

NALMS Notes

June 2013



President's Message

Finally, summer has arrived. The patio furniture is back out on the deck, and the BBQ grill is in regular use. We are back on our lakes with fishing poles, cameras, and a cooler. Perhaps you are also a citizen scientist collecting valuable monitoring data to evaluate the health of our lakes and reservoirs. Monitoring data provides the scientific basis for good policy decisions, and thus are essential for prioritization of scarce resources. Which projects give us the biggest restoration “bang for the buck”? Where is the need for action most urgent? Volunteers provide an important extension of our monitoring networks, and I want to thank you all for your diligence and service. Citizen scientists are also on the front lines of education and outreach to lake dwellers and those in the watershed. Workshops and other venues are held to inform and modify behaviors to help keep our waterbodies healthy. NALMS strives to provide access to resources for outreach and education and supports the efforts of citizen scientists throughout North America. After your paddle around the lake, can you spare some time to volunteer? Your lake thanks you, and I do too!



Picture (left to right): Ann Shortelle (NALMS President), Julie Chambers (Region 6 Director), Sara Peel (NALMS Secretary), Jennifer Graham (Region 7 Director), and Nicki Belleza (Region 3 Director)

WITHIN NALMS

Membership in Motion

NALMS membership has rebounded nicely with a number of late renewals from the spring membership period and some new memberships. We are now officially back in the hunt of 1,000 members. Our current total is 994 members. Just 6 more to go!

Renewal efforts for the summer membership period are well underway, and we've had a good response so far from the renewal reminders that have gone out to members whose memberships will expire on June 30th. So far 135 out of 232 members have renewed their memberships!

If your membership is coming due on June 30th, 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 list of members that renewed their memberships or joined NALMS during the last month.

New NALMS Individual Members: Lisa Borre, Mary Ann McGarry, Patricia Radloff, Adam Whisenant, Jeffery Williams

Renewing NALMS Individual Members: Michael Adam, Pete Alexander, Janet Andersen, Barbara Barry, Ralph Bednarz, Peter Berrini, Mary Blickenderfer, Jonathan Butcher, Robert Carlson, Darcy Cashatt, Julie Chambers, Jania Chilima, Curtis Degasperi, Mark Doneux, Jessie Graves, Sharon Gurney, Michael Horvath, Meghan Jacobson, William James, Brian Johnson, Robert Johnson, David Laman, Richard Lathrop, William Lewis, Meghan Lunney, Dave Marshall, Dennis McCauley, Kevin Menken, Jenifer Parsons, Ellen Petticrew, Chuck Pugh, Carroll Schaal, Steve Schreiner, Marge Sidney, Kristine Stepenuck, Chris Swan, Darrell Taylor, John Wilks, Craig Wolf

Renewing NALMS Corporate Members: Morgan & Associates, Inc. dba Peroxygen Solutions, Princeton Hydro, LLC

Renewing NALMS Nonprofit Members: Arrowhead Lake Association, City Of Delafield Lake Welfare Committee

This month I'd like to highlight the NALMS Bookstore discounts that we offer to our members. NALMS bookstore is filled with excellent resources at great prices. We offer discounts on the following publications:

- [Remote Sensing Methods manual](#)
- [The Lake Pocket Book](#)
- Interactive Lake Ecology [student workbook](#) and [teacher reference](#)
- [Through the Looking Glass...A Field Guide to Aquatic Plants](#)
- [How's the Water?](#)
- And for the those of you looking to fill out your LakeLine library we also offer back issues at a discounted rate

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

Like many organizations, NALMS has a presence on various social media platforms to both communicate with our existing members and, with any luck, attract new members. Also like many organizations, we're still trying to figure out the best way to use these tools. Complicating matters is the fact that not everyone uses the same social media sites. It may be hard to believe, but not everyone is on Facebook (me, for example).

The number of social media sites/apps/tools is constantly increasing as companies try to both cash in on the trend and take advantage of people's frustration with Facebook. You now have Google+, "the other social network"; Twitter for quick communication; LinkedIn for business relationships; Path for a more private social network; Pinterest for collecting; and there's even a social network specifically for scientists (ResearchGate).



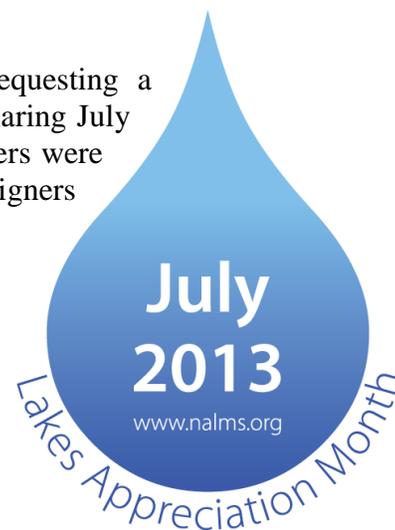
I bring all of this up because NALMS has just started dabbling in a few more of these networks. We've had a presence on Facebook, LinkedIn and Flickr for a while now, but we've just started to dip our toes into Google+, where we have a page and a community set up. Google+'s Communities and Hangouts on Air features have interesting potential for NALMS. Communities are basically discussion forums and Hangouts on Air allow you to publicly stream a video conversation among several people. On Twitter, we've set up accounts for the San Diego symposium (@NALMS2013) and the National Monitoring Conference (@2014NMC), both of which will be used primarily for conference-specific announcements.

Of course, if you want to be a part of the ultimate social network, join us this October in San Diego where you can have face-to-face discussions with fellow lake enthusiasts and limnologists. Maybe we should call it a Tweetup or a Hangout?

Philip Forsberg
Program Manager

July is "Lakes Appreciation Month"

In May 2013 NALMS sent a letter to each US state Governor requesting a proclamation recognizing the importance of lakes in their state and declaring July 2013 Lakes Appreciation Month ([Click here to read the letter](#)). The letters were signed by NALMS officers, regional directors and about 100 local co-signers that we mobilized from our membership and our social media channels.



Thank you to everyone who participated in these letters. It is our hope that they will encourage each Governor to not only raise awareness in their state through a proclamation, but will also inspire them to work with their state agencies, legislature, and key environmental groups to secure funding for local lake programs and also reach out to congressional delegates of their state and ask that they support legislation on the national level that protects and funds lake programs. So far NALMS has received proclamations from [Colorado](#), Delaware, [Illinois](#), Massachusetts, [Missouri](#), [Nevada](#), [New Hampshire](#), North Carolina, [Ohio](#), and [Vermont](#) (Click on each state to read the proclamations).

You can learn about [ways to get involved in “Lakes Appreciation Month” on our website here](#). And please [download our “Lakes Appreciation Month” logo](#) here and use it on your websites and as the profile picture in all of your social media channels during the month of July.

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

Summer Webinar Series about Harmful Algal Blooms and Nutrients by EPA

Join EPA on June 25, 2013, for *An Overview of Harmful Algal Blooms (HABs) and their Impacts in Freshwater and Marine Ecosystems*, the first in an exciting series of free summer webinars about this worsening environmental problem and public health threat. Jennifer Graham with the United States Geological Survey (USGS) and Quay Dortch with the National Oceanic and Atmospheric Administration (NOAA) will kick off the series with an introduction to HABs, their causes, and their impacts. Mario Sengco, a HAB expert in EPA's Office of Science and Technology, will moderate.

To register for this webinar and upcoming seminars, visit: epa.gov/watershedwebcasts

LAKE NEWS & INFORMATION

What happens when a Tornado goes over a Lake?

Question from Karen K. Miles, Ph.D., Karen.Miles@deq.ok.gov

This year has been an active year for tornados. Tornados have been seen crossing and/or forming over lakes over the years. What do these twisters do to the water quality of a lake? How much mixing occurs? Will a tornado make it rain carp miles away? Could a water spout spread invasive species from one lake to another? There are lots of interesting questions about when a tornado meets up with a lake or reservoir. One question has come in recently from Oklahoma.



“I received a phone call yesterday from a member of a local native tribe who does monitoring of a lake near them. When she monitored the lake after the May 20th EF-5 tornado (the one that made national news when it hit Moore, OK), she said the area was burned along the path of the tornado, the temperature of the lake was elevated, and there was green slime in the water. Has anybody ever heard of anything like this?”

If you have monitored a lake before and after an encounter with a tornado or can answer Karen’s question about water temperature and “green slime” after a severe weather event, please send her an e-mail.

Can you Explain it? Raining Fish

May 23, 2013, <http://beforeitsnews.com/paranormal/2013/05/oddties-week-its-raining-fish-2451964.html>

The theory has been that winds and water spouts crossing over water pick up the lighter fish and carry them, dropping them as the winds die down. Although it hasn’t been tested in action, the theory is the logical one.

A desert town in Australia was astonished to see it raining hundreds of fish from the sky. The fish had traveled hundreds of miles and were still alive when they hit the ground. It was believed they were picked up by a tornado.



The phenomenon of ‘The Rain of Fish’ or ‘Lluvia de Peces’ has been occurring in the Departamento de Yoro of Honduras each year since the mid-1800s. The occurrence has been puzzling not only the residents, but also scientists since it started. Each year witnesses report that in May or June, dark storm clouds, accompanied by

thunder and lightning will appear over the horizon and move over the region. The clouds are accompanied by a very heavy rain which will last upwards of three hours. Once the rain has finished, the city streets are littered with living fish.

National Geographic headed to the region in 1970 and were able to witness the event, though they were unable to offer up an explanation. They were able to determine that all of the fish that appear are roughly the same size and are all the same species. What's more puzzling is that this particular species of fish do not inhabit any nearby waters. One scientific theory is that the fish are sucked up in waterspouts formed by the high winds. Some think that the fish may be flying in from as far away as the Atlantic Ocean, which is some 200km away. Another theory suggests that the fish may be residing in underground rivers in the area.

Starting in 1998 a festival has been held in honor of the event in the city of Yoro. It is also worth noting that in recent years residents have been reporting not one, but two occurrences of the 'Rain of Fish' each year.

Lake George Event to Highlight Invasive Species

June 7th, 2013, AP, source <http://wnyt.com/article/stories/S3059407.shtml>

New York officials are set to show off new boat washing stations meant to help stem the spread of invasive species in the state's waterways. Department of Environmental Conservation Commissioner Joe Martens, Sen. Kirsten Gillibrand and Rep. Bill Owens will be among the officials visiting Bolton Landing on Lake George for the demonstration in early June.

Conservation groups and the state have been battling a number of invasive creatures in Lake George, including Eurasian milfoil, zebra mussels, spiny water fleas, and Asian clams. And there are other invaders in the state's lakes, rivers, and streams, including some that arrived as common aquarium plants.

Experts say inspections and decontaminating boats and other gear used on the water are key elements in the fight.

Minnesota Urges Lake Residents to Leave Aquatic Plants Alone

Minnesota Public Radio News (AP) May 27, 2013, <http://minnesota.publicradio.org/display/web/2013/05/27/environment/aquatic-plants>

Minnesota residents with lakefront property are being reminded not to clear aquatic vegetation without a permit, because the plants help stabilize the shoreline.

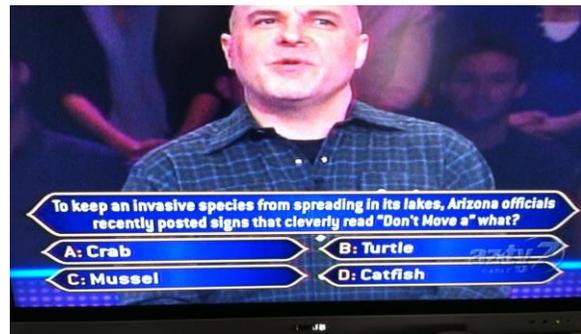
A St. Paul Pioneer Press report says residents sometimes remove vegetation to keep beaches clear for swimming. But that removes vital habitat for fish and birds, and it also leaves the shoreline vulnerable to erosion.

So the state Department of Natural Resources is beefing up its enforcement regarding the removal of lake vegetation. Instead of warning people who remove aquatic growth, the agency will issue \$285 tickets.

Current enforcement is centered on White Bear Lake and the Chisago Lakes area. Homeowners can buy a \$35 permit that allows them to clear half their frontage, to a maximum of 100 feet.

Lake Question on Prime Time TV

Check out the picture from the TV Show "Who Wants To Be A Millionaire". The AZ Assistant AIS Coordinator was actually watching the show at the time and snapped the photo. Maybe the next question on the show should be, "What does NALMS stand for?" The bigger question is did the contestant get the answer right or did he have to use up a lifeline and call his limnologist friend?



Alpine Lakes Reflect Climate Change

Science Daily, June 6, 2013, <http://www.sciencedaily.com/releases/2013/06/130606110513.htm>

Increases in temperature as a result of climate change are mirrored in lake waters where temperatures are also on the rise. A new study, by Dr. Martin Dokulil, retired researcher from the Institute for Limnology at the University of Innsbruck in Austria, forecasts surface water temperatures in large Austrian lakes for 2050 and discusses the impact on the lakes' structure, function, and water quality.

Austria has a multitude of lakes varying widely in type, size, flushing, altitude, and geographic location. Most of these lakes are important ecosystems and are sensitive to environmental changes. Surface water temperature is directly affected by climate change and is an essential aspect for recreation on the lakes by tourists, particularly during the summer season.

Dokulil analyzed long-term data records for air temperature and surface water temperatures dating back to the mid-1960s from the Austrian Hydrological Yearbooks. The nine large lakes studied, in or bordering Austria, were situated in different climatic zones. From these data, Dokulil was able to project temperature trends for the lakes' surface waters and predict temperatures for 2050.

His work suggests that lake surface temperatures are likely to rise by up to 3° C in Austrian lakes by 2050 depending on the region, as a direct result of climate change. Dr. Dokulil concludes: "The predicted changes in surface water temperatures will affect the thermal characteristics of the lakes. Warmer water temperatures could lead to enhanced nutrient loads and affect water quality by promoting algal blooms and impairing the biological functions of aquatic organisms. Significant increases in summer temperatures will also affect the carbon cycling in lakes, with potential consequences on atmospheric carbon dioxide levels and the Earth's climate."

Yellowstone to Check Boats for Invasive Species

Billings Gazette, May 14, 2013, http://billingsgazette.com/lifestyles/recreation/yellowstone-to-check-boats-for-invasive-species/article_00becb02-6893-5ba3-aa81-4a2d085aebef.html

All motorized and nonmotorized watercraft entering Yellowstone National Park's lakes must first pass an aquatic invasive-species inspection as part of the watercraft permitting process. National Park Service staff will conduct inspections seven days a week for all boats that launch from Bridge Bay, Grant Village, and Lewis Lake boat ramps.

Since 2009, Yellowstone's AIS program staff has had contact with more than 7,000 park boaters and performed more than 3,000 watercraft inspections, which resulted in more than 120 affected boats being cleaned with the use of a nonchemical AIS decontamination treatment.

Motorized boating is allowed on Yellowstone and Lewis lakes. Only nonmotorized boating is allowed on most other park lakes, and permits are required for all boats and float tubes. The park's South Entrance, Grant Village Backcountry Office, and Bridge Bay Ranger Station sell all boat permits, while the Mammoth Backcountry Office, Lewis Lake Campground, and West Yellowstone Visitor Information Center sell only nonmotorized permits. The Northeast Entrance, Bechler Ranger Station and Canyon and Old Faithful backcountry offices sell only float tube permits. Watercraft owners must pass a successful AIS inspection or have their affected watercraft treated prior to being issued a permit.

Information on boating and boat permitting in Yellowstone can be found at www.nps.gov/yell/planyourvisit/boating.htm.

Good or Bad for the Lake – You Decide

Many times, we read or hear a quick news item about a lake related topic. As a well-educated lake expert and member of NALMS, you should question these situations and ask if it makes sense or would you make the same choices. It is your job as a NALMS member to determine whether or not the next lake-related news item is “Good” or “Bad” or what you would have done.

The lake-related topic this time is about deterring recreational use.

Blue Lagoon dyed black to deter swimmers

Source: Hayley Dixon, June 11, 2013, <http://www.telegraph.co.uk/earth/10112837/Blue-Lagoon-dyed-black-to-deter-swimmers.html>

A Blue Lagoon at a disused quarry in the United Kingdom has been dyed black in an attempt to try and deter swimmers.

The quarry pool at Harpur Hill, near Buxton, Derbyshire, known locally as the Blue Lagoon, has a pH level of 11.3, is littered with rubbish and dead animals, and is extremely cold.



The local council took the step after finding people were unable to resist the pool's turquoise waters, despite the fact that it was almost equivalent to swimming in bleach, and it contained an abandoned car.

Signs close to the edge of pond warning of these dangers were put last year, but swimmers were still tempted into the bright blue water. The water normally gets its color from the caustic chemicals in the quarry stone.

Can the aesthetics of a lake or reservoir be too appealing? Was the right management technique applied in the right situation? What would you do if you managed this quarry pool?

USGS Study Evaluates new Pesticide for Zebra Mussels

Chris Hubbuch, LaCrosse Tribune, May 30, 2013, http://lacrossetribune.com/news/local/usgs-study-evaluates-new-pesticide-for-invasive-zebra-mussel/article_ba20f612-c8c4-11e2-a33b-0019bb2963f4.html

Developed by the New York Science Museum and commercially manufactured by Marrone Bio Innovations, Zequanox is made from pseudomonas fluorescens, bacteria commonly found in soil that scientists discovered was toxic to zebra mussels.

Laboratory tests confirmed that Zequanox is not toxic to rats and certain other aquatic species, and it has EPA approval for use in closed systems like power plants.

Now in its third year, the USGS study has examined the effects of Zequanox on zebra mussels in Lake Shawano and Lake Carlos, Minn., where it proved effective. Scientists have also studied its effects on fish such as walleye, smallmouth bass, and yellow perch.

The next step will be to test the pesticide on native mussels, like the endangered Higgins eye, washboard and fatmucket. Grown or harvested at the Genoa National Fish Hatchery, the seven species of mussels will be submerged in nine vats of water pumped directly from the Black River into the trailer, where they will be exposed to various concentrations of the powdered bacteria. After a set time — eight hours for some, 24 for others — the mussels will be submerged in the river in wire cages for 30 days, after which scientists will see whether the treatment had any ill effects

Upstate Reservoirs to Allow Canoe and Kayak Rentals

Wall Street Journal, May 12, 2013, <http://online.wsj.com/article/APEa7bcc107e2a4b3d9ec76501de031e2b.html>

The agency that regulates New York City's upstate water supplies says boat rental companies can now store canoes and kayaks along four reservoirs in the Catskills. The city Department of Environmental Protection says that's a first and should help promote tourism in the area.

It says about a dozen businesses are apparently interested in setting up shop on the Cannonsville, Pepacton, Neversink, and Schoharie reservoirs. The DEP has already arranged for 30 racks, each of which would hold four boats and will be taking proposals from businesses.

Another benefit is that the boats won't have to be steam-cleaned to prevent the spread of invasive species since they won't be used elsewhere.

World's Tallest Dam Approved by Chinese Environmental Officials

Jonathan Kaiman, Guardian News, May 17, 2013,
<http://online.wsj.com/article/APea7bcc107e2a4b3d9ec76501de031e2b.html>

Chinese environmental authorities have approved construction plans for what could become the world's tallest dam, while acknowledging that the project would affect endangered plants and rare fish species.

The 314 metre-high dam (1,030ft) will serve the Shuangjiangkou hydropower project along the Dadu river in south-western Sichuan province, according to China state news agency. A subsidiary of Guodian Group, one of China's five major state-owned power companies, will complete the project over the next decade.

The dam will be far taller than the 185 metre-high Three Gorges dam along the Yangtze river, the world's most powerful hydroelectric project, and slightly edge out the current record holder, the 300 metre-high Nurek dam in Tajikistan. The world's second-tallest dam, the 292 metre-high Xiaowan dam on the Lancang (Mekong) river, is also in China.

China's environment ministry acknowledged that the dam would have an impact on the area's highly biodiverse flora and fauna.

2012 Recreational Boating Economic Study

In 2013, the National Marine Manufacture's Association (NMMA) Center of Knowledge contracted with the Recreational Marine Research Center at Michigan State University to update the 2008 Economic Value of Recreational Boating at the State and Congressional District Level.

Each state and district datasheet includes the "total annual economic value of recreational boating", the number of recreational boating industry businesses, total jobs and annual recreational boating-related spending. The major work and analysis for this study was done by Drs. Edward Mahoney and Yue Cui of the Research Center

Go to the NMMA website and then select the center of knowledge web page. There, you will see each state. Click on any state and a list of documents will come up that will summarize the economics. They also have economic information for Canada.

www.nmma.org/statistics/centerofknowledge/researchlibrary.aspx

U.S. Drought said Hitting Native Fish Populations

UPI.com, June 6, 2013, http://www.upi.com/Science_News/2013/06/06/US-drought-said-hitting-native-fish-populations/UPI-85611370551383/

Persistent drought in North America has caused "a conservation crisis" for native fish communities, a Kansas State University researcher reported. Biology Professor Keith Gido and

his team studied state and federal endangered and threatened fish species in river ecosystems including the Arkansas, Kansas, Gila, San Juan, Red, and Platte rivers, a university release reported recently.

"A couple of key species that we have been studying have virtually disappeared where they historically were abundant," Gido said. As an example he cited silver chub, noting that more than 300 were observed in the Ninnescah River in southern Kansas in summer 2011. After a second consecutive year of severe drought, his team saw three silver chub during their sampling in 2012.

Two activities, river fragmentation and groundwater withdrawals, have significant impacts on aquatic systems and native fish species in the Great Plains, and when combined with the drought result in dramatically reduced fish communities and lower species diversity.

River fragmentation occurs when barriers such as dams break up the long sections of connected river and create shorter segments. "We have seen a gradual decline in native diversity over time," Gido said. "The drought exacerbates any of the effects because with fragmentation, if the stream is dry and the water is lower, the fish are unable to move around a barrier

Washington's Lake Stevens is treated with Alum

AquaTechnex, June 6, 2013

The Aquatechnex Washington Team began treated Lake Stevens, Washington with Aluminum Sulfate recently to reduce phosphorus pollution in that system. The 900 acre lake is the largest lake in Snohomish County and is an important recreational resource. A Clean Lakes Program Grant some years ago funded the placement of a hypolimnetic aeration system in the lake. This system failed after years of service recently and the City and County needed to find alternatives to combat potential toxic cyanobacteria blooms that have been an issue in the lake in the past.



The team was faced with moving and applying 55,000 gallons of alum to the lake within a short time frame to minimize impact on lake users. Two 30 foot converted Bayliners designed to hold 500 gallon tanks were deployed to the lake, these boats were equipped with precision application guidance systems. They were able to move to the application track, apply their load rapidly, and return for the next load at 30 miles per hour, something that's important for turn around.

The project should last through Friday June 7th and will involve 14 tank trucks of material precision applied to the lake. The \$96,000.00 project should provide relief through the summer. This contract is ongoing for the next few years and monitoring/treatment response will protect lake users

Ancient Lake in Australia found to be Unaffected by Climate Change

Cavan Sieczkowski, The Huffington Post, June 7, 2013, http://www.huffingtonpost.com/2013/06/05/gods-bathtub-ancient-lake-australia-photo_n_3389363.html

Scientists from Australia's University of Adelaide have identified a lake so pristine that they're calling it "God's bathtub." Although typical freshwater ecosystems vary because of climate change and man's influences, Blue Lake on North Stradbroke Island in Queensland has remained largely unchanged for 7,500 years, according to a recent study.

The water is so clear researchers could see to the bottom -- 33 feet below. "It's like God's bathtub," Cameron Barr, a researcher at the university and the study's lead author, told the Australian Associated Press (AAP).

The lake has been remarkably resistant to change. Drought had caused nearby lakes to dry up but not Blue Lake. "To our knowledge, this is the only lake like this in Australia that has shown such stability over such a long period of time," Barr told the Australian Broadcasting Corporation (ABC). "We expected some change, given the magnitude of environmental changes over that period, so it was a surprise to find almost none."

Researchers studying the response of freshwater systems in drought set their sights on the Blue Lake to study how environmental changes threaten ecosystems and how those systems responded to such changes in the past. They collected data regarding lake discharge and water quality over the past 117 years and compared historical photos. The researchers also looked at fossil pollen and diatoms which are very susceptible to changes in water chemistry.

"It appears that Blue Lake has been an important climate 'refuge' for the freshwater biota of the region, and is in the same condition now as it was 7,500 years ago," Barr said in a statement. "With appropriate management, the lake could continue relatively unchanged for hundreds, possibly thousands of years to come."

New Safety Signs on the Shores of Lake Mendota

Kari Knutson, June 7, 2013, U of W News, <http://www.news.wisc.edu/21862>

New signs have been installed along the Lake Mendota shoreline on the UW-Madison campus in an effort to draw more attention to lake safety. Signs had already existed, but the more than 20 new ones are an added safety measure following the drowning of a recent graduate and a student last summer. The hope this year, and every year, is to remind people that while the water is a great source of recreation, it needs to be respected.

"We want to make sure everyone can enjoy the lake safely," says Sean Geib, assistant supervisor at the UW Lifesaving Station. Some of the signs advise the hours a lifeguard is on



duty, areas where there isn't a lifeguard on duty, and where docking of private boats isn't allowed.

The water is especially dangerous for those who have been drinking alcohol, Geib says. "When people drink, their inhibitions go down," Geib says. "They may not be as strong of a swimmer as they think they are, but people convince themselves that they can do this."

Ninety percent of drownings occur when a person is either not wearing a life jacket or has been drinking alcohol.

The Lifesaving Station maintains a seasonal lake watch on Lake Mendota from April through October. It also employs student lifeguards to staff the Memorial Union swim pier from Memorial Day through Labor Day. Lifeguard hours at the swim pier are from 11 a.m. to sunset seven days a week. More than 20,000 people visit the pier each year. A brand new swimming pier is being installed this month.

The UW Lifesaving Station was established in 1909 to provide a lake rescue service to UW-Madison students while they enjoy Lake Mendota. In 2012, the crew had 565 runs, 175 rescues and 72 assists.

Websites of the Month – Good Sources of Maps

Ohio's Harmful Algal Bloom Advisory Map is nicely available on-line. It includes recreational advisories as well as drinking water warnings.

<http://wwwapp.epa.ohio.gov/gis/mapportal/hab.html>

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 Melanie G, Title of the photo is "Yellowstone National Park, East Entrance, WY"

Image can be found at

<http://www.flickr.com/photos/melanieg23/8933338320/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.