A publication of the North American Lake Management Society

LakeLine

Volume 34, No. 2 • Summer 2014

Lake Associations

34th INTERNATIONAL SYMPOSIUM

NALMS 2014

North American Lake Management Society

Tampa, Florida
November 12 – 14, 2014

NALMS and the Florida Lake Management Society invite you to join us for NALMS 2014 at the Tampa Marriott Waterside Hotel & Marina in 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.

Tentative Schedule

Monday, November 10	NALMS Board of Directors Meeting
Tuesday, November 11	Workshops NALMS New Member Reception Ybor City Mojito Mambo
Wednesday, November 12	Opening Plenary Session Technical and Poster Sessions Exhibits Open NALMS Membership Meeting Exhibitors' Reception
Thursday, November 13	Clean Lakes Classic Technical and Poster Sessions Exhibits Open Awards Reception and Banquet
Friday, November 14	Technical and Poster Sessions Exhibits Open

Hosted by the Florida Lake Management Society
An Affiliate of NALMS

Workshops and Tours

We will be offering a variety of full-day workshops and a field tour on Tuesday preceding the conference. These workshops provide attendees the opportunity for a more in-depth focus on a topic of interest, and many will provide hands-on experience.

Tuesday Workshops

- Collection, Identification, Ecology and Control of Nuisance Freshwater Algae
- Internal Phosphorus Loading
- Lake & Pond Phosphorus Inactivation & Interception

Tuesday Tour

- Tour of Lake Apopka and World's Largest Off-Line Alum Treatment Project

Visit the NALMS website, www.nalms.org, for more information and pricing.

Technical Program

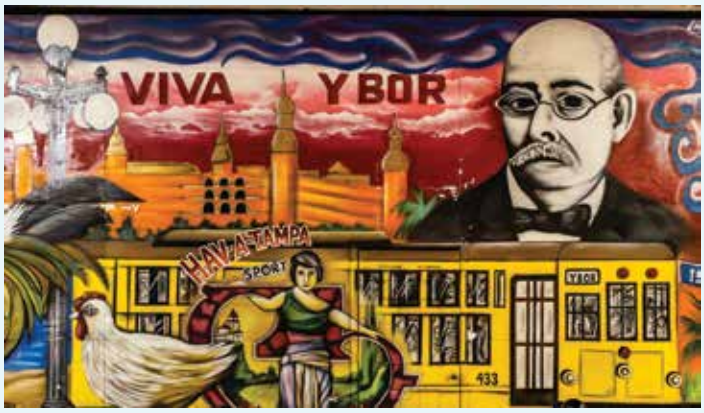
The NALMS 2014 Program Committee is planning a top-notch array of presentations on diverse aspects of lakes, ponds, reservoirs, their watersheds, and their many users and inhabitants. Below is a sample of key topics, but please check the symposium website regularly for up-to-date program information.

Proposed Sessions

- Springs and Coastal Rivers Assessment and Management
- In-Lake Restoration and Management Techniques
- Innovative Watershed Strategies For Nutrient Control
- National and Regional Lake Assessment
- Lake Management Case Studies
- Sustainability of Water Supply and Lakes
- Harmful Algal Blooms
- Invasive Species Management
- Stormwater Management
- Alum Treatment Technologies and Approaches
- Fish and Wildlife Habitat Improvement
- Large Lake Systems Management and Restoration
- Aquatic Plant Ecology and Management
- Data Management and Technologies
- Managing Reservoirs for Riparian Habitats and Protected Species
- International Perspectives on Lake Management
- Citizen Science and Monitoring

Symposium Theme

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.



Important Deadlines

August 15, 2014
Registration and payment from presenters of accepted abstracts due.

September 5, 2014
Early bird registration deadline.

October 9, 2014
Last day conference hotel rate available.

October 31, 2014
Regular registration deadline.

Contact Information

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Michael Perry | mperry@lcwa.org

Symposium Program Chair
Sergio Duarte | sergio.duarte@ocfl.net

Symposium Sponsorship/Exhibitor Chair
Brian Catanzaro | brian.catanzaro@pentair.com

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

Special Events

Ybor City Mojito Mamba

Tuesday, November 11

This year, our traditional symposium-eve social gathering will take us a short trolley ride from the hotel to Ybor City, a National Historic Landmark District which was established by cigar manufacturers and primarily inhabited by immigrants from Spain, Cuba, and Italy. In recent years portions of the neighborhood have been redeveloped into a night club and entertainment district.

Exhibitor Reception

Wednesday, November 12

NALMS, the Symposium Host Committee and our exhibitors invite you to join us in kicking off the symposium and welcoming attendees to Tampa. Take time to relax, view the poster displays and visit with the exhibitors and fellow attendees.

Clean Lakes Classic 5k Run/Walk

Thursday, November 13

The annual Clean Lakes Classic features a route just outside of the hotel along the bay. You need not be a runner to participate! All pre-registered participants receive a t-shirt as part of the sign-up fee.

NALMS Awards Reception & Banquet

Thursday, November 13

NALMS' Annual Awards Reception & Banquet is the climax of the Society's year as members and friends of the society are honored for their work and achievements over the last year. Awards are presented for Technical Merit, Outstanding Corporation (Jim Flynn Award) and Friends of NALMS and are capped off with our most prestigious award, the "Secchi Disk Award," which honors the NALMS member who has made the most significant contributions to the goals and objectives of the Society.

Hotel and Transportation

NALMS and the symposium host committee welcome you to sunny Tampa, Florida! The Tampa Marriott Waterside Hotel and Marina is a world-class hotel that overlooks Tampa Bay in the heart of Downtown Tampa. Nearby Ybor City, the Florida Aquarium, the Tampa Bay History Center and other attractions are within a short walk or can be reached by trolley making Tampa a perfect destination for work and play.

Hotel Information

Tampa Marriott Waterside Hotel & Marina
700 South Florida Avenue
Tampa, Florida
813-221-4900 | tampawaterside.com

- Room rates are $129 for single occupancy plus tax.
- Government rate rooms are available.
- The conference rate is available until October 9, 2014

Transportation Information

Tampa International Airport is served by 19 airlines with daily direct flights from 75 destinations in the United States, Canada and beyond. The Tampa Marriott Waterside Hotel & Marina does not offer an airport shuttle service, but is a short 15-20 minute ride via SuperShuttle.

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Page 4: Dean Beyett (left), William Verbeek (right), Robert Du Bois (bottom)

Visit www.nalms.org to register for NALMS 2014!

LakeLine

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On the cover:
Twins Anna and Joe enjoy their time at Palmer Lake, which is included in the Hubbard County (MN) COLA. Photo by Rebecca Murphy.

Advertisers Index

Published quarterly by the North American Lake Management Society (NALMS) as a medium for exchange and communication among all those interested in lake management. Points of view expressed and products advertised herein do not necessarily reflect the views or policies of NALMS or its Affiliates. Mention of trade names and commercial products shall not constitute an endorsement of their use. *Standard postage is paid at Bloomington, IN and additional mailing offices.*

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From Bill Jones the Editor

When you hear the words "Lake Association," what is your first thought? I've known many that are primarily social organizations that spend most of their annual budget on the 4th of July fireworks celebration. I also know of many that are actively involved in sometimes complex projects designed to improve the water quality of their lakes. The fact of the matter is – every lake association is a unique blend of primarily lake residents of varying economic means and skill sets that come together with a common focus on The Lake.

The theme of this issue of *LakeLine* is "Lake Associations." We can't possibly provide comprehensive coverage of all things about lake associations in the pages of this single *LakeLine*; however, we attempted to include a variety of articles that help represent a range of activities that can be accomplished by lake associations. Pay attention and take notes because there are lots of great ideas here for your lake association!

We begin with little Lake Volney, MN. I read in a blog post that this lake looked like pea-green soup in the late 1980s, but it was transformed into a clean lake and the lake association was awarded the 2011 Lake Association of the year in Minnesota. This was exactly the kind of story I wanted for this issue and **Steve Pany** and **Suzanne Boda** tell the story of the little lake that could. Boone Lake, RI, is even smaller at only 47 acres, but this impoundment was threatened by a failing dam. The lake residents didn't sit idly by but, instead, they formed a dam management district to fund necessary repairs. **Gary** and **Barbara Casaly** tell us how a special management district, authorized in many states, can be used to fund and protect a lake. Lake of the Woods, which spans parts of Ontario and Manitoba in Canada, and continues into Minnesota, is one of the largest lake associations in North America. Where do you start in managing such a large lake? Executive Director **Susan McLeod** shares some of her experiences with us.

> *LakeLine* encourages letters to the editor. Do you have a lake-related question? Or, have you read something in *LakeLine* that stimulates your interest? We'd love to hear from you via e-mail, telephone, or postal letter.

In many areas of North America coalitions of lake associations have formed to demand an even larger voice in area policies and politics. **Nancy Mueller** and **Holly Waterfield** describe how the New York State Federation of Lake Associations was created and how this statewide organization has become a powerful voice for lakes in New York State. The Federation of Ontario Cottagers' Associations was formed back in 1963 and today it represents more than 500 associations across the province. Executive Director **Terry Rees** summarizes some of the many ways FOCA makes a difference.

Our final two theme articles describe two innovative actions of lake associations that could stimulate other associations to do likewise. The idea for compiling an issue about lake associations was spawned when my SPEA colleague **Burney Fischer** told me about a master's capstone project his class undertook to analyze the sustainability of the Hubbard County (MN) Coalition of Lake Associations using Internet surveys. Student co-authors **Jennifer Okajima** and **Jana McGee**, along with faculty colleague **James Farmer,** join Burney in describing the survey methods and results in their article. In our final theme article, **Douglas Miskowiak** tells the fascinating story of how concerned residents of Moose Lake, WI, identified information needs, framed relevant questions, and became citizen scientists by partnering with a university to collect the field data needed to compile GIS data sets used in community planning.

In an issue featuring Lake Associations it is fitting that eight of our NALMS Affiliates wrote in with news of their activities and accomplishments. They have been very busy. Also in this issue, NALMS President **Terry McNabb** reflects on potential collaborations between NALMS and other like-minded societies, and **Dick Osgood** reviews a new book that examines changes the authors deem necessary to better protect lakeshores.

Also in this issue, we present the early information you need to plan your trip to the 34th Annual NALMS Symposium scheduled for Tampa beginning November 12, 2014. Be certain to also check out the annual "Call for Nominations" for both NALMS elected offices and for awards. This is your chance to nominate the future leaders of our Society and to nominate outstanding achievements by NALMS members. We finish this issue, as usual, with "Literature Search."

Enjoy!

William (Bill) Jones, is *LakeLine*'s editor and a former NALMS president, and clinical professor (retired) from Indiana University's School of Public and Environmental Affairs. He can be reached at: 1305 East Richland Drive, Bloomington, IN 47408; e-mail: joneswi@indiana.edu.

From Terry McNabb the President

The summer is coming early here on the West Coast and field work has begun. It's always interesting to get out on lakes we have worked on for years and see the people that make it happen within their organizations. This month's issue focuses on lake associations and the hard work they do to protect the waters they live on.

There are a number of organizations like ours that have as their focus the protection of our nation's water resources. To this point, however, there has been limited communication between the memberships of these groups.

The NALMS mission statement says "The purpose of the Society is to forge partnerships among citizens, scientists and professionals to foster the management and protection of lakes and reservoirs for today and tomorrow."

The Aquatic Ecosystem Restoration Foundation (www.aquatics.org) is another group I work with closely. Their mission statement says "The AERF is committed to sustainable water resources through the science of aquatic ecosystem management in collaboration with industry, academia, government and other stakeholders." They have a number of excellent publications on their website that I use every day that probably don't get as widely viewed as they should.

The Aquatic Plant Management Society (www.apms.org) is another group with a focus on lakes. Their mission statement says "APMS strives to promote environmental stewardship through scientific innovation and the development of technologies related to integrated plant management in aquatic and riparian systems." With the rapid spread of invasive aquatic plants in our country, this group has good information for lake managers.

Last, the American Fisheries Society (www.fisheries.org) has as a mission statement: "The mission of the AFS is to improve the conservation and sustainability of fisheries and aquatic ecosystems by advancing fisheries and aquatic sciences and promoting the development of fisheries professionals." They have always been my go-to group when we experience problems. The wording of these four mission statements is almost identical and their diverse memberships are probably in many cases all working on the same waters.

Our past president, Mark Hoyer, has felt for some time that we need better communications between these groups; we all have a common goal and objective and each group has expertise and understanding that would be of great value to each other. So we are starting down the road of meeting Mark's vision.

This fall in Tampa at our annual meeting there will be a session focused on improving and expanding communications among the three professional societies; NALMS, APMS, and AFS. The president of each of these groups is going to present an overview of the work and objectives that their group is particularly good at and focused on. After that, Mark will moderate and facilitate a discussion of how these groups can work more closely together and share knowledge.

Lake management has a significant number of components and variables that have to be understood as we go about our work. I am personally looking forward to seeing where this takes us and learning more about those aspects of lake management that these groups really focus on. And, yes, Mark, I will get my abstract in.

On another note, while we were holding our mid-year board meeting in Cincinnati the last weekend in April prior to the National Water Quality Monitoring Conference, we learned that NALMS lost one of the bright lights in our organization. Alan Cibuzar was a good friend of mine and I am sure a significant number of you would say the same thing. He was a former member of our Board of Directors and his mission in life was to assist lake associations and lake residents to protect their waters from point and nonpoint sources of pollution. For those of you who miss the NALMS Notes from May, you can go to http://www.nelson-doran.com/memsol.cgi?user_id=1299169 to see his memorial.

Terry McNabb has been working in the field of lake and aquatic plant management for about 40 years and specializes in management of invasive aquatic species. He is a graduate of Michigan State University and works primarily in the Western United States. He lives in Bellingham, Washington, with his family.

Making Good Things Happen for **Lake Volney**

Steve Pany and Suzanne Boda

Lake Volney is a 283-acre and 70-foot deep lake in Le Sueur County of southern Minnesota. Its watershed is 2,000 acres and includes some wetlands. In the lake's surrounding area there are many corn, soybean, and alfalfa fields, along with some dairy farms.

The public beach and pristine lake provided fishing, swimming, and watersports for many people in the area and for the 45 lakeshore property owners during the 1960s and early 1970s.

In the mid-1970s the lake's water quality started to degrade. And it got worse. By the 1990s, Lake Volney's water had turned to what looked like soupy green paint. Swimming was not something people wanted to do anymore. Runaway algae in the water caused by excessive amounts of phosphorous in the lake along with a large carp population turned the water soupy-green for the entire summer.

This change in the lake coincided with a period in the late 1970s and early 1980s that saw many wetlands in southern Minnesota drained, tiled, and tilled for farmland. These wetlands were once filled with wildlife and acted as important water quality filters for lakes, streams, and rivers. Lake Volney did not escape this misfortune and many wetlands were eliminated within its watershed.

The Lake Volney Association is Formed

The Lake Volney Association was formed in 1982. The early founding members helped secure a Clean Water Partnership Grant from the State of Minnesota in 1995 to be administered by Le Sueur County Environmental Services. This was a good step toward restoration of the lake. With this grant, Le Sueur County Environmental Services hired a professional hydrologist to determine possible solutions. Some of them included wetland restoration, lake reclamation, ferric chloride sediment treatment, riparian buffer strips, stream bank stabilization, holding ponds, and shoreland/agricultural best management practices for farmers.

By 1998 the lake still had poor water quality that limited recreational use. We got better informed about lake stewardship and shared this knowledge via newsletters and a website with area residents to encourage them to join the effort to improve the lake. We also obtained 501(c)(3) tax exempt status for the Lake Volney Association so we could obtain grants.

The hardworking members of the Lake Volney Association have done a lot of lake stewardship practices the past few years. They paid dues, made financial contributions, created shoreline buffers, created rain gardens (Figure 1), upgraded water related systems, used better lawn practices, funded a lot of carp seining by a commercial fisherman, and helped pay for a website and newsletter. Dan and Darlene Tuma recorded Secchi disk readings, Bob Gullickson and Terry Stier organized a yearly lakeshore cleanup, Mike and Sherry Skluzacek dredged holding ponds, Suzanne Boda organized meetings, Kenny Kalina worked with the DNR on fish stocking. Our Board of Directors had meetings and worked with many state and local agencies. All of these activities contributed to our goal of a restored Lake Volney.

Figure 1. Many rain gardens have been installed around the lake, including this one at the public access boat ramp.

In 2011 the Lake Volney Association was named Lake Association of the Year in Minnesota and awarded a $1,000 grant by the Minnesota Waters Organization. Minnesota has 642 lake associations. We were extremely honored and appreciative of this award. The average summer Secchi disk reading in 1995 was 3 feet with very poor water quality. In 2013 it was 15 feet – at times 25 feet – with fairly good water quality for most of the summer. The lake still can have occasional algae problems. The water quality at Lake Volney has been improved but there is still work to be done by many partners to fully restore this lake.

Other Projects

Secretary of the Board of Directors Sandy Weber, who records minutes at our meetings, grew up in the area and enjoyed swimming at Lake Volney in the 1960s. Sandy's mother, Kay Gregor, was a founding member of our lake association. Sandy's daughter, Nichole Weber, is on our Board and, using her degree from the University of Minnesota, gives us her guidance on some of the projects. In 2013, she applied and received a grant from the Schmitt Foundation to restore native aquatic plants at Lake Volney. This is a three-year project. The aquatic plants include bulrush, duck potato, water plantain, 3 square rush, pickerel plant, blue iris, sweet flag, and white water lily.

The State of Minnesota's Legacy Grant Program funded a Minnesota Department of Natural Resources purchase of 900 feet of lakeshore on southwest side of the lake. This is the site of the native aquatic plant restoration (Figure 2).

The Lake Volney Association hired A.W. Labs of Brainerd, Minnesota, to do a flyover analysis of the lake and watershed in 2008 and 2012 to identify problem areas.

The Lake Volney Association, in partnership with Le Sueur County and the Department of Natural Resources, completed two shoreline buffer projects areas at the public beach (Figure 3). Lauren Klement with the Environmental Services Department of Le Sueur County has worked with land owners in the watershed created holding ponds, stabilized stream banks, improved buffers, replaced outlet stream culverts (Figure 4), worked with lakeshore owners on their

Figure 2. Native aquatic plant restoration is an important component of the Lake Volney management plan.

Figure 3. The public beach sand was moved up and away from the shore and glacial stone and native plantings were used to stabilize the shoreline.

Figure 4. The outlet culverts were replaced to further help prevent shoreline erosion due to high water.

water related systems, and completed five Best Management Practices for farmers in the watershed.

You are invited to view our website for more information: **www.minnesotawaters.org/group/volney**.

The Future

While it seems Lake Volney degraded quickly, the restoration process is long and involves the collective work of many people. The MPCA's recent Total Maximum Daily Load study has proven there is still a long way to go to reduce runoff and in-lake nutrients and restore Volney to a natural state.

As an Association, we are constantly evolving. Our members and partnerships with landowners and government agencies are increasingly important as we move into new phases of restoration efforts. We seek ways to take advantage of new techniques and technology that may reduce pollutants both coming into the lake and those that have built up within the lake over the years. We strive for continued success so as to one day leave a legacy for future generations.

Steve Pany has been treasurer and webpage manager since 1998. Steve has been going to Lake Volney to swim, fish, and waterski since 1965. Steve has been to lake conferences and has networked with lake related organizations.

Suzanne Boda spent summers at her family cabin on Lake Volney and she and her parents were founding members of the Lake Volney Association in 1982. An avid environmental steward, Suzanne has served as a Board member and Board President for many years.

LAKE and RESERVOIR MANAGEMENT

A scientific publication of NALMS published up to four times per year solicits articles of a scientific nature, including case studies.

If you have been thinking about publishing the results of a recent study, or you have been hanging on to an old manuscript that just needs a little more polishing, now is the time to get those articles into your journal. There is room for your article in the next volume. Don't delay sending your draft article. Let the editorial staff work with you to get your article ready for publishing. You will have a great feeling of achievement, and you will be contributing to the science of managing our precious lakes and reservoirs.

Anyone who has made or plans to make presentations at any of the NALMS conferences, consider writing your talk and submitting it to the journal. It is much easier to do when it is fresh in your mind.

Send those articles or, if you have any questions at all, contact: Al Sosiak, Editor, *Lake and Reservoir Management*.

If there is anyone who would like to read articles for scientific content, please contact Al Sosiak. The journal can use your help in helping the editorial staff in editing articles.

Forming, Managing, and Funding a **Dam Management District**

Gary and Barbara Casaly

How Boone Lake in Exeter, Rhode Island, took control of its present, and, hopefully, its future

About Boone Lake

Boone Lake is a 47-acre privately owned lake in Exeter, RI, part of the Wood-Pawcatuck watershed. The lake is on the Roaring Brook in Washington County, Rhode Island, and is used for recreation purposes. Construction was completed in 1885.

The dam is masonry, a gravity dam of earthen construction. Its height is 21 feet with a length of 265 feet. Maximum discharge is 472 cubic feet per second. Its capacity is 360 acre feet (over 15 million cubic feet). Normal storage is 295 acre feet (over 12 million cubic feet). It drains an area of 2.5 square miles.

Boone Lake is managed and funded by lake residents via the Boone Lake Dam Management District (BLDMD), established in 2007. This dam management district was created within the limits of Boone Lake Shores, developed in the 1940s by Resort Properties, a Massachusetts corporation. It comprises about 150 properties, which include lakefront properties on the three streets that surround the lake (East Shore Drive, West Shore Drive, and Birch Drive) and properties across those streets from the lake.

Gary's Wake-Up Call

On April 1st, 2004, I received a phone call early in the morning from the then-president of our association (at the time a voluntary group of residents at Boone Lake in Exeter, Rhode Island).

"There's a breach in the dam," she said, nearly yelling into the phone. "You're kidding, right?" I retorted (with almost a laugh, as I knew it was April Fools' Day), but she meant what she was saying. A group of us assembled at the dam and became very concerned when we saw a small crevice carved out by water in the back of the dam, with a water and sediment mixture flowing as though it had eaten its way from somewhere under the front side of the dam, all the way through to the back side.

We immediately raised the gate (we were fortunate enough to have a gate that allowed us to control the flow of the water downstream through a sluiceway) in order to take as much pressure off the dam as possible. We then notified the government agency in the state that promulgates and enforces the safety regulations governing dams. It was clear that there was going to be no summer at Boone Lake that year (Figures 1 and 2)!

It takes a lot to fix a dam – even a small repair. We found that out first-hand when we sat with and talked to an engineering firm that guided us through what such a project entailed:

- Preparation of detailed engineering plans
- Presentation to governmental agencies in charge of dams, developing plans and the manner in which the proposed project would be carried out and the safeguards necessary to reduce the impact on marine life
- Applying for and paying fees to obtain permits to do the work
- Raising the astronomical amounts of money to carry out the project

We did it all – everyone working together, both association members and non-members – but it was an exhausting undertaking. Raising money became discouraging because nearly every time we thought we had the amount to do the work, another "little problem" would crop up – another retaining wall that needed to be replaced, or some other unexpected expense. From the start we were at a disadvantage trying to catch the "freight train" because we had not planned on Mother Nature being so cruel. We didn't have the rainy day funds already set aside when the rainy day came.

Envisioning and Forming the Dam District

For a number of years before the breach developed in the dam our association had explored and envisioned the creation of a dam district – a quasi-governmental unit that had the authority to assess and collect management fees from all residents around Boone Lake (not just the voluntary members of the association). No such districts had been created in Rhode Island – there wasn't even legislation authorizing their creation.

After the $186,000 cost it required to fix our dam, we started to seriously think about the issue. And, with the advent of the Great Rainstorms of 2005, even the government agency in the state that oversaw dams pushed for legislation that would allow for the creation of these districts. The State of Rhode Island passed enabling legislation (a law that sets out the basic parameters of what a district could do, with local town councils empowered to create the districts by ordinance) in 2005. That set the stage for our association to begin the process of trying to create what would become the first dam district in the state.

We prepared a proposed ordinance, which we had drafted based on some other states' legislation and some of our

Figure 1. Gate control mechanism. Photo: Larry Cotton.

Figure 2. Gatehouse and sluiceway. Photo: Larry Cotton.

own ingenuity, and filed it with the Exeter Town Council, which was now the local authority to create districts under the state-wide legislature. The Town Council scheduled many workshops to obtain input from the Boone Lake residents as to what they thought about the proposed ordinance. A number of presentations for the Town Council's and the residents' benefit took place at our own clubhouse and in the cafeteria of a local school. Attendees asked many questions and voiced views both for and against the formation of the district. In the end the ordinance was passed and we were on our own to get the district up and running.

Reasons for Creating a Dam Management District

We wanted to equitably distribute the cost of maintaining the dam for all Boone Lake residents, protect life and property against dam failure, and accomplish other objectives mentioned in the enabling legislation (see references at the end of this article).

Governance and Voting

Property owners who attend the annual meetings or special meetings make all decisions for the Boone Lake Dam Management District. The Board of Directors (officers), made up of Clerk, Treasurer, and Collector/Assessor, reports to the property owners (Figure 3). The Board members select a chair/moderator from one of its officers. The officers receive no compensation.

Property owners get one vote per tax lot or per adjacent lots used as one site under the same ownership. Votes are cast by the eligible voter, either the sole owner or one person designated by all the owners. Assessor's tax records as of 60 days before the vote determine the list of owners. When Assessor's tax records do not reflect a recent purchase, the new owner(s) must provide an affidavit and copy of the recorded deed at the meeting.

Meetings

Meetings are called with at least 30 days' notice. Assessed owners receive a notice of meetings, sent by mail, which includes:

- Time and place of the meeting
- Meeting agenda
- Proposed budget (put together by the Board)
- Annual management fee for that household if the budget is passed unmodified*

[* Note that changes or modifications to the budget raised and voted on at the meeting result in a different fee.
An eligible voter is the owner, or one of the owners, of the parcel who is

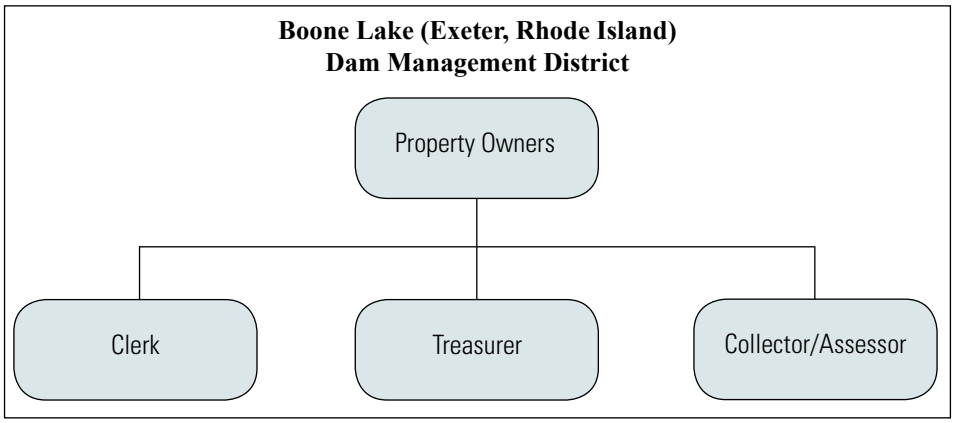

Figure 3. Property Owners and Board of Directors.

designated by the owners to cast the vote for that parcel. Eligible voters for 25 parcels represent a quorum. If the quorum is not reached, the meeting can be delayed (same date) for a reasonable time until a quorum is present, or postponed (new date). If the meeting is postponed but a quorum still is not reached, at the postponed meeting the members of the board and the eligible voters present are authorized to act at the postponed meeting.]

All matters (other than the election of officers) are determined by a majority vote. Election of officers is determined by plurality (the person who receives the most votes). *Robert's Rules of Order* control.

An informal meeting also takes place in June or July to discuss our "wish lists" for what might be included in the proposed budget. This allows for informal discussion and gives time for volunteers to investigate costs and options for the proposed budget items in time to present findings at the Annual Meeting.

What is this Budget For?

The budget is used to slowly build a reserve fund for dam maintenance and, if necessary, repair, and to cover the costs and expenses of regular maintenance and administration of the dam district (Figure 4). We include in the budget:

- Costs of regular maintenance (mowing, removing growth, inspecting the gate, etc.)
- Costs of administering the district
- Anticipated costs for major repairs that may be needed

Sharing the Amount of the Budget

Assessed amounts to property owners established by the budget are liens on properties under the enabling legislation. The Relative Weighted Value is the value of any property divided by the value of all properties. The budget is multiplied by the property's Relative Weighted Value to determine the Share. The Share is directly related to assessed property value, which is an objective value determined by the town.

For example, the annual budget is $29,000, and the total assessed value of all properties is $43,288,896. Property X has an assessed value of $401,500.

The Relative Weighted Value is $401,500/$43,288,896 = .009275
Property X's Share is $29,000 x .009275 = $268.98

The annual assessments (Shares) range from $16 to over $400 per property.

Updating and Maintaining Our Records

A search of the Town Clerk's records provides a list of recent transfers of property. When we get an inquiry regarding amounts owed on a property, we ask whether the transaction is a refinance (mortgage) or a sale. If it is a sale, we ask for the purchaser's name and mailing address to update our records.

Communication to our Boone Lake email address helps us track and respond to inquiries from purchasers and from attorneys. We answer questions from residents (what they owe or if a payment was received, for example) promptly so they can be confident that the Boone Lake Dam Management District is an efficient and responsive entity.

How Do We Let People Know What is Owed?

The Collector/Assessor sends bills to owners on an annual basis with coupons for quarterly payments. The coupons are similar to those sent out for property tax assessments. Payment reminders are

Figure 4. A view of frozen Boone Lake, with Gary at the dam. Photo: Larry Cotton.

posted at the entrance to the lake. We respond to inquiries from attorneys and purchasers, who are prompted to do so by the fact that municipal lien certificates (certificates issued by the town specifying taxes and fees owed on properties) and/or filings at the Town Clerk's office indicate that there is a statutory lien that secures payments. We provide a ledger of the amounts that are owed to those who have made such inquiries.

How Do We Collect the Amounts Owed?

If an owner is late on a payment, the Collector/Assessor sends a reminder notice. In most cases, this reminder is sufficient for the owner to make the payment. If a property owner does not pay the assessed share for several years, the account is referred to an attorney for collection. This extreme measure is rarely needed.

Why Not Wait Until "Something Happens" Before Raising Money?

It is too much of a burden on owners' personal finances to try to raise money quickly. Similar to a personal retirement fund, if we start early and let the money grow, and the funds – or some of the needed funds – will be there when we need them.

We always think back – how long did it take us to raise money by voluntary contributions when repairs were needed last time? We don't want to go through that again!

How Much Do We Need to Reserve and What are the Goals?

We use history to guide us. Major repairs have been made in 1975, in the early 1980s, and most recently in 2003-2005. The last repair cost about $186,000, and that was with outstanding volunteer help and discounted rates from some contractors who were doing a favor to friends.

We can only guess when the next repair might be needed and what it will cost. Also, regular maintenance is necessary and can hold off the need for more major repairs and potential failures.

Has This Been a Success?

Most, but not all, property owners feel that the dam district has been a success and the assessments are fair. Fund-raising pleas have been replaced by animated discussions about how to maintain the dam and the lake, and how to get the best value from our money and time.

The decision at the Annual Meeting every year has been to keep the budget at the same level as the previous year. The down-side is that we are not building our rainy day fund as quickly as some may prefer; the up-side is that owners know that they have a say and that their share has remained fairly constant from year to year, rather than increasing (as often happens once a fund-raising entity is voted in).

We encountered the Town Council Chair at the Registry of Deeds one day a few years after the Boone Lake Dam Management District was in operation. We discussed how the management district was working out. He told us unequivocally that it was working out well, because if it wasn't, he said he'd be one of the first to hear the complaints.

For More Information

- Rhode Island Legislation: Dam Management Districts: **http://webserver.rilin.state.ri.us/PublicLaws/law05/law05145.htm**
- Boone Lake District Ordinance: **http://www.boonelakeri.org/pdfs/boone_lake_dam_district_ordinance.pdf**
- Boone Lake website: **http://www.boonelakeri.org**
- Photographs from the Boone Lake dam repair (2004-2005): **http://www.boonelakeri.org/photos_dam_repair_2004-05.html**

Gary Casaly is a real estate attorney who has a private practice and has served as counsel for title insurance companies in Massachusetts. His involvement with Boone Lake leadership evolved from his enjoyment of the lake and interest in maintaining the quality of the lake and the integrity of the dam. He served as president of the Boone Lake Improvement Association (the sole governing body prior to the creation of the Dam Management District). Currently, he serves as Chair and Collector/Assessor for the Boone Lake Dam Management District. Gary can be reached at boonelakeri@gmail.com.

Barbara Casaly is a technical writer who specializes in websites and user documentation of all varieties. She is the webmaster for http://www.boonelakeri.org. In 2013, she was supportive of the collaboration effort between the University of Rhode Island course, "Writing Science for the Public," and Boone Lake residents, during which the students produced informative video presentations concerning lake quality and maintenance.

Next Issue – Fall 2014 *LakeLine*

Terminal lakes of the West comprise some of the most productive waterfowl waters in the United States, yet their future is in doubt as demand for freshwater and climate change challenge their very existence. Some have already been lost, others are barely surviving.

Lake of the Woods
District Property Owners Association

Susan McLeod

Celebrating our shared passion for lake life

The sun is up, information kits are stowed, sunscreen's applied, and the ropes cast off for another day on the water for the Lake of the Woods District Property Owners Association's (LOWDPOA) *LakeSmart Team*. It's a perfect morning for their work, with the lake surface like a mirror reflecting the colours of summer in cottage country.

Lake of the Woods alone has an area of 3,826 km^2 (1,477 mi^2 or 945,425 acres). It spans the Canadian and U.S. border from Ontario and Manitoba into Minnesota. It has 105,000 km (65,000 mi) of shoreline and contains 14,522 islands. LOWDPOA welcomes nearby lakes into its membership.

The *LakeSmart* team's goal today is to head down to the Sioux Narrows/ Nestor Falls (SNNF) area on Lake of the Woods, more than a 30-minute boat ride in calm weather. They'll first spend a few hours stopping at docks along the shoreline, meeting with waterfront property owners and tourist camp operators to talk about the importance and benefits of healthy shorelines. Then it's on to dry land and over to the SNNF Community Services Showcase to set up their display where they'll inform area residents, cottagers, and visitors on issues of importance to the health of our waterways and overall environment.

LakeSmart is just one of the outreach and education programs offered by the Lake of the Woods District Property Owners Association. Now hiring university students for its fourth summer season, it is also one of the most successful. Originating with an idea from the Association's Environment Committee, and launched in the summer of 2011 (Figure 1), *LakeSmart* offered the opportunity to directly reach waterfront property owners with an environmental message, raise the profile of LOWDPOA as leaders in lake stewardship, and positively impact waterfront development in the area.

Thanks are due for the help and guidance from the Muskoka Lakes

Figure 1. LakeSmart *launches in 2011: team members Laura Shore and Sam Warden with LOWDPOA President Barry Baltessen and Kenora Mayor Dave Canfield.*

Association, who has operated a similar "dock-to-dock" outreach program focused on boating safety. In addition to our member donations, community support also helps as businesses and organizations continue to step up with both cash and in-kind sponsorships that allow us to carry on.

Since its launch, *LakeSmart* has connected personally with more than 500 cottagers, helping to improve their shorelines and educating them on the important ecosystems they support along the way. More than 1,500 information kits have been dropped off to docks (that's a lot of boat bumps) and countless presentations have been made at public events throughout the district.

As the profile of the program continues to increase, smaller lake associations are now requesting full-day appointments for group presentations and individual property assessments. Margaret McKenty, president of the Trout Lake cottagers' association organized the day for her members and said, "*Laura & Luke came yesterday as planned & connected with even more cottagers than I expected. Hurray! I'm looking forward to seeing whether & how it influences lake stewardship around Trout Lake.*"

LakeSmart's profile and healthy shoreline message also led to the creation of an important partnership between LOWDPOA, the City of Kenora, the Ontario Ministry of Natural Resources, and the Lake Winnipeg Basin Stewardship Fund to build an interpretive Model Shoreline at the Lake of the Woods Discovery Centre. Officially opening in the summer of 2014, this naturally "landscaped" area on the Kenora waterfront will allow visitors to learn the importance of shorelines to water quality and lakeshore ecosystems, identify appropriate plants and structures to help protect the water's edge, along with general to-dos and not-to-dos when considering shoreline development.

The Lake of the Woods District Property Owners Association celebrated its 50th anniversary in 2012. What started as a small group of localized cottage owners coming together to fight against proposed education taxes (Figure 2) has grown into the largest association of its kind in Ontario; with a membership of close to 4,000 seasonal and permanent residents from across the entire Lake of the Woods watershed. President Robert Bulman states, *"We are all joined by our passion for lake life and this gives us strong voice when responding to issues that impact us. This can include water quality, forestry, mining, invasive species, land development, and taxation issues, just to name a few."* Although issues related to taxes, utility costs, and succession planning will always be important to cottagers; the common thread running through LOWDPOA's 50-year history has always been related to environmental concerns, particularly water quality.

Figure 2. LOWDPOA members bus to Kenora in 1962 to fight proposed education taxes to seasonal residents.

"We swim, we sail and generally relax in this environment. Winters take a heavy toll on the spirit, but rejuvenation is rapid at the lake."

~ LOWDPOA member Ian MacDonald, January 1971

Few people have a better opportunity to observe the effects of human activities in the wilderness than cottagers, many of whom return each year to the same location, and whose knowledge of the local area may have been passed down for generations. As a group, we can have quite a positive or negative – our choice – impact on the environment.

Cottagers from as far back as the late 1800s have been coming to Lake of the Woods and the surrounding areas to get away from the cities, breathe the fresh air, and splash about in the crystal clear lakes and rivers. We may not live here year-round, but as a group we have often been the first line of defence when it comes to protecting a lifestyle and ensuring a balance between Mother Nature and development.

Each of us has a different idea of what it means to be "at the lake"; the kayakers may not understand the power boaters, and the cross-country skiers can't imagine snowmobiling, but we all have one thing in common. We come to our very favourite place to enjoy, in our own way, friends, family time, and the great outdoors.

All the activities undertaken by the Lake of the Woods District Property Owners Association over the years revolve around our stated long term vision: *To preserve one of the most beautiful places on earth as a high-quality environment for future generations to enjoy.*

That common bond is what has driven all the environment related programs, education, political actions, and various events undertaken by the Association over the years. Environmental concerns are usually stated as one of the

primary issues of members, and often their main reason for joining LOWDPOA. When the very first Environmental Control Committee came together in the early ’70s, the message from the membership was clear: Cottagers had a vested interest in sustaining their environment (Figure 3).

Today’s association includes not just cottagers, but people who live and work in the region, so the balance between outright protection and economic development can be challenging.

In today’s social and political climate, it’s more important than ever for cottagers, permanent residents, and interest groups to find their common concerns and respect their positions, then work together toward ultimate solutions acceptable to all. By doing that, LOWDPOA has earned a seat at the table when local, regional, provincial, and even federal discussions take place. “Earned” is the correct term, as years of hard work by our board, staff, and volunteers, sometimes a seemingly uphill battle, have brought us to where we are today. “Projects build partnerships. Our collaborations with LOWDPOA over the years have helped both parties recognize our shared passion for all things ‘at the Lake’,” said Jennifer Findlay, Economic Development Officer, City of Kenora.

There is no doubt that the resource-based communities in northwestern Ontario cottage country have faced their share of bad news over the past 20 years. Closing industries and job losses have been felt across the entire region, creating the need for reinvention and to look for alternate sources of economic development. Thankfully, LOWDPOA’s strong voice is recognized as a partner in the process, and our contribution is valued through this reinvention. While we realize the need for increased development and economic diversification, we also try to ensure that it is always balanced with a view towards environmental sustainability.

One of LOWDPOA’s greatest achievements was initiated back in 2004, and after ten years its legacy continues to impact water quality related efforts on an international scale. That year the association organized the first Lake of the Woods Water Quality Forum; a conference of scientists and stakeholders related to the health of our waters. It brought together participants from both Canada and the United States who shared their projects and data. This annual event continues today with attendance by some of the most highly regarded specialists in the field.

All those LOWDPOA directors and volunteers deserve our thanks as this was one of the proudest moments in our history; one that will leave a legacy for generations to come.

Figure 3. Board members and volunteers help out at the sale of potted blister rust resistant White Pines.

This first Water Quality Forum also proved to be a catalyst for a new, coordinated approach to water quality research. Realizing that LOWDPOA didn’t have the scientific “legs” to undertake the work required, The Lake of the Woods Water Sustainability Foundation was launched at the 2005 Forum and announced at our Annual Meeting in May that same year. The sole focus of the Foundation is the preservation of water quality in the watershed, on both sides of the border through heightened awareness and the provision of support and funding of related research projects. Todd Sellers, Past President of LOWDPOA, was appointed Executive Director in 2006 and remains in the position.

Six years later, after a tremendous amount of work by the Foundation, the International Joint Commission released its *Report to the Governments of the United States and Canada on Bi-National Water Management of the Lake of the Woods and Rainy River Watershed*.

LOWDPOA was an active member of the Citizen’s Advisory Committee during a full year of consultation prior to the report being released, and today remains on the working committee as a stakeholder in watershed plans.

In 2013, as a result of the International Joint Commission support a Rainy-Lake of the Woods Watershed board is in place, a Water Quality Plan of Study is in the works to identify priority issues and understand what research and support is required, and the International State of the Basin Report is almost ready for publication of its second edition.

When we look back, there is no doubt that as the organizer of that first water quality forum, we could never have imagined the results.

LOWDKids in the Wild Looks to the Future

As with many not-for-profit organizations, our membership is made up of a high percentage of older folks, not surprising as they are the bulk of the property owners in lake country today, although we can see the generational shift to the next generation slowly

taking place. For us to succeed into the future and engage this next generation and their families, LOWDPOA recently launched its *LOWDKids in the Wild* program. LOWDKids (Lake of the Woods District) focuses on motivating this group to "take the reins" from their parents and grandparents; contributing to the well-being of the lakes areas in general and specifically through support of LOWDPOA.

LOWDPOA's youth education goal goes to the very heart of what most cottage and land owners deeply hope – that their children and grandchildren will value and enjoy the woods and waters as much as they have, and for most of the same reasons (Figure 4).

Through targeted activities and outdoor education LOWDKids in the Wild aims to have young people feel a sense of ownership in our woods and waters. Likewise, we would wish that they came to feel ownership in LOWDPOA as a major factor in maintaining and preserving those wild and natural places for themselves, and indeed for *their* children and grandchildren.

Figure 4. LOWDPOA: preserving the lake life experience for future generations.

A Shared Passion for Lake Life

LOWDPOA is only one of the cottage and lake associations across North America doing incredible things at a grass-roots level. Together we've planted millions of trees, cleared miles of trails, educated thousands of people, fought back when our favorite places are under threat, and undertaken countless programs and projects with those who share our passion for lake life.

Here's to our Lake of the Woods Property Owners Association and here's to all those like us.

Now sit down, relax on the dock and enjoy the sunset. You've earned it!

Susan McLeod is executive director of the Lake of the Woods District Property Owners Association. She lives and works "on the lake," sharing her passion for lake life through the membership of the Association, and the communities in the watershed.

We'd like to hear from you! Tell us what you think of *LakeLine*. We welcome your comments about specific articles and about the magazine in general. What would you like to see in *LakeLine*?

Send comments by letter or e-mail to editor Bill Jones (see page 7 for contact information).

NYSFOLA: Lake Associations Organized for Action and Education

Nancy Mueller and Holly Waterfield

The call of a loon, the sound of waves lapping on a shoreline, a canoe trip through the Adirondacks, or the tug of a bass or walleye on a freshly cast line – these are the reasons why people in New York are drawn to over 7,500 lakes around the state. New Yorkers are passionate about their lakes, so it's not surprising that the first lake association in the nation, the Lake George Association, was formed here in 1885. Since that time, hundreds of other lake associations have formed across the state. They range in size and scope from fully staffed incorporations with large annual budgets, which are actively engaged in lake management issues, to small clubs whose main mission may be to host an annual picnic or boat parade. What they have in common are people committed to their lakes, who are willing to volunteer their time and effort to ensure that the enjoyment of their lake is passed on to future generations.

Beginnings

Early on, most lake associations in New York focused their attention on local issues – lake level, zoning, development pressure, and taxes. There was some concern about water quality, especially in regions impacted by acid rain or urbanization, but things were generally "good" if you asked a lakefront property owner in most parts of the state. By the 1980s, concerns over water quality and Eurasian watermilfoil provided the impetus for a group of lake associations to push for a statewide coalition. Within a year, the New York State Federation of Lake Associations, Inc. (NYSFOLA) was established with a mission "*to protect the water resources of New York State by assisting local organizations and individuals through public dialogue, education, information exchange and collaborative efforts"* and a primary goal of encouraging New York lawmakers to establish a volunteer lake monitoring program similar to those in Vermont, Maine, Michigan, and Illinois. Those efforts were successful, and in 1985 the New York State Citizens Statewide Lake Assessment Program (CSLAP) was established as a cooperative program between the New York State Department of Environmental Conservation (NYSDEC) and NYSFOLA (Figure 1). The program was successful, and in 1988 the state Environmental Conservation Law was amended (ECL 17-0305) to mandate CSLAP and provide a full-time coordinator at NYSDEC.

It can easily be argued that NYSFOLA and CSLAP have matured side-by-side. Nearly 2,000 volunteers have participated in the program since it began, and over 100,000 hours have been spent collecting 20,000+ samples from 235 lakes around the state. The information collected by dedicated volunteers has become the state's primary lake water quality dataset and has recently expanded to include harmful algal bloom monitoring. More importantly, CSLAP

Figure 1. New York State Dept. of Environmental Conservation's CSLAP Coordinator Scott Kishbaugh trains a new CSLAP volunteer on Java Lake. Photo: Robert Thill.

volunteers typically become more invested in their lake's water quality. They want to know more about lake management issues and become involved in decision making that impacts water quality. They ask the questions: Why are there more weeds? What do we do to stop these algae blooms? What do the CSLAP data tell us? NYSFOLA is here to provide the answers and move them toward a solution.

Activities

The mission of NYSFOLA is to educate and assist lake associations with their local efforts. Through its newsletter, *Waterworks*, website: **www.nysfola.org**, an annual conference, and its network of CSLAP volunteers, NYSFOLA assists lake associations with everything from organizational issues, such as by-laws and insurance matters, to navigating the complex state regulatory framework, to the host of lake management issues encountered by communities across the state. NYSFOLA and NYS DEC have collaborated on two volumes of *Diet for a Small Lake: A New Yorker's Guide to Lake and Watershed Management*. This book has been the cornerstone for local lake management planning around the state, and thousands of copies have been sold (Figure 2).

As a result, lake associations in New York are increasingly engaged in lake and watershed planning, on-site wastewater treatment, phosphorus reduction, aeration, and invasive species management. They hire consultants, prepare permit applications, report harmful algal blooms, and submit aquatic plant samples. All of this is being accomplished as the mechanisms for funding lake management in New York are changing. State and federal funding have diminished over the last decade, and lake associations have been forced to take on more of the financial burden of lake management. Many have formed separate tax districts or foundations to serve as the fund raising "arm" of their association.

A University Partnership

The State University of New York College at Oneonta's (SUNY Oneonta) M.S. in Lake Management provides a low-cost alternative for lake associations to start the process of comprehensive lake management. Responding to the need for well-rounded whole-lake managers, the program strives to train a new generation of lake managers with the ability to assess lake ecosystems and the communities that revolve around them, and present sound approaches to mitigate acute problems in the short-term as well as plan for long-term management of the ecosystem. Lake associations with an interest in long-range planning benefit from an economical option that yields a comprehensive lake management plan for the future.

NYSFOLA has partnered with the SUNY Oneonta program to spread the word, connect the program with interested lake associations, and provide scholarship funds for graduate students. In a nutshell, a lake association commits to a two-year scholarship for a graduate student in the program; funding for two students per year is matched by the NYSFOLA Scholarship Program, with an additional match from the Scriven Foundation, a private foundation in the Oneonta-Cooperstown area. Students enrolled in the program each choose a lake and/or lake association on which to focus their efforts; the result of their two years of Master's Thesis research includes, among other components, a comprehensive management plan for that lake and watershed (Figure 3).

Three faculty members and two staff members, all CLMs, at the college's Biological Field Station provide continuous guidance and mentoring of students as they assess the current state of the lake and research historical conditions, survey the lakeside and watershed residents' concerns and goals

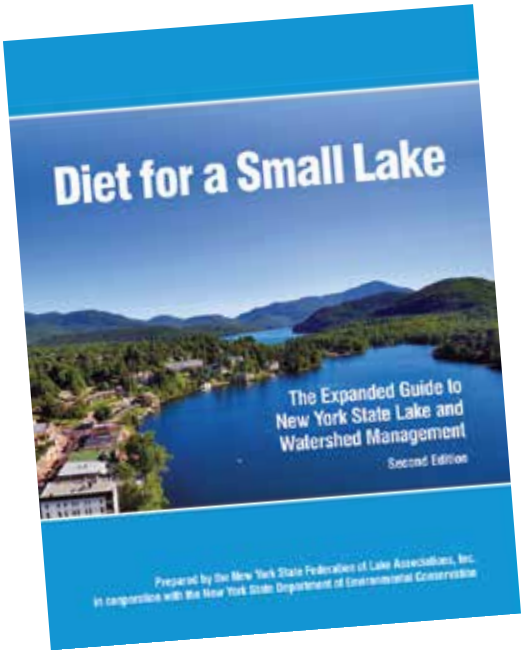

Figure 2. This NYSFOLA-produced book has aided many lakes throughout New York State.

Figure 3. SUNY Oneonta and SUNY Cobleskill students assess the fish community of Goodyear Lake, NY, via electrofishing survey in October 2013. The survey is part of a whole-lake assessment that will be used to develop a comprehensive lake management plan for Goodyear Lake and its watershed through the work of a student in SUNY Oneonta's M.S. in Lake Management program. Photo: Bill Harman.

for the lake, provide information for public education on key issues, and develop a range of solutions that both mitigate acute problems in the short-term and address issues more broad in scale with long-range lake and watershed planning. Drafting and adopting a lake management plan is a critical step and can be a means by which to obtain funding for management activities, but it is just the first step in establishing a productive working group that can move forward to implement the plan's recommendations.

Other Partnerships

In addition to protecting their "own" lakes, New York lake associations are increasingly working together to solve local or regional issues hence the formation of the Madison County Federation of Lake Associations, which encompasses a group of small recreational lakes originally created to feed the Erie Canal system, or the Finger Lakes Watershed Protection Alliance, focusing on the unique needs of the Finger Lakes region. They are also looking to NYSFOLA to take the lead on statewide issues. Currently, NYSFOLA is working with other environmental groups across the state in an effort to pass invasive species transport legislation. It will take lake associations large and small, from every corner of the state, to get Albany's attention. The leadership role falls to NYSFOLA, but it is the active engagement of lake associations and their most passionate members that will get the legislation through the Assembly and Senate.

As the role of lake associations has changed over time, NYSFOLA's role has grown to meet the demands. There is a greater emphasis on a statewide voice for lakes and an increasing demand for more lakes to be included in CSLAP. NYSFOLA provides the tools to ensure that lake associations, their managers and members continue to provide for the health of New York's lakes. Would you like to learn more? Join us at the NALMS International Symposium in 2015 in Saratoga Springs, NY.

Nancy Mueller has served as the manager of the New York State Federation of Lake Associations since 2000 after serving for many years on the Board of Directors. She is the assistant program coordinator for the NY Citizens Statewide Lake Assessment Program and serves on the NYS DEC Water Management Advisory Council's Harmful Algal Bloom Subcommittee. She is involved in a wide range of lake management issues and activities and is currently serving as chair of the NALMS 2015 International Symposium Host Committee.

Holly Waterfield, CLM, has been a research support specialist with the Biological Field Station of the State University of New York College at Oneonta since 2007, where she conducts lake monitoring, fisheries assessments, and is a mentor for students in the MS in Lake Management Program. She is active in the local county water quality coordinating committee, has been on the NALMS Board of Directors (Region 2 Director), and is currently serving on the NALMS 2015 International Symposium Host Committee.

The Role of Lake Associations: Connecting People for the Good of the Lake

Terry Rees

Lake associations are groups of enthusiastic volunteers who have come together with a great goal in mind: to protect an asset of mutual value – the lake experience. The genesis of these local groups may be a slow organic process of community-building, or a sudden jarring need for a united voice. In Ontario, there are literally hundreds of lake associations, scattered across the landscape. These groups benefit from access to peer mentors and best management practices to steward their lakes and their communities, and that is where FOCA comes in.

What is FOCA?

FOCA is the Federation of Ontario Cottagers' Associations, a not-for-profit membership organization representing volunteer associations across Ontario. FOCA was formed in 1963 by a small group of people in a handful of cottage associations; more than 50 years later, FOCA represents 50,000 families in more than 500 associations across the province.

Why a Provincial-level Organization Exists

FOCA sits at the table where individuals cannot, and acts as an information bridge between policy-makers and property owners on significant issues, including:

- the long-term environmental integrity of Ontario's freshwater resources
- effective land use planning
- risk management for volunteer groups
- fair property taxation
- rural safety and emergency preparedness, particularly in the face of extreme weather developments in recent years.

FOCA's mission is "to protect thriving and sustainable waterfronts across Ontario." Our primary tools are communication, education, and advocacy. We encourage and empower positive environmental stewardship among property owners. We promote and provide leadership for sound public policy on key issues. And we align with other key partners that support like goals and objectives.

Our members are lake and road associations, some very small and some quite large, with every size in between. Ontario borders on four of the five Great Lakes, and is blessed with over 250,000 named inland lakes in need of care and protection. FOCA's members live within this landscape, and are an integral part of the rural community in close to 300 of Ontario's 444 municipalities.

Why Cottage Country Matters

"Cottage country" matters to Ontario's economy. Billions are spent each year by waterfront property owners in the province – on watercraft, septic systems, furnishings, food and drink, cottage maintenance, and much more.

Waterfront property owners are a self-reliant and adaptable bunch. Despite the often casual clothes and dock-side meeting locations, these are dedicated and passionate folks who are vested in the future and are intimately familiar with the resources, special attributes, and changes happening on our lakes and rivers. Some live on relatively undeveloped land in low density regions; others live where lake capacity has already been reached, or even exceeded.

What FOCA Does

FOCA encourages property owners to join their local lake association; in turn, we encourage these groups to be members of FOCA (Figure 1). We believe there is strength in numbers, and we want everyone to be part of the solution for waterfront Ontario!

One of our primary functions is to communicate about and facilitate the network of best practices already underway at the lake level. Each year, FOCA celebrates these successes through the FOCA Achievement Award, presented to a member Association in order to recognize, share, and celebrate the leadership role played by these groups across Ontario. The most recent award went to the Pike Lake Community Association (Figure 2), for their efforts to protect their lake, engage their local community, and establish working relationships with municipal and regional partners. Find out more online at www.foca.on.ca/FOCA_Achievement_Award.

FOCA acts as a clearing-house for information on subjects as varied as blue-green algae, the Municipal Property

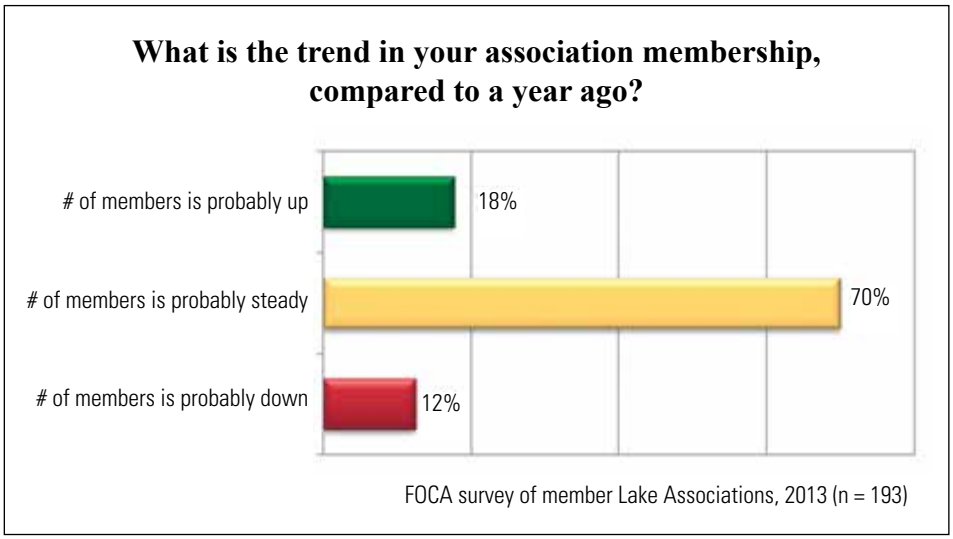

Figure 1. Member association memberships are holding steady and even growing, from FOCA survey 2013.

Figure 2. Terry Rees and Tracy Logan of FOCA present the 2013 FOCA Achievement Award to representatives of the Pike Lake Community Association.

Assessment system, rural fire safety, cottage succession issues, and much more. There is no need to re-invent the wheel when we can learn from each other's' experiences. FOCA maintains relationships with private, public, and institutional partners to connect the dots between science and action at the lake level.

In 2013 alone, FOCA had another busy year of policy and environmental initiatives. Partnerships continued with the Ministry of the Environment (MOE) for the Lake Partner Program (the largest volunteer water monitoring program of its kind), and the Ministry of Natural Resources (MNR) to deliver FireSmart messages. In 2013 alone, 630 Lake Partner volunteers sampled 820 locations at more than 540 lakes across Ontario. This year, even more kits will be sent out. Total Phosphorus and Secchi data are available via a link on the FOCA website at **www.foca.on.ca/lake-partner**, as well as from the Dorset Environmental Sciences Centre website at **http://desc.ca/programs/LPP**. Over the past year FOCA has facilitated workshops and meetings on the subject of a pilot blue-green algae monitoring program, and an aquatic invasive species monitoring program (Figure 3). We help to bring the tools to our members to enable them to take up the cause at the lake level.

FOCA continues to work with partners in Provincial government to augment the existing Lake Capacity Assessment (LCA) tool. The existing LCA, while somewhat useful, is limited in its application and is insufficient as the sole source of legitimate guidance for good waterfront planning. The Handbook cannot and should not be applied in isolation of other emerging and more sophisticated, modern consideration regarding sustainable waterfront development in Ontario, such as those under development by the MOE, with the support of FOCA, including but not limited to:

- site plan control
- site alteration by-laws
- increase lot sizes, zoning or by-law amendments
- best phosphorus removing septic technology implemented on sites

Other resources that might be referenced include FOCA's *Lake Planning Handbook for Community Groups*, which received the Ontario Planners Institute award (Figure 4). Some elements of consensus-building found within this guide may, in fact, be used within a future lake capacity/lake planning approach employed by the Province and land use practitioners.

FOCA participates in many speaking engagements and numerous committee, partnership and policy meetings. FOCA also conducts membership surveys annually, and shared the results with members about trends in lake association issues and engagement.

Looking at the Year Ahead

At the March, 2014 Annual General Meeting of Members, we identified the following priorities for lake associations, this year:

1. Civic Engagement: Associations are encouraged to get members connected online, to receive late-breaking news, to stay in touch during emergency situations

Figure 3. FOCA hosts a workshop for lake stewards as part of the new Aquatic Invasive Species Monitoring Program, March 2014.

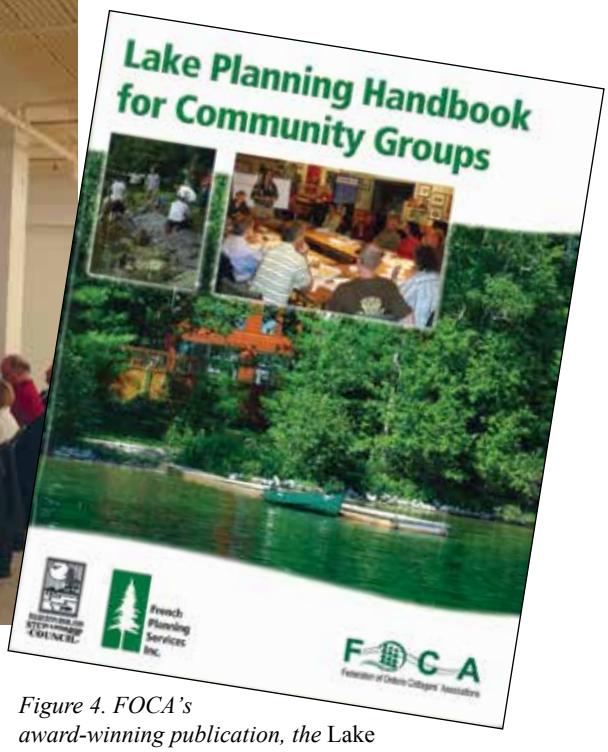

Figure 4. FOCA's award-winning publication, the Lake Planning Handbook

(including flood events) and simply to strengthen the community. FOCA will continue to provide updates in our monthly electronic newsletter (the "Elert"); subscribe for free on the FOCA website today, to stay in the know!

2. Municipal Elections: Ontario will hold municipal elections in October 2014. FOCA wants members to commit to vote at their rural municipality, to get to know their local candidates, to get other members involved, or even to run for office! The first step is to confirm your name is on your voter list, via this link: **www.voterlookup.ca**.
3. Good Governance: FOCA encourages our member associations to review their bylaws now, in advance of changes due under the new Ontario Not-for-Profit Corporations Act, as well as anti-spam legislation expected this year.
4. Risk Management: FOCA reminds members to review and understand insurance coverage for your association. Lake associations are being increasingly relied upon to deliver important services in Ontario's waterfront communities, and volunteers provide the energy and leadership for these groups. A risk management review is important, augmented by appropriate liability insurance protections. To this end, FOCA worked with a broker partner to develop an Insurance Program for Lake and Cottage Associations.
5. Water Quality: Get involved with FOCA in our new aquatic invasives plant monitoring program, and keep up the effort to sustain long-term water quality science through the Lake Partner Program.

As we met with members and partners across the province over the past year, a recurrent theme emerged: the need for informed and active involvement by all stakeholders, at all levels of government, at the community level in strong local associations, and by each of us as individuals on the waterfront. Success will depend upon everyone working together.

Terry Rees is an active representative on more than a dozen province-wide and bi-national committees related to water, the environment, and other community and sustainability issues. An outspoken advocate for the protection of Canada's freshwater systems, Terry has been the executive director of the Federation of Ontario Cottagers' Associations (FOCA) since 2004. FOCA is the largest waterfront landowner organization in Canada, representing over 50,000 member families in 520 community associations.

Why FOCA? A Testamonial . . .

FOCA acts as a bridge between property owners and regional partners. As one example, in 2013, FOCA received a question from a member Association, curious to know how Hydro One manages trees and brush to keep power lines clear, and concerned about the use of herbicides.

We solicited and received a response from Hydro One, explaining the protocols followed.

The note of thanks in July from our member Association President was gratifying:

"…once again FOCA has been instrumental in connecting lake associations with resources to help educate and answer questions. I will use this as yet another example of the benefits of FOCA during our AGM tomorrow!" ~ D.A.

Analyzing and Improving the Sustainability of Lake Associations

Jennifer Okajima, Jana McGee, Burnell C. Fischer, and James R. Farmer

The success of an online lake resident survey to improve lake association sustainability

Introduction

Lakes provide many benefits and services, from recreational opportunities to irrigation to aesthetic enjoyment. In order to maintain the ecological quality of their lake, as well as enhance its economic and recreational benefits, lakeshore residents can organize to form lake associations. In theory, lake association sustainability has a direct and positive effect on lake sustainability, as more effectively managed organizations should be better equipped to maintain their natural resources. This requires management of the lake itself, as well as organizational management of the lake association.

In the spring of 2013, at the request of the Hubbard County, Minnesota, Coalition of Lake Associations (COLA), a master's capstone class at the Indiana University School of Public and Environmental Affairs undertook a project to analyze the sustainability of both the COLA and individual lake associations (29 member lake associations) (Figure 1). The resulting class report provided research and recommendations related to increasing lake association sustainability (Finkelstein et al. 2013). As a framework for the report, lakes were viewed as common-pool resources, and COLA and Lake Associations (LAs) as common-pool resource managers.

As part of the larger project, a sub-study surveyed the preferences of

Figure 1. Big Sand Lake is one of 29 lake associations within the lake-rich Hubbard County COLA. Vern Whitten Photography.

lakeshore residents for seven of the 29 lake associations. Based upon suggestions from several of the lake associations and the COLA in fall 2013, the authors created individualized fact sheets based on the data from each of the surveyed lake associations (see Appendix for an example of an individualize fact sheet for the Long Lake Association). In the months after receiving fact sheets the lake associations and COLA have reported positive usage of the fact sheets. Four of the seven lake associations stated they had, or were planning to, distribute the fact sheet on their website (http://www.longlakeliving.org/ and http://mantraplake.webs.com) and/or through their newsletter. Three of the seven lake associations planned to utilize the information to better manage their lake association; one lake association mentioned they were currently updating their lake management plan using the fact sheet data. And, the COLA has expressed interest in future surveys to assist other lake associations in their planning and outreach to members.

Research Methods

An e-mail survey was sent to residents on seven lakes within Hubbard County (a copy of the survey is available from the corresponding author). These lakes were specifically selected by the COLA to represent a range of sizes and robustness of the individual lake associations. The goal was to see if issues and concerns were different depending on the qualitative variations between the lake associations.

Of approximately 716 residents surveyed, 290 completed online questionnaires. The number of respondents ranged from eight on the least-populated lake to 123 on the lake with the greatest number of residents. Acceptable participation rates were garnered for all lakes (response rate ranged from 19–89%). The e-mail invitation with a link to the questionnaire was followed by three reminder e-mails. Participants were limited to completing the survey once.

Along with some basic demographic questions, the 14 survey questions focused particularly on residents' concerns, perceptions of local organizations (COLA, their own LA, the DNR, outside lake users), recreational activities, and especially, residents' understanding of aquatic invasive species (AIS) and water quality issues. As mentioned above, each lake association was later provided with a two- to three-page fact sheet with results specific to their lake. For this article, we will use data and figures from Long Lake, our largest sample size of 123 respondents, with a 46% response rate, to demonstrate how we presented the results to the lake associations for their use.

Results

The survey provided a list of 16 concerns to be ranked in order of importance. AIS emerged as a top concern among residents of all seven lakes, regardless of demographics, sample size, or strength of the local LA. Results showed that the ranking of issues and concerns did not change much across lakes based on strength and size of the lake association (Table 1).

The concern over AIS, as well as land use, is also reflected in the residents' perceptions of the rules and regulations regarding these issues (Figure 2). As opposed to fishing and boating regulation, which residents view as neutral, most survey respondents considered the rules governing AIS and land use at their lakes as somewhat or too lenient.

Respondents generally had the most positive perception of their own lake association, and the most negative perception of non-resident lake users; these results may be linked to the lake residents' concerns about introduction of AIS or user conflicts (Figure 3). Since the majority of lake residents indicated that they used their boat only on their own lake, this suggests that there is at least the perception that non-resident lake users are bringing invasive species to these lakes, leading to conflict between lake residents and non-residents.

Having identified the most pressing concerns of lake residents, the survey also provided information on how to target educational programs to different groups of lake users to address these issues. The information noted above, which suggests that non-residents are a major potential source of AIS, may prove useful in designing educational programs about aquatic invasive species, as it implies that the greatest benefit may come from targeting non-resident recreational lake

Table 1. Sixteen Concerns of Long Lake Residents, Ranked in Order of Importance (n=123).

1	Aquatic invasive species
2	Lake pollution from agricultural runoff
3	Pollution from shoreline residences
4	Shoreline owners understanding issues
5	Shoreline development
6	Fisheries management
7	Effectiveness of the lake association
8	Development in the lake watershed
9	Boating practices/etiquette
10	Collaboration and knowledge sharing
11	Funding for lake association
12	Native plant restoration
13	Lake pollution from forestry operations
14	Participation and membership among lake residents
15	Lack of volunteers
16	Recreation user conflicts

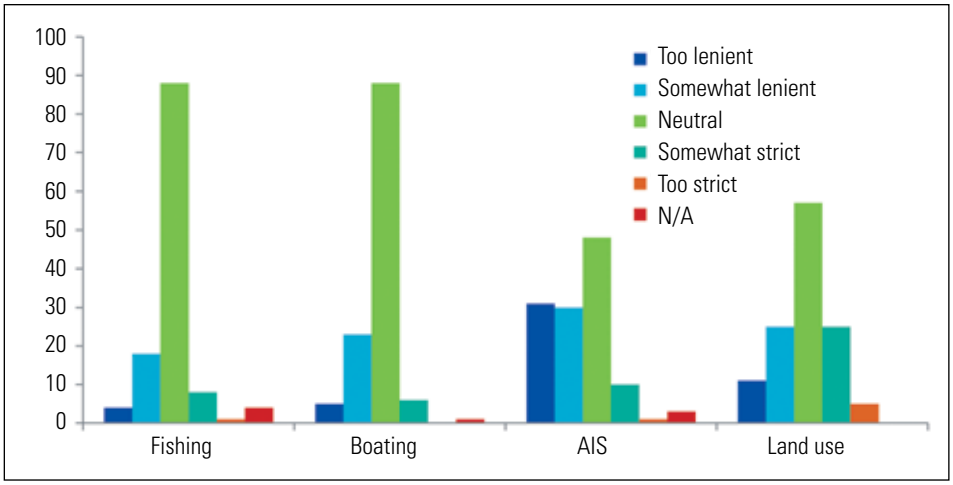

Figure 2. Long Lake residents' views (#'s) of local rules and laws (n=123).

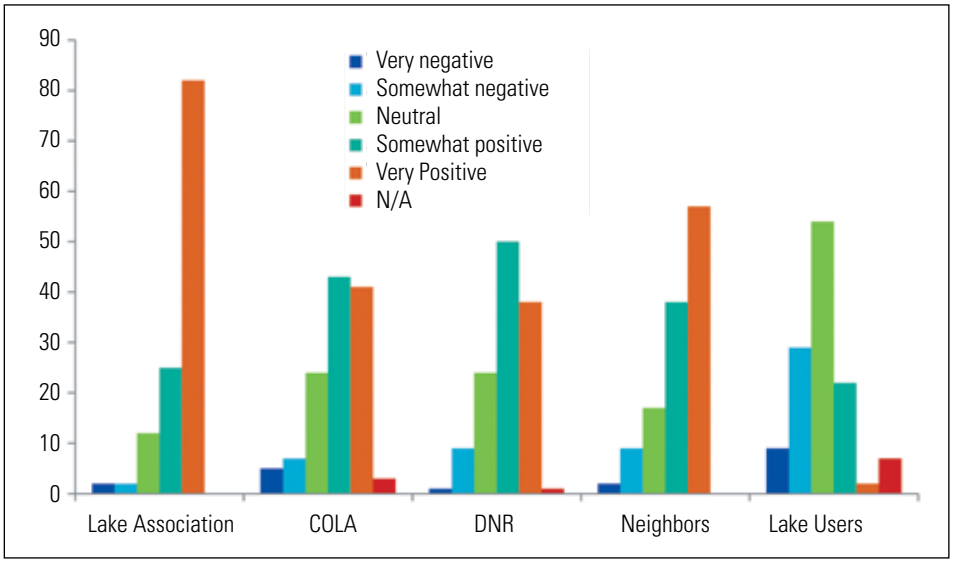

Figure 3. Long Lake residents' perceptions (#'s) of local organizations, neighbors, and lake users (n=123).

users, including guests of lake residents. In terms of outreach to lake residents, the survey results shed light on which AIS and water quality practices residents are currently engaged in (Figure 4). For those who did not engage in these practices (never or N/A), lack of knowledge about what to do was cited by residents of several lakes, particularly those with a younger membership base. This suggests that education of residents, and community-based social marketing techniques, could help to improve engagement in both AIS and water quality practices.

Further, residents were also surveyed about their recreational activities and participation in organizations other than the lake association. Water-related activities, such as motor boating, fishing, and swimming, proved the most popular with lake residents. Church was the most popular membership organization other than the lake association. Not surprisingly, lake users were most likely to encounter information about AIS when engaged in water-related activities. These activities and community groups could provide a way to connect with and educate lake users in the community, outside of activities directly tied to the lake association.

In terms of how best to manage the lake association itself, we found that residents' preferred method of contact was e-mail. This suggested that e-mail can be a more cost-effective and preferred route than traditional mailings, print newsletters, etc. Since this finding is from an e-mail survey, lake residents without e-mail addresses or who did not provide their e-mail address to the lake association were not included, which weakens the strength of this conclusion. Several of the lake associations were encouraged by the strong return to an e-mail survey and will begin the process of converting as many members as requested to an e-mail-only receipt of the lake association newsletters (two to three times/year), thus reducing both mailing and printing costs substantially. And, the use of websites to provide newsletters and other reports in color is another cost benefit they recognize.

Conclusions

The survey results were presented electronically to individual lake associations in the fall of 2013. The information was well received by individual lake association leaders as well as the Hubbard County COLA leadership, who then had data on their members' perceptions, demographics, and other information (e.g., on- and off-water recreational activities, level of involvement with their lake association, and preferred method of contact).

Even with relatively simple methods of data collection and presentation, this type of survey and fact sheet can serve as a valuable tool. An Internet-based survey is a quick and cost-effective way to capture social and environmental dimensions at the lake association level and provides useful information for lake managers. Response rates were generally high when presented this way, and this improved the quality of the data and the strength of many conclusions.

This type of data collection can prove valuable not just for lake association boards but also for lake managers implementing a project such as Maine's LakeSmart program (Welch & Smith 2008), which is designed to improve water quality practices, or AIS awareness practices. Further, if identical surveys are administered to residents on multiple lakes, the data from each lake can be compared; this could shed

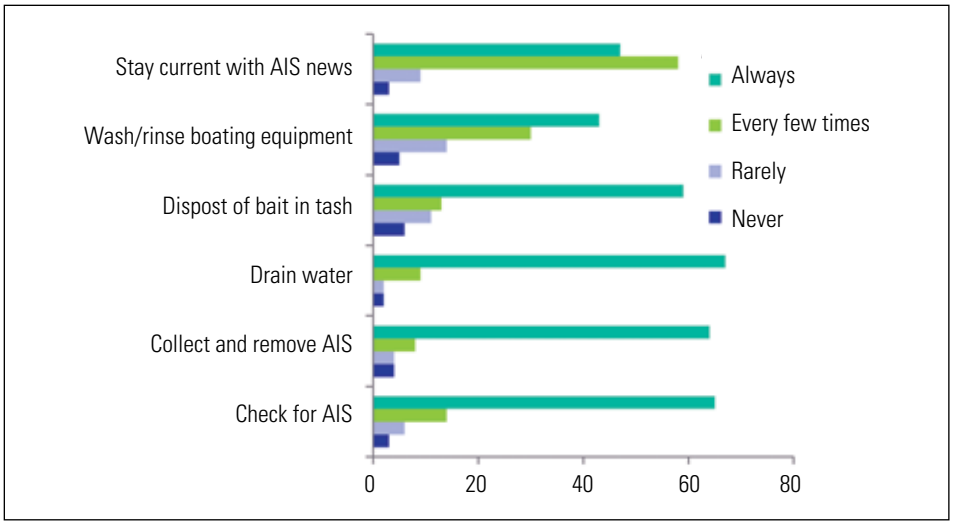

Figure 4. AIS practices that Long Lake residents (#'s) engage in (n=123).

light on how differing ecological, social, and management factors are impacting separate lakes.

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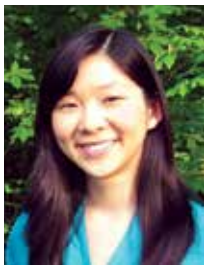

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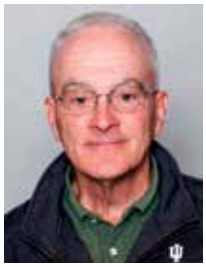

James R. Farmer is an assistant professor in the Department of Recreation, Park, and Tourism Studies at Indiana University Bloomington. His scholarship focuses on sustainable behavior, land use behavior, private land conservation, and sustainable food systems. Professor Farmer teaches courses on human health and natural environments, integrated resource management, sustainable agriculture, and research methods.

(LITERATURE SEARCH . . . continued from page 47)

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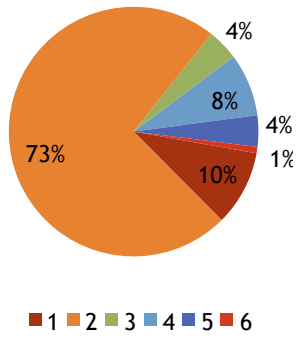
APPENDIX

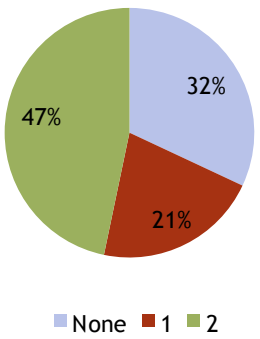
Long Lake - Lakeshore Resident Online Survey

- Indiana University's School of Public and Environmental Affairs spring 2013 capstone course entitled "Lake Management Associations: Developing Sustainability Guidelines" formed to address issues faced by its client, the Hubbard County Coalition of Lake Associations in Minnesota.
- A 14-question online survey of lakeshore residents on 7 Hubbard county lakes was conducted as part of this project. It was completed between February 21, 2013 and March 5, 2013.
- The online survey was sent to 266 Long Lake residents, and 123 residents responded. This factsheet summarizes those results.
- All results are shown in frequencies and not percentages (except for pie graphs).
- *Starred figures indicate multiple answers were allowed.

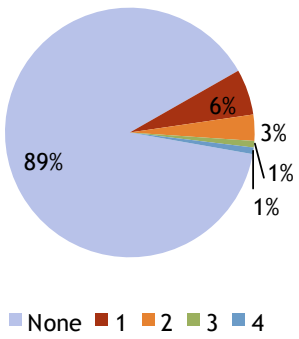
Household Size



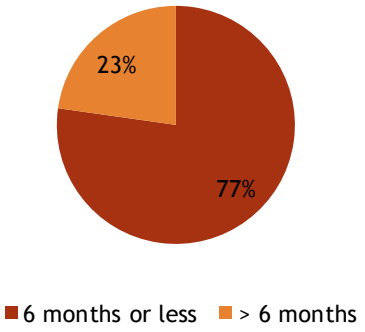
# of Retirees in Household



# of People <18 in Household

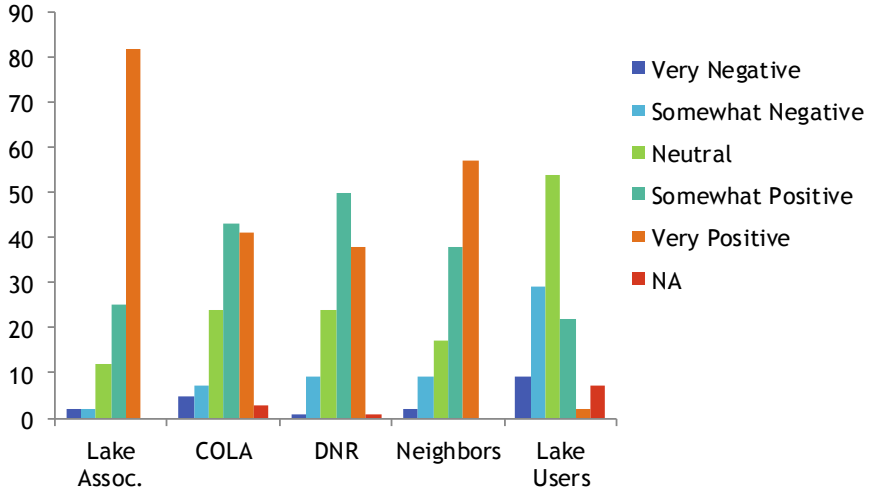


# of Months Residents Spend on the Lake



- Average age of Long Lake respondents was 66, median = 65.
- Respondents have owned their lake homes for an average of 23 years, median = 21 years.
- Most respondents (78/123) listed "enjoying the scenery and setting" as the most important factor for becoming a lake property owner.

Long Lake Residents' Perception of Local Organizations, Neighbors and Lake Users

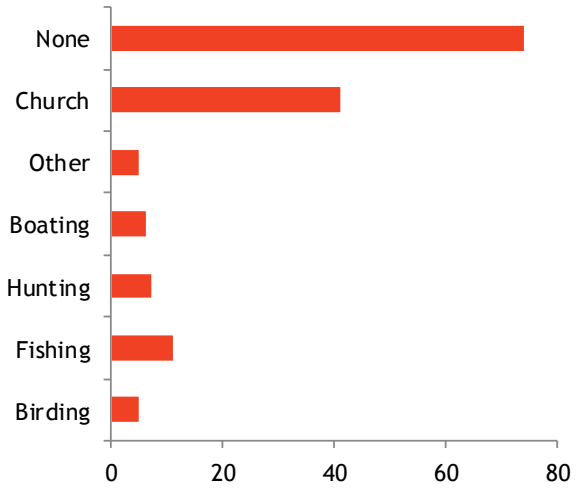


Ranking of Lake Residents' Concerns (#1 most important)	
1	Aquatic invasive species
2	Lake pollution from agricultural runoff
3	Pollution from shoreline residences
4	Shoreline owners understanding issues
5	Shoreline development
6	Fisheries management
7	Effectiveness of the lake association
8	Development in the lake watershed
9	Boating practices/etiquette
10	Collaboration and knowledge sharing
11	Funding for lake association
12	Native plant restoration
13	Lake pollution from forestry operations
14	Participation and membership among lake residents
15	Lack of volunteers
16	Recreation user conflicts

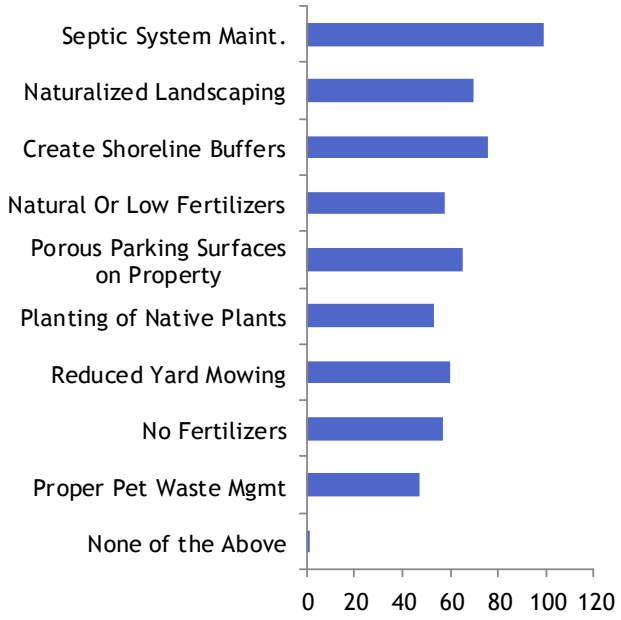
APPENDIX

***Long Lake Residents' Preferred Contact Method**

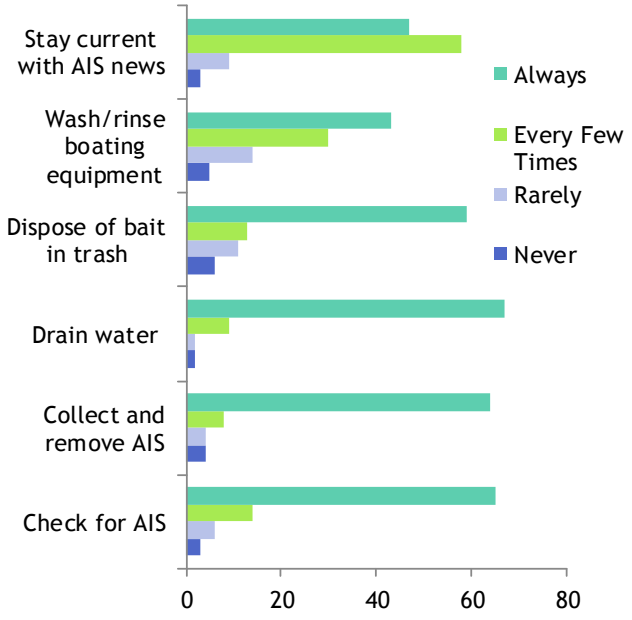
***Organizations Long Lake Residents are Involved In**



***Water Quality Practices Long Lake Residents Engage In**



***AIS Practices Long Lake Residents Engage In**

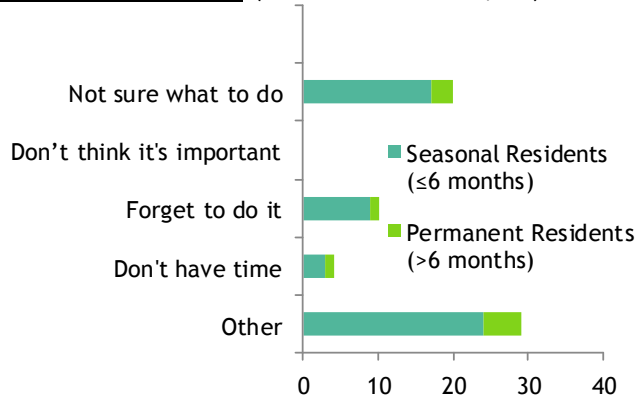


***Factors Preventing Long Lake Residents from Engaging in Water Quality and AIS Prevention Practices, Broken Down by Permanent and Seasonal Residents (respondents who answered "none of the above" and are not included in figure)**

Water Quality Practices: (none of the above = 73/123)

‡The option "too expensive" was only provided for water quality practices

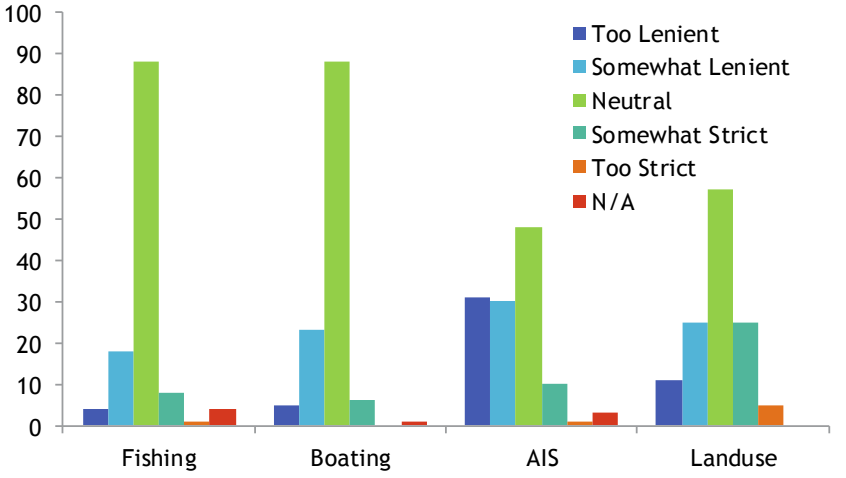
AIS-Prevention Practices: (none of the above = 66/123)



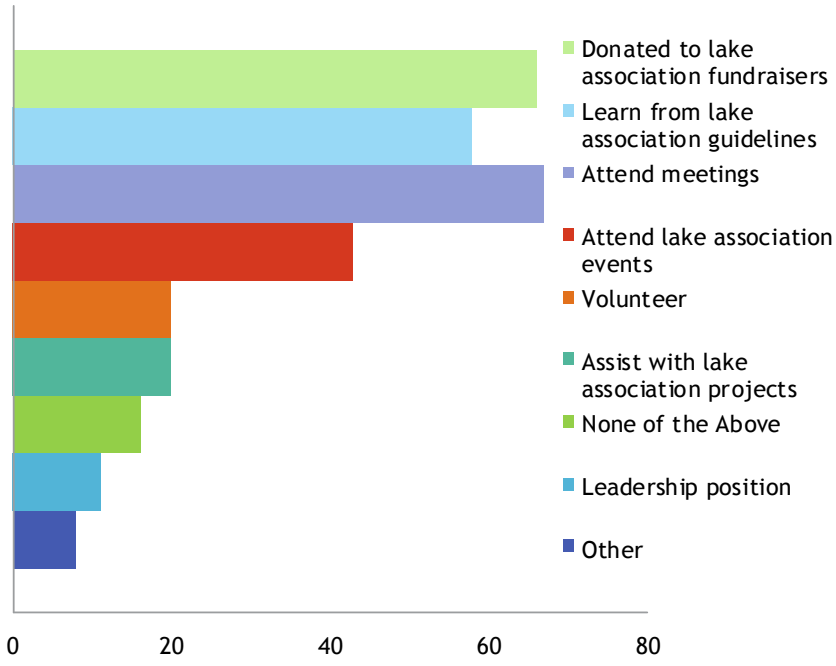
**Most residents that said "other" factors prevented them from engaging in AIS prevention because they only boated in Long Lake

APPENDIX

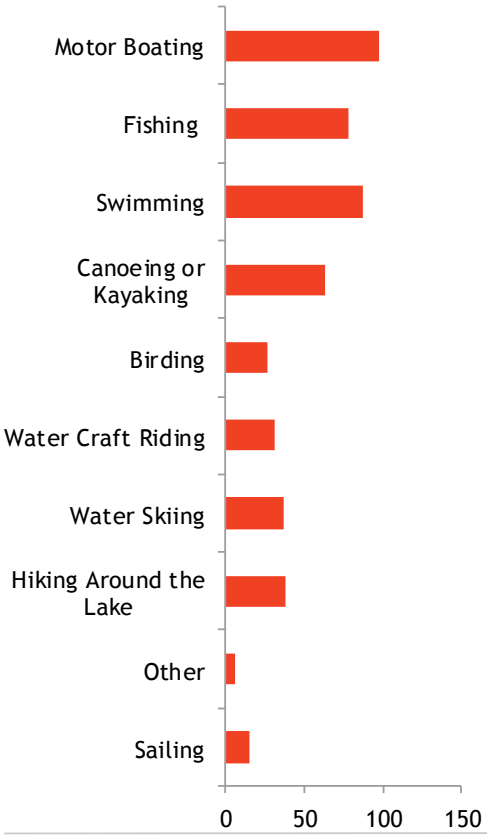
Long Lake Residents' Views of Local Rules and Laws



***Involvement of Long Lake Residents with the Lake Association**



***Recreational Activities Residents Engage in on Long Lake**



Hubbard County COLA

Prepared by Jennifer Okajima & Jana McGee.
Instructors: Burney Fischer & James Farmer.

Online survey conducted by the Indiana University School of Public and Environmental Affairs Capstone Course.

SPEA CAPSTONE
INDIANA UNIVERSITY 2013

Using GIS to Maximize Citizens' Contributions **to Science and Community Planning**

Douglas Miskowiak

Wisconsin is blessed with over 15,000 lakes. The Wisconsin state constitution guarantees that the waters of Wisconsin are held in trust for all of Wisconsin's citizens and the citizens of the United States. It protects their rights to boat, fish, hunt, and swim on navigable waters; enjoy the natural scenic beauty of navigable waters; and enjoy the quality and quantity of water that supports those uses. In 2008, the Wisconsin Department of Natural Resources (WDNR) launched the Critical Habitat Designation Program – a program that inventories public rights features and sensitive features of Wisconsin water bodies (**http://dnr.wi.gov/lakes/criticalhabitat/**). Here lies the complication: The WDNR has a budget capable of performing but a few lake assessments annually. Within this schedule, the first round of inventories won't be completed for another 2,000 years.

Another solution is necessary if recognizing and protecting critical habitats are important. This article describes how GIS has helped to enable an imaginative solution by engaging citizens to inventory and map critically important features on Moose Lake, a 1,670-acre drainage lake in Sawyer County, Wisconsin. With GIS, citizen contributions yielded valuable data, but more significantly produced passionate supporters that held a stake in the resource, in the data, and in the process.

Geographic Information for Protecting Our Rights, Responsibilities and Resources

Mother Nature is awe-inspiring and often works with subtlety. It's her natural scenic beauty and Northwood's character that brought folks from a cadre of backgrounds together. Over dinner parties and ice cream socials, people, that in their previous lives would have never crossed paths, were now sharing a meal and conversation about the things on Moose Lake they valued. Liberals and conservatives, retired professors and businessmen, teachers, and retired railway workers were asking questions about the resources they enjoyed (Figure 1).

"Why are the birch trees dying?" "How does the annual drawdown of the lake affect our fish?" "Should we expect more development to change the lake's character?" "Should we be worried about aquatic invasive species?" "How important are Moose Lake's natural areas for providing habitat?" The questions grew in complexity, but ultimately led to a very simple one: *"Who owns these resources?"*

This question alerted these citizens to a basic premise; no matter if it were land, water, fish, fowl, flora, fauna, pollution, invasive species, or endangered species, none can be effectively managed without clear knowledge of who owns the rights and has responsibility of the land.

This assertion led citizens to begin digging for answers. Remarkably, very little information existed for Moose Lake. The biggest surprise was in identifying land ownership. In 2007 Sawyer County was still relying on paper records to document ownership of its rural areas. Some records dated back to the mid 1800s when Wisconsin was first surveyed. Notably, the paper records recognized only six islands on Moose Lake – a gross miscalculation and reason for concern.

Citizens Take Action

Coming up with more questions than answers, the small group of citizens organized. They asked the Moose Lake Improvement Association (MLIA), a group with a mission similar to that of many lake associations, to allow them to form a voluntary citizen group – named the Ad Hoc Advisory Group for Natural Resources – with the purpose of understanding the island resources. Once approved, they came to the University for assistance. The University of Wisconsin-Stevens Point (UWSP) agreed to compile geographic data for Sawyer County, measure Moose Lake with finer resolution data, and distribute the data over the Internet for public access. The National Consortium for Rural Geospatial Innovations (RGIS), a consortium of national universities dedicated to providing access to GIS technology and data in rural places, including the Land Information and Computer Graphics Facility at the UW-Madison Campus, agreed to provide funding for the project. The results of this preliminary study are documented in Table 1.

Phase 1 project deliverables revealed significant findings for Moose Lake and its larger region. Most telling was the comparison among the rudimentary physical statistics of Moose Lake. Whereas Sawyer County inventoried six islands, the WDNR hydrography data revealed a tenfold increase to 62 islands and 38 miles of island and mainland shorelines. Citizen field inventories verified the existence of 82 islands. Citizens visited each of the islands documented on the university's map, digitzed from 1-meter resolution, leaf-on imagery. In a few instances, citizen field inventories revealed that islands thought to be one large mass were actually two smaller islands with navigable water in between them. Citizen research at the county land records department and of plat maps informed the U.S. Forest Service and Xcel Energy managers of forgotten land holdings – land that these

Figure 1. Citizen contributors of Moose Lake gather to celebrate completing the Moose Lake Legacy Initiative final report.

organizations were not actively aware that they owned, but were responsible for managing. Citizens also alerted managers to more reason for concern. Inventories were beginning to reveal the significance of Moose Lake for harboring unique, rare, and endangered species. Inventories noted the presence of white cedar, increasingly rare due to heavy browsing by white-tailed deer. They also noted competition between cattails and the culturally significant wild rice.

To substantiate their findings, the ad hoc group of citizens once again sought permission from the MLIA to compete for a WDNR Lake Planning Grant. Phase 2 goals included: to become better informed about Moose Lake's islands, to build awareness of the study's findings, and to use the information to help identify islands worthy of management or conservation.

As the credibility of the citizen volunteers and their message progressed, fears from project skeptics started sparking. The prospect of lake planning incited unease among a small minority of landowners. Their allegation, *"This planning grant will only lead to the regulation of our lake, a lake district, increased taxes, and – at best – a diminution of our property rights and – at worst – an outright taking."* Although the objectives of the project fit with the stated mission of the MLIA, the skeptic's protests panicked the organization. The MLIA denied the citizen's request to solicit for the grant and altogether disbanded the ad hoc group.

With a clear sense of purpose and an appreciation for a participatory democracy, the group sought a more welcoming partner. The Couderay Waters Regional Land Trust (Trust) was aware of the group's objectives and embraced its notion to conserve the lake's most sensitive islands. The Trust commonly acquires conservation easements voluntarily from willing landowners and was intrigued by the proposal's notion to map shoreline characteristics and identify ecologically and aesthetically favorable characteristics for conservation.

The grant proposal solicited the WDNR to fund the citizen exploration of both island and mainland shoreline characteristics. Information gleaned from the project's first phase defined the ecological and aesthetic characteristics to measure and the questions the plan would address.

1. Examine the spatial relationship between Moose Lake and its watershed. How is Moose Lake affected by decisions made elsewhere?
2. Inventory island and mainland shoreline characteristics. Is Moose Lake ecologically and aesthetically significant within the larger regional context? Are the islands of significant importance?
3. Prioritize characteristics to recognize shorelines of exceptional quality. With limited funding for conservations easements, what shorelines are critical to meeting conservation goals?

All inventories would be conducted by citizens with training by professionals and attributes linked geographically to the nearest shoreline for prioritization. Citizens would examine 50 miles of shoreline and inventory aquatic macrophytes, coarse woody habitat, structures visible from the lake's littoral zone, rare and endangered species, aquatic invasive species, and other ecological and aesthetic indicators. The grant was funded and inventories proceeded from May to October 2008.

Maximizing Citizen Contributions

Normally a project of this size and scope would be conducted over the course of several seasons. A solution was necessary to maximize the contributions of volunteers while minimizing the potential for burnout. A handful of

Table 1. Project Deliverables.

PHASE 1 DELIVERABLES
Moose Lake shoreline database digitized from 2005 National Agricultural Inventory Program imagery
Field verification of 82 Moose Lake islands
Compilation of 29 geographic data layers from state and federal sources
Crafted county-wide maps highlighting resources for each of Sawyer County's watersheds
Mapped ownership patterns from hardcopy sources
Delivered GIS data to the local tribe, county and regional planning commission
Hosted a public internet mapping services providing access to project data layers
PHASE 2 DELIVERABLES
Moose Lake Legacy Initiative Final Report – April 2010
Watershed Maps (West Fork of the Chippewa River)
Water Resources
Environmental Corridors
Pre-settlement Vegetation
Land Cover, 2001
Publicly Managed Lands
Impervious Surfaces
Tree Canopy Density
Glacial Geology
Citizen Lake Inventories and Maps
Shoreline Ownership
Aquatic Macrophytes (Emergent and Floating Leaf)
Wild Rice and Cattail Interface
Course Woody Structure
Visible Structures
Ecological Reference Areas and Refugia
Aesthetic Shoreline Condition
Wildlife Observations
Three Priority Scenario Maps
Priority Shorelines Scenario 1
Priority Shorelines Scenario 2
Privately Owned Priority Shorelines Scenario 2
Wild Rice of the West Fork of the Chippewa River map and data
Public Presentations
Wisconsin Land Information Association Annual Conference, February 19, 2009
Annual Northwest Wisconsin Lakes Conference, June 19, 2009
Moose Lake Improvement Association Annual Meeting, July 4, 2009
Town of Round Lake Open House, July 2009
ESRI International Users Conference, July 15, 2009
Department of Natural Resources Board Meeting, August 12, 2009
Sawyer County Lakes Forum, September 2009
Wisconsin Department of Natural Resources Northwest District Meeting, Fall 2009.

volunteers took charge in a cheerleader capacity. They set the pace, scheduled inventories, recruited participants, and identified and utilized each person's strengths. Notably, citizen participation, travel, and volunteered equipment and supplies exceeded the contribution of the WDNR's initial $10,000 grant.

For each inventory (see Table 1, Phase 2, Citizen Lake Inventories), resource professionals validated project methods and trained citizens to conduct them. Three resource professionals; a biologist from the U.S. Forest Service, an aquatic invasive specialist from Sawyer County, and the statewide citizen lake monitoring coordinator, trained citizens to conduct inventories and determine which resource characteristics to seek out.

Professional training was advantageous in several ways. Pedagogically, the project provided a ripe learning opportunity and method to teach interested volunteers about critical habitats. Moose Lake provided the classroom. The GIS maps provided the learning tools to help students recognize locations and spot patterns and areas of significance. Resource professionals and citizens acted both as instructors and students. Each shared information and experiences about an issue from their perspective. Maps effectively communicated patterns to each person involved by relating information to places they knew well.

One project task provides an excellent example of the rich educational discussion. Our citizens (and the university consultant) pondered how to conduct the inventories of rare and endangered species (Figures 2 and 3). Finding rare flora and fauna is difficult even when one knows what to look for. Steven Spickerman from the U.S. Forest Service offered a practical alternative. *"Plants are always on the move,"* he said. *"Instead of looking for individuals plants, it is more important to map assemblages of healthy ecosystems."* Spickerman referred to healthy ecosystems as *ecological reference areas*, or areas that are good representations of healthy ecosystems. Immediately, questions emerged and the conversation ignited. *"How might this relate to the dying of our birch trees?"* one citizen asked. Spickerman responded by evoking the map on pre-settlement vegetation and noting Wisconsin's forest cutover in the 1920s and '30s and the soil moisture conditions in the area. *"The climax species for this area are sugar maple, yellow birch, and hemlock. The conditions of the forest are naturally allowing the transition from white birch, to white pine and ultimately the climax species for the area."* Project maps and lake inventories substantiated Spickerman's assertions.

One citizen asked about the significance of white cedar. *"White cedar are heavily browsed by white-tailed deer,"* he began, *"but here on the Moose Lake islands they are common, why?"* After observing the islands, the vernacular experiences of a few citizens emerged.

Figure 2. Professionals training citizens. Steven Spickerman from the U.S. Forest Service describes ecological reference areas *or areas that are good representations of healthy ecosystems.*

Figure 3. Citizen scientists document the ecological and aesthetic indicators of Moose Lake on hard copy maps and note books.

"When snowshoeing Moose Lake in the winter, I've noticed deer carcasses on the ice, taken by wolves." Our citizens advanced a hypothesis. *"Might the wolves be protecting white cedar on the islands, because deer have learned they are vulnerable on the ice?"* Again, citizen-collected GIS data supported the hypothesis. White cedar are much more prevalent on the islands than on mainland shorelines. These inventories led Spickerman to believe that Moose Lake islands are perhaps one in only ten sites in the 800,000 acres of the Chequamegon National Forest of this quality and size.

Eight inventories were encoded on hardcopy maps and notebooks (Figure 4). Citizens drew and numbered shoreline segments on the maps. They recorded the segment number and the unique ecological and aesthetic characteristics of that segment in their notebooks. After the inventories were completed, the university consultant scanned each hard-copy map and referenced them to real-world coordinates so they could be encoded in a geographic information system (GIS). Heads-up digitizing methods converted hand-drawn line segments into digital lines that captured all of the citizens' notes. The shoreline, the convergence of the riparian and littoral zones, accommodated all inventoried attributes. Statistics for each inventory were compiled and maps were crafted to share the message about the ecological and aesthetic significance of Moose Lake (Figures 5 and 6).

Figure 4. A hard copy used by citizens to inventory coarse woody habitats. Shorelines were segmented and numbered and linked to a corresponding number in a notebook documenting the characteristics of each line segment. Digital techniques can employ SmartPhones, tablets, and other mobile GIS devices to produce similar results.

Prioritizing Shorelines

Now, with the most complete set of information about the lake and region compiled since the Great Depression era, citizen volunteers sought to pursue the project's final goal. Forty-six people, including citizen volunteers, Trust board members, resource professionals, and representatives from the MLIA were invited to learn about the data collection efforts, their significance, and how to use them to prioritize shorelines. Twenty-four people attended. Maps illustrated the inventory methods and findings so each participant had an understanding about the resources present.

Participants had another opportunity to weigh in. *"Given the information provided about the watershed and the Moose Lake inventories,"* the consultant started, *"what characteristics are important and should be prioritized for conservation, using voluntary conservation easements with willing landowners?"* Participants were forthcoming. One participant offered, *"Like on land, varieties of plants are beneficial for providing habitat. Where varieties of aquatic plants exist, those shorelines should be rated high."* Another chimed in, *"Areas where riparian trees are returning to hemlock should also be rated highly, but where white-cedar are present, those are areas of highest concern."*

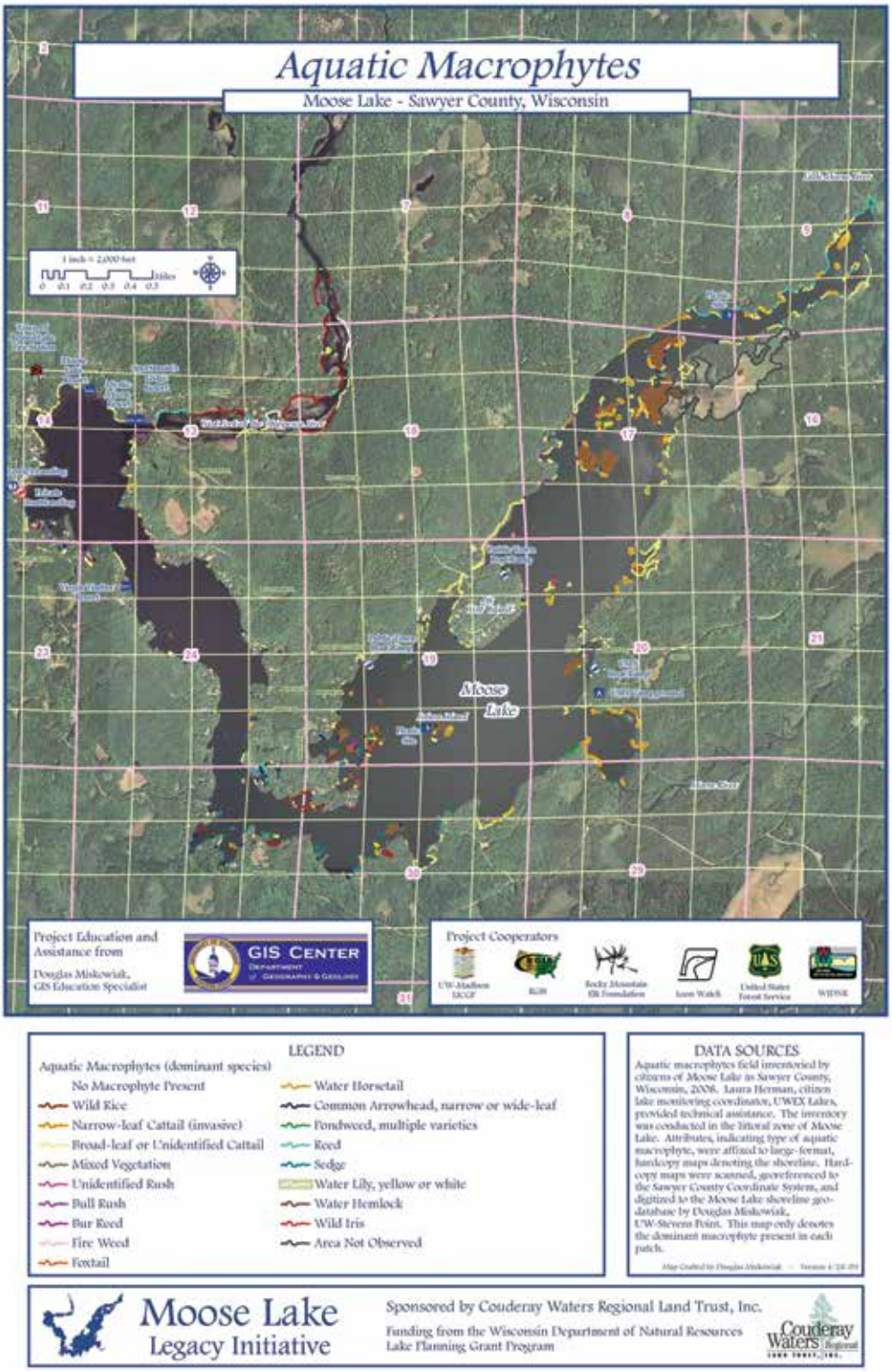


Figure 5. A finished inventory map documenting occurrences of aquatic macrophytes. Table 1 lists the various inventories and corresponding maps.

The conversation continued for almost two hours and was recorded on flip charts. Each shoreline was rated on a scale from *absolute priority, high priority, moderate priority, low priority,* to *not considered for conservation*, based upon the shorelines' ecological and aesthetic characteristics. The sophisticated priority exercise was processed in an ordinal (ranked) fashion. Shorelines with any single characteristic prioritized as *absolute priority*, were given that ranking. Shorelines that had an equal amount of high ratings as low ratings were given a *moderate* ranking. Shorelines with more high ratings than low ratings were given a high ranking and finally shorelines with more low ratings than high ratings were given low priority status.

The conservation priority map emerged. Overlaid with property ownership information, the Trust and its partners could quickly identify which landowners to solicit for conservation easements. The map provided a decision support system for evaluating costly conservation choices (Figure 7).

Owning the Message

From the initiative's beginning to its end, project critics had tried to take control of the message to derail the project. GIS helped project volunteers own the message by building it based upon facts observable on the landscape. At the Independence Day meeting of the MLIA, project detractors tried once again. Equipped with t-shirts stating that they will create their own legacy, the "Concerned Citizens of Moose Lake" reiterated that the initiative would lead to regulation, a lake district, more taxes, restrictions on jet skis, water skiing, and float planes. At the meeting, presenters from the Initiative were able to describe the role of the Trust and the findings from the initiative. Questions emerged about the role of the trust. *"Will the trust regulate critical habitats? What if I'm in a critical habitat? What if landowners don't want to participate?"* Each question was addressed in-kind by a Trust board member. To paraphrase, *"The trust does not have authority to regulate. The trust works individually with willing landowners to negotiate voluntary conservation agreements, whereby they donate or sell development rights. If landowners don't want to participate, they don't have to."*

Other questions emerged about the project results. One question in particular illustrated the value of documenting resources with GIS. *"How significant*

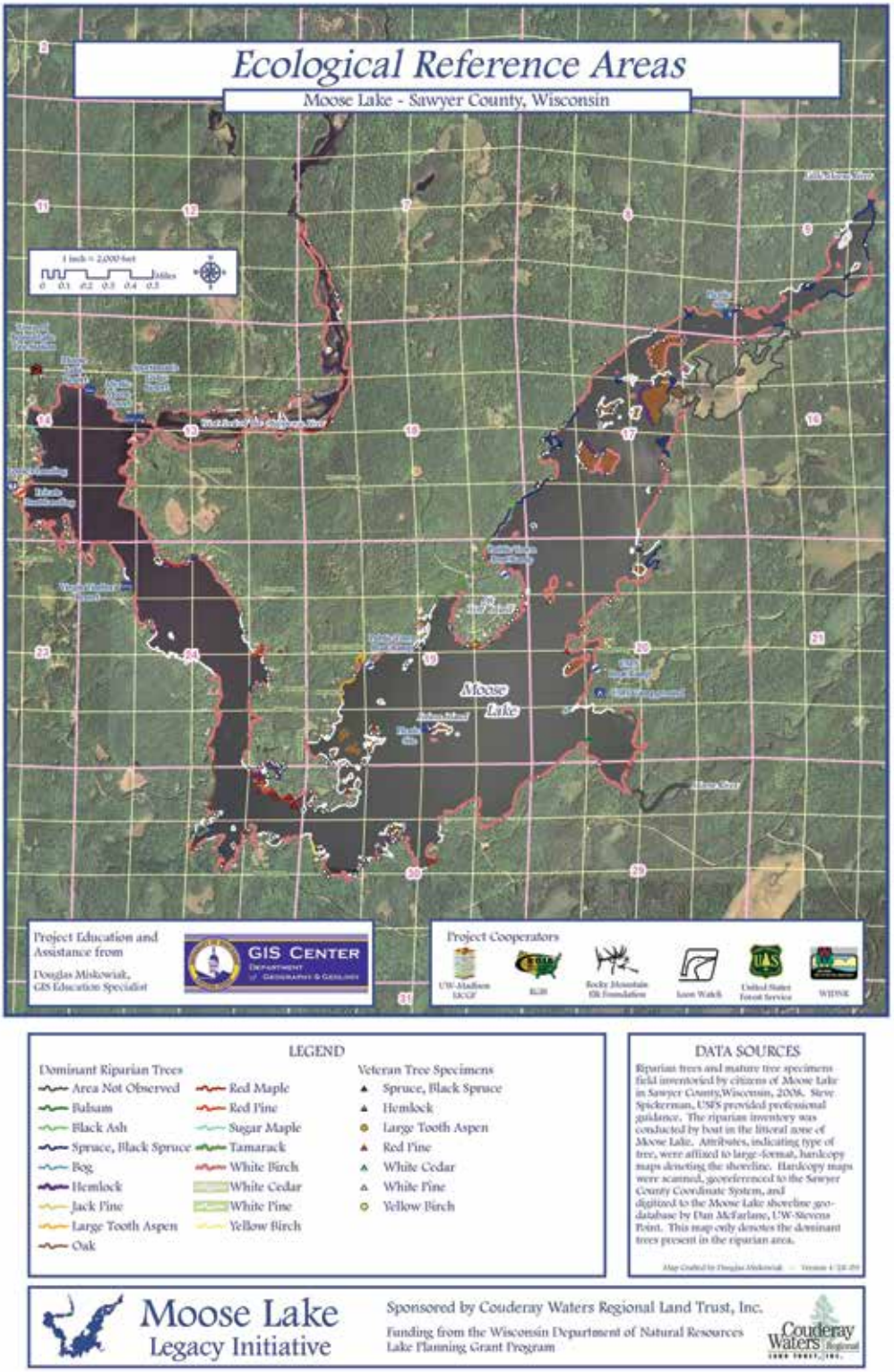


Figure 6. A finished inventory map documenting ecological reference areas.

are the white cedar 'relics' on Moose Lake as compared to everywhere else?" Here the university consultant pointed directly to the map that documented each instance of white cedar. He then noted the conversation with biologist, Steven Spickerman, that Moose Lake is perhaps one of ten sites in the 800,000 acres of the Chequamegon National Forest that harbors white cedar. After the meeting, members of the MLIA came up to project members to congratulate them on the products and results. Ironically, some members thought that future projects should be conducted through the MLIA.

How GIS Helped

This article describes the messy art and science of democracy. It illustrates the tenacity required to disseminate even the most simple of messages among allies and critics. How did GIS help? First, the maps resonated with project volunteers and incited their participation. The maps provided a tangible product whereby citizens could see the result and value of their time invested. They were able to relate places that they love to potential threats and opportunities. Second, by involving citizens in GIS data creation and prioritization they owned a stake in the data and the planning process as well. As stakeholders in the process they became active to share the story of Moose Lake without professional help. Third, involving citizens in a GIS enabled process helped them become the smartest people about the resource. Citizen volunteers knew more about the resource than local resource professionals, even informing the U.S. Forest Service and Xcel Energy of their forgotten island land holdings. Fourth, GIS mapping and statistical analysis helped our citizens speak to the facts about the resource. Pointing to maps, citizen contributors were able to clearly and credibly communicate sophisticated messages about the aesthetic and ecological significance of Moose Lake. In comparison to project skeptics that relied on conjecture, speaking to the facts in public venues won the Initiative credibility. Finally, maps are incredibly engaging. Whether critic or partner, the maps attracted droves to discuss issues surrounding Moose Lake. The proof is in the ability of these maps to attract over 100 people to a public meeting on the July 4th holiday weekend.

Sustaining a Legacy of Information

Over 30 datasets were developed and compiled during the Initiative. The shoreline database holds 33 attributes that capture the aesthetic and ecological condition of Moose Lake. These data

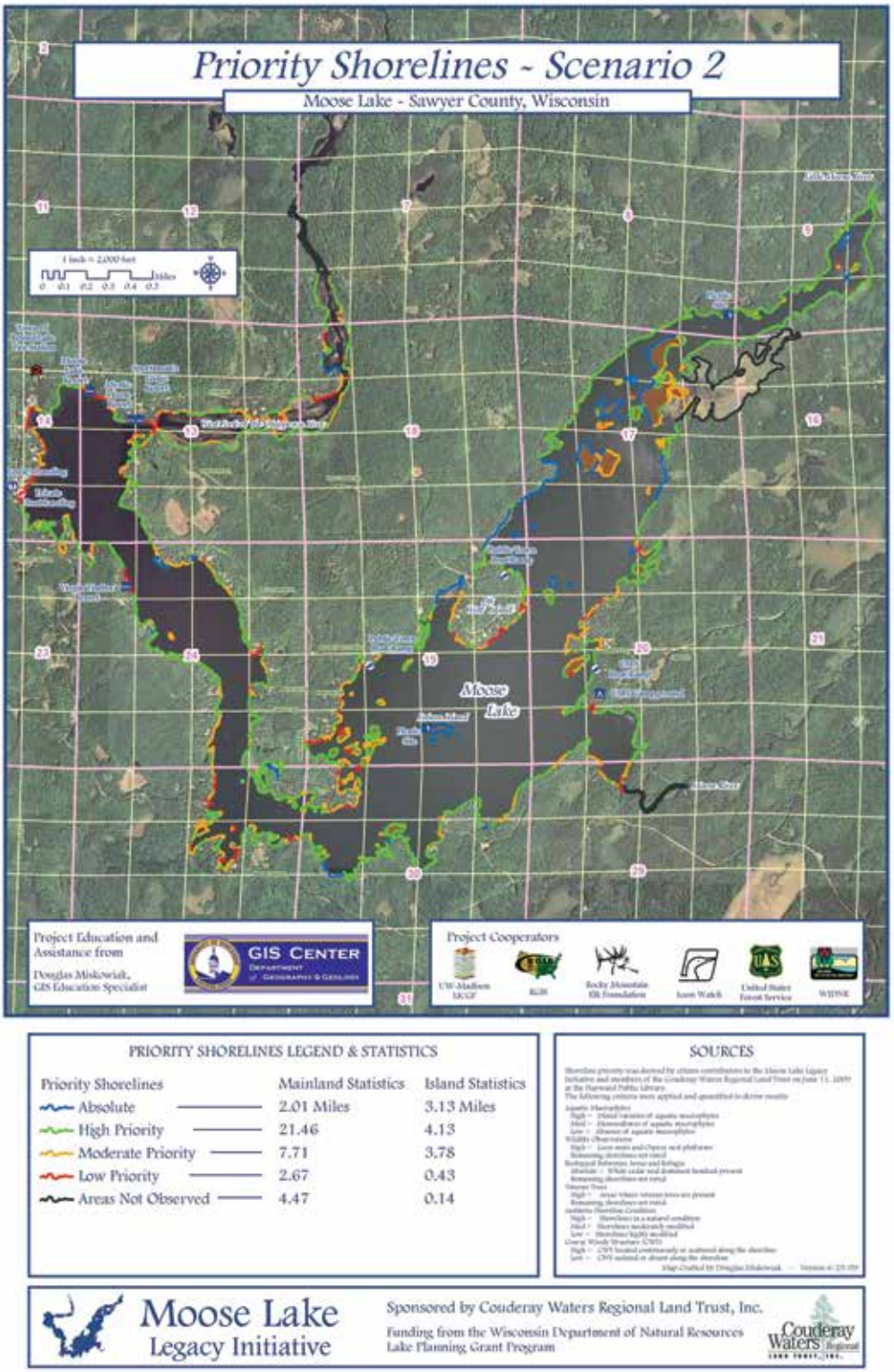


Figure 7. Priority shorelines scenario maps indicate areas of highest priority for meeting conservation objectives.

represent a massive contribution of citizen and professional collaboration. Not surprisingly, those that created the data believe the findings are significant and want the data preserved to compare change over time and to inform future projects. To facilitate this, UWSP submitted all GIS data in addition to the finished plan document. Even though some WDNR researchers desire access to the project's data, and although the WDNR funds the lake planning grants and the creation of these data, a mechanism doesn't currently exist for hosting and distributing project data. Why? The WDNR doesn't host data that they aren't responsible for creating themselves.

Volunteered geographic information sometimes known as crowdsourcing is a widely used technique in collecting data for natural resources planning. Cornell Lab of Ornithology for example, has long employed volunteers to track the locations of birds. Their website documents 120 citizen science projects that range from monitoring whales and glaciers to honey bees and bats (**http://www.birds.cornell.edu/citscitoolkit/projects/alphabetical**). The UW-Stevens Point GIS Center has developed and refined procedures for citizens to generate geographic information useful for lakes planning. Citizen scientists are ready to contribute. A conversation must begin to institutionalize these procedures and make citizen contributions and data accessible for critical decision-making. Wisconsin has only been a state for 166 years. Can we wait another 2,000 years before we understand the resources it harbors?

The Moose Lake Legacy Initiative final report, project maps and photo album can be found online at **www.uwsp.edu/GIS**. Click on *Research and Innovation* and *GIS Center Research*.

Doug Miskowiak is the Education Specialist at the UW-Stevens Point GIS Center. He teaches Geographic Information Systems and Geodesign for traditional and non-traditional learners. He is engaged in GIS applied research and outreach in Geodesign, public participation, public health, and GIS for decision support.

Affiliate News

Alberta Lake Management Society (ALMS)

The Alberta Lake Management Society has been growing in the past year as many of the issues that have affected other lakes make their way to Alberta. Here is a summary of our latest activity:

- Our community-based monitoring program, LakeWatch, has expanded to 33 lakes this year. We are now routinely sampling for Dreissenid mussel veligers at each lake and are distributing artificial substrates throughout the Province.
- We are currently testing protocols for the detection of invasive aquatic plants (i.e., Eurasian watermilfoil) in our lakes and hope to integrate this monitoring into LakeWatch.
- ALMS is supporting the government of Alberta in its comprehensive invasive species prevention program. It is high priority to prevent the introduction of invasive aquatics into Alberta.
- Education and outreach on water quality, lakes, and their watersheds is ongoing and we distribute hundreds of AWQA (Alberta Water Quality Awareness) test kits annually to schools and other educators. June 5 is AWQA day each year!
- Many lake watershed stewardship groups have taken up the challenge of watershed management and are using our recently published *Workbook for Lake Watershed Management Planning* to help guide them through the process. We are now working on a companion document, *Lake Management Focus Areas for Alberta* to assist with the more technical questions regarding lake management.
- Our 21st annual workshop will be held in Slave Lake, Alberta on September 26 and 27 this year. We are working with NALMS to bring the NALMS to Alberta in 2016, stay tuned for announcements!

Submitted by: Arin Dyer

Colorado Lake & Reservoir Management Association (CLRMA)

CLRMA continues to have a steady membership of 150 dedicated members each year. Many of them are water utility staff that manages drinking water reservoirs. In September of 2013, the Front Range was hit hard with a 1,000-year rain event. The severe flooding impacted many reservoirs in the South Platte basin, mainly with sedimentation that resulted in higher nutrients and turbidity. 2014 will be an unusual monitoring year for many lake managers.

CLRMA hosted the annual spring luncheon on April 17. The focus was on sediments and sediment sampling. Over 50 people attended. Next up is Lakes Appreciation Month. The governor will declare July as a month to celebrate Colorado's hard working reservoirs and pristine mountain lakes. Several lakes around Colorado will celebrate Lakes Appreciation Month by putting on shoreline clean up events and hosting other day long activities. CLRMA is also organizing a "Day on the Rez" at Bear Creek Reservoir (upstream of Denver) on July 30. This will be a day-long event for lake managers to learn about the newest equipment and for lake users to test out new recreational equipment.

Wrapping up in the fall, CLRMA will host the annual fall conference and business meeting. Steve Lundt is the current president and is supported by an active board of directors. CLRMA communicates to the membership with monthly e-mails, up-to-date website (www.clrma.org), and a quarterly newsletter. New for 2014 will be a new webpage that will list all current members that are consultants and what services they provide. The goal is connect members who are in need of assistance on lake projects with reliable consultants.

CLRMA will be coordinating the tenth year of the Colorado Volunteer Lake Monitoring Program. Volunteers send in water clarity data and help educate lake users about water quality topics. Volunteers receive a free membership and free registration to CLRMA events.

Finally, CLRMA will be hosting the NALMS Symposium in 2017. To put on a great event, planning efforts will begin 2014. CLRMA looks forward to showing off Denver and Colorado to the rest of the lake and reservoir world.

Submitted by: Steve Lundt

The Georgia Lakes Society (GLS)

The Georgia Lakes Society (GLS) enjoyed an active 2013-2014 season having already conducted three Lake University workshops. The most recent workshop held at University of Georgia facilities in Athens, GA, featured in NALMS *LakeLine* Winter edition, was

a great success. The 2013 workshops held in the North Atlanta Region and in Columbus also reached out to residents and lake professionals. GLS is already preparing to offer its second 2014 workshop practically in the shadow of Georgia's historic Stone Mountain located in the greater Atlanta area. The workshops provide educational information on burgeoning issues of regional interest as well as traditional fundamentals of lake science and limnological monitoring to lake residents and lake professionals alike.

GLS is entering the final stretch of revamping its volunteer lake monitoring program, Adopt-A-Lake, which partners with the Georgia Environmental Protection Division's (GAEPD) Adopt-A-Stream volunteer monitoring programs. GLS has long had a volunteer lake monitoring program but this expanded effort with GAEPD is intended to better share qualified data with the State, which maintains a system underpinned by a very user-friendly robust database.

The GLS annual meeting will be held in Atlanta on May 24 where new Board members and officers will be introduced following the GLS election cycle. GLS contacts and activities can be followed at **http://www.georgialakes.org** (Figure 1).

Submitted by: Marty Williams

Indiana Lakes Management Society (ILMS)

The Indiana Lakes Management Society hosted the 26th Annual Indiana Lake Management Conference on March 20 and 21, 2014 at the Monroe County/City of Bloomington Convention Center. More than 110 individuals attended the conference learning about aquatic plant and algae identification, listening to more than 30 great presentations and networking with other lake residents, managers, and professionals (Figure 2).

This year, ILMS honored three Indiana individuals and groups for the tireless work they do to improve conditions within their own backyard and throughout Indiana's lakes.

- Annie Skinner, chairperson for the Clear Lake Water Quality Committee in Steuben County, Indiana was recognized for her tireless efforts to monitor water quality, host and coordinate workshops and seminars, and make herself available as the "go-to" person for water quality knowledge about Clear Lake. As Peg Zeis indicated, "Annie is passionate about all aspects of water quality and works tirelessly to educate, encourage interest, and provide information to the lakes community."
- The Lagrange County Lakes Council was recognized by ILMS for their efforts to understand and promote lake water quality and high quality management to the Lagrange County community, lake residents, and lake users. ILMS awarded the Lagrange County Lakes Council their Group of the Year award for all of their efforts on behalf of Lagrange County and all northern Indiana lakes.
- ILMS awarded the outstanding implementation project award to the Tippecanoe Watershed Foundation's Healthy Shorelines Initiative. TWF identified a need to improve their shorelines focusing their efforts at transitioning their lakeshores from mowed grass to native plants and glacial stone seawalls. This program provides $1,000-$3,000 to each resident to improve their shoreline conditions. Since 2012, TWF improved 109 shorelines on 13 lakes including over a mile of new glacial stone seawalls and glacial stone re-facing of current seawalls.

The Indiana Lake Management Society is gearing up for a busy summer

Figure 1. Georgia Lake Society Board at Whitehall, GA. Left to Right: Marty Williams, Susan Wilde, Mark Johnson, Mary Mayhew, Mickey Desai, Susan Cummings, Tony Dodd.

Figure 2. IMLS conference participants identify aquatic plants. Photo by Elizabeth Tompkins.

celebrating all things Indiana lakes! Annually, ILMS sponsors a summer and fall workshop series. This year's series features a variety of fun events located throughout Indiana's lake country!

- The Northern Indiana Lakes Festival kicks off our celebration of all things lake on June 14. This weeklong event celebrates Kosciusko County lakes in Warsaw and Winona Lake Indiana.
- ILMS will work with the Wawasee Area Conservancy Foundation to host the Foundation's Bug Catch in Lake Wawasee July 5, 9-11 a.m. with bug expert Nancy Brown. Grandkids and grandparents, parents and others bring bugs, plants, and other lake related catches for discussion and demonstration with Nancy.
- ILMS will host Love Your Lakes Day at the State Fair Fishing Pond on August 10 where ILMS members bait hooks, educate fair attendees about fishing and Indiana lakes … and have great fair food, of course!
- ILMS will partner with the Indiana Clean Lakes Program to host two workshops focused on aquatic plant identification, work with NRCS APHIS staff to host a mute swan workshop, and join with the Steuben County and Lagrange County Lakes Councils for their annual fall workshop.

Submitted by: Sara Peel

New York State Federation of Lake Associations, Inc. (NYSFOLA)

The New York State Federation of Lake Associations, Inc., held their 31st Annual Conference "Celebrating Lake Stewardship," May 2-4 at White Eagle Conference Center in Hamilton, NY. Dr. Jay Bloomfield received NYSFOLA's Lake Tear of the Clouds Award for his decades of involvement in lake management during his tenure at the NYS Department of Environmental Conservation.

New volunteer training for the Citizens Statewide Lake Assessment Program (CSLAP) was held as part of the conference, and over 30 people braved some rain to participate. The Harmful Algal Bloom monitoring component of CSLAP was highlighted in a May 29th U.S. EPA webinar entitled "The Role of Citizen Scientists in Harmful Algal Bloom Monitoring and Response." Over 120 lakes will participate in the 2014 program, which is a collaboration between NYS DEC, NYSFOLA, Upstate Freshwater Institute, and the SUNY College of Environmental Science and Forestry.

NYSFOLA is also pleased to announce that they are serving as the Host Committee for the 2015 NALMS International Symposium *North American Lakes: Embracing their History, Ensuring their Future* that will be held November 18-20 in Saratoga Springs, NY (www.saratogacitycenter.org). Saratoga Springs may be famous for history, spas, and horses, but its proximity to many "famous" northeastern lakes makes it the perfect place for lake managers to gather. We are already lining up special sessions on the Finger Lakes, Great Lakes, Onondaga Lake, and Adirondack Lakes, as well as a wide range of lake management activities. Mark your calendars now!

Submitted by: Nancy Mueller

Oklahoma Clean Lakes and Watershed Association (OCLWA)

This year OCLWA held our 23rd annual conference on April 2-3, 2014. Last year, our conference had over 160 attendees representing universities, tribes, state, and federal agencies, municipalities, water districts, lake and watershed managers, as well as representatives from private industry.

Building on last year's success, we expanded the conference both in location and format. Our goal to convene the largest, most meaningful conference of its kind in the region is rapidly coming to fruition. This year we offered three concurrent presentation tracks, two plenaries, and an expanded poster session. Our conference theme, "Going with the Flow," fit to the current times very well. Topics were very diverse and included lake and watershed management, wetlands, fisheries, and even groundwater. The two-day conference was held at the Wes Watkins Conference Center on the campus of Oklahoma State University. With over 180 attendees and 17 sponsors and exhibitors, this year's conference was a great success.

Additionally, OCLWA has also sponsored three clean-up events at lakes across the state this spring (Figure 3).

Submitted by: Julie Chambers

Oregon Lakes Association (OLA)

OLA/ WALPA Conference

The Oregon Lakes Association (OLA) and Washington State Lake Protection Association (WALPA) held a joint conference on October 16-18, 2013 in Vancouver, Washington to address "Collaborative Lake Management." The conference was preceded by two well-attended workshops: Aquatic Weed School and Limnology 101. Total registration was 154, a crowd large enough to attract 11 major sponsors. The turnout further distinguished itself by the generous contributions made to, and the spirited participation in, a silent auction and raffle, which were part of the conference activities. All proceeds were dedicated to the organizations' respective scholarship funds to support student research. The Plenary Session featured Charlie Cristafulli, USFS, speaking on "Reflections on 33 Years of Ecosystem Responses Following the 1980 Eruption of Mount St. Helens."

As the Conference concluded, Oregon State University graduate student Connor Driscoll's poster titled, "Putative Novel Cyanophage Genomes Identified from a *Microcystis* Bloom Metagenome" was recognized as the crowd favorite. Portland State University graduate student Jeff Brittain was awarded the 2013 OLA scholarship to aid his research on the response of alpine lakes to experimental simulations of atmospheric nitrogen deposition. Kristin Richardson, the recipient of the 2012 OLA scholarship presented a progress report of her research on the sedimentary history at Loon

Figure 3. Volunteers at a clean-up event at Lake Overholser in Oklahoma City, sponsored in part by OCLWA.

Lake. Although only in its second year, the scholarship is proving to be a very positive program for OLA. The financial stimulus it received at this Conference will boost Pacific Northwest lake research for years to come. See details for our 2014 scholarship at http://www.oregonlakes.org/Scholarship.

HABs Workshop

On March 4, 2014, 50 people attended the annual HAB Stakeholder Meeting hosted jointly by OLA and Oregon State University in Corvallis, Oregon. OLA coordinates the annual meeting, which brings together people with varied interests in freshwater cyanobacterial HABs to review recent blooms and advisories, regulatory changes, and monitoring practices. Oregon Health Authority (OHA) reported that reduced funding will limit its future activities, but OHA will continue to issue and lift advisories with input from lake managers and interested partners.

OLA has agreed to be one of those partners and has agreed to pass on to OHA reports of HABs and through our partner network provide opportunities to stay connected to lake and HAB issues. OLA maintains a database of contact information for these partners. All members are eligible to receive updates on upcoming HAB technical workshops and information on conferences, educational training and events that OLA provides throughout the year. While membership is not required to receive announcements, it does offer discounts on training and provides updates on OLA projects.

These meetings, held in February or March of each year, have become an important opportunity for connecting and informing those with interests in HABs in Oregon.

OLA Fall Conference

This year's conference will take place at the Columbia River Maritime Museum (Figure 4) in beautiful Astoria, Oregon on Saturday, October 11, 2014 under the theme "Lakes of the Clatsop Plains: Past, Present, Future." Specific topics being worked into the Clatsop Plains lakes topic include; geology, land use history, wetlands drainage history, nutrients, ground water use, harmful algae blooms, and local watershed council organization and activities. Included in the conference registration is a museum day pass, so participants may explore the museum during session breaks. Conference updates are located at http://www.oregonlakes.org/Events?eventId=899728&EventViewMode=EventDetails, while registration information will be available at oregonlakes.org.

Submitted by: Stephen Wille

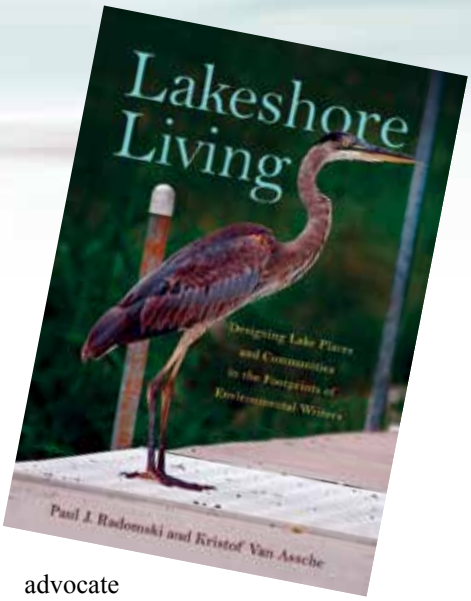
Please take a moment to ensure NALMS has your correct email and mailing address. Log into the member-only area ofwww.nalms.org to view the information we currently have on file.

Send any corrections to membershipservices@nalms.org.

Figure 4. The Columbia River Maritime Museum, site of the OLA Fall Conference.

Dick Osgood

Book Review



Lakeshore Living: Designing Lake Places and Communities in the Footprints of Environmental Writers.
P.J. Radomski and K. Van Assche. 2014. Michigan State University Press.

We can do a better job at protecting and restoring our lakeshores. On this point, the authors and I agree. However, this book has not convinced me that profound, revolutionary changes to our country's governance system, infrastructure, and, indeed, our morals are forthcoming. The authors' passion and vision should not be ignored – I would like a better road map, though.

Radomski and Van Assche advocate top-to-bottom systemic societal, cultural, and institutional changes to fully protect lakeshores. These changes are framed in the philosophies of environmental writers Aldo Leopold, Sigurd Olson, and Holly Whyte.

This is an interesting approach and one that I appreciate. My witnessing lakes' marginalization at the hands of multiple of societies' other priorities counts me as empathetic. But, yikes, the authors have bitten off more than I can chew. Probably others too.

Part One provides an instructive and well-written overview of lake ecology, including a detailed inventory of aquatic flora and fauna. However, the inclusion of Latin names for everything that swims, crawls, or oozes may be a distraction for non-technical readers, the same people needing persuasion.

Part Two provides reviews of the three environmental writers' philosophies and serves as an underpinning for later chapters. Part Three presents principles and tools for "sustainable and just planning and design" of lakeshores. However, the principles and tools are mostly conceptual, and Van Assche's sketches, while artistically attractive, are not always illustrative of the concepts in the text. This is not a major drawback.

The authors' argument is diminished by a critical foundation issue. The authors believe the systems underlying the threats to lakeshores are severe and serious. It's not helpful to their cause to call the agricultural system in this country an "epidemic." If this is an ailment to be cured, what will we eat? The book goes a long way to demonstrate our way of treating lakeshores (also lakes, watersheds, cities – the line between these is often fuzzy) are under siege and our collective culture, values, and ethics must be significantly changed to remedy this. But in the end, they state:

> "Today, most people have incorporated the land ethic into their bundle of beliefs and morals. Most people believe in the lakeshore living principles of Aldo Leopold."

So, if most people are on board, what's the problem?

Part Four ties things together and culminates in seven recommended "system changes," which are profound. It has been more than a half-century since the three environmental writers espoused their visions of system changes, and these changes have not been threaded into our cultural fabric. What will compel these changes now?

I thoroughly empathize with what the authors are trying to accomplish. But is their vision in the cards? For example, their prescription for retooling the nation's water use, re-use, and waste treatment systems, which could be an entire book, occurs in just a single paragraph. They advocate converting private lakeshores to public lands – a radical and expensive idea. They advocate wholesale re-codifying state and municipal governance. They brush away "socially laden" aquatic invasive species concerns by suggesting we should be less bigoted about these species' origins – then ask, why should successful colonizers be connoted negatively? In fairness, the authors recognize that what they advocate is a tall order.

Private land ownership, which seems the root of the issue, is not directly addressed.

Lakeshore owners will probably not change enough and the radical system changes also do not seem to be in the cards. So we are left to manage lakes and lakeshore problems – that plays into NALMS strong suit.

I hope readers will be inspired to take meaningful evolutionary steps in the directions the authors recommend, but I doubt revolutionary changes will be forthcoming.

Dick Osgood owns Osgood Consulting LLC, blogs on lake management (www.LakeManagersNotebook.com), and is a NALMS Past President.

Bill Jones

Literature Search

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(LITERATURE SEARCH . . . continued on page 30)

North American Lake Management Society
2014 Achievement Awards & Call for Nominations

Each year NALMS recognizes individuals, organizations, and programs, corporations and projects that have contributed to the Society and to the science of lake and watershed management. Presented at the annual NALMS international symposium banquet, these awards were established to encourage the advancement of the principle goal of the North American Lake Management Society, that being the forging of partnerships among citizens, scientists, and professionals to foster the management and protection of lakes and reservoirs for today and tomorrow. These awards recognize outstanding efforts of our colleagues and encourage similar activities. The awards to be presented this year at the Society's 34th Annual Meeting in Tampa Florida include:

- **Secchi Disk Award** – for the **individual member** considered to have contributed the most to the achievement of NALMS's goals.
- **Jim Flynn Award** – for the **organizational member** considered to have contributed the most to NALMS's goal.
- **Friends of NALMS Award** – awarded to **individuals or corporations** making major contributions to NALMS. Recipients do not have to be NALMS members, and "contributions" extend beyond monetary donations.
- **Technical Merit Awards**
  - *Successful Projects* – for demonstrable success in achieving lasting improvements in water quality or recreational utility through lake or watershed management. Projects are evaluated with respect to project success, cost-effectiveness and benefit duration.
  - *Volunteer Actions* – for individuals or groups involved in documented grass-roots lake or watershed management efforts, with emphasis on local involvement, creative methods of funding and demonstrable success.
  - *Research Efforts* – for individuals or groups performing research that contributes to the science of lake management. Selection criteria are relevance, approach and applicability. (Copies of journal papers should accompany nominations).
  - *Public Education/Outreach* – for individuals, groups or programs that have creatively and effectively contributed to the development and dissemination of watershed management or related educational programs, materials or assistance.

A single plaque is given for each Technical Merit Award, although additional certificates can be provided where several individuals are responsible for a project. The Award Committee appreciates the assistance of nominators in ensuring that recipients are present at the Annual Banquet to receive their awards. The Awards Committee may also request photographs or other graphic materials be made available for the Award Presentation.

Eligibility

Recipients of the Secchi Disk and Outstanding Corporation awards must be NALMS members; otherwise these awards are open to any individual or organization contributing to lake science or management. Current NALMS board members and members of the NALMS Award Committee are not eligible for nomination.

Nominations

Any individual or organization may make nominations for these awards. To submit a nomination, please provide the following information on the enclosed form:

1. Your name, title, mailing address, telephone number, and email.
2. Full name of the nominee (or project), present position, organization or affiliation, mailing address, telephone number, and email.
3. A 500-word, clear, concise, and complete description of the achievement to be recognized and statement of how the efforts of the individual or organization meet the award criteria.
4. Electronic transmission of the nomination form and supporting materials in preferred, but paper copies may be sent, but please send them early so that they can be converted to electronic format by the nomination deadline.

Deadline for Nominations

August 15, 2014

We know that there are many individuals, organizations, programs and corporations working hard each day to protect and enhance our lakes, ponds and reservoirs. Be sure that they receive the recognition that they so justly deserve by sending a nomination, with supporting documentation, to:

Awards Committee Chair, Dick Osgood
Email: Dick@DickOsgood.com

Please contact Dick with questions.

A Call to Action

Nominations for 2014 Election are being accepted at this time!

NALMS is seeking candidates that will add diversity and breadth to the Board and its committees.

You could become a nominee for a position on the NALMS Board of Directors, to take a more active role in steering the direction of activities that relate to these precious resources. Experience or training in lake management is not required for a board position, and we encourage candidates with expertise in nonprofit management, leadership development, marketing, fundraising, legal issues and membership growth and development to consider running for a Board position.

Nominations are being accepted for the following Board positions:

- **President-Elect**
- **Secretary**
- **Region 4 Director** – Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee
- **Region 7 Director** – Iowa, Kansas, Missouri, Nebraska
- **Region 8 Director** – Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming
- **Region 11 Director** – New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Quebec
- **Student At-large Director** – North America and beyond

The **President-Elect** serves a three-year term including one year as President and one year as Immediate Past-President. The **Secretary** serves a two-year term. **Regional Directors** serve three-year terms and act and vote in the interests of the Society as a whole, while bringing regional concerns to the attention of the Board. The **Student At-large Director** serves a one-year term and acts and votes in the interests of the Society as a whole, while bringing student concerns to the attention of the Board.

Nomination Process

Any member may submit nominations. Candidates must be nominated by at least two members to be eligible and self-nomination is encouraged if supported by two other NALMS members.

Nominations are due no later than **August 12, 2014** and must be made in writing and include an address, e-mail address and phone number for the nominee.

The Nominations Committee will screen nominees to ensure active membership and conformity with criteria for office, including, but not limited to:

- Demonstrated interest and participation in the Society;
- Leadership ability and other qualifications listed in the position requirements; and
- Willingness to accept the duties of office as outlined in the position requirements, including commitment to attend semi-annual board meetings.

Submit nominations or questions about Board position requirements to Philip Forsberg via email: forsberg@nalms.org

WE HOPE YOU ENJOY READING *LAKELINE* MAGAZINE.

If you are not a member of NALMS and would like to receive quarterly issues of *LakeLine*, you can do so for only $55 per year with a "Lake Leader" NALMS membership. You one-year membership includes:

- Four mailed issues of *LakeLine* magazine
- Monthly e-newsletter NALMS Notes
- Member-only website access including
  - Electronic copies of current and back issues of *LakeLine*
  - NALMS membership directory
- Conference registration discounts
- Discounts at the NALMS Bookstore

Join on-line at: **www.NALMS.org**

Go ahead... take your best shot!

YOU could be the winner of the 2014 NALMS Annual Photo Contest.

This year, two winning images will be selected, a Member's Choice winner selected by Symposium attendees and an Editors' Choice winner selected by the editor and production editor for the entry that will make the best *LakeLine* cover. We have secured sponsorship for the Photo Contest so a *$250 gift card* will be awarded to each winner.

Your favorite lake or reservoir photo could grace a cover of *LakeLine*!

Entries will be judged during the 2014 NALMS Symposium . . . in sunny Tampa!

Only electronic submissions will be accepted. You must be a NALMS member to submit an entry.

Photos should be of sufficient resolution to print from (approximately 300 dpi at 8.5" x 11").

Maximum of one submission per person.

Entries must be received by October 15, 2014.

Send your entry to:
Bill Jones, Editor *LakeLine*
joneswi@indiana.edu