:28 AM](#)

ALBUQUERQUE, N.M.--The nation's largest American Indian reservation is awash in extreme drought, and that has forced its leaders to declare an emergency.

Navajo Nation President Ben Shelly signed the emergency declaration Monday along with a memorandum directing all executive branch agencies to develop plans for responding to the drought and educating the public about its effects.

"We are going to do everything we can to bring our people through this drought. We have many needs, and we are a strong people," Shelly said in a statement. "Water is precious, and we have to learn how to conserve and change our practices to make sure we prevail through these drought conditions."

Over the last month, drought on the Navajo Nation---from the tribe's lands in New Mexico and Arizona to southeastern Utah---has gone from bad to worse. The latest federal drought maps show extreme conditions covering the Four Corners region.

Some areas of the reservation have seen just over one-third of their normal precipitation this year. The soil is dry and wells aren't producing water like they have in the past, Shelly said.

Making matters worse is summer forecasts are predicting continued high temperatures and below average precipitation for the area. Navajo emergency management officials said that will likely result in lower river flows, which could have negative effects for livestock and municipal wells.

There are about 5,000 stock ponds across the reservation, and officials said as water supplies dwindle, more pressure will be placed on the tribe's windmills and drinking water wells.

The tribe's commission on emergency management said drought conditions have already created a critical shortage of water and feed for livestock.

"The land condition will continue to deteriorate and the socio-economic framework of the Navajo Nation will be negatively impacted," the commission stated. "The livestock owners and farmers will need to plan to protect and preserve their land and their livestock."

The declaration makes available emergency funds for Navajo communities and clears the way for the tribe to seek a federal disaster declaration.

Website of the Month – Good Sources of Maps

Canada has lots of natural lakes and now there is a website that must be bookmarked. This site has fishing maps for most of the country. If you want to print one, there is a \$10 fee. They do provide some basic statistics for each map.

<http://www.backroadmapbooks.com/main/index.html>

Lake Photo of the Month

By J. A. McCrae, Title of the photo is “Pack of canoes settling down for the night”

Image can be found at

<http://www.flickr.com/photos/36681814@N05/9117271340/in/pool-nalms>



To be considered for NALMS' Lake Photo of the Month please submit your photo to the North American Lake Management Society (NALMS) Flickr Group. Be sure to include the name or location of the lake in the title.

NALMS Professional Certification Program

Looking for a Certified Lake Manager (CLM) or Professional (CLP) in your area?

Browse our list of CLM's and CLP's at <https://www.nalms.org/home/programs/list-of-certified-lake-managers-and-professionals/>

Interested in becoming a CLM or CLP?

Find out how to establish yourself as an expert in the field of lake management at <https://www.nalms.org/home/programs/professional-certification/professional-certification.cmsx>

NALMS on Yahoo Groups!, Facebook, Linkedin and flickr

To learn more about these and other NALMS social and discussion groups navigate to the following links!

http://tech.groups.yahoo.com/group/lake_management/

<http://www.facebook.com/pages/North-American-Lake-Management-Society/159923186867>

http://www.linkedin.com/groups/North-American-Lake-Management-Society-3809234?gid=3809234&trk=hb_side_g

<http://www.flickr.com/groups/nalms>

NALMS Bookstore

If you're looking for some great Lake Management Resources check out the NALMS Bookstore!

<https://www.nalms.org/home/publications/bookstore/book-store-and-subscriptions.cmsx>

NALMS Affiliate Member Newsletters

Looking for information on your local NALMS Affiliate member organization? Check for local news you can use on our Affiliate Newsletter Page at

<https://www.nalms.org/home/publications/affiliate-newsletters/newsletters.cmsx>

To submit a Newsletter please send a PDF version to Greg Arenz at membershipservices@nalms.org

Looking for a Job or have a Job to post?

NALMS maintains an online Job Board for job seekers at

<https://www.nalms.org/home/programs/job-board/job-board-home.cmsx>

Do you have a job that you would like to post on the NALMS Job Board?

Simply fill out the Job Posting Form found at <https://www.nalms.org/media.acux/98e37b01-3af1-4557-a2bd-610cdc244a1d> and fax it to 608.233.2836, mail it to PO Box 5443 Madison, WI 53705, or email it to info@nalms.org.

Post an Event

Do you have an event that you would like to share on the "Upcoming Events" page on the NALMS website? Let us know at events@nalms.org

Update Contact information

NALMS members can now go online to correct their own contact information and are encouraged to do so. Please tell your friends and colleagues who are NALMS members to check and update their records. If they are not getting LakeLine, the Lake and Reservoir Management journal, or NALMS Notes something is wrong. If they don't have access to fix their own contact info, they can call the NALMS office at 608.233.2836 or email Greg Arenz at (garenz@nalms.org) to get changes made. This goes for postal service mail as well.

Open Invitation to Add to the Next E-newsletter

If you are having a conference, have a lake-related question, need advice, looking for similar lake problems/solutions, have an interesting story to share, or just want to be heard throughout NALMS, please send your material to Steve Lundt at slundt@mwr.dst.co.us. All e-newsletter material is due to Steve Lundt by the first Friday of each month to be considered for inclusion in that month's e-newsletter. The newsletter goes out electronically monthly.