March 2014

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Welcome New Members!
Thank You to Our Renewing Members!

Region 12: Western Canada and the Fight Against AIS

Ron Zurawell, Region 12 Director | ron.zurawell@gov.ab.ca

The western Canadian provinces (Manitoba, Saskatchewan, Alberta, and British Columbia) and northern territories (Yukon, Northwest Territory, and Nunavut) represent the largest geographic area of all NALMS Regions. And while this Region contains the largest number of lakes, it may possess the smallest human population. Water management in Region 12 is complicated by the fact that a majority of people reside in areas with the fewest water resources. Water issues do vary across the Region with water scarcity occurring in the southern prairies, urban and agriculture induced eutrophication happening throughout the parkland and boreal-transition zones, and consumptive use and potential for contamination of surface waters by natural resource industries (e.g., oil extraction, precious metals, and diamond mining) in the far north. Given the vastness of the area, it is surprising that one key issue, aquatic invasive species (AIS), is beginning to unify Region 12.

Several events over the years in Western Canada have significantly increased public concern and awareness and subsequently, government’s response to AIS. First was the discovery of a single snakehead fish in a pond located in Burnaby’s (B.C.) Central Park in 2012. The fish was caught and determined to be a sub-species of snakehead originating in sub-tropical Vietnam or China that most likely couldn't survive B.C.’s winter conditions. Two months later, the B.C. Government along with the Invasive Species Council of B.C. responded to the potential threat of invasive quagga mussels when a boat from Arizona was launched into Shuswap Lake. The mussels were confirmed to be dead at time of launch. In 2009, B.C. signed on with Washington, Oregon, Idaho and Montana as a partner in the Columbia Basin Rapid Response Plan providing a system for early detection, rapid response, and notification about AIS. However, the Burnaby snakehead and close call at Shuswap Lake had led to further action. The Government in December, 2012 amended its Controlled Alien Species Regulation under the Province’s Wildlife Act controlling the possession, breeding, shipping, and releasing of alien animals.

AIS prevention gained momentum in Alberta in 2013 with the introduction of a Dreissensid mussel surveillance and monitoring program. The program, which included piloting two voluntary boat inspections near ports of entry from the US and development of a Provincial AIS reporting hotline, was initiated through the Crown of the Continent Ecosystem Managers Partnership (CMP). CMP is an ecosystem-based, inter-jurisdictional, cross-agency collaboration involving Alberta, B.C. and Montana seeking “to demonstrate leadership in addressing the environmental management challenges in

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Halting Invasive Species is a Year Round Job

This winter has been especially tough on the majority of the United States. The Great Lakes are frozen solid for the first time in years. I read an article this morning on the icebreaking efforts the Coast Guard is going to undertake this spring, thinking isn’t Mother Nature supposed to take care of that? Apparently she needs some help.

Under all that ice, many of these lake systems harbor zebra and quagga mussels, one of the more destructive invasive species our continent faces. Out here in the west, our water resources are still largely mussel free, but maybe not for long. These pests were discovered in Lake Mead some years ago. This reservoir behind the world famous Hoover Dam is one of the largest boating meccas in the West where water is scarce. It would seem the simple thing to do would be to quarantine boats leaving that lake and clean them prior to letting them move on.

Absent that, the surrounding states have been forced to set up check stations at their borders and man them as continuously as possible given staff and budget constraints. Idaho probably has the best and most proactive program in this regard, and Idaho protects the waters of Washington, Oregon and parts of California as vessels on trailer would pass through there first. Last spring the Idaho check station stopped a semi hauling construction barges from a project on Lake Mead caked in mussels. After some discussion, they learned that there were about 30 additional trucks heading to Washington with similar loads and taking different routes. That started a mad scramble to find them. One houseboat made it through the United States, across the Canadian Border and into Shuswap Lake in British Columbia with mussels attached (see cover story). At this point they think these were all dead and are crossing their fingers.

The Idaho program opened up for the season this month and within a week caught the first boat coming from the lower Colorado caked in mussels. Had this boat moved a few weeks earlier, no check station. (http://www.spokesman.com/blogs/outdoors/2014/mar/13/idaho-checks-first-quagga-mussel-infested-boat-season/)

I live in Bellingham, Washington which is over 750 miles from the nearest known infestation of these pests, yet last year the City and County closed 17 mile long Lake Whatcom to boaters without inspection and stickers costing $50.00 per year. The reason they had to take that step is because there is no comprehensive, yearlong effort to control the spread of these dangerous organisms from traveling here. This makes you start thinking that piecemeal attempts to protect water resources are necessary because others closer to the source aren’t focused.
I will try to be brief this month in an effort to make up for my long-winded effort last month as well as to hone in on the one membership item that is really on my mind at the moment. Renewals of course!

March has flown by at an incredible pace here in the office and we are now fast approaching the March 31st membership expiration date for our Spring membership period. It seemed like just yesterday we were still trudging along through a lingering winter and springtime membership expiration dates and the like were still far off in the distance. And the thought of Spring? “What’s that?!” could be heard echoing through the halls of the NALMS office. But indeed it is upon us; if not in weather (“grumble…grumble…snow…grumble…grumble”) then in membership.

Though the Spring membership period started off well, more recently renewals have really tailed off. And unfortunately, at this point only a little over half of the members up for renewal during this period have renewed their memberships. If your membership is coming due please renew today! You can do so on our website (http://tinyurl.com/NALMSmembers), by faxing or mailing our form (http://tinyurl.com/NALMSMemberForm), or over the phone at (608) 233-2836.

I look forward to welcoming you back!

The snow may still be coming down where you are – we had another half an inch or so this morning in Madison – but warmer weather and Lakes Appreciation Month is coming!

As most of you know, July of each year is Lakes Appreciation Month and is a time when we focus attention on the benefits and enjoyment of our lakes and reservoirs as well as some of the issues those resources are facing.

July is 3 months away, but it’s not too early to start planning your Lakes Appreciation Month efforts. The NALMS website has a whole page devoted to Lakes Appreciation Month and ideas for how you can show appreciation for your favorite lake, either by organizing specific efforts to help protect your lake or simply spending time enjoying it.

Over the next few months, you’ll see more here, on the NALMS website and in LakeLine about Lakes Appreciation Month. I just hope our lakes here in Wisconsin are no longer frozen by then. I’m beginning to have my doubts!
Call for Abstracts

We are now accepting abstracts for our 34th International Symposium to be held in Tampa, Florida from November 12 – 14, 2014.

Abstracts are due by May 16, 2014.

Managing for Results: In-lake and Watershed Management

The theme of NALMS’ 2014 International Symposium features both watershed and in-lake management and research efforts that can provide more near-term meaningful results. With seemingly endless water features and equally abundant water resource management challenges, Florida is uniquely positioned to host a discussion of these issues and to share national and international approaches and solutions. NALMS and the Florida Lake Management Society invite you to join us for NALMS 2014 at the Marriott Waterside Hotel and Marina in beautiful Tampa, Florida.

NALMS 2014 offers an opportunity to explore old Florida habitats, springs, rivers and beaches. Florida is a world-class destination where visitors can enjoy the attractions as well as the arts, history and Hispanic culture of west central Florida and its sub-tropical splendor. Tampa provides an opportunity to bring together lake managers, regulators, educators, researchers, students and corporate partners from around the continent and the world to share the results of research and management, to exchange ideas and information, and to learn about advancements in technology, management, and knowledge.

Visit the NALMS website to view the Call for Abstracts and to submit your abstract.

Do You Have a Conference or Workshop You’d Like to See Listed in NALMS Notes?

Email the details to us at NALMSNotes@nalms.org.

Working Together for Clean Water

Join us on the banks of the Ohio River in 2014!

Registration is now open for the 9th National Monitoring Conference which will be held the week of April 28 – May 2, 2014 in Cincinnati, Ohio at the Duke Energy Convention Center. This biennial conference is the place to be to mingle with your fellow water-quality monitoring professionals! The conference is a showcase for new findings on the quality of the Nation’s waters. You’ll also learn about the newest innovations and cutting-edge tools in water-quality monitoring, assessment, and reporting; and have a great time doing it.

We’ll have numerous influential speakers, hundreds of presentations and exhibits, and dozens of workshops and field trips to choose from. There are also other events to participate in such as in the “Fluid 5K” Run fundraiser.

To find out more about the conference or to register, visit the conference website.

We hope you join us in Cincinnati!

2014 WAPMS Conference Information

March 30 – April 2, 2014

The 33rd Annual Western Aquatic Plant Management Society conference will be held at the Peppermill Resort in Reno, Nev. Visit their Conference Info page at wapms.org for more information on registering, submitting titles and abstracts, and hotel reservations.

Oklahoma Clean Lakes & Watersheds Conference – April 2-3, 2014

The 23rd Annual Conference will be held in Stillwater, OK at the Wes Watkins Conference Center on the campus of Oklahoma State University. Go to www.oclwa.org for more information.
**Wisconsin Lakes Partnership Convention – April 24-26**

Come to Stevens Point and help us get “Back to the Point” of protecting and restoring our legacy of lakes. There will be over 50 presentations, 25 workshops/tours, a poster session, awards and banquet, and great networking opportunities. Register now, early bird deadline is April 3rd ([www.wisconsinlakes.org](http://www.wisconsinlakes.org)).

**Michigan Inland Lakes Convention: Partnering to Protect Michigan’s Inland Lakes – May 1-3**

The major lake and shoreline organizations in Michigan, including the Michigan Chapter of NALMS, are coordinating efforts to host an inaugural statewide Lakes Convention at Boyne Mountain Resort in Boyne Falls, Michigan. Visit [www.michiganlakes.msue.msu.edu](http://www.michiganlakes.msue.msu.edu) for more information.

**2014 Ohio Stormwater Conference – June 4-6, 2014**

Conference will be at the John S. Knight Convention Center in Akron, Ohio. Registration is now open at [www.ohiostormcon.com](http://www.ohiostormcon.com). The 2014 conference is presented by the Tinker’s Creek Watershed Partners with support from the Ohio Stormwater Association.

**Obituary: 51 Dams Removed in 2013**

We mourn the loss of 51 reservoirs that slowly drained to lower grounds in the United States. Some would say that it was time for these reservoirs to go, that they had a fulfilling life, and that by letting them go water quality will improve for others. Some had to go because of age, politics, water rights, endangered species, and complications during renovation, etc…

Depending on your views, some would say that a reservoir is only temporary and that rivers are better wild while others see the benefits of reservoirs and how they serve the local watershed and keep things safer. In the end, we hope proper decisions on letting go of these reservoirs were made with true, sound science and that we are all better off because of it. So let’s raise (actually lower) a Secchi disk one last time in honor of those brave 51 reservoirs that are no longer with us.

To see a map of all dams removed since 1936, go to [www.americanrivers.org/initiatives/dams/dam-removals-map](http://www.americanrivers.org/initiatives/dams/dam-removals-map).

**Region 12: Western Canada and the Fight Against AIS**

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the Crown region by adopting trans-boundary collaborative approaches to environmental management.” In 2013, the Alberta Government was notified of seven mussel-fouled boats en route to the Province – most of these were destined to popular lakes primarily in central Alberta. All boats were successfully intercepted and inspected; they were all coming from mussel-infested waters of the Colorado River system in southwestern US. These events provided impetus to enhance protective policies (Fisheries Officers were enabled to inspect, decontaminate and seize if necessary any vehicles, watercraft and equipment known to harbor Dreissenid mussels) and quickly expand the AIS program resulting in widespread training of Fisheries Officers and the establishment of veliger monitoring in 55 recreational lakes and reservoirs (no Dreissenid veligers were found in surface waters sampled).

Last autumn, the Manitoba Government confirmed the discovery of zebra mussels in Lake Winnipeg. With this event, the profile of AIS in Western Canada reaches even greater importance as governments realize prevention against mussels necessitates surveillance across provincial borders in addition to US – Canada ports. Provincial programs will continue to develop and evolve to meet the challenges posed by the spread of AIS. Watershed stewards are joining the fight. Invasive mussels pose a significant risk to our ecosystems and our biodiversity but also to our economy. A Dreissenid mussel invasion is estimated to cost the province over $75 million annually. This issue is preventable, given a raising profile, adequate resources, increased awareness, and enabling legislation and policies to provide a solid backbone.

**President’s Message**

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Prevention is the only tool that works against many of these aquatic invasive species that threaten our lakes and reservoirs. There are no measures that can target them once they arrive. We as a group need to advocate for better protection of our water resources and that means year round programs to keep these organism from moving around.

March 2014
Wal-Mart Helping out Lakes
Source: USA Today
http://www.usatoday.com/story/money/business/2014/03/16/wal-mart-has-fertilizer-plan/6428637/

Wal-Mart, which started in 2009 to develop sustainability measurements of products it sells, said in the fall it would require suppliers of crops (corn, wheat and soy) to begin developing fertilizer-optimization plans. Participants include food supplier Cargill and producer Kellogg’s.

Wal-Mart hopes to reduce fertilizer, one of the biggest sources of pollution in lakes and rivers, on 14 million acres of farmland by 2020.

Liberty Lake, Washington sends out Press Release about Procter & Gamble
Source: Liberty Lake
http://libertylake.org/news-and-events/

In May 2005, Procter & Gamble (P&G) travelled from Ohio to Washington State to testify in opposition to a Liberty Lake Sewer and Water District (LLSWD) Board decision to ban phosphorus in dishwasher detergent. LLSWD’s ban precipitated a statewide ban and a national trend.

Then area residents responded by buying only phosphorus free dishwasher detergents by Ecover and Seventh Generation. Long before the law took effect, Albertsons and Safeway managers purchased phosphorus free product from outlying retailers to stock their shelves in Liberty Lake. Recently, P&G has announced that they are removing phosphorus from their products worldwide.

In the recent press release, LLSWD congratulated the Liberty Lake community for their role in having successfully persuaded P&G’s decision to remove phosphorus from their laundry detergent products worldwide.

Invasive thinking – ‘Rock Snot’ found to be Native in Canada
Source: The National
http://www.cbc.ca/m/touch/canada/newbrunswick/story/1.2554825

Didymo was thought to be an invasive species of algae in Eastern Canada. New research has discovered that is has been in Canada as far back as 1896. The theory is that cooler temperatures have suppressed the species and that the recent global warming trend has allowed for it to come back. The research comes from studying the changes in algae species in lake sediments.

You Decide
Source: US Environmental Protection Agency
http://water.epa.gov/polwaste/nps/success319/me_echo.cfm

Read this case study and then decide whether nonpoint source BMPs saved the day or reducing agriculture did. Some NALMS members have given the challenge at past symposiums that there are no lakes or reservoirs that have become success stories because of BMPs. Could this be the first?

Echo Lake, Maine – Water quality began to decline in the late 1960s. It was listed as an impaired water in 1986. After installing sediment and erosion control BMPs at high-priority sites and a reduction in active cropland, Echo Lake was removed from the 303(d) list in 2012. Read more and you decide what did it.

Website of the Month

New maps and data tables that describe nutrient loading to major estuaries throughout the conterminous U.S. are now available online on the National Water-Quality Assessment (NAWQA) Program web page titled Tracking the Source and Quantity of Nutrients to the Nation’s Estuaries. These new web pages describe the major sources and contributing areas of nutrients to 115 estuaries along the Atlantic Coast, Gulf of Mexico, and the Pacific Northwest coast and from 160 watersheds draining into the Great Lakes.

In addition to the new web pages, water resource managers interested in a particular stream, reservoir, or estuary can use the online, interactive SPARROW model Decision-Support System (DSS) to estimate how reductions in nutrient sources affect downstream nutrient loads at a
stream outlet. A new reporting feature within the DSS provides summary information on the amounts and sources of nutrients from upstream states or major hydrologic regions. For instance, output from the new reporting feature shows the amount of nitrogen contributed from each of the 31 states that drain into the Gulf of Mexico from the Mississippi River Basin.

**New Technology**

*Items included in NALMS Notes do not represent or imply the endorsement of any specific commercial product or service by NALMS.*

Using satellites to understand algal blooms, aquatic vegetation, and now phosphorus.

Blue Water Satellite, Inc. uses patented satellite imaging technology to detect the presence, location, and concentration in parts per billion of blue-green algae, aquatic vegetation, and phosphorus (land and water). Lakeanalysis.com is a division of Blue Water and provide lake reports for smaller lakes and watersheds.

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**A Lake Manager’s Notebook – A New Blog by Dick Osgood**

Dick Osgood

In my “Next Phase” I have begun writing a book called A Lake Manager’s Notebook. While I have a start and a general outline, I also want to get a broader view. So I have started a blog of the same name.

I ask you to help by:

1. Go to the blog and “follow” ([http://lakemanagersnotebook.com](http://lakemanagersnotebook.com))
2. Contribute comments.
3. Suggest topics.

At this point, I want to help individuals, lake associations, policymakers, and others better negotiate how to best approach managing lakes to get meaningful, tangible outcomes. In my consulting career, I have too often come across misinformation and technologies high in promises and low in results. Perhaps even more concerning, I have often found myself among a room full of committee members who have recently become “Google Experts.”

Please pass this along to others who might benefit.

Thanks, Dick Osgood, CLM

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**NALMS News**

**New NALMS Job Posting Form**

NALMS has revamped our job posting form in an effort to make it easier to post opportunities to the NALMS job board. Posters will no longer need to download the PDF job form, print, scan, and send it back. Instead, job opportunities may now be posted for review directly online through the website. In addition to the new form, NALMS has also developed a system to automatically process job posts into the code necessary for our Job Board webpage. This should result in faster turn-around times for reviewing and posting jobs to the NALMS Job Board. If you know of a job opportunity that would appeal to our members please use the new job posting form today!

**Complimentary Journal Subscription for NALMS Members**

We are still offering complimentary journal subscription through Taylor and Francis. As an individual member of NALMS (Professional, Lake Leader, Student or Emeritus) we can set you up with an additional FREE journal subscription to one of the following publications:

- Aquatic Ecosystem Health and Management
- Coastal Management
- Critical Reviews in Environmental Science and Technology
- European Journal of Phycology
- International Journal of Environmental Studies
- International Journal of Water Resources Development
- Journal of Environmental Policy and Planning
- Journal of Land Use Science
- Reviews in Fisheries Science
- Society and Natural Resources

Here’s how you can sign-up:

1. Log into the NALMS website at the top of the homepage.
2. Click on the “Complimentary Journal” link located on the right-hand menu of the Members Only page.
3. Fill out the “Complimentary Journal Subscription” form and click “Submit.”
4. Await arrival of an access code from Taylor & Francis.
5. Follow the instructions you receive from Taylor & Francis to enjoy your complimentary subscription.
Welcome New Members!

Audrey Carrier
Mark Fincel
Terry Frederick
Kevin Johnson

Aquatic Technologies Inc.
Bill Bartodziej
Marilyn Bayerl
Paul Blakeslee
Greg Boyer
Luis Bravo-Inclan
Kevin Bright
John Clayton
John Derksen
Ray Drenner
Stephen Duda
Reesa Evans
Bruce Fletcher
Michael Freedman
Rob Gatewood
Brian Ginn
Andrew Gould

Trent Lewis
Fernando Pantoja Agreda
Seneca Lake Pure Waters Association
Jim Shelley

Laurie Smith
Sus Theis

Thank You to Our Renewing Members!

Brenda Hann
Larry Hauck
Tom Hausenbauer
Alan Heyvaert
Curtis Hickman
Patty Hoch-Melluish
Robert Karl
Ken Kingdon
Lake and Watershed Association of South Carolina
Lake Waramaug Task Force
Michael Little
Bruce Lockhart
Chris Mayne
Susan McMahon
Michael Meyer
John Moore

Carl Nielsen
Sandra Nierzwicki-Bauer
Ben Niffenegger
Oklahoma Clean Lakes and Watersheds Association
Stuart Perry
Douglas Pickard
Leonard Schantz
Stuart Stein
Brad Stompe
Calvin Whealton
Jay White
Stephen Wilson
Trace Wolfe
Brian Wood
Woodridge Lake Property Owners Association
Paul Zillig

Update Your 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, Lake and Reservoir Management* or NALMS Notes something is wrong. If they don’t have access to fix their own contact info, they can call the NALMS office at 608.233.2836 or email Greg Arenz at (garenz@nalms.org) to make changes. This goes for postal service mail as well.