

2011 NALMS e-Newsletter



October 2011

President's Message

The first time I visited Niagara Falls was with my family, probably when I was around 7 or 8 years old and probably in a 1958 Plymouth like the one in the movie *Christine*. I can vividly remember standing close to the edge of the Horseshoe Falls and thinking “man - that’s a lot of water.” There were lots of daredevils in those days, going across the falls on wires and over the falls in barrels, so most of my wonder was with those sorts of things and with the severed heads in the wax museum.



I went again this weekend to the Falls for the second time (peddling a bike), and as I looked down into the whirlpool I thought again “is that ever a LOT of water.” But I wasn’t much interested this time in fantastic tourist attractions so there was a bit more time to reflect on the water. One thing that crossed my mind was the likelihood that the water in the Niagara River is probably in much better shape these days than it was in the early 60’s when I first visited. Lake Erie is certainly pumping out fewer nutrients, and the organic contaminants are much lower in most places, together with reductions in long range transport of any number of nasty things. Yup - the water is probably much better in a number of measurable ways. It made me feel good to think that. That over my career the water had improved. Probably not too difficult to find a few places elsewhere where that is not exactly the case.

Anyway, with no desire to go to see the severed heads, I continued to reflect on the big island of cormorants in the Falls basin. They were new! – but were they a good thing or a bad thing? (I tend to root for them)...and then the water clarity itself owes much of its improvement to the zebra mussels...and then I started to fantasize that once climate change dried everything up - the Maid of the Mist tours would have to be walking tours (and they would have to be renamed), BUT in the end I decided to accept the good news for what it was and be glad that there are those among us who are trying to fix those things that fall into the bad news category. Things surely are different than they were...not all worse mind you. So...our Symposium is probably only a few days off by the time you read this. Lots of people dedicated to fixing water problems...

Bev Clark
President - NALMS

WITHIN NALMS

Membership in Motion – Greg Arenz

A goal that I have set for myself is to become more familiar with the everyday activities of NALMS members so that I can fine tune Membership Services to match their needs. As part of this goal, I have been eager for an opportunity to see what some of our members are up to. Last month an opportunity came along in an afternoon outing with past NALMS President Richard Wedepohl to a project at Lake Belle View.



Located in Belleville, WI, Lake Belle View has recently been physically disconnected from the Sugar River and dredged. During this trip we stocked the lake with a variety of fish including Largemouth Bass and Northern and took turbidity, dissolved oxygen, and temperature readings. And to close out the day, we seined the Sugar River for fish and transferred them back to the lake. All in all it was an informative excursion, and I want to thank Richard for allowing me to tag along and learn!

And I am eager to learn more about our members! So keep in touch, and let me know what you're up to and remember that you can always become a part of the lake management conversation at NALMS' social groups on [Facebook](#) and [LinkedIn](#).

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We are still working to get all NALMS members that were up for renewal in September back on board. If you have recently expired and have not renewed your membership yet, please do so to make sure you don't miss out on any of your membership benefits. You can [renew online here](#) or [download a membership form here](#) and send it to me at the office.

We've had 102 members renew so far, and we've also seen 34 new members join NALMS during the September renewal period.

Please join me in welcoming Johanna Ansker, Francisco Gerson Araújo, Wendy Bley, James Britton, Candace Buford, Victoria Chraibi, Melissa Clark, Adam Copland, Steve Crawford, Regina Crawford, Tony Dugdale, Jonathan Frodge, Martin Hilovsky, Jeff Jackson, Bruce Kania, Robin Matthews, Ken Merrill, Brian Murphy, Jeffery Pasek, Marlow Pellatt, Matt Petty, Nancy Rapin, Mark Reinsel, Nick Salvatore, Casey Schoenebeck, Jeff Sereda, Ed Shallenberger, Emily Stanley, Sarah Sutton, Anna Thelen, Erika Thompson, Andy Welch, Steve Wells, and Lindsey Witthaus.

Thank you to all members for sharing our mission and supporting NALMS! As always, please contact me at 608.233.2836 if you have any questions or concerns about your membership.

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Finally, here at the office we are working on all the final conference details and pretty soon we'll be packing up and shipping out for the upcoming conference in Spokane, WA. This will be my first Symposium experience, and I am looking forward to meeting many of you during the event. I will be working the registration booth with Philip so stop by and say "Hello!" Safe travels to all who will be attending and for those of you who cannot make it this year - I hope to meet you at next year's Symposium!

As always, if you have any questions or concerns about your membership, please contact me at 608-233-2836.

Take care,

Greg
Membership Services Coordinator

NALMS Office Notes

(if nothing then delete this item for this month)

Philip Forsberg
Program Manager

2011 NALMS Sponsors for the Symposium

Please join NALMS in thanking the Sponsors of our 31st International Symposium in Spokane for their generous contributions. You can show your appreciation by clicking on the following links, learning a little about each Sponsor, and sending them a message thanking them for helping make the Symposium great!



Water Quality Program





**Shorelands &
Environmental
Assistance Program**



Advisory Committee on Water Information (ACWI)

NALMS was invited to join the membership of the Department of Interior’s (DOI) ACWI in 2003. The ACWI advises the Federal Government, through the DOI, United States Geological Survey (USGS) on the Federal Water Information Coordination Program (WICP). The purpose of the committee is to represent the interests of water-information users and professionals in advising the Federal Government on activities and plans related to Federal water-information programs and the effectiveness of those programs in meeting the Nation’s water information needs. The committee meets at least once a year and is chaired by the Department of Interior’s Assistant Secretary for Water and Science. Steve Heiskary represents NALMS on this committee. Background information on ACWI may be found at: <http://acwi.gov/aboutus.html>.

The annual meeting on July 12-13, 2011 in Reston, Virginia included updates from various programs that collect water information. Some of the primary topics addressed included:

1. WaterSMART – This is a broad initiative and details may be found at www.watersmart.gov
2. National Streamflow Information Program
3. Report from the Subcommittee on Hydrology
4. USGS Cooperative Water Program
5. Integrated Water Resources Science and Services (IWRSS)
6. WaterFALL™ Watershed Flow and Allocation Model

7. National Water Quality Monitoring Council (NWQMC)
8. National Ground Water Monitoring Network

A complete set of minutes from the 2011 meeting and copies of the presentations may be accessed on the ACWI web site http://acwi.gov/acwi-minutes/acwi2011_july_webex/ . The presentations and reports on the site provide detail on all of the above topics and other issues addressed at the meeting. If you would have any questions on NALMS role and participation in ACWI feel free to contact Steve Heiskary (steven.heiskary@state.mn.us).

UPCOMING CONFERENCES & EVENTS

What's the Best Way to get to your Hotel and back to the Airport?

There are several options for getting to and from the Symposium from the Spokane International Airport (www.spokaneairports.net). There is the usual rental car option if you plan to sightsee while you are in Washington, but remember that there is a daily parking fee at most hotels (\$12 for the Double Tree).



If your travel budget is smaller, the best option is to take advantage of hotel shuttles that are often complimentary. The Double Tree/City Center offers a free 15 minute ride to and from the airport (509-455-9600). Here is a complete list of hotels that provide shuttles in the Spokane area, <http://www.spokaneairports.net/hotel.htm>.

Another economical and environmentally friendly way to travel is to use the local public bus system, Spokane Transit Authority (STA). Bus 60 leaves Concourse C and A about every 30 minutes starting at 6:40am and ending service at 10:40pm during the week. A one-way pass is good for 2 hours, and it costs \$1.50. There is also a downtown shuttle that costs \$0.75 for getting around once you are in Spokane.

Finally, you can always take a taxi. Taxi Service 509-568-8000 provides 24-hour taxi dispatch service. The cost to City Center from the airport will probably be around \$25 - \$30, depending on how big of a tipper you are. It is about a 15 minute ride.

LAKE NEWS & INFORMATION

Hydrilla in Upstate New York

From Holly Waterfield (CLM), SUNY Oneonta Cooperstown Campus Biological Field Station Main Laboratory

The first documented population of *Hydrilla verticillata* in upstate New York was reported in August and occupies more than 95 acres within the Cayuga Lake inlet in the City of Ithaca, New York. The infested area is slated for a rapid-response herbicide application in October to reduce the potential for spread throughout Cayuga Lake and other water bodies in the Finger Lakes Region. Many of the Finger Lakes are connected to the Erie Canal and Lake Ontario, facilitating the spread of aquatic invasive species in the region and highlighting the need for outreach and diligence in preventing further spread of exotic species.

A New Lake Book out that you can check out in Spokane

Darby Nelson is an aquatic ecologist and Board Chair of Conservation Minnesota and a member of NALMS. He will have a booth in Spokane to show off his recent book, *For the Love of Lakes*.

Darby's goal for the book is to help people who enjoy lakes better understand lake ecology and ultimately increase lake stewardship. The book covers history, science, emotion, and poetry.

Less Calcium, Less Zooplankton, More Algae

From Science Daily

An algal bloom in a lake near Parry Sound, Ontario, located on the Canadian Shield, another region of Canada experiencing lake water calcium decline.

Unprecedented algae growth in some lakes could be linked to the decline of water calcium levels and the subsequent loss of an important algae-grazing zooplankton that helps keep blooms at bay.



Daphnia act like microscopic lawnmowers in lakes, feeding on algae and keeping it in check. However, without sufficient calcium, these grazers cannot reproduce.

Declining calcium concentrations in some lakes, which is linked to acid deposition and logging, has only recently been identified as a serious environmental problem in North America and Europe.

By studying microscopic fossils and other indicators preserved in a lake sediment core from Lake George (Nova Scotia), the Queen's research team found that algal production remained relatively constant throughout the last century until around 1990 when the levels tripled. The increase in algae directly coincided with the decrease of Daphnia in the lake.

EPA Launches New Website to Protect Wetlands; Urges Public to Report Any Violations of the Law

From EPA, Contact Information: John Martin, (212) 637-3662, martin.johnj@epa.gov

From helping control floods to serving as natural buffers against water pollution to providing recreational opportunities and habitat for fish and wildlife, wetlands offer benefits almost too

numerous to count. Members of the public can help the U.S. Environmental Protection Agency protect these vital areas by reporting suspected violations of the federal laws that protect wetlands in New Jersey, New York, Puerto Rico, and the U.S. Virgin Islands, the areas that comprise EPA Region 2. Violations can now be easily reported on EPA's website at <http://www.epa.gov/region02/water/wetlands/violations.html>.

Once a suspected violation is submitted on the website, EPA scientists will perform an investigation to determine if regulatory action is required. Wetlands are protected by the federal Clean Water Act, and the Corps of Engineers - or in many instances a state or territory - must issue a permit before a wetland can be impacted. EPA works in partnership with the Army Corps of Engineers, the states and territories to oversee and enforce wetlands regulations. Suspected violations can be submitted anonymously, though a lack of contact information may hinder EPA's ability to proceed with an investigation.

EPA Region 2 boasts a diversity of tidal and freshwater wetlands, including mangrove swamps and salt flats in the Caribbean, tidal salt marshes of the New York and New Jersey coasts, and coastal freshwater wetlands of the Great Lakes region. Interior regions also have a diversity of freshwater wetlands including swamps, bogs, fens, wet meadows, and marshes. Notably large wetland complexes in the region include the New Jersey Pinelands, the Hackensack Meadowlands and New York's Great Swamp.

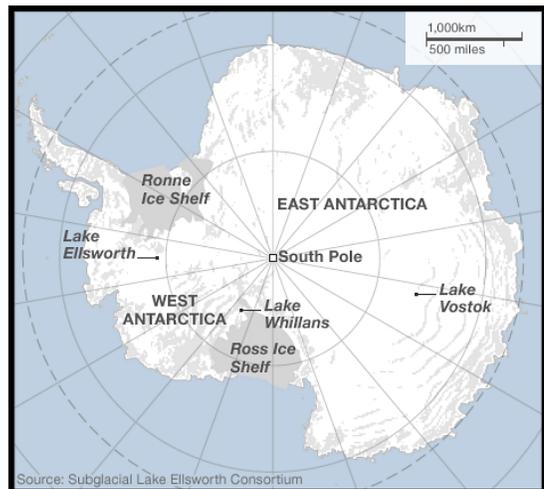
For more information on wetlands, visit <http://www.epa.gov/region02/water/wetlands/>.

Antarctic Lake Mission Targets Life and Climate Signs

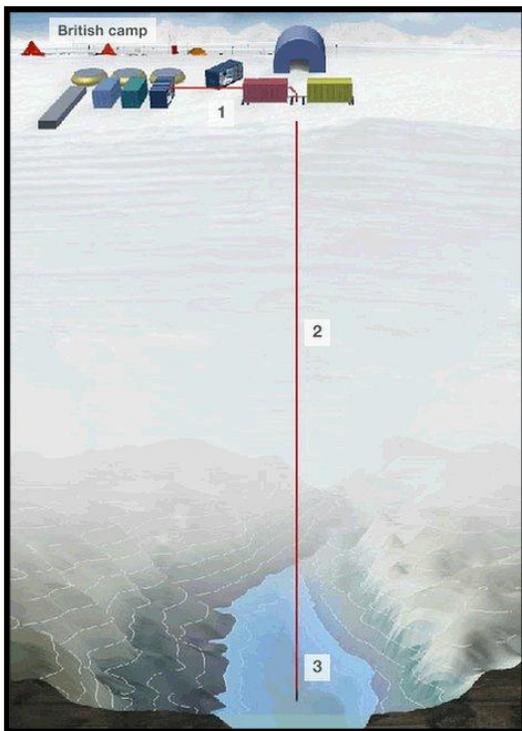
From BBC News, Richard Black (<http://www.bbc.co.uk/news/science-environment-15245594>)

A pioneering British expedition to sample a lake under the Antarctic ice hopes to find unknown forms of life and clues to future climate impacts. The mission will use hot water to melt its way through ice 3km (2 miles) thick to reach Lake Ellsworth, which has been isolated from the outside world for at least 125,000 years - maybe a million.

The team hopes to be the first to sample a sub-glacial Antarctic lake. Understanding the West Antarctic Ice Sheet is crucial to forecasting future climate change impacts, as it holds enough ice to raise sea levels globally by at least 3m (10ft) and perhaps 7m (23ft).



Exploring sub-glacial lakes may also help scientists design missions to search for life on other worlds such as Jupiter's moon Europa, which is thought to feature a liquid ocean beneath a thick layer of ice.



Lake Ellsworth is about 10km long and 2-3km wide. Ellsworth lies in a valley in the bedrock of Antarctica, with 3km of ice above. The water is kept liquid by natural geothermal heat coming from the Earth's interior. Mapping investigations revealed that the lake has a soft floor, which presumably means a thick layer of sediment.

But reaching the lake and taking samples involves a mission that pushes the boundaries of engineering skill and ingenuity. The hot-water drill is basically a spraying device on the bottom of a hose 3.2km long. Ninety thousand liters of pure water will be made at the Ellsworth site by heating and then filtering ice, using a boiler taken along for the purpose. Hot water will be sprayed from the bottom of the hose, melting its way to Lake Ellsworth (1). It will be pumped down the 3.2km-long hose and out of the nozzles at the bottom. With the water at a scalding 97 C, it should melt a smooth, uniform hole about 36cm across down to the bottom of the ice.

A 5m-long probe will then be lowered through the hole and into the lake, carrying 24 flasks that will gather water samples at various depths (2). It will also carry lights and a high-definition video camera, and filters to draw solids from the water. Once the probe has been hauled up, a coring device will be lowered down the borehole to take samples of the lake floor sediment (3).

The whole process will be a race against time. Water on the sides of the borehole will freeze, making it progressively smaller. Professors estimate there is a window of about 24 hours to complete the dual sampling before the hole becomes too small.

Grand Lake St. Mary's Update

From The Columbus Dispatch, by Spencer Hunt
 (<http://www.dispatch.com/content/stories/local/2011/09/29/alum-cut-phosphorus-in-grand-lake-st-marys.html>)

A report the state released in late September showed that aluminum sulfate, that was sprayed in June over the central 4,000-acre region of the 13,000-acre lake, reduced phosphorus in that zone by as much as 56 percent. The goal was 50%.

The effect on the algae itself isn't as clear. Data in the 37-page report, prepared by Seattle-based consultant Tetra Tech, showed that chlorophyll-a didn't drop with the phosphorus levels.

This was the first large application of alum at Grand Lake. A test run in the fall of 2010 found that alum reduced phosphorus levels at two test sites by 50 to 60 percent and produced no change at a third. Officials also said that 210,000 cubic yards of phosphorus-laden sediment were dredged from the lake bottom this year. Also removed were more than 13 tons of rough fish, including carp, gizzard and shad, which can stir up phosphorus from the lake bottom.

Crazy Weather over Lake Michigan

From NBC Chicago, Lisa Balde (<http://www.nbcchicago.com/weather/stories/130572153.html>)

Several huge columns of water seemingly burst out of the water across Chicago's lakefront on September 24th. They're called waterspouts, and they are rare for the Chicago area. Only 13 such waterspouts have been reported along the Lake Michigan coast from Chicago to Racine, Wis., in the past 11 years.



The National Weather Service documented on the 24th at least six different sightings along the lakeshore. Confirmed reports stretched from east of Lake Forest at 10:10 a.m. to about four miles off the metro area's shore at 10:20 a.m., as well as one spotted north of Navy Pier at 12:09 p.m. and a couple in Wisconsin.

A waterspout is a vortex of water connected to a cloud and are considered "similar to tornadoes over water," according to the National Weather Service. They're most likely to form at the end of the summer season.

Fine Dining on Asian Carp

From Louisa Chu (www.wbez.org/blog/louisa-chu/2011-09-15/finding-beauty-beast-asian-carp-92026)



From this to this!



Illinois Department of Natural Resources has recently added Asian carp to their "Target Hunter Now!" program, which works with fishermen, hunters, and meat processors to donate excess food to food banks around the state of Illinois.

Then a well known chef challenged 10 of Chicago's best chefs to a contest to see who could create the best Asian carp dish. Other chefs have even started calling the fish by the name of "Silverfin" to make it sound more appetizing.

Why not? With enough butter, salt, and glazes, I am sure we can make this fish taste good. Then it will be just a matter of time before we eradicate this exotic species by over harvesting like we have done to our native species. Unless of course, it becomes protected and endangered.

Lake Agassiz Demise

From Environmental News Network by Andy Soos (<http://www.enn.com/ecosystems/article/43359>)

Lake Agassiz was an immense glacial lake located in the center of North America (Manitoba mostly). Fed by glacial runoff at the end of the last glacial period, its area was larger than all of the modern Great Lakes combined, and it held more water than contained by all lakes in the world today. At its largest, Glacial Lake Agassiz, as it is known, covered most of the Canadian province of Manitoba, plus a good part of western Ontario. A southern arm straddled the Minnesota-North Dakota border. University of Cincinnati Professor of Geology Thomas Lowell will present a paper about the lake to the Geological Society of America annual meeting in Minneapolis.



Lowell's paper is one of 14 to be presented Oct. 10 in a session titled: Glacial Lake Agassiz---Its History and Influence on North America and on Global Systems: In Honor of James T. Teller. Although Lake Agassiz is gone, questions about its origin and disappearance remain. Answers to those questions may provide clues to our future climate. One question involves Lake Agassiz' role in a thousand-year cold snap known as the Younger Dryas.

During the last Ice Age, northern North America was covered by a glacier, which alternately advanced and deteriorated with variations in the climate. This continental ice sheet formed during the period now known as the Wisconsin glaciation and covered much of central North America between 30,000 and 10,000 years ago. As the ice sheet disintegrated, it created at its front an immense proglacial lake, formed from its meltwaters.

Around 13,000 years BP the lake came to cover much of Manitoba, western Ontario, northern Minnesota, eastern North Dakota, and Saskatchewan. At its greatest extent, it may have covered as much as 440,000 square kilometers, larger than any currently existing lake in the world.

The last major shift in drainage occurred about 8,400 years ago. The melting of remaining Hudson Bay ice caused Lake Agassiz to drain nearly completely. This final drainage of Lake Agassiz contributed an estimated 1 to 3 meters to total post-glacial global sea level rise.

Lake Agassiz' major drainage reorganization events were of such magnitudes that they had significant impact on climate, sea level and possibly early human civilization. Major freshwater release into the Arctic Ocean is considered to disrupt oceanic circulation and cause temporary cooling. The draining at 13,000 may be the cause of the Younger Dryas stadial.

How Terms Change across the Landscape

From

Derek

Watkins

(http://derekwatkins.files.wordpress.com/2011/07/dwatkins_usstreamnames.png)

So what is it that brings the water to and from your lake? Is it a stream, river, creek, brook, run, kill, slough, arroyo, or a bayou? Toponyms, names given to places, have a lot of cultural and history in their meaning. The link above provides a map that shows all the various places across the United States that use various names for streams.

Websites of the Month – Important and Useful Spokane Websites

Spokane International Airport (GEG) – <http://www.spokaneairports.net/index.htm>

NALMS Info site - <http://www.cvent.com/events/nalms-2011-spokane-washington/event-summary-0819feed2a9549578c4910e8eb46bf0d.aspx>

Spokane Transit Authority (STA) - <http://www.spokanetransit.com/>

Double Tree Hotel (City Center) - http://doubletree1.hilton.com/en_US/dt/hotel/SPCC-DT-DoubleTree-by-Hilton-Hotel-Spokane-City-Center-Washington/index.do

National Weather Service - <http://forecast.weather.gov/MapClick.php?CityName=Spokane&state=WA&site=OTX&textField1=47.6589&textField2=-117.425&e=1>

List of lakes, parks, ski resorts, beaches, golf courses, etc. near Spokane - <http://www.hikercentral.com/metros/44060.html>

Monthly Water Fact to Impress Others at the Symposium

When phosphorus dishwasher detergents were banned in Washington in 2010, many folks in eastern Washington would drive miles to Idaho to purchase the “good stuff”. Spokane has had a phosphorus ban in place since 2008. After the first 10 months of the ban, the local wastewater treatment facility saw a 14% decrease in the amount of phosphorus getting to the treatment plant. After a few years of the ban, you cannot find any phosphorus dishwashing detergents anywhere, even northern Idaho.

Update Contact information:

Please let the NALMS Office (garenz@nalms.org) know if you have or are planning to change your contact information, so we can make sure you do not miss any of the NALMS monthly news letters, updates, or general NALMS announcements. NALMS appreciates this.

Open Invitation to Add to the Next E-newsletter

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