

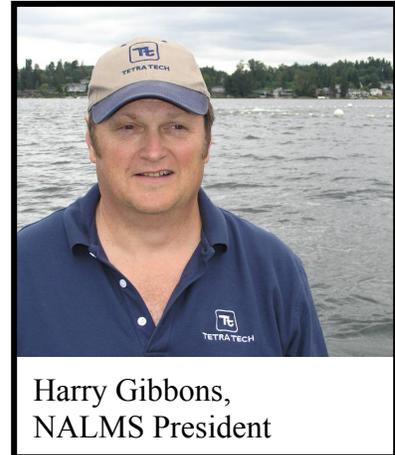
2009 NALMS e-Newsletter



October

President's Message –

Now is the time of year when we have to promote the management of our lakes. This promotion cannot just be about lakes and reservoirs any more. We, the members of NALMS, have to take center stage and promote the management of lakes and reservoirs by promoting our profession, our science, our engineering, our outreach. Given the economic times we live in, we can no longer sit back and assume that lake and reservoir management will occur because of current regulation or need. We have to get out of our shells and communicate to individuals, organizations, agencies, and politicians the need for lake management. If NALMS is going to achieve its goal of promoting lake and reservoir management, we as members must move the understanding of the need forward. In addition, those of



us that are dependent for part or all of our income on environmental management, it is imperative that we share what we know. Lakes do not manage environmental stressors on their own or necessarily in a direction that we define as beneficial to human and aquatic organisms. Who else besides us, based on our understanding of lake and reservoir management needs, are better suited to help develop the environmental policies, programs, and funding avenues?

It is time for us to form those partnerships together and advance some common ideals. Specifically, we need to identify where at the local, state, and federal level there is a need for legislation. This legislation can promote protection of the environment, as exemplified by the phosphorus ban in detergents and dishwasher detergents (Read Sarah Unz's article – Membership in Motion). Or it can be legislation to address specific environmental needs for improvement of a given ecosystem. Or it can be assisting in defining and drafting legislation that expands the current mandates for lake management and the funding needs.

Yes, we have to become more politically involved if we are going to meet the constant need for improvement of lakes and reservoirs and continue to educate our fellow citizens, ourselves, and future lake professionals. Let's talk to each other and define where there are opportunities for each of us to partner and help with local, regional, state, and federal issues to make lake management a priority in the future. As I stated last month it is not too late to work for lake management sustainability for the environment, society, and economic viability of our very existence.

Let's keep this in mind as we meet at our NALMS 29th International Symposium, "Ensuring Our Lakes' Future" in Hartford, CT this October. If you cannot attend this one, start planning now to attend our 2010 Symposium in Oklahoma City and the 2011 Symposium in Spokane. These all will be happening places to learn, exchange ideas, meet the happening people, and of course have fun!

Let's look forward and work together toward 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 they truly are.

Thanks,

Harry Gibbons
President, NALMS

WITHIN NALMS

Membership in Motion - Sarah Unz

Membership renewals are still trickling in from the September renewal process. Thank you to everyone who has renewed and welcome to all the new members! If you have not yet renewed, please login to www.nalms.org and then click on Join Now. All of your contact information will pop up, so the only thing left to enter will be your credit card information. After this, you will be set for another year's membership. If you prefer to renew by sending in your payment information through the mail or by fax, please download the membership PDF [here](#).



A reminder to all NALMS members that invasive species cards are still available to you for free! [Please click here](#) to see what the cards look like and to download an order form. Do you know any teachers who would be able to use these in his or her classroom? What about a scout troop? Do you have a lake association meeting coming up where you could pass some out? Spread the word not the species!

I was able to spend sometime outside of the NALMS office recently with one of NALMS' Past Presidents, Richard Wedepohl. Richard provided testimony on behalf of NALMS in support of a bill that would limit Phosphorus in dishwasher detergent in the State of Wisconsin. From this experience I learned several things:

One, NALMS' own Bill Jones proposed similar legislation in Indiana and it passed, making Indiana the first state in the nation to protect its lakes and waterways by prohibiting the use of laundry detergents containing phosphorus.

Two, there was support for this legislation from municipal groups, waste water treatment facilities, the Soap and Detergent Association, and many non-profit groups. From all corners, this legislation was supported and it was refreshing to see some common ground, especially on such an important topic.

Three, Past NALMS Presidents can be found in the Wisconsin State Capitol building. I was able to meet Lisa Conley at the hearing. I was also able to meet other NALMS members who were in support of this legislation.

Thank you to Richard for allowing me to attend the hearing with him and for representing NALMS.

The office is very busy preparing for the Symposium, but we are always here to help members. Please give us a call if you need assistance with Symposium registration, membership renewals, accessing the member-only area of the website, or any other NALMS issue. We look forward to hearing from you and to seeing you in Hartford!

Take care,

Sarah
Membership Services Coordinator

UPCOMING CONFERENCES & EVENTS

2009 NALMS Annual Symposium – Last Minute Travel Plans

Plane tickets have been purchased, hotel reservations have been booked, registration for the conference has been paid, you are starting to look for your favorite conference frog tie, and now all you need to know is how to get to and from the airport.



Besides walking or hitchhiking, there is a relatively inexpensive and environmentally friendly way to get to and from the Hartford airport (Bradley International Airport). The bus and it costs \$1.25 one way. That's right, the mass transit bus system for Hartford (CTTransit) includes two busses (one is express with less stops) that travel to and from the airport on a regular basis.

Bus 30 is the Bradley Flyer, the 30X is the express that uses I-91 and the 30N uses North Main Street. Both take about 30 minutes to get to downtown from the airport. They leave about every hour from the airport. To find where to catch the bus (at the lower level terminal), go to www.bradleyairport.com/home/.

The bus will drop you off in downtown Hartford at the Old State House which is only 3 blocks from the conference center. A detailed downtown map of the bus stops is at www.cttransit.com/uploads_RTDivisionDetail/2009htfd_detail.pdf.

For a weekday schedule of the 30N and 30X busses, go to [www.cttransit.com/Uploads_Schedules/h_30_wkdysched\(4\).pdf](http://www.cttransit.com/Uploads_Schedules/h_30_wkdysched(4).pdf).

Hockey Lovers Take Notice

That stalwart band of NALMS hockey aficionados will again take to the ice in Hartford Connecticut, coincidental with the NALMS international symposium. This is not a NALMS sponsored event, but anyone in Hartford for the week is welcome to play, watch, or otherwise take place in the pageantry. Anyone wishing to play will need to check in with Ken Wagner ASAP, so teams can be stacked...er, I mean set up. Ken.wagner@aecom.com or 508-612-5799.

NCLMS 2009 Annual Meeting And Fall Workshop

Current Topics in Lake Management: Shoreline Management, Watershed Issues and Invasive Species. The meeting will be on Thursday, November 12, 2009 from 9:00 AM – 3:00 PM at the Mahlon Adams Conference Center in Charlotte, NC. For more details, go to www.nclakemanagement.org.

East Coast Affiliates – CEU Opportunity in New Jersey

The Rutgers University NJAES Office of Continuing Professional Education is pleased to offer the follow class in lake management. This course has routinely been attended by affiliate members of the North American Lake Management Society. While the course is New Jersey-based, the content is universal.

Lake Management - November 5 and 6, 2009. Whether you are a lake manager or a lake resident, an ecologist, or an engineer, this popular two-day lake management course is for you. From small ponds to large lakes, drinking water reservoirs to fishing lakes, if you want your lake and watershed management efforts to be successful you need a technically sound foundation to properly investigate and diagnose water quality problems and to develop cost-effective, long-term restoration plans.

Led by Dr. Stephen Souza, President, Princeton Hydro LLC (Past President, PALMS, 1993 and Past President, NALMS, 2001), this course will teach you how to monitor water quality, identify problem algae and aquatic plants, and select the correct types of lake rehabilitation measures needed to protect, enhance, or improve the quality of your pond, lake, or reservoir. Dr. Souza's professional team will guide you through the benefits and pitfalls of all of the most commonly implemented lake and pond management options, including the need for state or federal permits to implement many of these measures.

For featured topics and more information on how to register, please visit: <http://www.cpe.rutgers.edu/courses/current/ew0301ca.html#lkmgmtdescript>

This course is approved for 1.2 CEUs towards the NALMS Certified Lake Manager/Lake Professionals program.

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.

Dam removal - Does anyone have experience removing dams 9 ft high and/or have experience with designing a monitoring program for such a project?

Please send your comments to Danielle Donkersloot at Danielle.Donkersloot@dep.state.nj.us.

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.

Indiana Lake Management Society (ILMS) – www.indianalakes.org

ILMS is a great website full of current and useful information about lake management in the state of Indiana. Even though the site is full of information, ILMS will be launching an updated, constructed website to replace this one. This is a great opportunity to see how an affiliate website changes from one version to the next. Go and check out this website before it is updated.

LAKE NEWS & INFORMATION

NALMS Member Helps out Nepal Fish Farmers

A former NALMS board member helped fish farmers in Nepal to grow bigger carp to feed the local population that struggles to maintain a proper diet.

To produce more fish, the government encouraged cage fishing. Uses cages to grow fish in local lakes began in 1972 in Nepal's Pokhara Valley at Lakes Phewa, Begnas, and Rupa.



The plan worked, but yielded modest fish harvests. People remained undernourished. Today, the Nepal interior economy is thriving because of a small, but significant, change in production technique. Families not only have food, but a surplus to sell for cash. Tourists flock to the area to sample the catch, bringing in more money. All that was needed was a little science from a University of Missouri aquatic ecologist and current NALMS member.

In 1985 Jack Jones, now the Dunmire Professor of Water Quality in the University of Missouri College of Agriculture, Food and Natural Resource's Department of Fisheries and Wildlife Sciences, wanted to add an international component to his career. He noticed Nepal's developing aquaculture and thought his expertise in limnology could help.

There was a shortage of fingerlings to stock the lakes and the rural families who farmed the fish, one of the lowest of the country's castes, couldn't afford feed pellets. They relied on naturally-occurring plankton for the fish to eat. They were just not growing big enough fish everywhere.

Jones, after collecting data, did notice that some cages did yield twice the biomass of bighead and silver carp. After analyzing the data and considering water temperature, food, oxygenation, and sunlight, Jones realized that the optimum depth for the cages was just a few more feet below where the surface cages were kept. By simply rotating the 15 x 6 foot cages so that they went 16 feet down into the water column, the fish farmers were able to double the fish growth. The simple answer was vertical cages instead of horizontal cages.

Word got out almost overnight and the other families began switching their cages to the vertical position. The end result was an economic boost. A chain reaction occur, more aquaculture meant more fish related jobs like net mending which meant more money moving around making banks happy. Eventually, it has even boosted tourism, and families are starting to own their own homes.

Today, one family can operate a five-cage system that adds 9,000 to 14,000 Nepali rupees (\$6,300 to \$10,000) to their annual income, an enormous boost in a country where the average annual household income is still under \$300 per year. The caste now sends their kids to college instead of working the oilfields overseas.

From a relatively simple solution to increase fish production, the country of Nepal has changed for the better, all thanks to Jack Jones.

Who Will Set Water Quality Standards for Florida Lakes?

Florida Department of Agriculture officials are trying to block a proposed settlement between the U.S. Environmental Protection Agency and a Florida environmental group in which the EPA would set pollution limits for Florida's lakes and rivers. On Nov. 16, the state department will ask a federal judge to block a proposed agreement and allow the Florida Department of Environmental Protection (FDEP) to set those standards.

FDEP obviously think that they are better suited to set Florida standards than EPA. They are more familiar with the data and EPA would set numbers that are too protective. The pollutants EPA is expected to set standards for are primarily phosphates and nitrogen, found principally in fertilizers.

While Florida already has limits for nitrogen and phosphorous when it comes to maximum daily loads entering the state's water bodies, it doesn't have such standards when it comes to average allowable limits. Instead, Florida water officials have for many years only said that nutrient levels, such as for phosphorous and nitrogen, should not create an imbalance between flora and fauna, but never dictated specific levels for those nutrients.

Originally, the FDEP was working with the EPA to help establish average allowable limits for unwanted nutrients in water, but stopped when EPA was sued over the issue.

Limited Copies of Forests, Water and People Report Available

There are a limited number of hard copies of *Forests, Water and People: Drinking water and forest lands in the Northeast and Midwest US*. Please contact Martina Barnes at USDA Forest Service (email: martinabarnes@fs.fed.us) with your complete mailing address.

Inspector General Report Recommends EPA Bolster Cleanup Plan for Great Lakes

According to report issued on September 14 by the EPA Office of Inspector General - [EPA Needs a Cohesive Plan to Clean Up the Great Lakes Areas of Concern \(AOC\)](#) - the Agency needs a broader plan for cleaning up the 31 identified areas of concern around the Great Lakes. The report said that while EPA is the main agency responsible for cleaning up the areas, it “does not have a regime for coordinating remediation activities across its program offices” or with state and local interests and “without improved management, coordination and accountability, EPA will not succeed in achieving the results intended for the AOC program. The areas of concern (AOCs) are managed by the Great Lakes National Program Office, which reports to EPA's Region 5 office in Chicago. Cleanups are often complicated by overlapping responsibilities related to superfund jurisdiction, pending Clean Water Act enforcement, contamination removal under the Resource Conservation and Recovery Act, and statutory limitation of the use of funds from the Legacy Act—which funds the AOC program—to clean up superfund sites, the report found. There is also overlap among EPA regions, as the AOCs are located in three different ones.

The report recommended the Great Lakes National Program Manager establish a management plan spelling out each EPA program office's authority and responsibility for cleaning contaminated sediment; assign a lead EPA office to each site and determine the volume of contaminated sediment at each site; and annually measure and publish estimates of volumes, cleanup costs, and progress for each site. The inspector general's office said EPA agreed with some of the report's conclusions, though it did not concur with the idea of designating site-specific leadership authorities. The agency has 90 days to issue a written response to the report.

EPA Launches TMDL Program Results Analysis Web Site

EPA has developed a new Web site to communicate information about **Total Maximum Daily Load (TMDL) Program** results to technically specialized audiences, including TMDL developers, state water programs, academia, other federal agency programs, and EPA water quality staff. The TMDL Program Results Analysis Project is a multi-year effort directed at measuring and analyzing programmatic and environmental results of the program. The Web site provides a Clean Water Act Impaired Waters Program Pipeline navigation feature, fact sheets, EPA reports and Web sites, EPA

grantee reports and Web sites, publications, and datasets related to this effort. www.epa.gov/owow/tmdl/results/

Great Slave Lake and the Aurora borealis



Credit & Copyright: [Yuichi Takasaka](#) (Blue Moon Promotions)

This image found on the internet by Dick Osgood and was taken on September 22nd over Great Slave Lake in Northwest Territories of Canada. Great Slave Lake is the deepest lake in North American (614 meters) and is the ninth largest lake in the world.

Free Data-Sharing by Google

Google has launched a new online tool enabling free data-sharing that could aid with international scientific research collaborations.

The tool, Fusion Tables, launched on the Google Labs website, allows tables of data to be visualized as charts, graphs, and maps, which can help identify patterns and trends. Users are able upload their data and make the information freely available to anyone, opening up possibilities for collaboration.

Google is currently in conversation with several non-profit and government-funded organizations in an effort to increase the available online information. Since the tool's launch in June ClimateWizard — a collaboration between The Nature Conservancy, the University of Washington, and the University of Southern Mississippi has uploaded data on global climate change predictions. Education is one key area for this new, accumulative database application. Fusion Tables could be a great tool for teachers in the classroom to let students investigate their own data, integrate it, or fuse it with data from other places, and make the data come alive by visualizing it on maps.

CoCoRaHS

No, it is not another sugary kid's cereal. It is the Community Collaborative Rain, Hail and Snow Network. This volunteer weather monitoring effort would match nicely with any volunteer lake monitoring effort. CoCoRaHS is based out of Colorado State University, but they have a network of over 15,000 volunteer observers who check precipitation amounts on a daily basis across the United States (and their goal is to one day have an observer every square mile!).

If you have volunteers who may be interested in taking part in a precipitation monitoring program that's well organized, easy to participate in, and extremely helpful for collecting data related to

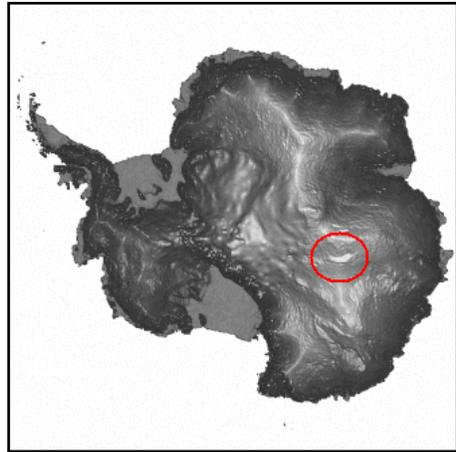
nonpoint source runoff to lakes, then use this website to sign up or to learn more about the program (<http://www.cocorahs.org/>).

Featured Lake – Ancient Lakes of the World – Lake Vostok

Lake Vostok may be the coldest, deepest and most southerly lake on earth. Vostok is thought to be one of the less than twenty ancient lakes on earth, although the lake's exact age is unknown. Vostok's water is considered to be the most pure on earth, since it has remained untouched beneath 4km of ice for its entire lifespan, possibly up to 15 million years.

Lake Vostok sits beneath a Russian research station that has seen the lowest temperatures ever recorded on this planet: minus 126.9 degrees Fahrenheit (53 degrees Celsius).

Lake Vostok is the largest of over 70 sub-glacial lakes on Antarctica. Its maximum depth is 500 meters and is considered the seventh largest lake in the world.



Lake Vostok is approximately the size of Lake Ontario. The lake is approximately 230 km long by 50 km wide, and probably contains a sediment record up to hundreds of meters thick. The average age of Vostok's water is thought to be approximately one million years old; the lake itself may be as old as 30 million years, if it is found to be a rift valley lake.

The lake and approximately 145 other smaller lakes were discovered by low flying aircraft with radar. Radar waves directed to the ice shield indicated areas that had extremely flat bottoms to the ice. Future investigations with seismic waves were able to provide a profile of the water depth.

Lake Vostok is not frozen under the 2.5 mile deep ice cover. There are three reasons for this. One, pressure from the thick ice cover reduces the freezing point of water to 30 F. Second, the ice cover naturally locks in the geothermal heat that naturally radiates from Earth. Third, the thick blanket of ice protects the lake from the extremely cold conditions of Antarctica.

One major scientific discovery with Lake Vostok involved micro-organisms that have been found living under the ice sheet, near the surface of the lake. Living without light or nutrients for millions of years, these life forms can demonstrate a wider than thought range in which life forms can survive in. Some scientists say that this can't be true and that contaminated drilling equipment was the source of the microbes. If there is life in Lake Vostok, the theory would answer questions about the limits of life on Earth and expand the range of environments that might potentially host life-forms in space.

Website of the Month – www.dnr.state.wi.us/lakes/publications/under/

This is a link to a guide that was written to help people understand information about lake water quality and to interpret lake data. It is a 20-page document that is nicely laid out and easy to navigate. The title is Understanding Lake Data by Bryon Shaw, Christine Mechenick, and Lowell Klessig.

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.