



## Speaking for Lakes How Maps Can Tell A Complex Story

By Dan McFarlane, GIS Specialist, UWSP Center for Land Use Education and UWEX Lakes

*Maps are visual representations of our world; they are abstractions of reality. Maps are so much a part of our daily life that we seldom stop to think about them. They have been around much longer than written history. Primitive man first used sketches of geography to help others find their way from here to there or to communicate where the best hunting grounds could be found. These early maps were important for our ancestors' survival as they based critical decisions on the spatial information that was illustrated in the map.*

**T**oday our world has become significantly more complex than it was for our early ancestors. Our traditional understanding of the environment around us has changed dramatically as human factors are now the dominant contributor to changing habitats. This is especially evident around our cherished lakes. Yet, we still rely on geographic information and maps to help make decisions and solve complex problems. The good news is technology and maps have come a long way since the early days of sketching features and locations on cave walls.

### Technology and maps

In the simplest sense, geographic information systems, or GIS, are tools that collect, store, analyze, and display geographic data, which can then be used to make maps. The real power of GIS technology is to help people understand the world around them through data visualization. The earliest form of GIS came in 1855 when John Snow, an English physicist, plotted the locations of cholera outbreaks on a map of London. The patterns that emerged led to the discovery of a contaminated water pump. While his method of mapping points was vintage by today's standards, his analysis of locational data from an above ground perspective was unique and revolutionary for its time.



Douglas Miskowick

Currently we have more geographic data available to us than ever before, from aerial photographs to social media and crowdsourcing. It's said that over 80 percent of all information can be mapped to a specific location on the ground. Organizing all this information and producing something meaningful is what makes GIS so powerful, and the map remains the dominant medium for sharing our geographic knowledge.

*(Continued on page 2)*

*Crowdsourcing: The advent of tools that allows and encourages citizens to provide geographic data and mapping in a collaborative environment.*

Maps can tell all kinds of stories. As the saying goes, “If a picture is worth a thousand words, a map is worth a thousand pictures.” While a story alone can describe places and features on the earth, maps combined with text, graphs, photos, and other elements help reveal patterns and show relationships that may not otherwise be evident in text and tables only. Similarly, maps can tell stories in new ways. Thanks to advances in data collection, web technology, and GIS, maps can be used and interacted with in a myriad of ways. While some maps tell fairly simple stories, such as “You are here”, other maps can communicate significantly more complex ideas.

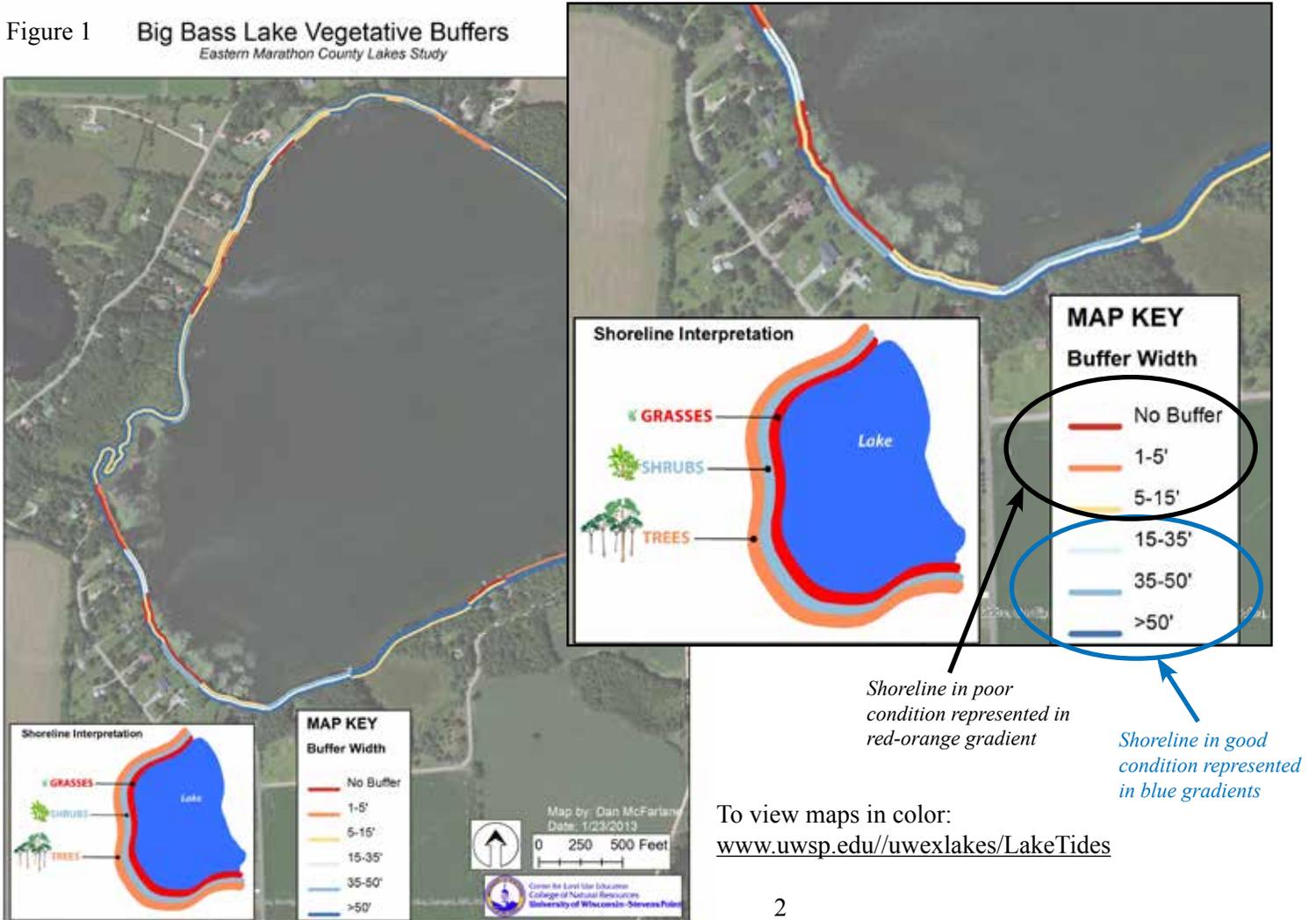
### Why map specific places?

People use maps to see where things are or what a particular feature is. Mapping specific places can show you where you need to take action. Maps, either printed or in digital form, can create effective communication with

friends, scientists, clients, and the general public. For example, students and researchers at UWSP mapped vegetation and man-made features along the shore of dozens of lakes in central Wisconsin. The resulting maps help natural resource professionals know where to focus on restoring the shoreline to make the lake healthier for all living things. Using data from the field surveys and creative map design, shorelines were color-coded from blues representing better conditions to oranges and reds signifying poorer conditions. The maps were created to document shoreline health, but when citizens viewed the maps, some began to make land management changes along the shoreline on their own. In many cases lake property owners seemed uncomfortable with their portion of the shoreline being shown in the red category (Figure 1). In this case, a good map that is attractive and easy to understand communicated an important story about the lake...and people listened.

*Maps combined with text, graphs, photos, and other elements help reveal patterns and show relationships that may not otherwise be evident*

Figure 1 **Big Bass Lake Vegetative Buffers**  
Eastern Marathon County Lakes Study



To view maps in color:  
[www.uwsp.edu/uwexlakes/LakeTides](http://www.uwsp.edu/uwexlakes/LakeTides)

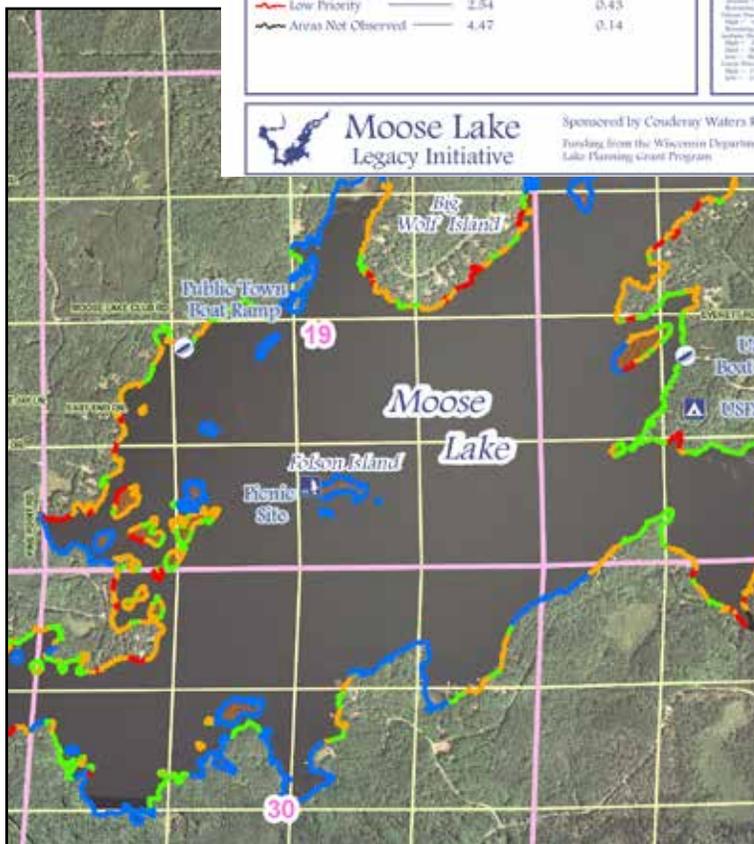
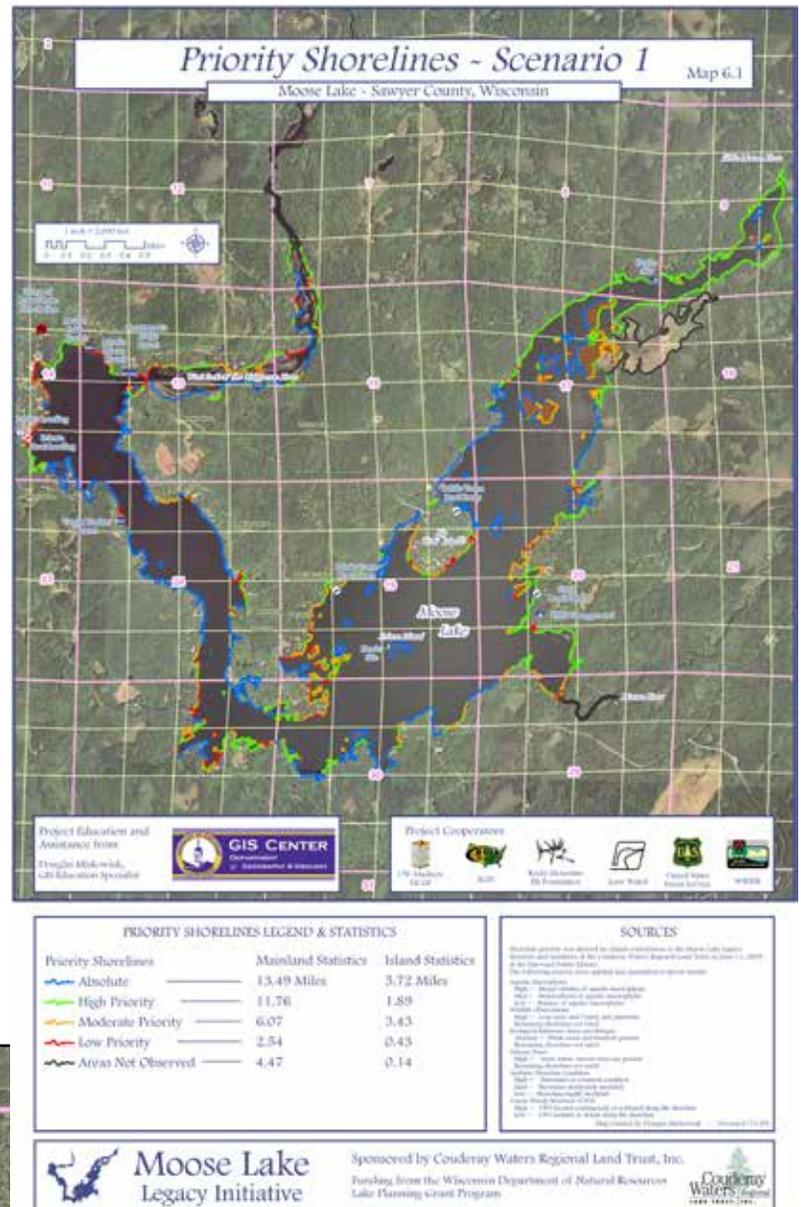
Figure 2

## Going beyond the map

By mapping the locations of features, one can also begin to explore patterns and analyze where areas meet certain criteria. For example, the UWSP GIS Center partnered with citizens from Moose Lake to inventory, map, and analyze landscapes along islands and shorelines of Moose Lake in Sawyer County. Working with volunteers, the GIS students and staff inventoried nearly 50 miles of shoreline, documenting the location of natural and visual characteristics, wildlife observations, and ownership, as well as other indicators important to a healthy shoreline. They then used GIS and geodesign concepts to conduct a suitability analysis for assigning scores to shoreline segments based on rankings collected from participants. The Couderay Waters Regional Land Trust is using the maps to prioritize portions of Moose Lake for conservation easements in order to protect the critical areas that provide the most aesthetic and ecological benefits to the lake and the public (Figure 2). Here, the maps depict the results of an objective spatial analysis and display a clear and simple message of which shoreline areas deserve the most protection.

*Suitability Analysis: The determination of which sites meet certain criteria, such as identifying which lands are best for protection.*

A better world is a common goal for all of us. GIS can help us achieve this goal by improving our understanding of the natural environment, including lakes. Maps have been telling stories for centuries. They take technical information and transform it into a common visual understanding. Maps are very effective at presenting geographic information with the goal of informing, educating, entertaining, and involving their audiences. An aesthetically pleasing map is going to communicate an idea elegantly and lead to better decision making. Just like our ancestors who relied on maps for food, water, and survival, we depend on maps and GIS analysis to help us gain a deeper understanding of a place, help us make better choices, and prepare us for future events and conditions. 💧



# Angling for Wetlands and Their Freshwater King

Reprinted from Wisconsin Wetlands, the member newsletter of the Wisconsin Wetlands Association.

By Kyle Magyera, Wetland Policy Specialist, Wisconsin Wetlands Association

Patterson Leeth, MPLS Fly



Fishing lakes, rivers, and flowages near healthy wetlands can be your ticket to landing the “fish of ten thousand casts.” This musky was caught near a shallow wetland on a fly rod after a long, patient day on the water.

*Wisconsin is a fishing paradise, offering diverse angling opportunities. You can be a bona fide trout bum or musky hunter, or you might simply enjoy all of the different sport fish Wisconsin has to offer. Each fish provides unique thrills during the pursuit and fight. Those thrills are no more elusive and satisfying than during the hunt of Wisconsin’s most legendary and prized fish: the musky. Why do Wisconsin anglers have this tremendous opportunity to hunt the “king of freshwater” and the “fish of ten thousand casts”? Healthy wetlands, of course. Wetlands support what swims below and what follows and attacks our lures and flies.*

**The heaviest concentrations of naturally-reproducing muskies occur in the Chippewa, Flambeau, and Wisconsin Rivers. What do all of those rivers have in common? An abundance of diverse wetlands.**

**M**uskies represent an excellent case study showing how healthy wetlands are crucial to the health of our sport fisheries. Though muskies are seldom thought of as “wetland fish,” they rely on wetlands throughout their lives. Lake and river edge wetlands, often known as the

“shallows,” consistently support a healthy balance of protective cover, forage, water clarity, and water temperature, factors that make up preferred musky habitat.

Because edge wetlands are the first waters to warm and oxygenate in the spring, they are attractive places for muskies to lay their eggs. While muskies may sometimes choose non-wetland spawning grounds, they prefer sites that are protected from the wind, are less than three feet deep, and contain plentiful sedges, rushes, and mat-forming plants. These sites include shallow marshes and other seasonally-flooded inland wetlands. They are desirable because their diverse, dense plant cover offers musky eggs protection from predators. Wetlands also help prevent these fragile eggs from being smothered by sediment and silt.

Newly hatched fry, fingerlings, and juvenile musky depend on wetlands as they develop into healthy, reproducing fish, feasting on a buffet of zooplankton, insects, and small fish. These same wetlands also provide spring refugia to adult muskies after they endure the rigors of winter and spawning. The adult fish take advantage of the wetlands’ shelter, warm water, and abundant forage opportunities as their metabolism increases.

Once mature, muskies are voracious predators that follow their favorite food sources. During all seasons, wetland-dependent species, including walleye, panfish, bass, ducks, muskrats, frogs, salamanders, and crayfish, make up a musky’s diet. Even in the heat of summer, muskies will leave deep, open water areas to forage and rest in the shallows.

Because muskies are likely to seek food or shelter in or near wetlands, they are often targeted by anglers, whether these anglers realize it or not. “Fishing the shallows” is a reliable strategy of musky hunters, particularly effective in the spring and fall. These



muskies – from trophies to juveniles – truly are “wetland fish.” We anglers get excited by shallow water boils, swirls, follows, attacks, and landings when muskies stay close to spawning grounds or patrol in or around desirable emergent cover such as bulrushes, arrowhead, pickerel weed, and wild rice.

Healthy wetlands are vital for maintaining naturally-reproducing musky fisheries, offering habitat for a sustainable population without stocking. The heaviest concentrations of naturally-reproducing muskies occur in the Chippewa, Flambeau, and Wisconsin Rivers. What do all of those rivers have in common? An abundance of diverse wetlands, including bogs, marshes, sedge meadows, and alder thickets, within their floodplains, shorelands, and watersheds. The same can be said about productive musky lakes in northern Wisconsin. Float down or motor through any of those waters, and you’ll see the many wetlands supporting outstanding musky fishing.

Healthy musky and other sport fisheries are difficult to achieve without two critical services that wetlands provide: clean water and lots of it! Wetlands are natural water filters, preventing sediment, phosphorus, nitrogen, and other harmful pollutants from entering our waterways. Muskies thrive in clean water; poor water quality and low oxygen levels can obstruct their natural seasonal behaviors. Emergent wetland plants, in particular, ensure sufficient oxygen in a musky’s preferred habitat. Additionally, wetlands manage and replenish water levels and flows in musky waters that are dependent on groundwater connections. They also buffer adverse effects of dramatic water level fluctuations following weather events and drought, protecting muskies from these highs and lows.

No matter what you pursue in your fishing adventures, try to develop an appreciation for wetlands, even if it comes one fish at a time. Remember that healthy wetlands, no matter how far from the water’s edge, are the lifeblood of all sport fish. Teach others about the sport fish-wetlands connection. Use the “king of freshwater” as an example. Even better, get involved with a fishery conservation effort by encouraging local wetland protection, restoration, and management. The health of our sport depends on it. 💧



*This ephemeral wetland in the Flambeau River State Forest (a Wetland Gem™) improves water quality, stores storm and flood waters, and benefits the naturally-reproducing musky population downstream. For these reasons, WDNR identifies wetland conservation as a key musky management practice.*

Contact Kyle Magyera, Wisconsin Wetland Association’s Policy Specialist, at 608-250-9971 or [kyle.magyera@wisconsinwetlands.org](mailto:kyle.magyera@wisconsinwetlands.org) if you’re interested in learning more about how to support and encourage local wetland conservation.

### [My Healthy Wetlands Clearinghouse](#)

Wisconsin Wetlands Association (WWA) is developing an outreach program for private wetland landowners in Wisconsin. Our state has lost nearly half of its original wetlands, making it more critical to protect and manage those that remain in order to keep water clean, alleviate flooding, provide wildlife habitat, and protect shorelines. Private landowners are particularly important in this regard, as they collectively own 75% of Wisconsin’s remaining wetlands.

WWA recently created *My Healthy Wetlands* ([www.wisconsinwetlands.org/MyHealthyWetlands.htm](http://www.wisconsinwetlands.org/MyHealthyWetlands.htm)), a web-based clearinghouse of resources for private wetland landowners to better understand their wetlands and how to care for them. This resource provides links to publications, websites, and other information to help landowners identify, protect, enjoy, manage, and restore wetlands. It also connects landowners with resources to help them promote wetland wildlife habitat, understand wetland regulations and property tax assessments on wetlands, and fund wetlands work.

WWA is collaborating with many partners to identify resources about what wetlands are, why they matter, and how to care for them. We will work with these partners to develop new resources and expand wetland programming for private landowners.

If you are a wetland landowner, we want to know what information and tools you need to better understand and care for your wetlands! Contact WWA at 608-250-9971 or [programs@wisconsinwetlands.org](mailto:programs@wisconsinwetlands.org).

# Sanitary Districts

## More than Just a Sewer

Sanitary districts were among the first formal institutions that people used to manage lake issues in Wisconsin. As special purpose units of local government, sanitary districts can raise revenue through property tax and user fees. In the 1940s, many sanitary districts used this authority to raise money for algae and plant control projects, addressing local needs that towns and counties might not fund.

*There are numerous examples of sanitary districts that are actively participating as partners in caring for lakes.*



R. Korfh

*Aquatic plant management can be one of the responsibilities of a Sanitary District.*

Nancy Turyk



A major difference between sanitary districts and lake districts is their method of governance. While most lake district commissioners are elected through the annual meeting, sanitary districts may have boards that are entirely appointed by the local government that encompasses the district. Also, unlike lake districts, non-resident property owners cannot formally participate in sanitary district votes.

Sanitary districts can take on a wide range of lake management activities

such as stormwater management and the treatment of waters for algae and nuisance aquatic plants. On lakes where the sanitary district encompasses at least 60% of the lake's shore and no lake district already exists, the sanitary district board may, by resolution,

take on additional responsibilities normally reserved for lake districts or local government. These include operating a water safety patrol, recreational enhancement projects such as boat landings, and broad land conservation initiatives. They can also perform similarly to a lake district with respect to boating ordinances in cases where the local governments have agreed to delegate this authority.

There are numerous examples of sanitary districts that are actively participating as partners in caring for lakes. The Lake Pewaukee Sanitary District in Waukesha County was created in 1944 and since 1945 the district has been involved in a wide range of efforts to manage aquatic plants on 2,500-acre Pewaukee Lake. They share the cost of aquatic plant management with the Town of Delafield and the City of Pewaukee.

The Delevan Lake Sanitary District carries out aquatic plant management on the 2,072-acre Delavan Lake and provides sanitary sewer service to 3,094 structures. Revenue for their lake management work comes from the general tax levy for properties located within the district.



The Browns Lake Sanitary District encompasses 3,897-acre Browns Lake in Racine County and also provides aquatic plant management for the lake. There are just over 1000 households in the district who pay a fee for both sanitary sewer service and lake management.

Many other sanitary districts have exercised their option to take on lake district responsibilities. There are about 20 sanitary districts in Wisconsin that might encompass lakes and either could or presently do participate in lake management, but have not passed resolutions to take on lake district responsibilities. With the growing expense

of aquatic plant management and a renewed interest in properly infiltrating stormwater, there is increased interest in sanitary districts to broaden their responsibilities and partner with lake associations, counties, and the state to ensure the health of our lakes. If you live on a lake with a sanitary district and want to discuss these ideas, contact our office at [uwexlakes@uwsp.edu](mailto:uwexlakes@uwsp.edu) or call Eric Olson directly at 715-346-2192. 🌊

Check out these sanitary districts online:  
Lake Pewaukee Sanitary District [www.lakepewaukeesd.org/](http://www.lakepewaukeesd.org/)  
Delevan Lake Sanitary District [www.dlsd.org/](http://www.dlsd.org/)

*With the growing expense of aquatic plant management and a renewed interest in properly infiltrating stormwater, there is increased interest in sanitary districts to broaden their responsibilities and partner with lake associations, counties, and the state to ensure the health of our lakes.*

# Q & A Lake Districts

*We often get phone calls and emails from Lake Tides readers with a variety of questions about lake districts. Do you have a question about lake districts that you would like to see answered in Lake Tides? Send it to [uwexlakes@uwsp.edu](mailto:uwexlakes@uwsp.edu) so we can include it in a future issue.*

## **Q: What should a lake district's annual audit entail?**

**A.** As we noted in the Summer 2010 issue of *Lake Tides*, all lake districts are required by law to prepare an audit at the close of the fiscal year, the results of which they then submit to the annual meeting. The statute does not provide much guidance for what the audit should entail. Audits generally summarize the financial position of an entity and review annual revenues and expenditures to identify errors or misstatements. Most lake districts choose to conduct their audit through a committee of the district commissioners. While “self-auditing” of this sort is permissible, it is good practice to ensure that the members of the audit committee are not the same commissioners who regularly review and approve expenditures. It may also be advisable to seek out volunteers for the audit committee from the district’s membership base, ideally people with experience in accounting (or at the minimum, a love of numbers). Finally, a lake district board can often learn a lot about their own operation and identify potential areas for improvement by occasionally working with a professional accounting firm to conduct a more rigorous audit. To get a sense of the cost that this might entail, districts are encouraged to contact the treasurer’s office in nearby cities and villages to learn more about their experience with public sector accountants. You can view a copy of the Lauderdale Lakes Lake Management District’s 2011 audit online at [http://lllmd.org/documents/2011\\_Audit.pdf](http://lllmd.org/documents/2011_Audit.pdf)

For more information on lake districts, see *People of the Lakes: A Guide for Wisconsin Lake Organizations*, [www.uwsp.edu/cnr/uwexlakes/districts](http://www.uwsp.edu/cnr/uwexlakes/districts).



# Expanding Our Reach

## The Wisconsin Lakes Partnership Goes International!

*This specific initiative centers on improving and sustaining the water quality of Lake Nicaragua, the ninth largest freshwater lake in the western world.*

The Wisconsin Lakes Partnership (WLP) began developing a new international relationship this spring with the people of the Republic of Nicaragua. The project was initiated by the Farmer to Farmer program, a collaboration between UW Extension and the US Agency for International Development's Partners of the America's office. The Farmer to Farmer program facilitates knowledge exchange between citizens living and working in the United States with partners in Central American nations.

This specific initiative centers on improving and sustaining the water quality of Lake Nicaragua, the ninth largest freshwater lake in the Americas. The lake is threatened by invasive species, commercial-scale aquaculture, runoff, and the prospects of being used as part of a new trans-ocean canal similar to the Panama Canal. Addressing these major

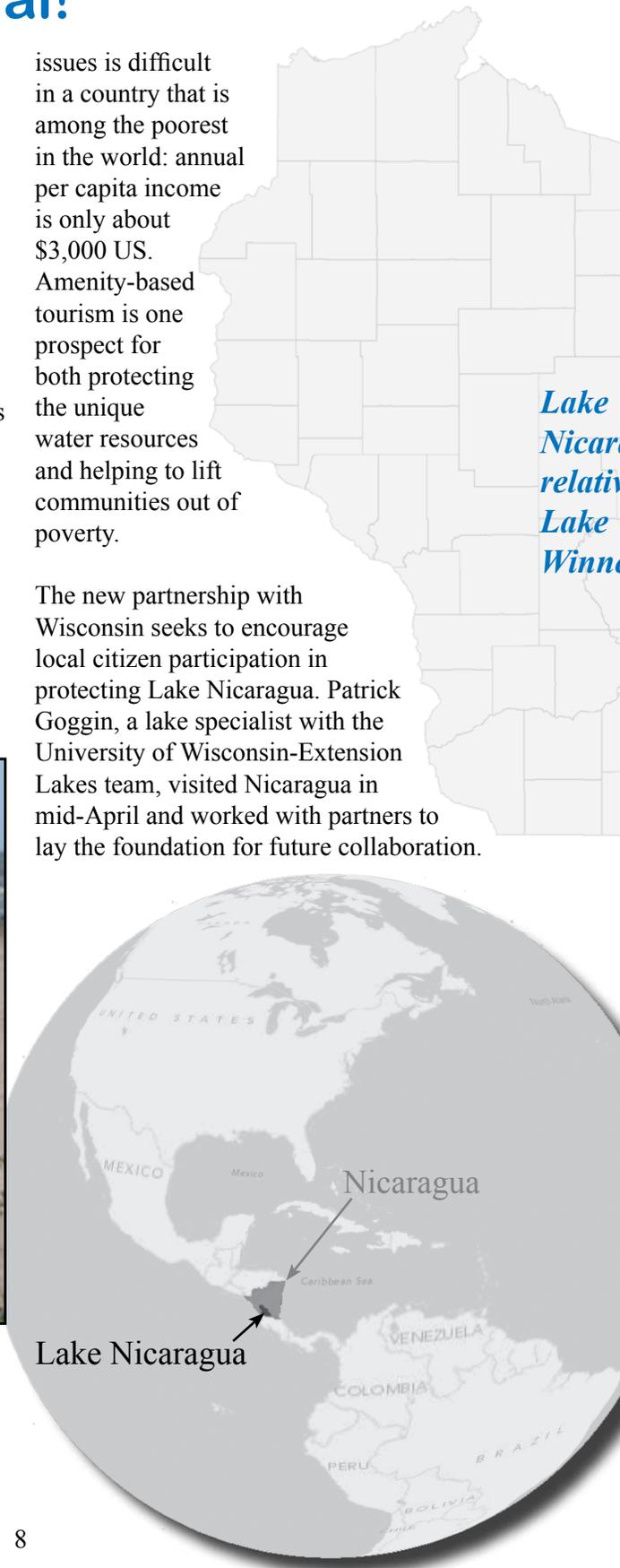
issues is difficult in a country that is among the poorest in the world: annual per capita income is only about \$3,000 US. Amenity-based tourism is one prospect for both protecting the unique water resources and helping to lift communities out of poverty.

The new partnership with Wisconsin seeks to encourage local citizen participation in protecting Lake Nicaragua. Patrick Goggin, a lake specialist with the University of Wisconsin-Extension Lakes team, visited Nicaragua in mid-April and worked with partners to lay the foundation for future collaboration.

Patrick Goggin

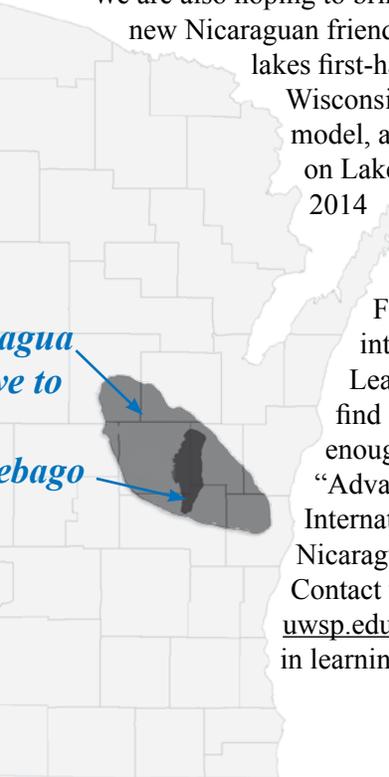


*The beachside community of Cardenas is slated to be one of the three pilot water quality monitoring locations for the new Lake Nicaragua partnership.*



Goggin and colleagues Victor Cedeño and Juan Francisco Rodriguez (both environmental consultants with FUPADE) and Daniel Ingram (a field officer with Partners of the Americas) created a vision and mission for the new Lake Nicaragua Water Quality Monitoring Project partnership. They also worked together on fashioning draft implementation steps for achieving some short-term goals.

We are also hoping to bring up some of our new Nicaraguan friends to see Wisconsin's lakes first-hand, learn about our Wisconsin Lakes Partnership model, and give a presentation on Lake Nicaragua at the 2014 Lakes Partnership Convention in Stevens Point. Finally, we are seeking interest among Lake Leader graduates to find out if there are enough people to merit an "Advanced Lake Leaders International" trip to Lake Nicaragua in January of 2015. Contact us at [uwexlakes@uwsp.edu](mailto:uwexlakes@uwsp.edu) if you are interested in learning more! 💧



**Short-term goals for this collaboration include:**

- building partnerships;
- setting up government-citizen water governance strategies and communication channels;
- equipping and soliciting citizen volunteers for pilot water quality monitoring stations at three locations on Lake Nicaragua; and
- laying the seeds needed for developing a new Center for Lake Research and Science Education Outreach on Lake Nicaragua to be located in Granada.

*This collaboration is supported by the Partners of the Americas Farmer-to-Farmer Program, a United States Agency for International Development [USAID] sponsored effort aimed at cultivating positive change. Our Nicaraguan host was the Foundation for Development [FUPADE], a national nonprofit group improving the quality of life for their population.*



*Local fishermen in the city of Granada take a break from seining for fish. The Lake Nicaragua water quality monitoring project seeks to include fisherman and other lake users as participants in data collection.*

**Lake Nicaragua Fun Facts**

Known as Cocibolca to the natives, La Mar Dulce (the Sweet Sea) to the Spanish conquerors, and Lake Granada to the people from the city of Granada, this large inland water body is now generally referred to as Lake Nicaragua.

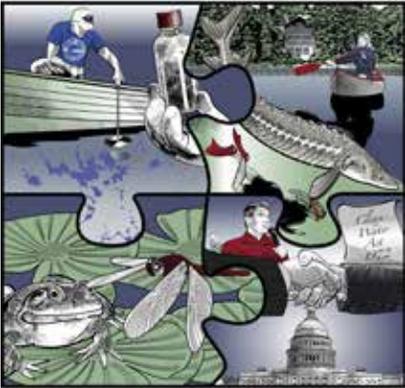
Larger than the state of Delaware, this freshwater giant covers a chain of volcanoes which created many beautiful islands and islets, the largest being Ometepe (which could cover half of Lake Winnebago)! This, and Zapatará, another large volcanic island, are laden with thousands of indigenous artifacts, beautiful views, and tropical birds.

# Convention Wrap-up



2013 WISCONSIN  
LAKES PARTNERSHIP  
CONVENTION

Chris Whalen 2012



**WE'RE ALL IN THIS TOGETHER**  
*Celebrating Diversity*

**H**undreds of lake lovers trekked to Green Bay in early April to share their successes and learn from one another at the 35<sup>th</sup> annual Wisconsin Lakes Partnership Convention. This year's event featured a couple of new tweaks meant to attract newcomers, but also satisfy those who come to the convention year after year. The first day was filled with optional workshops in the morning and afternoon, including tours of the

Green Bay wastewater treatment facility and a youth education workshop at the nearby Bay Beach Sanctuary. The Lake Leaders reception was held at Titletown Brewpub, allowing people to reconnect and learn about the Lake Leaders program (recruitment for the next class of Lake Leaders takes place in early 2014!).

The Convention formally kicked off with a plenary talk by Dr. David Garman, Dean of the recently created School of Freshwater Sciences at UW Milwaukee. Dr. Garman highlighted the looming stressors facing lake and river

resources worldwide and made the case for Wisconsin to play a lead role in solving water management problems through applied research and business development. Ken Johnson, DNR's

Water Division administrator, gave a luncheon talk that highlighted his own youth in the Green Bay area when the Fox River was so polluted that it did not support any fishery. He pointed out the progress we have made and the challenges we still face to meet the goals of the Clean Water Act.

Wednesday night featured the Lakes Stewardship Awards. Rod Olson was recognized in the citizen category for all his efforts at Desair Lake and his engagement in watershed planning and protection in the Red Cedar Basin. Forest County Association of Lakes was recognized



Derek Kazanough

Amy Kowalski



*"This year's hands-on workshops were very engaging."*



Amy Kowalski



Derek Kazanough

for their group efforts in northeast Wisconsin to advance lake protection and restoration in one of the most remote regions of the state. The Tomah Lake Committee received an



Derek Kazanough

award for the individual lake group category for their tireless efforts to restore Tomah Lake and make it more accessible to the recreating public. A team of DNR LTE lake researchers,





Kelly Wagner, Michelle Nault, Ali Mikulyuk, and Martha Barton (referred to as the “Plant Divas”), were recognized in the public service category, and an award for innovative service was given to the DNR’s Jane Malischke and Pamela Toshner for their work in streamlining Clean Boats, Clean Waters grants.



The 2014 Wisconsin Lakes Partnership Convention will be back in Stevens Point at the Holiday Inn, April 24-26. The initial planning meeting will take place on June 26 at 10am; you are welcome to join the effort. Contact UWEX Lakes for more details ([uwexplakes@uwsp.edu](mailto:uwexplakes@uwsp.edu)).

Thursday’s lunch was emotionally punctuated with a stirring talk given by Dr. Mamie Parker, a retired Assistant Director with the U.S. Fish and Wildlife Service. Mamie recounted the many ways that her mother’s wisdom guided her career as the first African American woman to advance to Assistant Director in the Service’s history. Despite the numerous barriers, Mamie repeatedly drew from her inner strength to demonstrate what leadership means. Award winning documentary filmmaker Allison Argo gave the closing plenary talk, sharing her transformative story as she went from actress to director, giving voice to wildlife as diverse as frogs, gorillas, and horseshoe crabs along the way. Between these keynote events, attendees went to over 50 different breakout sessions and met with over 30 different exhibitors.

Archived presentations from 2013 and earlier Lakes Partnership Conventions are online at [www.uwsp.edu/uwexplakes](http://www.uwsp.edu/uwexplakes)



### 2013 Wisconsin Lakes Partnership Photography Contest Winners

The photography contest featured 70 entries and included a great variety of subject matter and styles. Check out the online archive to view winning photos (including honorable mention).

#### Natural Features In & Around Lakes & Underwater

- 1<sup>st</sup> – *Free Ride* by Linda Grenzer
- 2<sup>nd</sup> – *Last Day of Summer* by Tina Carlson
- 3<sup>rd</sup> – *A Child’s Wonder* by Derek Kavanaugh

#### People Enjoying Lakes

- 1<sup>st</sup> – *Last Cast* by Craig Libuse
- 2<sup>nd</sup> – *Kayaking On Lake Superior* by Tom Quinn
- 3<sup>rd</sup> – *Flippin’ Out* by Craig Libuse

#### People’s Choice - *Drying My Wings* by Chris Hamerla



*Free Ride*  
by Linda Grenzer



*Last Cast*  
by Craig Libuse





## BUYING A LICENSE OR REGISTRATION?

Donate \$2 to aquatic invasive species research and control

### Where does my \$2 go?



75% goes to WDNR's Lakes Segregated Account to directly fund AIS research and control projects

25% supports your local merchant

Even when these projects do not take place on your local water body, the knowledge gained is applied to benefit ALL Wisconsin waters! For more information and examples of research paid through this fund, visit <http://dnr.wi.gov/lakes/sayyestolakes/>.



## Protect the Places Where You Play: Keep Invasives Out!

June is Invasive Species Awareness Month (ISAM) in Wisconsin! Join your fellow lake lovers and dedicated state specialists in protecting the places we all play by keeping invasives out. A variety of workshops, field trips, and lectures will be offered around the state on the impacts of invasive species in Wisconsin. To find events in your area and learn more about how to get involved, visit: <http://invasivespecies.wi.gov/awareness/>.



# Landing Blitz 2013 – “All aboard!”



**STOP AQUATIC  
HITCHHIKERS!™**

**T**he Wisconsin Department of Natural Resources (DNR) is preparing for its 5<sup>th</sup> annual statewide Landing Blitz and invites all interested parties to join in efforts to prevent the spread of aquatic invasive species (AIS) among Wisconsin lakes.

and earned much good will. In addition, you will receive a sample press release and tips on generating media interest in your local efforts. Finally, the DNR can provide educational materials, usually free of charge, for use during the Blitz (see <http://dnr.wi.gov/topic/invasives/documents/pubcatalogue.pdf>).

The Blitz convenes on the busiest boating period, the Independence Day holiday, and will run from Thursday July 4<sup>th</sup> through Sunday July 7<sup>th</sup>, 2013.

To enroll in the Landing Blitz and reserve a supply of towels, or to learn more, please contact Michael Putnam at 608-276-9868 or [michael.putnam@wisconsin.gov](mailto:michael.putnam@wisconsin.gov). Join in this growing effort to keep AIS out of Wisconsin lakes. 💧



The Blitz highlights efforts of Clean Boats Clean Waters participants who attend boat landings throughout the boating season, educating boaters on how to rid boats and trailers of AIS and adhere to state laws prohibiting AIS transport. In 2012, participants reached nearly 40,000 boaters during the Blitz week!

We invite all past and new participants to join us in 2013. As in previous years, the DNR will provide each participating lake with free towels to reward boaters practicing the preventative steps of “Inspect, Remove, Drain and Never Move.” This reward has been very popular among boaters



Teresa Wolfe

**As a reminder, boaters, anglers, and others enjoying Wisconsin waters are required to:**

- INSPECT** boats, trailers, and equipment
- REMOVE** all attached aquatic plants and animals
- DRAIN** all water from boats, vehicles, and equipment
- NEVER MOVE** plants or live fish away from a waterbody



# Did you know the American coot is not a duck?

# DYK

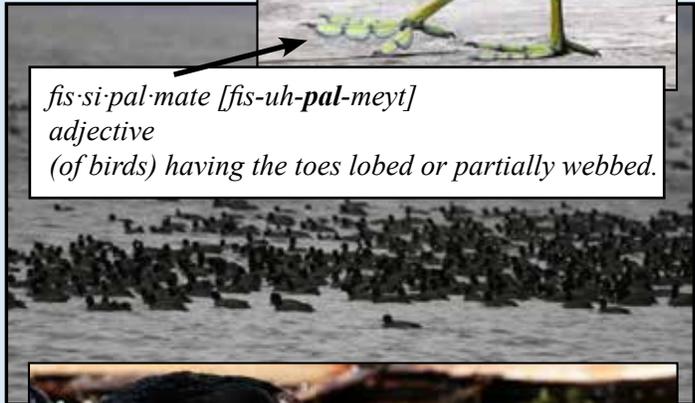
When you hear the word “coot” do you think of that harmless old neighbor that leads a simple life? Well, if you live near a marsh or other water with lots of emergent plants, this beautiful, dark-gray bird with a bright white bill may come to mind – the American coot. Often found floating with a flock, the American coot may be mistaken for a duck, although it’s actually a rail. If you’ve seen one chomping insects on land, they walk more like a chicken with their magnificent fessipalmate feet that are greenish-yellow in color. They can dive to 25 feet to feed on aquatic plants, amphibians, and small fish, and need a lengthy distance to get enough speed to take flight. Coots are typically shy, but males can get aggressive during mating season, using their large feet and bills to attack intruders. After males chase their female partner across the water during mating season, these monogamous pairs raise 1-2 broods of 2-12 eggs in a year. Mom and Dad both sit on the nest and take care of the chicks for the first couple of months. These adorable little chicks with their bright orangish-red beaks leave the nest within a few hours after hatching. Check out our Facebook page for pictures - they’re a must see!

So, it is true that more than just ducks float in water...small rocks, wood, ivory soap, even coots!



Marlene Trapp

*fis-si-pal-mate* [fis-uh-pal-meyt]  
*adjective*  
(of birds) having the toes lobed or partially webbed.



R. Korih



Marlene Trapp



## The Great Secchi Dip-in

It’s once again time for the annual Secchi Dip-in! During this event, volunteers from all over the world contribute to our understanding of water quality by measuring and entering Secchi data into an international database. Join the movement by taking a Secchi measurement of a lake near you between June 29 and July 21. While this database is not connected with the Citizen Lake Monitoring Network database in Wisconsin, it offers a place to house your Secchi readings and even give trends of transparency after having five years of data. Volunteers can also share their personal thoughts on the severity of problems on the waterbody where they collect data. Check out the website at [www.secchidipin.org](http://www.secchidipin.org) or contact Bob Carlson at [rcarlson@kent.edu](mailto:rcarlson@kent.edu).



# Want to be part of the solution?

## 2013 Spring/Summer CLMN & CBCW Workshops

Volunteering is a great way to help slow the spread of aquatic invasive species and enjoy some time on your local lakes! You can find out more about the Citizen Lake Monitoring Network (CLMN) and the Clean Boats, Clean Waters (CBCW) Watercraft Inspection Program on our website at [www.uwsp.edu/cnr/uwexlakes](http://www.uwsp.edu/cnr/uwexlakes). Just click on one of these icons. Spring and summer workshops are already in full swing. It's not too late to get involved - check out our Lake Event Calendar to find a training near you!  
[www.uwsp.edu/cnr/uwexlakes/Calendar](http://www.uwsp.edu/cnr/uwexlakes/Calendar)



# CALENDAR

**June 14: 2013 Northwoods Lakes Conference, Conserve School, Land O' Lakes**

Keynote speaker topics: Wisconsin Valley Improvement Corporation management Challenges, Deerskin River Study, and Black Oak lake monitoring. For more information contact: Clyde (715)-479-7032 or [owensacres@gmail.com](mailto:owensacres@gmail.com) or Rollie (715)-545-2711 or [alger427@yahoo.com](mailto:alger427@yahoo.com)

**June 19: Invasive Species Education Summit, Trees for Tomorrow, Eagle River**

Join the Wisconsin Invasive Species Council, the Department of Natural Resources, and educators from around the state at this 2<sup>nd</sup> annual event. For more information: <http://invasivespecies.wi.gov/awareness/section.asp?linkid=808&locid=63>.

**June 21: 2013 Northwest WI Lakes Conference in Spooner, 8:00 am - 3:00 pm**

Keynote speaker Christine Thomas, Dean of UW-Stevens Point College of Natural Resources, will speak on the "Citizen's Role In Conservation." Registration of \$40 includes continental breakfast, lunch and materials - students attend free of charge! For more information: [www.wisconsinlakes.org](http://www.wisconsinlakes.org)

**June 22: Lac du Flambeau Lakesfest "Keepers of the Waters" - 10 am - 3 pm**

Features many Tribal, State, Federal, and Community programs and activities to educate and inform the public about Mother Earth "Aki" and the cultural importance of clean water, air, and land. Includes prizes, raffles, canoe races, free hot dogs & drinks, live music, children's games/activities, and special guest: Jerron McMillian from the GB Packers. For more information: Gretchen Watkins at 715-588-4162 or [g Watkins@ldftribe.com](mailto:g Watkins@ldftribe.com)

**August 1: Lake Planning & AIS Control Grants Application Deadline**

For more information about these grants contact your WDNR Lake Coordinator or go to <http://dnr.wi.gov/lakes/grants/>.



## Lake Tides -- 905032

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## Reflections

*Water is life's mater and matrix,  
mother and medium. There is no life  
without water.*

~ Albert Szent-Gyorgyi

