

# 2012 NALMS Notes

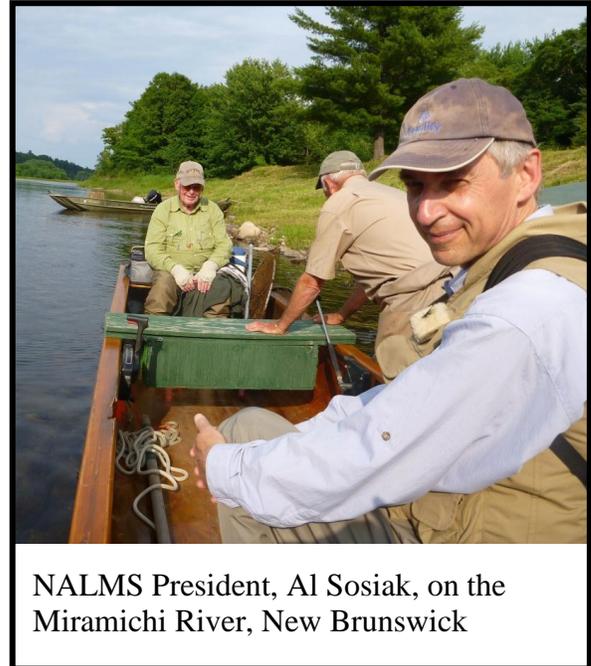


August 2012

## President's Message – Staying Busy

I'd like to provide you with a brief update on some of the many projects that NALMS is working on this summer or has recently completed. These special projects are in addition to the conference work, membership services, and all the routine administration that must be done by NALMS office staff and volunteers:

- Provisional approval of a formal conflict of interest policy with agreements that must be signed by directors, officers, and committee members. This policy was not a response to any known conflict of interest but to avoid even the appearance of such a conflict.
- Approval of a CLM/CLP seal, with formal guidelines for correct use of the seal. This optional program will allow those currently certified to affix a seal to documents they have provided and will increase visibility of the CLM/CLP program.
- A committee is developing a detailed plan for implementation of a student mentoring program that will be considered for approval at the board meeting in Madison.
- A package of website enhancements has been approved, and we hope to have online voting available for this year's NALMS election.
- NALMS 2007 Strategic Plan is being revised to reflect current realities and procedures and is to be submitted for approval in Madison.
- A search committee has been formed to find a replacement Editor-in-Chief for the Journal of Lake and Reservoir Management and provide mentoring in 2013 before the end of the term of the current Editor-in-Chief. I'd be pleased to discuss the qualifications for this demanding position with any that might be interested.
- Preparations are being made to incorporate NALMS in Wisconsin to replace the current incorporation in Maine, where we have had no active presence for many years. The current arrangement requires needless expenses and unnecessary paperwork. This change in incorporation will be carefully done in stages, and the membership will be asked to vote on a by-law change that is one step in the process.



NALMS President, Al Sosiak, on the Miramichi River, New Brunswick

I'd like to thank those that responded to my plea for nominations in NALMS Notes and other correspondence. As I write this, we still haven't received any nominations for President-elect, due August 7 but several are considering this key position.

Enjoy whatever lake or river you are able to spend time on this summer! We are blessed with so many lakes in North America. However, they need our ongoing efforts to maintain this marvelous resource.

Al Sosiak  
President – NALMS  
Al.Sosiak@telus.net

## ***WITHIN NALMS***

### **Membership in Motion**

We wrapped up our summer membership period on August 15<sup>th</sup> and at final tally NALMS welcomed 44 new members and renewed 190 out of 250, or 76%, of members during this period. Unfortunately this is well below our goal of an 85-90% rate of retention and continues a slight downward trend in membership renewals over the last two membership periods.

In light of this trend, I will slightly adjust membership retention and renewal initiatives on a trial basis. Our pre-expiration retention initiatives will now begin earlier (90 days out from expiration instead of 45 days out) and will include five contact opportunities for members who are up for renewal instead of two. We will also expand our post-expiration renewal initiatives significantly throughout the year following membership expiration. It is my hope that these adjustments will encourage members to renew early and will reach past members who may be interested in reinstating their memberships.

Of course if your membership recently expired you may still [renew on the NALMS website here](#) or you may [fill out a Membership Registration Form](#) and send it to the office. As always, please call me at 608.233.2836 or email me at [garenz@nalms.org](mailto:garenz@nalms.org) with any questions. I love talking to current and past members about NALMS membership benefits and opportunities.

NALMS' 902 current members are so important to furthering our mission to foster the management and protection of lakes and reservoirs. Any initiative NALMS undertakes, whether our programs or publications, is powered by dedicated members. With this in mind here is a big THANK YOU to everyone who renewed their membership or joined NALMS during the last month! We appreciate your lake management efforts and your support!

**New NALMS Individual Members:** Jake Vander Zanden, Linda Beck, Kayla Bowe, Shane Bowe, Kelly Deem, Marsia Geldert-Murphey, Kyle Hanson, Marcia Hartwig, Sarah Holden, Zahidul Islam, Meghan Jacobson, Jens Jensen, Olivia Johnson, Jason Luce, Dave Marshall, Dick McCarthy, Ed Neff, Andrew Olynyk, Andrea Plevan, Barry Rosen, Lois Roth-Johnson, William Tonn, Gerard Urbanozo, Bill Vernieu, Matthew Vogt, Susan Wilde

**New NALMS Non-Profit Members:** [Lauderdale Lakes Lake Management District](#)

**Renewing NALMS Individual Members:** Frederick Amalfi, Jesse Anderson, Deva Borah, John Burgess, Phillip Cerna, Tom Conry, Christopher Costello, Mark Doneux, Linda El Farra, Marlene Evans, Bill Frazier, Shelly Frie, John Hanish, Don Hickman, Rodney Jung, Melanie Lasch, Richard Lathrop, Carolyn Mathews, Terry McNabb, Barry Moore, Eileen Pannetier, Jenifer Parsons, Erin Stratton, Chris Swan, Therese Thompson, Lois Wolfson, Chester Young

**Renewing NALMS Corporate Members:** [Clean Lakes, Inc.](#), [Phoslock Water Solutions Ltd.](#)

**Renewing NALMS Non-Profit Members:** [Voyageurs National Park](#)

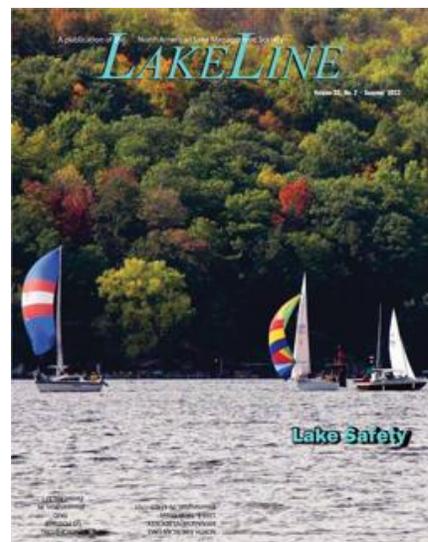
Finally, I always like to end my article by highlighting a NALMS membership opportunity or benefit. As [registration for our 32<sup>nd</sup> Symposium](#) in Madison, WI just opened, I thought I would highlight some opportunities for members that can be found there. While the symposium always offers excellent learning opportunities for our members through the available technical sessions and workshops there are also a number of other events that can be just as important to members. Foremost of these is the annual membership meeting where you will be introduced to your new President-Elect and Regional Directors as well as hear about NALMS fiscal health and upcoming initiatives. Social events like hospitality suites, the Exhibitor reception and the Awards banquet are also excellent opportunities to network. And remember that individuals who volunteer four hours at the Symposium will receive a 25% refund of their registration. The Symposium also offers a great way for our organizational members to [build their brand identification by exhibiting and/or becoming a Symposium sponsor](#).

As always, please don't hesitate to take advantage of all your membership benefits and opportunities! And if you have any questions or concerns about your membership, please contact me at 608-233-2836.

Greg Arenz  
Membership Services Coordinator  
[garenz@nalms.org](mailto:garenz@nalms.org)

## **What's New in Lakeline?**

NALMS is proud to announce the second issue of the 32<sup>nd</sup> volume of *LakeLine* magazine featuring a Lake Safety theme. Articles following this theme include a comprehensive collection of important safety procedures from Chris Mayne, important field safety measures for volunteer water quality monitors from Sara Steiner, management and boating regulations implemented at Lake Lure by Barbara Wiggins, Ken Wagner, and Clint Calhoun, key boating stewardship practices to prevent water contamination from boat and marina operations from Chris Solloway, a description of how Indiana law provides for temporary boating restrictions and lake closures to protect the public in the event of unsafe lake conditions by Lt. Gary Whitaker, documentation of a strange biological safety hazard



from imported bioengineered erosion control products by Kurt Kelsey and Mariquita Sheehan, and a “Student Corner” article on ice safety precautions from Bill Henne. In this issue we also learn about water management activities on the Fond du Lac Reservation in northern Minnesota from Nancy Schuldt and the annual Secchi Dip-In from Bob Carlson, Dan Canfield, Dana Bigham, Roger Bachmann, Mark Hoyer, and Christine Horsburgh.

*LakeLine* is a quarterly publication and every NALMS member receives the magazine. *LakeLine* informs and educates readers about current issues related to lake management and keeps NALMS members informed on the Society’s business and activities. *LakeLine* has grown with NALMS from a fledgling newsletter-style publication in 1980 to a full-color, professionally produced magazine. One thing that hasn’t changed over the years is the willingness of NALMS members, lake researchers, and practitioners to share their knowledge with others within the pages of *LakeLine*. Without the unqualified participation of these talented authors, NALMS could not produce a quality publication. As such, NALMS would like to extend a thank you to all of the authors who contributed to this issue of *LakeLine*!

## ***UPCOMING CONFERENCES & EVENTS***

### **Registration Open for NALMS 32<sup>nd</sup> Annual Symposium**

Attendees may now register for **NALMS 32<sup>nd</sup> Annual Symposium: Lakes in the Landscape: Values > Visions > Actions**. Held at the Monona Terrace in Madison, WI from November 7<sup>th</sup> – 9<sup>th</sup>, 2012 the Symposium will emphasize the science of lakes in the landscape, ranging from in-lake to watershed to global, as well as approaches that facilitate lake management...from satellites to surveys to shorelines.



[Click here for our Registration Page!](#)

Full conference registration includes:

- Access to all technical sessions, Wednesday – Friday.
- Included lunch & refreshment breaks Wednesday – Friday, continental breakfast Wednesday – Friday, Wednesday reception and Thursday reception and banquet.
- Daily registrations include access to technical sessions, meals and included receptions only on the selected day of attendance.

Please note that One-day registrations may not be combined to create a two-day registration and that Guest registration does not include access to technical sessions.

### **Exhibition and Sponsorship at NALMS’ 2012 Symposium**

NALMS 32<sup>nd</sup> Annual Symposium offers an excellent opportunity for Exhibitors and Sponsors. Please consider the following in making your decision to exhibit and/or sponsor:

- NALMS 2012 offers **Targeted Quality Sessions** that our Symposium Exhibitors and Sponsors can associate with their products or brands while pinpointing a targeted audience. The Symposium has a reputation for providing the highest quality sessions to a targeted field

of lake and reservoir management professionals, academia, and interested citizens across a wide range of lake management topics.

- NALMS 2012 typically brings together an audience of 500-600 **Premium Attendees** to whom our Exhibitors and Sponsors can extend their brand visibility. NALMS leads the way in lake and reservoir management education and has a large geographic reach extending from North America to an international community that draws upon influential consumers, community leaders and business decision-makers within the lake and reservoir management field.
- NALMS 2012 will **Enhance Your Corporate Image** by building upon your brand identification while strengthening your association with NALMS, our valued members, high-quality publications and programming, and the superior sessions and events at our Symposium.

[Click here for more information on Exhibiting at NALMS 32<sup>nd</sup> Annual Symposium](#) or you may also contact Philip Forsberg at [forsberg@nalms.org](mailto:forsberg@nalms.org).

[Click here to learn more about Sponsoring NALMS' 32<sup>nd</sup> Annual Symposium](#) or you may also contact Greg Arenz at [garenz@nalms.org](mailto:garenz@nalms.org).

## ***LAKE NEWS & INFORMATION***

### **Lakes Make you Live Longer**

*From Toledo Blade editorial (<http://www.toledoblade.com/Editorials/2012/07/23/Enjoy-lakes-live-longer.html>)*

Residents of the Great Lakes region can take heart in the conclusion of a new report from Great Britain: People who live near water tend to live longer. A research team at the University of Exeter based its conclusion on a correlation it found in British census data on human health and the environment. Among its theories for the link between longevity and proximity to water: less stress, more outdoor activity, a calmer lifestyle, and the soothing effects of sunsets and walks on a beach. Wealth was not a factor; people of limited means showed the biggest gains in life spans.

Day trips to waterways have provided psychological lifts for generations. But the researchers say there may be longer-term benefits from frequent visits. As suggestive as such findings are, they strengthen the argument for keeping our lakes and beaches clean. Not everyone can afford to buy lakeshore property, or to make daily visits.

### **Indiana Warns of Toxic Algae after Lake Trip Dooms Dogs**

*From Journal Gazette, Jeff Wiehe*

*(<http://www.journalgazette.net/article/20120721/LOCAL/307219980>)*

They brought the four dogs back from the Salamonie Reservoir in the early evening, hosed them down outside the house to get the dirty water off and then gave them their dinner. And that's when the trouble started. Dakota, the 6-year-old German shorthaired pointer, didn't eat at first, which wasn't terribly unusual. But she was lethargic, and within minutes of devouring their food, so were the three others.

“Well, we thought maybe they got too hot,” said Marge Young, who along with her husband had taken the dogs to swim in the reservoir on Sunday. “We just left them alone to let them rest. We didn’t think too much about it.”

Within hours all the dogs were vomiting. By the morning, Dakota was dead. Ellie, a 4-year-old black Labrador mix, died the next night. The Wabash couple whisked the other dogs, by then suffering from severe liver problems, to the vet. The likely culprit for the dogs’ ills: blue-green algae.

The plight of Marge and Larry Young’s dogs has sparked the Indiana Department of Natural Resources to issue extra warnings about the potentially toxic algae. Known to cause rashes, skin and eye irritations as well as nausea, stomachaches and tingling in the fingers and toes, there are possibly high levels of cyanobacteria at many Indiana lakes and reservoirs, according to the Indiana Department of Environmental Management.

Currently, the Department of Natural Resources lists warnings on its website about high levels of the algae at six state parks, including Chain O’ Lakes and the Salamonie Reservoir.

The algae can be fueled by summer heat, sunlight and fertilizer runoff from lawns and farms, the DNR said. Drought and low water levels in lakes and reservoirs can increase the quantity of the algae or its toxins.

## **Spiny Water Flea Confirmed in New York’s Lake Champlain**

From (<http://blogs.mcall.com/outdoors/2012/08/spiny-water-flea-confirmed-in-new-yorks-lake-champlain.html>)

The presence of the spiny water flea, an aquatic invasive species, was confirmed in Lake George, the New York State Department of Environmental Conservation announced today.

In July, the Lake Champlain Basin Aquatic Invasive Species Rapid Response Task Force released seven recommendations to slow the spread of spiny water flea into Lake Champlain, which includes redirecting the flow of the Champlain Canal into the Hudson River and furthering a feasibility study for a hydraulic barrier between the Champlain Canal and Lake Champlain.

The Task Force is made up of representatives from New York State, Vermont, and Canada. The Task Force’s report recognizes that the closure of the Champlain Canal and the Glens Falls Feeder Canal is not technically, legally, or economically feasible.

The discovery of spiny water flea in Lake George provides another pathway for the invasive species to enter Lake Champlain via the LaChute River. Lake George is not connected to the State Canal System.

The presence of spiny water flea was confirmed through sampling efforts by the Lake George Association on Tuesday, July 31. The samples were taken to the Darrin Fresh Water Institute where four spiny water fleas were identified.

The possible presence of the spiny water flea was first reported on Friday, July 27 by an invasive species steward at DEC's Mossy Point Boat Launch near the north end of the lake. A fisherman had reported having a clump of small organisms on his fishing line after spending time trolling the waters off Mallory Island along the east shore of the lake.

The steward took a sample and provided it to the Lake George Association, who passed it on to the Darrin Fresh Water Institute. After the organisms were identified as spiny water fleas, the Lake George Association sampled the waters off Mallory Island and further confirmed its presence.

The invasive pest was previously confirmed in the Great Sacandaga Lake in 2008, Peck Lake in 2009, Stewarts Bridge Reservoir 2010, Sacandaga Lake in 2010, and most recently this summer in the Champlain Canal and Glens Falls Feeder Canal.

Native to Eurasia, the spiny water flea feeds on tiny crustaceans and other zooplankton that are foods for fish and other native aquatic organisms, putting them in direct competition for this important food source. The tail spines of the spiny water flea hook on fishing lines and foul fishing gear.

Spiny water fleas can impact aquatic life in lakes and ponds due to their rapid reproduction rates. In warmer water temperatures, these water fleas can hatch, grow to maturity, and lay eggs in as little as two weeks. Conversely, "resting" eggs of spiny water fleas can remain dormant for long periods of time prior to hatching.

Currently, there are no successful means to control or eradicate this and many other aquatic invasive species, so preventing their spread is the only means for reducing their impacts on native aquatic communities. It is very important that boats, anglers, and other recreational enthusiasts take precautions to avoid transporting this and other invasive species, particularly after leaving water known to have an aquatic invasive species.

## **Record Summer Heat Killing more Fish**

*From Great Lakes Echo (Jennifer Kalish) July 31, 2012*  
(<http://greatlakesecho.org/2012/07/31/record-summer-heat-killing-more-fish/>)

This summer's unusually high temperatures and continuing drought are killing fish across the Great Lakes region. There were multiple reports of fish kills in early July across Michigan, Minnesota, Wisconsin, Indiana, and Illinois, according to state fisheries supervisors. There have been at least 60 separate incidents in Illinois. About a dozen have been reported in Indiana.



As many as 350 northern pike were confirmed killed in one Wisconsin report, though most of the kills are of less than 100 fish. A few fish kills have also been reported in Ohio, New York, and Pennsylvania, but they have been linked to sources other than high water temperatures by each state's regulating agency.

Pike are among the species most affected. But die-offs have also been reported among brown trout, bass, suckers, bluegill, catfish, and Asian carp –though people aren't too concerned about the latter. Summer fish kills are not unusual, and not much can be done to prevent them. However, this summer's heat and excessive drought have resulted in more of them.

As less rain falls and temperature rises, the water and oxygen drop, stressing the fish. This is because less water makes it easier to reach high water temperatures, and oxygen dissolves faster in cooler water than it does in warm water.

With this summer's low water and air temperatures often reaching 100 degrees, many state fish experts report surface water temperatures of 90 degrees or higher, Johnson said. Some Great Lakes fish species like trout and northern pike can't tolerate water temperatures above 75 degrees.

Most of the fish kill reports came in the first half of July and have slowed since then. Some fish experts believe it is a result of cooler weather.

### **Fish Kills in Midwest Rise As Drought Effects Intensify**

*Associated Press, August 5, 2012*

<http://online.wsj.com/article/SB10000872396390443792604577571531181771286.html>

Thousands of fish are dying in the Midwest as the hot, arid summer dries up rivers and causes water temperatures to climb in some spots to nearly 100 degrees.

About 40,000 shovelnose sturgeons were killed in Iowa in early August as water temperatures reached 97 degrees. Nebraska fishery officials said they have seen thousands of dead sturgeon, catfish, carp, and other species in the Lower Platte River, including the endangered pallid sturgeon.

Biologists in Illinois said the hot weather has killed tens of thousands of large- and smallmouth bass and channel catfish and is threatening the population of the greater redhorse fish, a state endangered species.

So many fish died in one Illinois lake that the carcasses clogged an intake screen near a power plant, lowering water levels to the point that the station had to shut down one of its generators.

The federal U.S. Drought Monitor shows nearly two-thirds of the lower 48 states are experiencing some form of drought, and the Department of Agriculture has declared more than half of the nation's counties---nearly 1,600 in 32 states---as natural disaster areas.

Dan Stephenson, a biologist with the Illinois Department of Natural Resources, said fish kills happen most summers in small private ponds and streams, but the hot weather this year has made the situation much worse.

### **Global Warming Harms Lakes**

*ScienceDaily (July 16, 2012) (<http://www.sciencedaily.com/releases/2012/07/120716091917.htm>)*

Global warming also affects lakes. Based on the example of Lake Zurich, researchers from the University of Zurich demonstrate that there is insufficient water turnover in the lake during the

winter and harmful Burgundy blood algae are increasingly thriving. The warmer temperatures are thus compromising the successful lake clean-ups of recent decades.

Many large lakes in Central Europe became heavily overfertilized in the twentieth century through sewage. As a result, algal blooms developed and cyanobacteria especially began to appear en masse. Some of these organisms form toxins that can compromise the use of the lake water. Dying algal blooms consume a lot of oxygen, thereby reducing the oxygen content in the lake with negative consequences for the fish stocks.

The problem with overfertilization was not merely the absolute amount of oxygen and phosphorus, the two most important nutrients for algae. Humans have also changed the ratio between the two nutrients: The phosphorus load in lakes has been reduced vastly in recent decades, yet pollution with nitrogen compounds has not decreased on the same scale. The current ratio between the nutrients can thus trigger a mass appearance of certain cyanobacteria, even in lakes that have been deemed "restored."

"The problem today is that mankind is changing two sensitive lake properties at the same time, namely the nutrient ratios and, with global warming, water temperature," explains Thomas Posch, a limnologist from the University of Zurich. In collaboration with Zurich Water Supply, he analyzed 40 years' worth of data in a study that has just been published in *Nature Climate Change*.

The evaluation of this historical data on Lake Zurich reveals that the cyanobacteria *Planktothrix rubescens*, more commonly known as Burgundy blood algae, has developed increasingly denser blooms in the last 40 years. Like many other cyanobacteria, *Planktothrix* contains toxins to protect itself from being eaten by small crabs. Burgundy blood algae were first described in Lake Zurich in 1899 and are a well-known phenomenon for Zurich Water Supply. Consequently, the lake water is painstakingly treated for the drinking-water supply to remove the organism and toxins completely from the raw water.

But why does *Planktothrix* increasingly thrive? The most important natural control of the cyanobacteria blooms occurs in the spring, once the entire lake has cooled down vastly during the winter. Intensive winds trigger the turnover of the surface and deep water. If the turnover is complete, many cyanobacteria die off in the deep waters of Lake Zurich as they cannot withstand the high pressure, which is still 13 bars at depths of 130 meters. Another positive effect of this turnover is the transportation of fresh oxygen to the deep. However, the situation in Lake Zurich has also changed drastically in the last four decades. Global warming causes rising temperatures at the water surface. The current values are between 0.6 and 1.2 degrees Celsius above the 40-year average. The winters were increasingly too warm and the lake water was not able to turn over fully as the temperature difference between the surface and depths posed a physical barrier. The consequences are larger oxygen deficits for a longer period in the lake's deep water and an insufficient reduction of the Burgundy blood algae blooms.

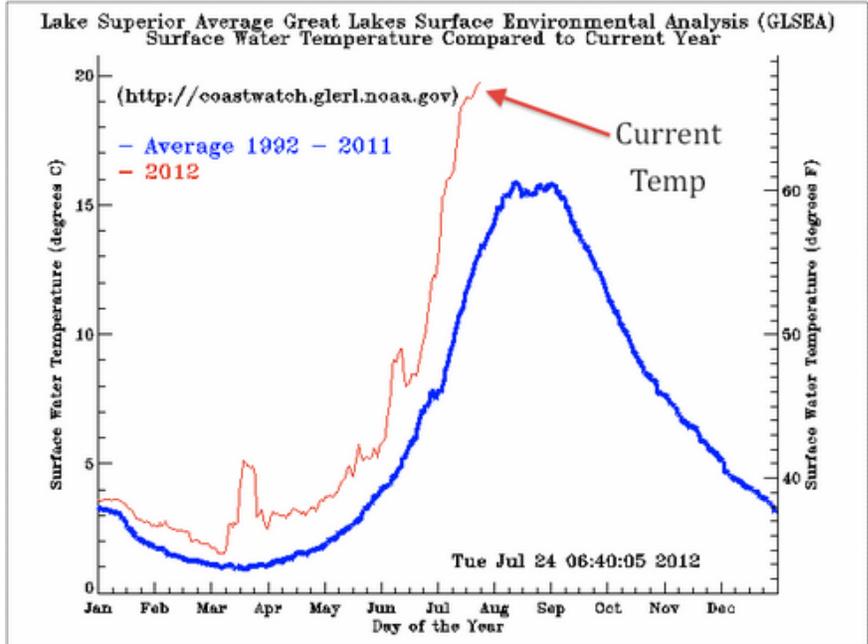
"Unfortunately, we are currently experiencing a paradox. Even though we thought we had partly solved the nutrient problem, in some lakes global warming works against the clean-up measures. Therefore, we primarily need cold winters with strong winds again," says Posch. As far as the researchers are concerned, the winter of 2011/12 was just what the doctor ordered: The low temperatures and heavy storms allowed the lake to turn over completely and ultimately resulted in a reduction in *Planktothrix*.

# Very Warm Waters in the Great Lakes this Summer

By Paul Huttner, July 25, 2012

[http://minnesota.publicradio.org/collections/special/columns/updraft/archive/2012/07/balmy\\_70s\\_2012\\_lake\\_superior\\_w.shtml](http://minnesota.publicradio.org/collections/special/columns/updraft/archive/2012/07/balmy_70s_2012_lake_superior_w.shtml)

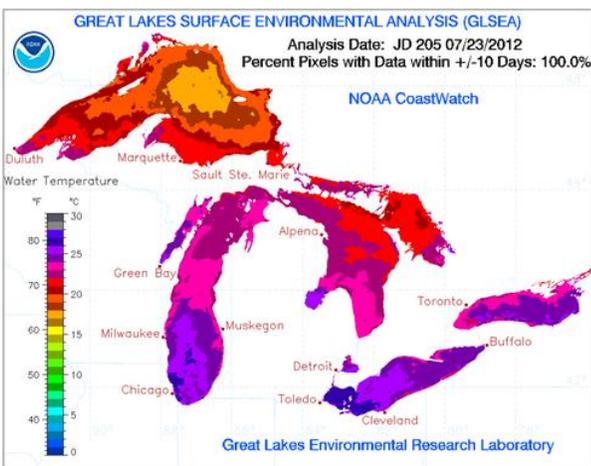
**74.8 degrees** - Surface water temperature on Lake Superior near Duluth on July 25th. **70s** - water temperatures along the North Shore from Duluth all the way to Grand Marais. **80 degrees** - water temperature (average is 63 degrees) at south buoy 43 miles off shore from Milwaukee on July 6<sup>th</sup>. The all-time daily average high temperature record for Lake Superior is 71°F, which was recorded in mid-August 2010. With a few more weeks of warming left, that record is in jeopardy.



Surface water temps in the "swimmable" 70s now stretch

from Duluth all the way to Grand Marais. A small bubble of water has even reached 75 degrees just east of Grand Marais, according to satellite derived data from NOAA's Great Lakes Environmental Research Laboratory. Average surface water temps on Lake Superior for this time of year are in the mid-50s. So water temps are running about 15 to 20 degrees above average this summer.

The massive runoff from the Duluth floods has played a role in boosting water temps this summer.



The runoff stream carried loads of tiny sediment particles into the western part of the lake. Those particles take time to settle, and are efficient at reflecting sunlight and heating up surrounding water.

One ironic twist in the record warm water temps is that it may lead to a more active lake effect snow season downwind of the Great lakes. Warmer water means the lakes will give off more heat and moisture as cold air masses blow across the lakes, especially early in the season. If there is arctic air in late November & December, then the area could see some horrendous lake effect snow totals in the lee of the Great Lakes this winter.

## **Robotic Torpedo Surveys Water Quality of Chicago Beaches**

By Sara Mathews, July 20, 2012 (<http://greatlakesecho.org/2012/07/20/robotic-torpedo-surveys-water-quality-of-chicago-beaches/>)

Researchers hauled a robotic torpedo out of Lake Michigan after it finished surveying 26 miles of Chicago shoreline. The bright yellow Ecomapper is a 5-foot long autonomous underwater vehicle (AUV) that collects water quality data with sensors in its nose. A propeller pushes the robot, fins direct it and a small antenna checks its positioning with GPS.



The water temperature, dissolved oxygen levels, water chemistry, and pH levels the robot collected will be used to improve the health of Chicago beaches. The survey is part of a nearshore water quality study by the U.S. Geological Survey and the Chicago Park District.

Researchers also measured how fast and in what direction the nearshore water flows. An accompanying manned boat also collected data for the survey which ran from Calumet Harbor to Evanston. It traveled parallel to the Chicago shoreline about three quarters of a mile out and collected data at the surface. Each mile researchers dropped in the Ecomapper which swam to the shoreline and back, collecting information from deeper waters.

The torpedo takes measurements every second it dives and resurfaces, producing data that will be turned into three-dimensional maps of Chicago's nearshore at one-mile increments. The Ecomapper provides a larger understanding of the nearshore water movement of Chicago's coastline.

It took two days for the Ecomapper to survey Chicago's shoreline. An upgraded navigation system helped it to stay on course even when swimming through choppy Lake Michigan waters with 3-foot waves. Those two days were slow-going. Though the torpedo can swim for up to six hours at a time, the heavy boater and jetski traffic required the boat to follow as it slowly made its way to the shoreline.

With a \$100,000 price tag, the biggest concern was the device being hit by another watercraft. The torpedo was kept to a short distance to the manned boat for this reason. The Ecomapper is manufactured by SonTek, an environmental equipment company.

## **The Next Evolution of Acoustic Telemetry Goes Mobile**

*Caroline Mercado, HTI Hydroacoustic Technology, Inc.*

Driven by the research needs of USGS scientists and others, the latest product for acoustic telemetry for fisheries research has arrived. Over the past decade, fisheries scientists around the world have used acoustic telemetry to remotely track fish behavior with fine-scale 2D and 3D positions. These studies provided a wealth of information about fish passage, survival, and behavior. Most often the surveys used fixed receivers for monitoring site-specific areas (e.g., water intakes, diversions, and

hydropower dams). In recent years with increased need to evaluate fish behavior beyond fixed stations, an easy means for mobile surveys became essential.

HTI's new *Model 395 Micro Data Logger* finished testing this spring at various locations on the west coast. There are three new game changers exclusive to the *Model 395 Micro Data Logger* that makes it unique. Beyond its ability to detect and identify hundreds of fish at the same time in real-time, it's now possible to achieve fine-scale 2D/3D tracking of each tagged fish with multiple units.

To learn more about this new technology, HTI offers system details and potential fisheries research applications at [http://www.htisonar.com/datalogger\\_Model395.html](http://www.htisonar.com/datalogger_Model395.html).

## **Invasive Plants used as Biofuel Crops**

*West Farm Press, June 20, 2012* (<http://westernfarmpress.com/management/biofuel-crops-can-bring-invasive-weed-risk>)

The biofuels industry is hitting its stride, with both small farms and large-scale plantations producing renewable crops that can be converted to energy. But scientists with the Weed Science Society of America (WSSA) caution that many of these crops also are known as invasive weeds in some of the regions where they are planted. That means growers must exercise caution in order to protect our natural ecosystems.

A recent report from the National Wildlife Federation cites several examples of species cultivated for biofuels that have the potential to become harmful invaders. Among them are: Giant reed (*Arundo donax*) an invasive weed known for crowding out native plants in fragile riparian areas, Reed canarygrass (*Phalaris arundinacea*), a great threat to America's wetlands, rivers, and lakes, Cylindro (*Cylindrospermopsis raciborskii*), an algae associated with toxic blooms in the Great Lakes region, and Napiergrass (*Pennisetum purpureum*), an invasive plant known as one of the most problematic weeds in the world.

One of the most popular biofuels crops is giant miscanthus (*Miscanthus × giganteus*). This fast-growing hybrid is unable to produce seed, making it less likely to spread unintentionally than other miscanthus species. But it too can represent a threat if planted in the wrong location. One example: Weed scientists are concerned about a now abandoned miscanthus farm located in Kentucky, on the flood plain of the Ohio River. Any plant fragments washed into the river could travel hundreds of miles, spreading miscanthus well beyond the planted fields.

It is imperative that the biofuels industry adopt best management practices to minimize the risk of weed-like crops spreading beyond the growing field. Recently the Biofuels Center of North Carolina, as well as N.C. growers, state officials, extension specialists, and environmentalists have collaborated to develop a series of best practices.

## **Algal Toxin and Taste-and-Odor Transport in the Kansas River**

*USGS Donita Turk, July 19, 2012* (<http://www.usgs.gov/newsroom/article.asp?ID=3285>)

Algal toxins and related taste-and-odor compounds were transported 173 miles down the Kansas River during reservoir releases in September and October of 2011, according to a new U.S. Geological Survey study. Results show that algal toxin levels did not exceed state public health

warning levels downstream from affected reservoirs, and were not detected in finished drinking water from Kansas River sources.

The Kansas River is a primary drinking water source for about 800,000 people in Topeka, Lawrence, and Johnson County, Kan. Water released from Milford Lake to the Kansas River during a blue green algal bloom in late August 2011 prompted concerns about the potential transport of cyanobacteria and associated toxins and taste-and-odor compounds to downstream drinking-water supplies. While taste-and-odor compounds are not harmful, algal toxins at elevated levels can be harmful to people, aquatic life, pets, and livestock. [Results of this study can be found online.](#)

"Harmful algal blooms are on the rise globally in both marine and freshwater systems; applying good science to understand their triggers is the first step to reducing their occurrence in the future," said USGS Director Marcia McNutt. Algal toxins and taste-and-odor compounds were found in Milford Lake from September until mid-October 2011 during sampling throughout the Kansas River, from the Milford Lake outlet to water intakes at Topeka, Lawrence, and WaterOne in Johnson County. This study is one of the first to quantitatively document the transport of cyanobacteria and associated compounds during reservoir releases and improves understanding of the fate and transport of cyanotoxins and taste-and-odor compounds downstream from reservoirs.

On July 1, 2012 the USGS, in cooperation with the city of Topeka, the city of Lawrence, the city of Olathe, WaterOne, and the state of Kansas, started a five-year monitoring program for algal toxins and taste-and-odor compounds in the Kansas River. This supplemental program will complement ongoing monitoring conducted by the state of Kansas and the Corps of Engineers and provide additional information for public water suppliers and Kansas River water managers.

## **Good or Bad for the Lake – You Decide**

Many times, we see a quick news item about a local lake having a problem or a lake manager, city department, or lake association deciding what to do about a lake issue. Read the below article to see if they made the right choices.

*It rose gallon by gallon, day by day, while the people of DePue, IL watched and waited to see if it would rise enough. If they couldn't defy the drought and add 2 feet of water to their 600-acre lake by then, they would lose the PRO National Championship Boat Races that, for a generation, have kept tiny DePue from shriveling into a forsaken village in the middle of the northern Illinois cornfields.*

*To raise their lake and save its race, people camped out on the spit of dirt where Lake DePue meets the Illinois River. They guarded the dam made of the sandbags that townspeople filled by hand. They tended the old tractors that power the pumps that sucked 600 million gallons of river water to their desiccated, polluted lake. All because the lake was too shallow to be safe for its beloved races. This was done within two weeks and during a drought.*

*Donations arrived, too, from boaters, Facebook friends, expat DePue residents and assorted unknown well-wishers who had heard the news and understood how much the races meant to this smidgen of a town that hasn't had a factory in years. The annual races are the town's homecoming*

*weekend, its noble purpose, a way to raise money for the things it otherwise can't afford, like playground equipment and Little League uniforms.*

*It's a town too poor to afford an impromptu dam operation, \$35,000 by one estimate, but also too poor not to try. And little by little, through the week, the lake swelled. Exposed lake bed that had been as dry and hard as bone vanished beneath water. The usual water started to look fresher. In fact, saving the race is just a piece of saving the lake.*

*DePue people love Lake DePue as much as Chicago people love Lake Michigan. Raised on tales of its days as a spring-fed wonder, they have fought in vain for years to have it dredged of silt and cleaned of the toxic metals deposited by the old zinc smelter and fertilizer plant.*

*On the deadline morning, Todd Brinkman motored into the murky water armed with a measuring tape attached to a long pole. He is affiliated with the American Power Boat Association that sponsors the race, and he was dubious when Mayor Bryant proposed the quick dam idea. He boated around the race course with two referees, plunging his measuring pole into the water, here, there, the next place. Five feet in most places, up from 3, and the water still coming. Good enough.*

*The truth is, the pumping operation didn't do all the work. One night, locals removed a beaver dam from a small, full nearby lake that's used almost exclusively by duck hunters and that water, too, flowed into Lake DePue.*

Is this “Good” or “Bad”? Did the costs outweigh the benefits? What rules were violated? Does the beaver dam have any water quality benefits to the watershed? How can a small town fix up their lake compared to larger cities? What is the value of this lake to this small community? Water quality and quantity will both be impacted by climate change and global warming. Will the smaller lakes communities be impacted first?

## **Website of the Month – <http://dnr.wi.gov/lakes/commonquestions/>**

The screenshot shows the Wisconsin DNR website's 'Important Questions and Answers on Wisconsin Lakes' page. The navigation menu includes 'Business', 'Licenses & Regulations', 'Recreation', 'Education', 'Topics', 'Contact', and 'Join Us'. The 'Water Levels & Drought' section is selected, showing text about blue-green algae blooms. The sidebar on the right includes a search bar for lakes and contact information for the Wisconsin DNR Lakes Division.

With something like 65% of the United States in a drought, this website might help answer questions about lakes and droughts.

## **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>

## **Lake Photo of the Month**

### ***Lower Tuhare Lake***

[http://www.flickr.com/photos/dizmang\\_photography/7599804254/in/pool-nalms](http://www.flickr.com/photos/dizmang_photography/7599804254/in/pool-nalms)

By [Shannon Dizmang](#)



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 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://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.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](mailto: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](mailto: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 [Let us know at events@nalms.org](mailto: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](mailto: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](mailto: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.

## **NALMS Notes is Co-edited by James Vennie & Steve Lundt**

### **Steve Lundt**

I was born and raised just west of Mt. St. Helens. By growing up in the lush Pacific Northwest, I enjoyed all things wet (which was about everything) - rain, fog, fishing, mountain biking, baseball, hiking, and lakes. I stayed in the Portland area for my undergraduate degree in Sociology and Chemistry. I then explored Hawaii and Yellowstone for a couple of summers and ended up in Denver as a bicycle messenger. After a couple of years working in various labs, I went to Indiana University and



received a MSES at the School of Public and Environmental Affairs. I do have to admit that I have to basically thank Bill Jones for everything after 1997 - my education, involvement with NALMS, and for my career on lakes. I have worked on Oswego Lake (Portland) and a couple of downstream reservoirs in Denver over past 14 years. I have been lucky to have a career where it seems like I drive a boat more than a car. I live in Denver with a great wife and two boys, 10 and 7. From managing lakes to raising kids, the little things do matter the most.

### **James Vennie**

James recently retired from the Wisconsin Department of Natural Resources, Lakes Partnership. He worked on Wisconsin Lakes for 32 years. He is a Professional Hydrologist, Limnologist, Hydro geologist, and WI-DNR's expert on Algal Toxins. James graduated from University of Wisconsin - Stevens Point in Water Science. He is the past Chairman of NALMS Technology Transfer Committee for many years. Also, started the first NALMS website and supported E-Mail distribution system Lakes-L for decades.

