Looking Back at the 2016 Secchi Dip-In
Vanessa Snyder, Secchi Dip-In Intern | secchidipin@nalms.org

During the second year of the Secchi Dip-In (SDI) as a NALMS program, a focus was placed on increasing participation and learning more about volunteer demographics. Event details were circulated using flyers, emails (subscribe here!), and social media (Facebook; Twitter). Participants were encouraged to submit information via the GLEON Lake Observer application or via the Secchi Dip-In website. During 2016, a total of 646 measurements were submitted from lakes in eight countries (Canada, Denmark, Ireland, Italy, Serbia, Sweden, Turkey, and the United States), including lakes in thirty US states and three Canadian provinces. Fifty-seven volunteer monitoring organizations were connected with data submitted during 2016, while over two-hundred submissions (32%) from 2016 were not connected with a specific volunteer monitoring program (VMP).

A survey (via SurveyMonkey) was released mid-August 2016, to better understand the demographics of the Secchi Dip-In volunteer base and to request program feedback. Ninety-seven (97) people supplied responses. The responses inform decisions regarding future outreach and marketing strategies. Ideally, the responses will allow the Secchi Dip-In to better serve current volunteers and to effectively diversify our volunteer base via attracting new volunteers.

Knowledge gained via survey:

- **Age bracket**: Greater than 75% of respondents are 60+ years old.
- **Education**: Approximately 77% of respondents have earned a Bachelor’s degree or higher.

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Looking Back at the 2016 Secchi Dip-In
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• Communication preferences:
  • Greater than 93% of respondents indicated a preference to interact with the Secchi Dip-In program via email.
  • Approximately 10% also indicated a preference to interact (potentially concurrently) via social media outlets.

• Sampling Location & Equipment:
  • Volunteers typically sample near a lake home (or alternate address owned by volunteer) within their primary state of residence.
  • Half used personally-owned sampling equipment; half borrowed equipment.

• History with SDI program: Number of years participating in the Secchi Dip-In was fairly equally spread, when respondents were asked to select from 4-year increments.

• Feedback Take-Aways:
  • Fix (simplify) data entry/editing process.
  • Preference to submit to only one organization (i.e., local VLMP, who may then choose to submit to the SDI program).
  • Increased publicity nationally and locally.
  • Connect with school systems – Higher education institutions and K-12 could provide a large volume of additional volunteers, if provided with monitoring equipment and simple lesson plans.
  • “Adopt-a-lake” List – Participants requested lists of untested lakes for this type of program.

A timely question was posed by an attendee to the 2016 NALMS Annual Symposium: “What are the future goals of the Secchi Dip-In program?” In short, the Secchi Dip-In program intends the data to remain openly available such that the data can continue to be used (by members of the public, professionals, and academics) to monitor and model changes in lakes worldwide. Additionally, NALMS and the Secchi Dip-In program aspire to publish materials based on information in the SDI database.

Keep your eyes out for forthcoming information about the July 2017 Secchi Dip-In! Remember: data can be submitted at any time during the year.
Welcome to the March/April installment of NALMS Notes. As I write this, I’m on the back end of the recent Board of Directors (BOD) meeting held in Chicago. A hearty thank you to Bob Kirschner at the Chicago Botanic Garden, and long-time NALMS member, for coordinating local arrangements and making meeting space at the Garden available free of charge. If you are unfamiliar with the workings of the BOD, it is charged with overseeing the running of the society, which is accomplished by monthly phone calls the first Thursday of every month and semi-annual face-to-face meetings; once at mid-term (this past weekend March 25–26), and once in conjunction with the annual Symposium. The BOD receives reports from the regional directors and committee chairs that detail their activities during the last ½ year and what they have planned between now and the annual symposium. Amy Smagula, the NALMS BOD secretary has the job of 1) extracting all of the reports from everyone, 2) compiling them into a comprehensive board packet, as well as 3) recording minutes during the meeting – no small feat – thank you, Amy.

For the time I have been on the BOD, the mid-year meeting typically kicks off with a Saturday night collective dinner, followed by a pre-board meeting to finalize the flow and motions for the Sunday all-day meeting. This year, instead of a sit-down dinner, we opted for an active grab and eat pizza and bowling dinner. Diane Lauritsen (Region 4 director), Mike Perry (treasurer), and Lisa Borre (Region 3 director) showed us a thing or two about bowling! Yours truly was finally able to figure out how to get a ball to the other end of the lane. This was a wonderful opportunity to connect as a board, get to know those relatively new to the board better, and in general learn more about each other in an informal atmosphere. Thanks to Bob for presenting us with the option, and allowing those interested to enjoy the orchid show at the Gardens on Saturday afternoon.

At Sunday’s meeting, the BOD first held a meeting of the Maine corporation to approve 1) the merger of the Maine and Wisconsin corporations, and 2) approve the merger plan. This was followed by the longer Wisconsin meeting which as its first business addressed the same two motions as the Maine meeting. These are corporate law issues clearly laid out by each state and the IRS and is one of the final steps necessary to bring the whole merger/reincorporation in Wisconsin issue to a final vote by the membership. Stay tuned, we will be providing more information shortly regarding the need for the general membership to participate to bring final closure. The BOD then received reports from the secretary and treasurer, followed by a review of outstanding action items, many of which had been accomplished in the interim. It is clear some committees are moving more efficiently than others, which will be encouraged to become more active, as these are the heart of our society.

Break-out sessions focused on 1) finances, 2) grants, 3) Secchi Dip-In program, 4) partnerships, 5) strategic planning, and 6) conference planning – a flurry of activity for the BOD members. After lunch, a board training session on diversity and inclusivity was led by Jonny Stax, which was followed by review of the morning’s break-out sessions by the entire BOD. Needless to say, discussion was lively given some of the decisions facing the society. Amy again carried her big stick to corral all the reports so she could incorporate them in the minutes. All too soon those with early flights departed, while those staying overnight collectively debriefed about the day’s meeting, happenings on the hoops court, and shared more personal interactions over a meal at the Big Claim Co.

Some may view these machinations and information packets as seemingly mundane, however, they summarize the state of the society and inform the direction and decisions of the BOD. While not everyone may be keen to read them, in my opinion these materials have been neigh impossible to locate by interested members. To that end, I have instructed Alyssa to create a “Your Board in Action” web page (Accessed from the Member Quick Links area at the bottom right of the NALMS web page - you must be logged in as a member to access this) where you can locate the
President’s Message

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board packets and minutes going forward. We’ll upload past packets and minutes as time and resources permit.

Given the ever changing political landscape in our Nation’s capital, we have decided to explore joining the Consortium of Aquatic Science Societies (CASS – currently they only have a Facebook page), and the American Institute of Biological Sciences (AIBS). The former would allow us to lend our voice, and signature, to sensible legislative approaches affecting aquatic resources, while the latter has a staff of 30 and issues digests of important legislation and happenings that would allow us to efficiently sift out what directly affects lake and reservoir management. We’ll report back as we progress.

With the spring thaw, we’ve experienced some historic high discharge volumes in the Pacific Northwest – never did I imagine I’d have to walk uphill on the ramp to the University of Idaho boat dock. All this water will eventually drain, and before long the open water season will be in full swing – if it isn’t already in your area. I know that training for National Lakes Assessment and various Volunteer Lake Monitoring Programs is either underway, or about to start as programs and individuals prepare for a busy summer sampling season. Enjoy the water – be safe.

Left: Photo by Frank Wilhem; Right: Photo by Jim Ekins

NALMS News

NALMS Seeking Candidates to Serve as Lake and Reservoir Management Editor

The NALMS Board of Directors is soliciting letters of interest from individuals who would be interested in serving as Editor for the society’s peer-reviewed publication Lake and Reservoir Management.

Interested individuals should have experience with the journal as an author, reviewer or associate editor, and have familiarity with the ScholarOne manuscript management system and with the wide range of topics that come under the umbrella of lake and reservoir management. Candidates for this position should have:

• Tact and diplomacy
• Excellent project management skills, attention to detail and demanding review timelines
• Excellent English writing and editing skills
• Lake or reservoir management experience

Interested individuals should send a letter of interest to Frank Wilhelm, NALMS President, expressing their interest in the position and briefly outlining their qualifications. Letters will be reviewed by the Publications committee and further information will be requested if necessary. Materials will then be advanced to the Lake and Reservoir Management Editorial Board and the NALMS Board of Directors for further review and approval.

Left: Photo by Frank Wilhem; Right: Photo by Jim Ekins

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NALMS Notes
With all of the media attention in recent months on politics in Washington, DC, an important lake-related news item may have received less attention than deserved. In December 2016, the US Environmental Protection Agency (USEPA) released the results of the 2012 National Lakes Assessment (NLA).

Are lake conditions getting better or worse? A comparison of the 2007 and 2012 National Lakes Assessments indicates little change between surveys, according to USEPA. In most cases, the percentage of lakes in degraded biological, chemical and physical condition did not change over this five-year period, with a few notable exceptions.

To find out more about the state of our nation’s lakes, check out the fact sheets and data discovery tools on the informative NLA 2012 website: https://www.epa.gov/national-aquatic-resource-surveys/national-lakes-assessment-2012-results.

- **Key Findings** in a high-level summary including information on key stressors
- **Ecoregional Results** for nine ecological regions
- **Report & Highlights** with public and technical reports as well as related regional highlight studies
- **Data dashboards** of the NLA assessment results with the option to customize and download charts by region, state, etc.
- **Data downloads** for both the 2007 and 2012 reports are also available on the main NLA website.

In Pennsylvania, the 27th Annual Pennsylvania Lake Management Society (PALMS) Conference was held in State College, Pennsylvania on March 1–2. Keynote speaker Robert Richardson, Professor and Extension Specialist at North Carolina State University led things off at this well attended affiliate meeting with talks about the Biology and History of Monoecious Hydrilla and also Operational Programs for Monoecious Hydrilla Management. About 100 were in attendance. Visit the conference website for more details: www.palakes.org/news-and-events/conference-2017/.

In Virginia, the Virginia Lakes and Watersheds Association, another NALMS affiliate, held its 2017 Virginia Water Conference in Richmond, Virginia March 5–7 with a packed agenda and sessions on lake and reservoir management, stormwater, dam safety, floodplain management, watersheds, TMDLs, and more. About 400 were in attendance. Visit the conference website for more details: www.vlwa.org/VirginiaWaterConference.aspx.

In my home state of Maryland, the Friends of Deep Creek Lake (DCL) were active in the state legislature again this year, after their previous successes with legislative initiatives important to lakes. Barbara Beelar, the driving force behind this effort, worked with a coalition of groups and state legislators to introduce a bill to establish a State Lakes Protection and Restoration Fund. The purpose of the bill is “to create a funding mechanism for allocation of state funds for protection programs and restoration projects in all 15 state owned lakes in Maryland.”

The bill had the support of the Deep Creek Lake Property Owners Association and the Board of Commissioners, Chamber of Commerce, and Board of Realtors in Garrett County. In Annapolis, Maryland. The bill passed the House and Senate committees on March 15 and now moves to the Senate floor. This is a significant step toward achieving a permanent funding stream for Lake Protection and Restoration in the state. If passed, the bill will ensure that the state of Maryland is committed to protecting and restoring our state’s lakes for future generations.
News From Region 9

Ellen Preece, Region 9 Director | ellen@robertson-bryan.com & Debra DeShon, Mussel Dogs | deshon@musseldogs.info

Harmful Algal Blooms and Quagga Mussels

Like many areas throughout the country, region 9 is experiencing an increase in cyanobacteria harmful algal blooms (HABs). To address the growing HAB problem in California and to provide a forum for coordination of HAB responses efforts, the California Cyanobacteria and Harmful Algal Bloom (CCHAB) Network was established in 2006. CCHAB is a workgroup of the California Water Quality Monitoring Council which is a collaboration between the California Environmental Protection Agencies and Natural resource agencies. The CCHAB Network’s mission is to develop and maintain a comprehensive, coordinated program to identify causes and impacts from California HABs.

Since its establishment, the CCHAB Network has developed and updated guidance for voluntary postings used to notify the public of HAB presence. Recently CCHAB launched a HAB portal that presents information on health and environmental effects from HABs. This portal includes real time interactive maps that present existing blooms so that users can easily identify if there is a HAB in their region. The portal also provides monitoring data, tools to identify toxic and non-toxic algae, and a feature that allows users to report blooms. To access the HAB portal visit: www.mywaterquality.ca.gov/habs/

Another topic of concern in Region 9 is the threat of invasive quagga mussels. The discovery of quagga mussels in Lake Mead in 2007 led the California Department of Fish and Wildlife to train canines to detect quagga mussels by scent. Mussel Dogs, a consulting and inspection service that trains dogs to detect quagga mussels, recently coordinated a study with Dr. David Wong and the California Department of Fish and Wildlife to determine if detection canines trained to find quagga mussels could detect the veliger stage. There were four detection teams utilized in the study and over three days the canines were trained to recognize the veliger odor at varying concentrations. Each detection team then performed a blind trial to find a concentration of 31 veligers. Each team performed this trial successfully during the four blind trials. The team plans to perform follow up studies in the field. The results are encouraging and there is hope that the canines can help prevent further spread of these invasive mussels. To access the entire study please visit: www.reabic.net/journals/mbi/2016/4/MBI_2016_DeShon_etal.pdf

NALMS Region 9 includes members in Arizona, California, Hawaii, and Nevada.

News From Region 3

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County, Maryland. Environmental groups, including the Maryland League of Conservations Voters, Sierra Club and The Nature Conservancy, are also supporting the legislation. An editorial about the management of Deep Creek Lake, and lakes in general, by long-time NALMS member Dick Osgood, who attended the 90th birthday celebration of Deep Creek Lake two years ago, was included with the legislative packets this year. The bill is making its way through the legislative process and is expected to become law. Beelar was also working on legislation to ban fracking in the state, and this effort was successful. Maryland Governor Larry Hogan is expected to sign the bill into law after the legislative session ends in April. You can bet that the Friends of DCL will be back next year. For more information or to follow their latest news and updates: friendsofdcl.org/news/
Using lake sediments to understand the environmental history of lakes in Algonquin Park, Ontario, Canada

Janae Rampone¹, John P. Smol², Andrew M. Paterson³ and Anna M. DeSellas⁴
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Lakes in south-central Ontario, Canada, are being impacted by several environmental stressors, including acidification and subsequent recovery, changing nutrient concentrations, rising dissolved organic carbon concentrations, invasion by non-native species, rising road salt concentrations, climate warming, other watershed alterations, as well as other stressors. Algonquin Provincial Park is located in south-central Ontario (Figure 1), and is world-renowned for its natural ecological features and wilderness, including more than 1,300 lakes and 3,700 km of rivers. Despite the value of freshwater lake resources in Algonquin Park, very little monitoring data exist for Algonquin Park’s lakes.

To better understand regional changes in water quality in Algonquin Park lakes, students from the Paleoecological Environmental Assessment and Research Lab (PEARL) at Queen’s University, working in collaboration with the Ministry of Environment and Climate Change (MOECC), the Ministry of Natural Resources and Forestry (MNRF) and York University, sampled 54 lakes in August of 2015. Sediment cores, plankton samples, and water chemistry samples were collected from every lake. Lakes were sampled by air or by road over a time period of six days (Figure 2). To access the sediment record, sediment cores were extracted from the deep spot of each lake and sliced into thin intervals (½ cm thick), with each interval representing a chapter of time (Figure 3). The top of the core represents the most recent sediment deposited at the bottom of the lake, while the bottom of the core indicates the oldest sediment.

These lake sediment cores are now at different locations across Ontario, including Queen’s University, the MOECC’s Dorset Environmental Science Centre, and York University, where they are being analyzed to understand past environmental conditions in Algonquin Park as part of various graduate student theses projects. These projects will examine the paleolimnological indicators from the sediments, including remains of algae (diatoms, algal pigments) and invertebrates (chironomids and cladocerans). These indicators will enhance our understanding on how Algonquin Park lakes have responded to past environmental stressors and inform predictive models that can be used in future management initiatives.
News From Our Affiliates

CALMS and California HAB Workshops

The California Lake Management Society (CALMS) announces an upcoming US EPA Harmful Algae Bloom Webinar and meeting:

EPA Region 9 HABs Webinar and Meeting
The US Environmental Protection Agency’s Office of Water and Region 9, in collaboration with the California Surface Water Ambient Monitoring Program (SWAMP), will be conducting a Harmful Algal Blooms (HABs) webinar preceding an in-person meeting in April (see below).

April 5, 2017: HABs webinar (register here)
April 25–27, 2017: In-person Meeting in Costa Mesa, CA (register here)

Note: Registration for the Webinar and Meeting are separate and FREE (we request registration to obtain a headcount for planning purposes).

CALMS also announces their Facebook page (www.facebook.com/CaliforniaLakes) and their annual meeting will be held at Big Bear Lake, California October 2017 so check their web site for updates.

ILMA Buck an Acre Challenge

The Illinois lake Management Association (ILMA) is running a unique fundraising program. Their “Buck an Acre” Challenge looks like an excellent way to encourage participation in lake protection without breaking the bank.

North Carolina Lake Management Society Spring Workshop

The North Carolina Lake Management Society (NCLMS) will be holding it’s spring workshop at Almance Community College in Haw River, North Carolina on May 4. The focus of the meeting will be “There’s an App for that: Emerging Technologies in Water Quality.” Should be a great update.

Oregon Lakes Association Meets Scholarship Goal

The Oregon Lakes Association has met their scholarship goal for 2017, but there is always room for more, give a look if your interested. OLA holds it annual meeting in the fall and we will post that information as time gets closer.

A New Lake Association Mapping Project in Washington

The Washington State Lake Protection Association (WALPA) has started up a new lake association mapping project using online technology. It looks to be an excellent way for associations to locate others in the vicinity and dialog. View the map at www.gis.cwu.edu/geog/walpa/.

WALPA is also accepting applications for their Student Scholarships for 2017. Applications are due by May 19. More information is available at www.walpa.org/scholarships_awards/.

WALPA holds its annual meeting in the fall and we will update you when it gets closer.

Submit Your Affiliate News

Let us know what your NALMS affiliate is up to! State and provincial lake management groups do fun and interesting things. Let NALMS and others know what you are up to. You spend a large amount of volunteer time to put on great events, might as well share them. Send your news to us at nalmsnotes@nalms.org.

Have a job to post? Looking for a job?

Check out the NALMS website!

www.nalms.org/home/find-a-job/
www.nalms.org/home/post-a-job/

Find NALMS on the Web
Lake News & Information

2012 National Lakes Assessment Results
Source: US Environmental Protection Agency

The National Lakes Assessment (NLA), by the US Environmental Protection Agency and its partners, surveyed a wide array of lakes representative of those found in the US, from small ponds and prairie potholes to large lakes and reservoirs. The NLA is part of the National Aquatic Resource Surveys, a series of statistically-based assessments designed to provide the public and decision-makers with nationally consistent and representative information on the condition of the nation’s waters. Results from nationwide monitoring conducted in 2012 are now available.

Mapping Human Impacts on the Great Lakes
Source: Canadian Geographic

Here is a good article about the human impacts on the Great Lakes. This link shows and discusses a mapping project that shows pollution and invasive species impacts.

Keep Tahoe Blue
Source: League to Save Lake Tahoe
☞ shop.keeptahoeblue.org/shop/product/?PID=179

Keep Tahoe Blue, why is this bumper sticker so popular? It doesn’t matter where you are in the US, you run into this iconic bumper sticker. There can be lakes right down the road from where you see this one, but this is what’s on the bumper. Even saw a Spanish version the other day 800 miles north of there.

Ask a CLM
A new feature we would like to promote in coming NALMS Notes is the Ask a Certified Lake Manager section. Of course, to do this we need questions. We invite anyone living on or around lakes to consider submitting questions of interest to tmcnabb@aquatechnex.com. We will then review our list of Certified Lake Managers (CLMs) to get an idea who might be best suited to answer the question and publish both. Please give this some thought and consider joining in on this, it is a good opportunity to communicate common questions that lake association members might have and get some good information out there.

Consider a Donation to NALMS
You can donate at any time to the funds below by simply visiting the donation page on the NALMS website at http://tinyurl.com/qzm36dw.

Eberhardt Memorial Student Fund
The Eberhardt Memorial Student Fund supports travel grants for student presenters to attend the Annual Symposium.

G. Dennis Cooke Symposium Fund
The G. Dennis Cooke Symposium Fund supports NALMS’ effort to facilitate the exchange of information on managing lakes and watersheds.

Lake Givers Club
Contributions to the Lake Givers Club support NALMS’ educational publications, programs and operations.

Secchi Dip-In
Contributions support the operations of the Secchi Dip-In citizen science program.
Conferences & Events

*Colorado Lake and Reservoir Management Association Spring Luncheon*
April 18, 2017 • Westminster, Colorado
www.clrma.org

*North Carolina Lake Management Society Spring 2017 Workshop*
May 4, 2017 • Haw River, North Carolina
nc lakemanagement.org

*New York State Federation of Lake Associations Annual Conference*
May 5–6, 2017 • Hamilton, New York
www.nysfola.org

2017 New Hampshire Lakes Association Lakes Congress
June 1–2, 2017 • Meredith, New Hampshire
nhlakes.org

Florida Lake Management Society 28th Annual Technical Symposium
June 6–9, 2017 • Captiva, Florida
flms.net

57th Annual Aquatic Plant Management Society Meeting
July 16–19 • Daytona Beach, Florida
www.apms.org

American Fisheries Society 147th Annual Meeting
August 20–24 • Tampa, Florida
fisheries.org

2017 Oregon Lakes Association Conference
October 20–21 • Florence, Oregon
oregonlakes.org

NALMS Affiliate Organizations

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.

The highest paved road in North America is the road to the top of Mt. Evans (14,258 feet above sea level) just west of Denver.

Lake Photo of the Month

“Morning Light” by Bev Clark.

Bev’s photo was an entry in the 2016 NALMS Photo Contest held at the Banff Symposium. Look for your opportunity to enter the 2017 Photo Contest this summer. The 2017 contest will be held at the Denver Symposium.
Colorado welcomes NALMS to the headwaters state. Colorado is home to thousands of lakes ranging in elevation from 3560-12,000+ feet above sea level. We are proud of our mountains and appreciate the importance of our lakes and reservoirs.

Water in Colorado is used for fishing, drinking, farming, rafting, camping, mining, ranching, boating, brewing, and more. These uses are supported with a statewide annual rainfall of just 17 inches. The lakes and reservoirs throughout the West and the Rockies provide the resources to meet these needs. Finding balance in how we manage them is critical.

**POTENTIAL TOPICS**

- Reservoir Management
- Case Studies
- Mixing & Aeration Systems
- Harmful Algae Blooms
- Alum Treatment
- Drinking Water Treatment
- Arid West Issues
- Invasive Species
- Inter-basin Water Transfers
- Western Water Law
- Watershed Management
- Water Quality Monitoring
- Climate Change Impacts
- Citizen Science
- Storm Water Impacts
- Agricultural Uses
- National Lakes Assessment
- National Park Lakes
- Data Analysis & Innovative Visualization Techniques

The Call for Abstracts is now open

Finding Balance is key to managing our lakes, watersheds, and even day-to-day relationships with people. Come to NALMS 2017 in Colorado to hear fascinating lake talks, see the Rocky Mountains, drink great beer, and to achieve balance in managing your lakes and reservoirs.

For sponsorship or general information, contact NALMS: nalms.org, 1-608-233-2836

For other details contact ColoradoLRMA@gmail.com
Conference Theme
Colorado’s water is used for fishing, drinking, farming, rafting, camping, mining, ranching, boating, snowmaking, brewing, and much more. All of these uses are supported with a statewide annual average of just 17 inches of rainfall. The lakes and reservoirs throughout the West and the Rockies do so much and finding balance in how we manage them is vital to meeting the ever-increasing demand for water.

Finding Balance is the key to managing our lakes, reservoirs, watersheds, and even day-to-day relationships with people. Come to Colorado in 2017 to hear some fascinating lake talks, see the mountains, and to hopefully find balance.

After 26 years, the Colorado Lake and Reservoir Management Association welcomes NALMS back to the headwaters state. Colorado is home to thousands of both natural alpine lakes and reservoirs across the state. We are proud of our mountains and appreciate the importance of our lakes and reservoirs. The conference will be held at the Westin Westminster, located between Denver and Boulder.

Preliminary Session Topics
We encourage the submission of abstracts for papers or posters on any of the topics listed below, or abstracts that address topics of broad interest to the lake and reservoir management community.

- Reservoir Management
- Case Studies – both successful and less than successful
- Mixing and Aeration Systems
- National Lakes Assessment
- Alum treatment
- Harmful Algal Blooms
- Drinking Water Treatment
- Arid West Issues
- Invasive Species
- Inter-basin Water Transfers
- Western Water Law
- Watershed Management, including Wildfire Impacts and Acid Mine Drainage
- Water Quality Monitoring
- Climate Change Impacts
- Citizen Science
- Storm Water Impacts
- Agricultural Uses
- National Park Lakes and Reservoirs
- Data Analysis and Innovative Visualization Techniques
- Model Applications
- Regulatory Framework
- Communicating Lake Issues to Users and Other Stakeholders
- African Lakes
- Central and South American Lakes
- Beersheds and Brewing

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Chris Holdren | LakeConsultant@gmail.com

General Conference, Exhibitor & Sponsorship Information
NALMS Office
608-233-2836 • www.nalms.org

Important Dates
May 31, 2017
Abstracts due.

Late Spring
Registration opens.

August 25, 2017
Registration and payment from presenters of accepted abstracts due.

September 15, 2017
Early-bird registration deadline.

October 27, 2017
Regular registration deadline.

Visit www.nalms.org/nalms2017 for more information and to submit your abstract.