

2009 NALMS e-Newsletter

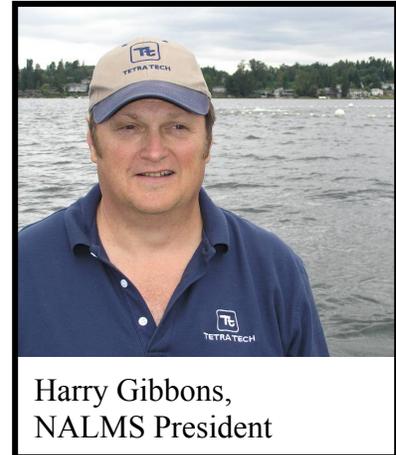


September

President's Message – Take Action

July and August were all about having fun. September is about developing a good feeling by setting the stage to take action and move forward!

Right, it is time to move our energies to promoting, preserving, and managing our lake and reservoir resources. By planning and starting action now that not only builds upon our experiences from this last summer but also helps us identify the path that we must follow to ensure the quality of our lakes, we will push lake management to a new level. Through this type of activity, we will develop a feeling of gratification through accomplishment, goal setting, and movement towards achieving and sustaining our management objectives. Some may not call that fun, but it is nevertheless rewarding. This step up in our intellectual activity is in direct contrast to what we are about to observe in Mother Nature with the on-set of Fall. Unlike so many aquatic organisms that will respond to the decreasing temperature and solar energy with the slowing of metabolic rates; we can resist this seasonal slow down by turning our total focus to lakes and specifically how to manage them for current uses and for future generations to come. Now is the time to reach for lake management sustainability for the environment, society, and economic viability of our very existence.



With that said, look for coming issues of this Newsletter that will role out NALMS' plans and activities. Over the next few months, NALMS will be focusing not only on how NALMS can grow and work towards its mission, but how NALMS will increase its activities to assist its affiliates in their missions. This does not mean everything is starting anew, but it does mean we are going to attempt to reenergize our programs, committees, and day-to-day functions along with some new agendas and projects. But why not start with a trip to NALMS 29th International Symposium, "Ensuring Our Lakes' Future" in Hartford, CT this October? If you cannot attend this one, start now to plan your trip to the 2010 Symposium in Oklahoma City and the 2011 Symposium in Spokane. These all will be happening places to be to learn, exchange ideas, meet the happening people, and of course have fun!

As for immediate happenings, Sarah Unz and Philip Forsberg have been working hard in our office to ensure we have in place the basic foundation to serve our members. As always, they are there to help answer your questions or seek out a member that can address or help other NALMS members. Let's look forward and work together towards a future that brings lakes and reservoirs into the public's awareness so that we can help shape the future where lakes and reservoirs are universally recognized as the valuable resources that they truly are.

Thanks,

Harry Gibbons
President, NALMS

WITHIN NALMS

Membership in Motion - Sarah Unz

Welcome to a new piece in NALMS Notes devoted to membership and current activities in the NALMS office.

A big thank you to everyone who has renewed their membership while registering for the upcoming NALMS Symposium, and another big thank you to those members who have renewed their memberships for another year. If your membership expires on September 30, 2009 you should have received an invoice from me. If you have not, or you are not sure when your membership expires, please do not hesitate to contact me. Renewing is very easy. Simply, go to www.nalms.org and click on Join Now! If you prefer to renew by sending in your payment information through the mail or by fax, please download the membership PDF [here](#).

The office has been very busy with Symposium work, membership renewals, and working on the website. We have been working with Acumium, a local company here in Madison, to help us move forward with the website. They have many years of experience and work with the University of Wisconsin Alumni Association, which has chapters all over the world. They have helped us achieve some of our goals so far and are assisting us in moving towards a site and content management system that is sustainable and sophisticated. Your input on what you would like the NALMS site to be is welcomed and very much appreciated. Please submit ideas, especially examples of sites you like, you find easy to navigate, and that are similar to NALMS to slunz@nalms.org.

Thank you for your membership and your support and commitment to NALMS!

Take care,

Sarah
Membership Services Coordinator

NALMS in the News

NALMS' Lake & Reservoir Management Journal had an article featured by ENN (Environmental News Network). Go to http://www.enn.com/top_stories/article/40358 to check it out. The article is about whether or not phosphorus ordinances make a difference for lakes. This was great exposure

for NALMS and the journal. Let us know if you see NALMS anywhere else out there in your daily lives. Every bit of exposure helps.

Get Your Free Copy

Lake and Reservoir Management, the official journal of the North American Lake Management Society (NALMS), recently published a timely article containing the results of a study on the effect of a ban on phosphorus in lawn fertilizer on local water quality. The article, "*Reduced River Phosphorus Following Implementation of a Lawn Fertilizer Ordinance*" (Volume 25, Issue 3), written by John Lehman, Douglas Bell, and Kahli McDonald is available FREE online for 60 days!

Free article is at <http://www.informaworld.com/smpp/content~db=all~content=a913929531>.

"There is considerable interest in reducing phosphorus in lawn fertilizers across the USA, but few scientific studies have documented the benefits," states Editor-in-Chief Ken Wagner. "This research is an important first step toward putting good science behind policy decisions."

Pass this offer on to others.

It's Time to Cast Your Vote!

It's time once again to cast your vote for NALMS' officers and directors. Click here to download your ballot, <http://www.nalms.org/nalmsnew/userfiles/file/2009electionballot.pdf>.

- Ballots must be returned to the NALMS Office via mail or fax by October 11, 2009.
- All members may vote for President-Elect and Treasurer.
- Members may only vote for the Regional Director candidate in their region.

UPCOMING CONFERENCES & EVENTS

2009 NALMS Annual Symposium – 10 Reasons to Attend

1. This will be your year to win the Clean Lakes Classic 5k run.
2. There are 10 pre-conference workshops that will teach you everything you need to know about lakes.
3. If you stay late, there are 9 more post-conference workshops.
4. To say hi to Philip at the check-in counter
5. See who loses their first tooth at the annual hockey game
6. Hartford, need we say more
7. Witness first hand what happens when the trees lose their chlorophyll-a, now if only we can get the public that excited about lakes losing their greenness in the fall.
8. Get to stay at a Marriott or Hilton on company time or without the family
9. Enjoy the exhibitor reception on Wednesday
10. The dessert at the annual Awards Reception and Banquet



Important Dates

October 26, 2008 – Board of Directors Meeting

October 28, 2008 – Annual Membership Meeting

Both will take place at NALMS' 29th International Symposium in Hartford, Connecticut. NALMS members are welcome and encouraged to attend both meetings.

More information about the conference can be found on the NALMS website at <http://www.nalms.org/nalmsnew/nalms.aspx?subcatid=42&Sid=3>.

If you have questions relevant to the program, please contact Amy Smagula at Amy.Smagula@des.nh.gov or 603-271-2248

7th annual Water Monitoring and Education Summit

The New Jersey Department of Environmental Protection, in cooperation with the Rutgers EcoComplex, the Watershed Watch Network, and the NJ Water Monitoring Council will be hosting the 7th annual Water Monitoring and Education Summit, November 18 and 19, 2009. This year's Summit has been expanded to include all water monitoring activities in NJ.

You are invited to participate in the 7th Annual Water Monitoring and Education Summit by becoming a presenter and/or developing a session of multiple presenters. The conference will showcase projects, protocols, and tools that have been developed to compliment local and state planning efforts and sustainable management practices. This conference is not limited geographically. A list of topic possibilities is included as a springboard from which you may generate ideas and is not meant to be restrictive. Deadline: September 28, 2009.

For more info or a copy of the call for presenters, visit <http://www.state.nj.us/dep/wms/bfbm/vm/>.

Mid-Atlantic Volunteer Monitoring Conference

Monday-Tuesday October 19-20, 2009 at Dickinson College, Carlisle, PA

For more information, go to <http://sites.google.com/site/eparegion3conference/>.

The conference is FREE for the first 150 people that register. Registration and information on lodging options can be found on the web site.

The 2009 Mid-Atlantic Volunteer Monitoring conference will provide a forum for volunteer monitors, environmental organizations, and agencies to meet, present, and promote volunteer monitoring efforts. The conference includes plenary session, workshops, and breakout sessions on topics such as sustaining volunteer organizations, data use, watershed issues, and monitoring techniques.

The conference is sponsored by the Environmental Protection Agency Region 3 (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia), the Pennsylvania Department of Environmental Protection, and the Alliance for Aquatic Resource Monitoring (ALLARM)/Dickinson College.

AFFILIATE TALK

To foster better communication amongst the diverse group of NALMS Affiliates, this section will feature a monthly topic or question which may be of interest to many affiliates. The goal is to help affiliate groups learn from each other, be more efficient with their time and resources, and better manage our lakes and reservoirs.

This question by Rick Almalfi was posted on the Certified Lake Manager/Professional group website with many great responses.

Question: We have a client with a shallow, 100-acre lake in Northern Arizona (temperate climate). It is choked with Eurasian milfoil with some coontail. Has anyone had any experience trying to use White Amur in this situation? The game and fish department is resistant to its use. I know it is not a preferred food for the fish. Has any chemical applications stood out as more successful than others? We have tried Navigate with limited short-term success.

Here is a list of pearls of wisdom that Rick received.

1. Avoid eradicating all aquatic plants. It may cause a shift to a more turbid, algae dominated state.
2. Don't treat the entire lake before testing the herbicide in a smaller area to see how the native plant community responds.
3. Determine the social issues before treating a lake. Sometimes one person or small group of vocal people can steer a lake management decision in the wrong direction. Before satisfying the squeaky wheel, determine the overall uses or goals for the lake and decide what is best for all of the lake community.
4. Appropriate aquatic plants equal fish, no plants equal no fish and lots of algae.

Affiliate Websites – Check out this one

A great way to see what other affiliates are doing is to check out their websites and see what they are up to and how fancy their web pages are.

The Colorado Lake and Reservoir Management Association (CLRMA) rolled out a new website look. The updated site has a scrolling banner to announce upcoming events, an interactive map to locate lakes and reservoirs around the state, and a new way for lake monitoring volunteers to send in their Secchi depth data via the website. Eventually, a large lake database will be linked to the interactive map to provide detailed information about each body of water. Go to www.clrma.org to see the newest affiliate website.

LAKE NEWS & INFORMATION

OIG Report Finds EPA Needs to Accelerate Adoption of Numeric Nutrient Water Quality Standards

An August 26 report released by EPA's Office of Inspector General (OIG) (Report No. 09-P-0223) evaluated the effectiveness of the Agency's strategy to determine what improvements could be made to accelerate progress to promote State adoption of numeric nutrient water quality standards under the Clean Water Act (CWA). The report found that EPA cannot rely on the States alone to ensure that numeric nutrient standards are established. EPA should prioritize States/waters significantly impacted by excess nutrients and determine if it should set the standards. OIG also found that EPA also needs to establish effective monitoring and measures so that accurate program progress is reported and assist EPA management in program decision-making. The inspector general recommended that EPA prioritize waters such as the Gulf of Mexico that have been significantly affected by excess nutrients and determine whether it should set standards for nutrients for those waters. It also needs to establish effective monitoring and measures to ensure that progress is accurately reported.

The inspector general found EPA's nutrient criteria strategy lacked management control and an adequate system of accountability for itself or the states. EPA also did not seek state commitments to specific actions or deadlines that would provide accountability. As a result, the report said, few states have made progress in adopting numeric nutrient water quality standards. While states have been slow to adopt numeric standards, the report said, EPA has not worked with the states to identify priority waters or coordinate efforts to focus on waters that needed the most protection. In some cases, the states developed standards based on availability of data rather than the severity of impairment.

OIG recommended that the Assistant Administrator for Water:

- Select significant waters of national value which need numeric nutrient water quality standards to meet the requirements of the Clean Water Act.
- Set numeric nutrient water quality standards for the waters identified in the first recommendation to meet the requirements of the Clean Water Act.
- Establish EPA and State accountability for adopting numeric nutrient standards for the rest of the Nation's waters. and
- Establish metrics to gauge the actual progress made by the States.

WEF Hosting World Water Monitoring Day

The Water Environment Federation (WEF) is hosting World Water Monitoring Day (WWMD) on September 18 at Hains Point in Washington, DC from 9:00 am – 12:30 pm. All are welcome to join WWMD sponsors and partners as they celebrate World Water Monitoring Day 2009. Following a short formal program, participants will conduct hands-on testing of the Potomac River and visit a variety of displays from WWMD partners and other water quality stakeholder groups.

Naturally-occurring Bacteria takes on the Quagga

A strain of native bacteria found in soil has been shown to kill the Quagga mussels by slipping into the pests, undetected by the clams' natural defense systems, and killing them. The San Diego Union-

Tribune reported that tests using the bacteria will take place along the Colorado River in eastern Riverside County this fall.

Pam Marrone, a biologist working at Davis Dam on California's eastern edge, stated that a solution called Zequanox contains the bacteria that may be the key to eradicating the foreign pest from North America's rivers and lakes. The beauty of Zequanox is that the bacteria in it are not foreign to California. Their toxins are deadly to Quagga mussels but cannot be detected by the pests.

Michigan State University Extension – Review of the Native Watermilfoil Weevil

For information on Milfoil Weevil, check out a new Michigan State University Extension Bulletin, available at the following URL: <http://web2.msue.msu.edu/bulletins/Bulletin/PDF/WQ61.pdf>. This 8-page document focuses on the biological control of Eurasian Watermilfoil with the native watermilfoil weevil. It covers the life cycle of the weevil, overwintering habitat needs, and a nice list of Q & A.

Tiny Invasive Clams Flourish in Lake Tahoe

A UC Davis report says the population of Asian clams has soared in the southeast portion of Lake Tahoe, threatening to control food sources, provide necessary calcium for other invasive mussels, and excrete nutrients that foster algae growth.

No one is certain how the Asian clam first arrived at Lake Tahoe, whose famed clear waters lie at the center of a multimillion-dollar tourism economy. Some authorities say that fishermen used the clams as bait and that surviving clams took root on the lake's bottom. Visitors first noticed the white, partially oxidized shells on the shore seven years ago.

"We've been aware of the Asian clam problem in Tahoe since 2002, and it's been just the past couple of years that it appears these clams have proliferated fairly rapidly," said Dennis Oliver, a spokesman for the Tahoe Regional Planning Agency, a bi-state agency that has spent more than \$1 billion in federal, state, local, and private money on restoration efforts at the lake.

Authorities are testing removal methods such as suctioning out the clams and covering their beds in plastic to smother them. Environmentalists have called for increased inspections of boats to make sure quagga and zebra mussels don't get in as well. The day may come soon when Lake Tahoe will be closed to traveling boats to avoid further invasive species.

Great Salt Lake, Hot Spot for Mercury Pollution

A national USGS report, about mercury pollution in the nation's freshwater streams, lakes, and wetlands, recently revealed that mercury pollution is so pervasive that every one of the 291 fish sampled nationwide was contaminated.

The Great Salt Lake was not part of the study, because it is not a freshwater lake. But the new findings provide a useful tool for understanding just how contaminated the Great Salt Lake is relative to other waters across the country.

The national studies show that saltiness, low oxygen, sulfur, and dissolved organic carbons play a role in the transformation of elemental mercury into its toxic form, methyl mercury. The Great Salt Lake is the perfect setting for methyl mercury formation.

Compared to the national data, the Utah water body typically has mercury levels double those found in more than 90 percent of the water sampled nationally. And the open water has up to 38 times more methyl mercury than 97 percent of waters sampled in the survey, while a recent sample taken in the Great Salt Lake wetlands had more than six times as much as in 97 percent of the sampled waters.

The Utah Division of Water Quality, the Utah Division of Wildlife Resources, the U.S. Fish and Wildlife Service, Utah State University, the University of Utah, and the U.S. Environmental Protection Agency have joined the geological survey in studying mercury in the lake. Now Utahns are warned to eat less fish, or none, from 16 lakes and rivers statewide because of mercury contamination.

Since the Great Salt Lake does not contain any fish, the concern is more with waterfowl. High mercury in Common Goldeneye, Cinnamon Teal, and Northern Shoveler on the Great Salt Lake have prompted advisories for eating those bird species.

Retrofitting Dams to Generate Electricity, Can Your Lake help Reduce Greenhouse Gases and Global Warming?

There maybe a new push to retrofit existing dams to help generate renewal energy across the country. There are approximately 80,000 dams in the United States. Only 3% (2,400 dams) of them are used to generate power.

Recently, the Belleville Dam on the Ohio River was retrofitted to generate power. American Municipal Power, a large Ohio-based power supplier, broke ground earlier this month on the first of five planned hydropower retrofit projects on the river. The total cost will come to around \$1.9 billion, and they should be completed between 2013 and 2015. Total power production will be 350 megawatts, enough to supply 350,000 homes.

Reason for this new push is because of the increase in renewable energy attraction, upcoming climate policies, and the difficulties in building new reservoirs and dams. A Sierra Club representative expressed full support for the Ohio River project because it displaces dirty energy from the grid. With enough creativity, maybe a retrofitting of an existing dam can be partially funded by carbon offsetting purchases from people who like to have carbon-neutral vacations.

Asian Carp only 5 Miles from Lake Michigan

Preliminary results, out at the end of July, detected the DNA of the Asian silver carp only five miles from the barriers. Of 21 samples taken near the locks near Romeoville, 12 were positive for silver carp. Based on the results, the Army Corps of Engineers has increased the voltage, pulsing, and frequency of the electronic barrier. The Asian carp escaped from fish farms in the South after flooding in the early '90s.

In June, the Army Corps of Engineers hired the University of Notre Dame to conduct DNA research near electronic anti-carp barriers in the Chicago Sanitary and Ship Canal near Romeoville. The

canal is the only continuous, direct connection between Lake Michigan and the Mississippi River. The DNA testing, developed by a team headed by Notre Dame Professor David Lodge, can detect species-specific, trace amounts of mucus, urine, and feces.

Ecologists fear that the carp, which can grow to 100 pounds and up to 4 feet long, could devastate sport and commercial fishing in the Great Lakes. The fish feed on the low end of the food chain, like plankton. The Asian carp wind up squeezing out other fish that bigger fish feed on.

Blimp Tested in Effort to Understand Lake Erie Algae

Researchers are hoping that a surveillance balloon about the size of a two-story house will help decrease western Lake Erie anoxic dead zones.

The \$125,000 unmanned SkySentry Aerostat blimp, initially designed for military surveillance and communications, is testing its cameras and other equipment about 1,000 feet above a barge off Maumee Bay.

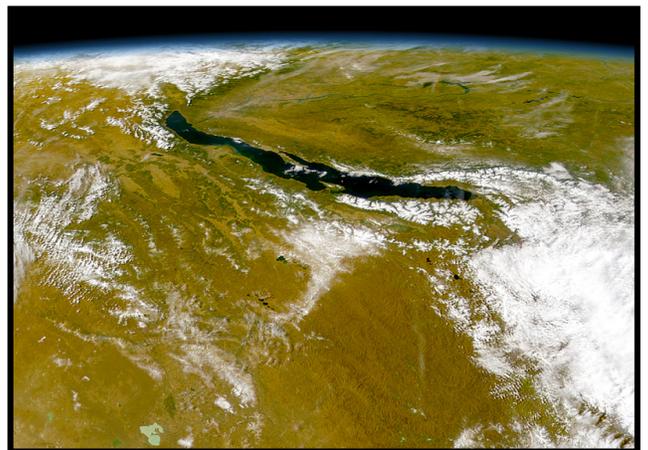
Several times a week, the device snaps spectral images of the light emitted by algae and matches them to algae found from boats and aircraft in the warm and shallow waters. Researchers seek to track algae blooms before they fully develop and predict where they will drift.

Another goal is to find a less expensive way to capture images than satellites, which are not as clear and are recorded only every eight days.

Officials from Colorado-based SkySentry and the Army's Space & Missile Defense Battle Lab recently demonstrated the blimp for government officials, scientists, and environmentalists during a conference at the University of Toledo's Lake Erie Center. For the military, the blimp was used for communications and surveillance at levels above 60,000 feet.

Featured Lake – Ancient Lakes of the World – Lake Baikal

Lake Baikal, probably the most famous of the ancient lakes by far, is the world's largest natural lake by volume and is between 20 to 30 million years old. More water than all the Great Lakes combined could fit inside Lake Baikal. Baikal is also the deepest lake on earth, sitting in the planet's deepest land depression, a rift nine km deep, located in one of the most complicated and least understood fault zones on earth.



The lake stretches for 636 km and is up to 80 km wide. The average depth is 730 meters while the maximum depth is 1,637 meters. The hydraulic residence time is approximately 330 years. The lake's unusual purity is due to two factors. First, one of Lake Baikal's 250 species of freshwater shrimp, the endemic *Epishura baicalensis* strains out large amounts of algae and bacteria from the

water. In addition, most of the Baikal watershed is underlain by bedrock, causing water inflow to have very little contact with sediments and minerals in route to the lake.

The lake has 365 rivers flowing into it and holds a full 20% of the liquid freshwater on the surface of the earth. This ancient lake is considered by many to be one of the cleanest lakes on the planet, and untreated lake water withdrawn from deep in the lake is used as a source of bottled drinking water.

The unique size and age has created an opportunity for animal uniqueness. Lake Baikal's diverse and unusual biota includes the Baikal seal (*Phoca sibirica*), which lives nowhere else on earth and is separated by 3,220 km from its nearest relative, the Arctic ringed seal. The Baikal seal, known locally as nerpa, are fully adapted to freshwater. Baikal seals can remain under water for up to 45-60 minutes, due to the extraordinary capacity of their blood to hold oxygen, and they give birth to their young in snow dens on the lake ice.

Fifty-two species of fish inhabit Lake Baikal waters. The omul (*Coregonus autumnalis migratorius* Georgi), an arctic white fish endemic to Baikal, accounts for two-thirds of the annual catch from the lake.

Over the last 50 years, watershed management efforts at Lake Baikal have progressed from a strictly resource extraction focus in the 1950's, to a management and educational development focus in the 1990's to the current period of transition. Policy-makers currently have the choice of implementing progressive watershed management plans developed in the last decade while supporting the development of the service sector economy, or to pursue intensive development options that could increase economic gains in the short term, but jeopardize environmental integrity and human health in the long run. The path taken in the next decade in regards to environmental policy will guide development within the region for the next century. This long-term trajectory is based on current decisions because economic development is just beginning to take hold in Russia, in general, and at Baikal, in particular. For example, recent legislation allowing housing developments around the shores could bring a huge influx of development pressures on Baikal's shoreline. Once constructed, it would be impossible to then reverse development trends towards conservation priorities.

Website of the Month – Earth's Water from Above

<http://www.circleofblue.org/waternews/2009/world/spaceborne-perspectives-earths-water-from-above/>

The spaceborne satellites and radars of the the National Aeronautics and Space Administration and the European Space Agency capture scores of true- and false-color images of the Earth's water every day. These dazzling photos and composite images offer a unique new perspective on the river basins, lakes, and glaciers of the world and can be seen at this website.

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.