Lake Tides
The newsletter for people interested in Wisconsin lakes

Not Exactly Our Mate

New Zealand Mudsnails Found in Black Earth Creek

By Deborah Seiler,
AIS Communications Specialist

For Mike Sorge, water quality biologist of the Department of Natural Resources (DNR), it started as just another day of routine sampling when his kick net scooped up something troublesome from the streambed of Black Earth Creek in Dane County. It was just one sample of hundreds that DNR's biologists collect every year to track the health of Wisconsin waters and catch problems early.

Laura MacFarland

Maureen Ferry, AIS Monitoring Specialist and Laura Herman, Wisconsin's Citizen Lake Monitoring Coordinator collect New Zealand mudsnails from Black Earth Creek.

But when researchers sorted through trays back at the lab, they noticed something unusual in Sorge's sample. What at first appeared to be dark grains of sand were actually hundreds of New Zealand mudsnails, a scourge of western trout streams.

New Zealand mudsnails are a potentially harmful aquatic invasive species (AIS) that first arrived in the United States in the late 1980s and quickly spread through western streams. Tiny at less than 1/4 inch, they are more easily transported and harder to kill than many invasives Wisconsin has dealt with in the past.

Laura MacFarland

DNR's monitoring specialist for AIS, Maureen Ferry, was one of the first to hear the news. She remembers, "It was disappointing news but this is why we keep an eye on heavily trafficked waterways like Black Earth Creek. Thanks to regular monitoring by biologists like Mike, we may have caught the invasion early." Ferry continues, "Now it's our job to roll out our rapid response plan as fast as

(Continued on page 2)

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Wisconsin Department of Natural Resources

Participant gets a closer look at a New Zealand mudsnail during an informational meeting held in Cross Plains on December 12, by the Department of Natural Resources.

possible so they don't reach new lakes and rivers."

Outside of their native habitat, New Zealand mudsnails reproduce asexually as clones. This means that only one snail is needed to start a new population. Although "Clone 2" snails exist in the Great Lakes, these populations are not expanding. The mudsnails in Black Earth Creek had hitched a much farther ride from the "Clone 1" population, which was previously only found west of Colorado.

Mudsnails have another trick up their shells that allows them to reach new waterways. Each snail has something called an operculum, or "trap door," that it can close over the end of its shell when threatened. This makes them resistant to most chemicals and able to survive out of water in a damp environment for up to 26 days. They can even survive passage through the gut of a fish!

"Anglers, trappers and hunters will have a huge impact on how this spreads. It's important to clean everything."

~ Mike Sorge

Sorge and Ferry say that the impact mudsnails will have on Wisconsin is unknown. In the worst case scenarios, mudsnails in some western U.S. waterbodies have been found growing at densities of up to 500,000 per square meter, harming native food webs and trout health. But, in other locations they have had minimal impact, or their populations have crashed after an initial boom.

Laura MacFarland

New Zealand mudsnails are typically smaller than 1/4 inch.

"It's easy to fear the worst," says Sorge, "But natural systems are pretty resilient."

What's being done?

To protect Wisconsin's waterways and fisheries, Sorge and Ferry agree that the best course of action is to stop New Zealand mudsnails from reaching a waterbody where they might take over in the first place.

To make this happen, a team of state and local natural resource agencies, conservation groups and citizen representatives have come together to form a rapid response team for New Zealand mudsnails. The team is taking a three-pronged approach to develop decontamination guidelines, an outreach strategy and a monitoring program. The monitoring program, which will begin in the Driftless region and spread statewide, includes traditional net sampling and testing a new protocol to detect "environmental DNA" – genetic markers that mudsnails leave in the water which can help detect them at very low densities.

What can you do?

So what's a Wisconsin lake-lover to do? Until the team has finished their search for other snail colonies, it's important that everyone who uses a stream or lake – especially in the Driftless region – take a few minutes to learn how to stop the spread of these tiny snails, and share the word widely.

"The first and biggest impact of how this new invasion plays out will be how users prevent the spread through simple disinfections," says Sorge. "Anglers, trappers and hunters will have a huge impact on how this spreads. It's important to clean everything. The DNR will do our part to keep our gear clean, too."

Gear decontamination research is ongoing. For additional recommendations, check with state resource agencies and conservation groups for new methods as they become available or visit dnr.wi.gov and search for "New Zealand mudsnails."

BEFORE leaving the water:

- ✓ **INSPECT** equipment and **REMOVE** attached plants and animals (required by law)
- ✓ **DRAIN** all water from equipment (required by law)
- ✓ **SCRUB** equipment with a stiff brush, including crevices, to remove all mud and snails.
- ✓ **RINSE** equipment with tap water to remove juveniles. Consider keeping a water jug or spray bottle in your car.

BEFORE entering another stream, switch to a completely new set of gear OR do one of the following disinfection steps:

- ✓ **FREEZE** for 8 hours, or
- ✓ **WASH** with 212°F water (steam clean), or
- ✓ **SOAK** in 120°F water for several minutes, or
- ✓ **SOAK** in 2% Virkon solution (2.7 ounces per gallon) for 20 minutes

G'day mate! Thought I'd go for a walkabout by hitching a ride on your boot laces.

"Clean Angling with the River Alliance of Wisconsin" is a great video about how to properly clean your gear: http://youtu.be/LPlRYsqNxJo

Grant-funded Project to Control Newly Establishing Invasive Phragmites Patches

By Stacy Schumacher, Wetland Invasive Species Specialist

Phragmites is a resilient species and may become more robust if other treatments such as mowing are done at the wrong time of year.

The best way to control Phragmites is to try and catch it early before it becomes well-established.

Throughout the Great Lakes region, a very tall, densely growing grass known as *Phragmites australis* or common reed grass, has taken over areas of roadsides, wetlands and lake shorelines. Over the last few years, a great deal of work has been done to try to control large patches of the non-native invasive strain of this species, particularly on the shores of Lake Michigan and Green Bay. These large-scale control projects can take a lot of time and resources, but if phragmites populations are caught early, control can be much easier.

Recently the Wisconsin Department of Natural Resources (DNR) received $200,000 from the US Fish and Wildlife Service's Great Lakes Restoration Initiative (GLRI) fund to implement a new Phragmites control project within Wisconsin's Lake Michigan basin [more information at www.fws.gov/GLRI/]. The stated purpose of the project is to find the leading western edge of the Phragmites invasion and "push" it back toward Lake Michigan. In many Wisconsin counties, especially in the western Lake Michigan basin, this non-native strain of Phragmites is a newly established invasive wetland or lakeshore plant. Current efforts to prevent its establishment and spread in this area will help prevent many of our inland lakes and wetlands from encountering the problems this plant has caused in other areas of the Great Lakes region.

This project will focus first on eliminating non-native Phragmites in those counties in the far northwestern part of the Lake Michigan basin, then move south and east through the counties along the western edge of the basin, as funding allows. The goal is to treat at least 200 acres of non-native Phragmites, beginning in late summer 2014, with follow-up treatments in 2015. DNR is reaching out to partners that may have location data in order to build a map of non-native Phragmites populations across the state that will guide control activities for this project – contact details are at the end of the article.

The project targets newly establishing Phragmites infestations and may take place in areas such as wetlands, lakeshores, rights-of-way, State natural areas, parks and adjoining private lands. Other criteria such as the availability of partner organizations, prior control work done, and the existence of rare species will guide site selection. Phragmites can spread quickly to new areas by underground rhizomes, above ground runners or stolons, stem fragments (e.g., from mowing), and by seeds that germinate readily in disturbed ground or exposed lakebeds.

Control treatments of Phragmites patches are most effective if all parts of an infestation are treated, which means that getting all landowners of a site to agree to treatment is important for success. Aquatic formulas of herbicides such as glyphosate or imazapyr applied by certified applicators are commonly used because Phragmites is a resilient species and may become more robust

courtesy of Chris Hamerla

Dense patches of Phragmites can grow in wetlands or lakeshores to the exclusion of all other vegetation and access.

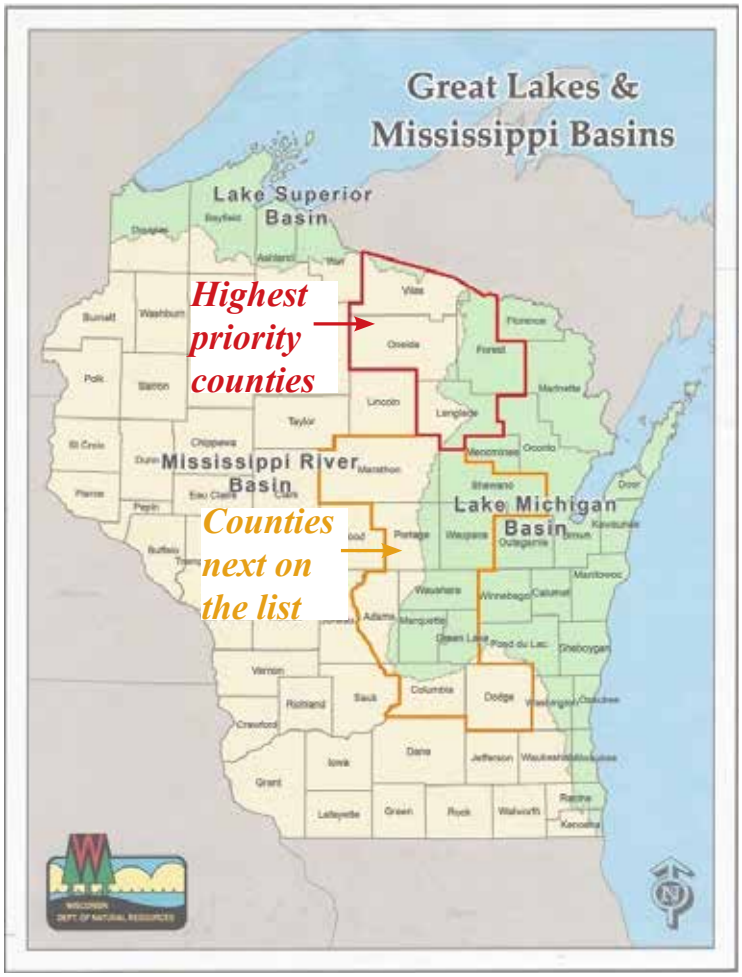
if other treatments such as mowing are done at the wrong time of year. The best way to control Phragmites is to try and catch it early before it becomes well-established.

This project is still actively seeking reports of Phragmites. These reports can be sent to the DNR in a number of ways – you can email invasive.species@wi.gov or learn how to send in any sightings you have on our wetland invasive reporting website (http://dnr.wi.gov/topic/Invasives/report.html). A great online resource to learn a lot more about this invasive plant, and ways to control it, is found at the Great Lakes Phragmites Collaborative website (http://greatlakesphragmites.net/).

For specific questions about this project contact Stacy Schumacher, Wetland Invasive Species Specialist at stacy.schumacher@wi.gov.

Learn More

You can learn more about Phragmites and other aquatic invasive species (AIS) with these newly-published, peer-reviewed AIS fact sheets (www.goldensandsrcd.org/our-work/water) from the Golden Sands Resource Conservation and Development AIS program.



Phragmites project areas.

Did you know about ice quakes?

DYK

BOOM!

As the temperature dropped deep below zero this winter, many towns in North/Northeastern USA were put in the perfect conditions to experience an ice quake. What is an ice quake? These phenomena, also known as frost quakes or cryoseisms, occur when water freezes within soil or rock. As the ice continues to expand, it creates a tremendous amount of pressure and is relieved in a deafening boom and occasional tremors. When heard, this boom is often mistaken for an earthquake! The difference, however, is an earthquake includes the movements of tectonic plates whereas ice quakes are caused from the pressure of frozen soil within the ground.

Because of subzero temperatures occurring this winter, as we approach spring, the stage has been set for possible ice quakes around us. Ice quakes most often rumble during spring, since the sporadic changes from hot to cold can thaw or refreeze the ground within one night. This doesn't mean that they don't occur during the cold winter months. There have already been reports around Wisconsin from people who have experienced ice quakes!

While the title of this phenomenon may scare you, ice quakes are not nearly as dangerous as earthquakes. Cracks in the earth may occur due to vibrations or the pressure of the ice, but it doesn't go much beyond that. If you hear an incredible boom in these next few months, you may be witnessing an ice quake!

Lake Bottom Mysteries

A Go-to Guide To "Goo"

By Sandy Wickman, UW-Extension Lakes

You have to admit, there are some strange and unusual things lurking in our Wisconsin lakes. Spend any time on the lake and you will likely come across long skeins of gloppy, jelly-like substances, a mass of green tapioca, orange slime, or maybe an odd spongy looking clump. You might wade through an oily sheen or find gelatinous balls that you can roll with your fingers. Today, we are going to look more closely at slimy, gloppy goo.

***Look for more information about eggs in the water in upcoming issues of* Lake Tides.**

Some of the jelly-like masses and clumps might be egg masses of insects, fish or amphibians. According to Jeffrey Dimick, Research Specialist at UW-Stevens Point, "Most insect eggs are small enough to escape notice by the casual, and even seasoned observer of aquatic substrates. Some caddisflies crawl down into the water and deposit small gelatinous masses of eggs.

courtesy of Yvonne Merriam

This beautiful blue line of fertilized eggs was "written" on the water's surface by a female baskettail.

courtesy of Jeff Mercier

Eastern dobsonfly eggs, Corydalus cornutus, *deposited on a rock.*

The water bug, *Belostoma*, deposits eggs to the dorsum of the male, where they are very visible. The most noticeable insect egg masses are developed above water. Dobsonflies, fishflies, alderflies (order Megaloptera) and snipe flies lay eggs on the undersides of rocks and earth that hang over the water. When the eggs hatch, the first-instar larva drops into the water and begins development."

Winged Wonders

Most of our dragonflies (order Odonata) lay eggs singly or in small groups, or inject them into the substrate or plant material where the eggs will not generally be noticed. The female baskettail (genus *Epitheca*) forms a mass ("basket") of eggs and then carries that basket

courtesy of John Lyons

Yellow perch eggs taken on Mud-Callahan Lake, Sawyer County

at the tip of her abdomen looking for the right spot to deposit it. She either attaches her ball of hundreds of eggs to a submerged plant and then leaves, or drags her abdomen along the water's surface, unraveling her string of eggs as she goes. Either way, the once-compact egg mass swells into a long strand, from six inches, to several feet long and an inch wide.

Something's Fishy

Many fish are broadcast spawners and their eggs may be difficult to see. The nest builders, like bass and bluegill lay eggs in a depression that they have created in the substrate and you may see the eggs inside the nest. In general, the greater the degree of care given to the offspring, the lower the number of eggs laid (the more involved the parents, the fewer the eggs). Species like largemouth bass, which build and guard a nest, lay fewer eggs than similar-sized species like walleye, which broadcast their eggs on gravel and leave them to fend for themselves.

Yellow perch eggs have a unique accordion-like skein of eggs that you might find draped across downed trees and emergent aquatic vegetation in early spring. These transparent skeins can contain 10,000 to 40,000 eggs! The egg mass absorbs water rapidly after it is emitted and then swells, sometimes reaching seven feet long and weighing up to two pounds! The egg mass is semi-buoyant and moves with water currents and waves. Bad weather may cause the egg mass to be torn up and washed onto land.

Slowing It Down

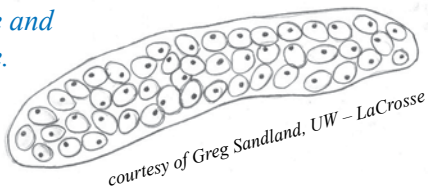
Snails are soft-bodied animals that manufacture their own shells and belong to the class Gastropoda ("belly foot"). There are more than 500 species of freshwater snails found in North America. Some of these species lay eggs (although some snails have live young). The eggs of the pond snail (*Physa gyrina*) are embedded in a thick, clear, jelly-like mass surrounded by a sticky outer layer. These masses are often attached to leaves, stones, sticks, submerged vegetation or the shells of other snails. Rarely are they found floating free in the water.

The size of the snail egg mass can vary in length, width and diameter, based on snail size and species. The egg mass of the Great Pond Snail, *Lymnaea stagnalis*, is five to six centimeters in length (about two inches).

If you are interested in finding out more about our freshwater snails, Greg Sandland and Kathryn Perez at UW-La Crosse have created the *Key to Wisconsin Freshwater Snails*: www.uwlax.edu/biology/faculty/perez/wifwsnailkey/wifwsnailkey.htm. The key is a great resource with pictures of each snail species, as well as some additional useful pages comparing egg masses of different species, and comparisons of some exotic snails to similar-looking natives.

This spring, spend some time on the lake and keep a lookout for these signs of new life. Take a picture and share it on our Facebook page – if you don't know what it is, there might be an "eggs-pert" who can help to identify it.

Eggs from the Great Pond Snail are raised, elongated gelatinous masses, often found on stones, sticks, stems and leaves in the water. There can be from 30-130 eggs in each mass.



courtesy of Greg Sandland, UW – LaCrosse

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 so we can include it in a future issue.*

Special thanks to Dr. Jeff Thornton for sharing this insightful example.

Q: Can a property be detached from a Lake District?

A. Yes, however, there is a process.

Create a process, treat the petitioner respectfully, execute your process, and keep good written records of the decision.

Following a recent annual meeting of a Lake District in northeastern Wisconsin, one property owner came before the Board of Commissioners to enquire about detachment of his properties from the District. The Commissioners, who had attended the Lake District Commissioner Training offered at the 2013 Wisconsin Lakes Convention, knew that detachment was a serious issue that had to be initiated either by the Board or by the property owner. Consequently, they informed the land owner that he should request detachment in writing and present this request to the Board at their next meeting. Sure thing, the land owner appeared at the next Board meeting and presented his petition for detachment.

Chapter 33 of the Wisconsin Statutes permits lands to be detached from public inland lake protection and rehabilitation districts pursuant to Section 33.33(3) when properties are "not benefited by continued inclusion in the district." Determination of whether a property benefits from inclusion in the District in the case of detachment is site-specific and requires an investigation by the Board of the individual circumstances relating to the property proposed for detachment. This principle was clearly stated as an outcome of the 2004 case, Donaldson v. Board of Commissioners of Rock-Koshkonong Lake District. Armed with this knowledge, the northeastern Wisconsin lake district's Board of Commissioners accepted the landowner's petition and informed the landowner that they would approach his request in two stages; namely, the establishment of criteria under which the benefit to the property in question could be established, and the conduct of a site visit in the presence of the landowner during which visit the criteria would be evaluated.

The Board of Commissioners then prioritized the action for the following Board meeting, with the action item of determining the criteria under which a detachment of the specific properties would be considered. In preparation for this meeting, the Secretary was tasked with creating a checklist of issues to be considered as part of the detachment process. The issues identified by the Board would parallel the issues to be considered during lake district formation, but would be specifically targeted toward the properties proposed for detachment.

The criteria that the Board adopted included:

A. Physical characteristics of property
B. Recreational, commercial, or residential property?
C1. Is property on bank of natural watercourse?
C2. Are there private access rights to the lake?
C3. What is the proximity to public lake access?
C4. Is property within view of the lake?
C5. Is property within watershed or ground water table of the lake?
D. Is value of property enhanced if the lake is clean, attractive and usable? Or would property value be diminished if the lake were in a degraded condition?
E. Would detachment result in any "hole" in the boundaries of the district?
F. Did circumstances surrounding property's inclusion in the district change?
G. Any other relevant factors

Upon adopting these criteria, the Board of Commissioners then scheduled and posted notice of a special meeting of the Board to be held prior to the regularly scheduled Board meeting, during which the Board and the landowner would visit the property in question. During this visit, the Board members prepared notes in response to each of the criteria that had been identified. Also, the landowner was encouraged to participate in developing the responses to the criteria, and to ask any questions about the process that might arise. Completing the site visit, the Board adjourned to their regularly scheduled meeting where the detachment was formally considered. Using their predetermined criteria, the Board found that the property in question continued to benefit from inclusion in the District and the detachment request was denied.

A postscript to this meeting was the appreciation shown by the landowner to the Board for their serious and professional consideration of his request. The landowner noted that he was now more familiar with the Lake District, its principles, and its operations. He acknowledged that he was completely satisfied with the outcome of the deliberations.

The lessons to be learned here are several-fold: create a process, treat the petitioner respectfully, execute your process, and keep good written records of the decision. The appropriate posting of the meetings and site visit should also be noted: although the Board had determined that no decisions would be taken during the site visit, the presence of a quorum (= 3 commissioners, regardless of the size of the Board, per Wisconsin Statute) required that notice be given as the quorum automatically created a condition under which a decision could presumably be made. By determining a procedure in advance and executing that process in the presence of the petitioner, the District created a win-win situation which earned the respect of the landowner and the community.

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

Clean Boats, Clean Waters Rolls Out Improvements With a Positive Spin

2014 is bringing positive updates to the CBCW Watercraft Inspection program! A diligent team of folks worked hard this fall and winter to improve the CBCW training and materials, in order to balance our education efforts more equally with our data needs and to better assist inspectors in educating boaters. More details about these changes will be in the next *Lake Tides*, but here is a sneak peek at what's new:

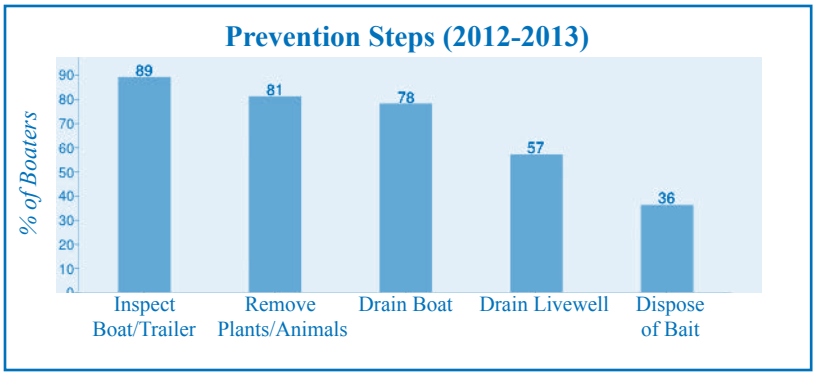
- Fresh conversational approach to inspections
- Simplified data form with educational prompts to assist inspectors
- New training format and online training resources, and more!

Folks who have attended a CBCW workshop before should plan to attend a training this year for the latest information and inspection protocol. Contact your local AIS Coordinator for more info: http://dnr.wi.gov/lakes/invasives/ and click on "Aquatic Invasive Species Contacts" on the bottom right corner of the page.

Watercraft Inspection Data: 2013 Fast Facts

(data as of 1/22/14)

- 111,256 boats were inspected by volunteers and paid inspectors
- 239,904 people were contacted about the 'Clean Boats, Clean Waters' message
- 67,913+ hours were spent conducting watercraft inspections
- 96% boaters stated that they were aware of WI's AIS laws
- Boaters and other landing users were asked about whether they took each prevention step after they last used their boat and equipment. *(2012-2013 data)*



For more watercraft inspection results, go to http://dnr.wi.gov/lakes/invasives and click on "Watercraft Inspection Data" (on the right hand side of the page) under "Data & Maps".

www.uwsp.edu/cnr/uwexlakes/cbcw

Back to the Point

WI Lakes Partnership Convention

April 24-26, 2014 ~ Stevens Point, WI

Agenda ...at a glance

Thursday, April 24

Pre-convention Workshops/Sessions

8:00am	Registration opens
9:00am-Noon	**Morning Workshops**
Noon-1:30pm	Lunch on your own (exhibits open at noon)
1:30-4:30pm	**Afternoon Workshops**
4:30-5:30pm	**Special Technical Sessions**
5:30-7:00pm	Networking time - Dinner on your own
7:00-11:00pm	**Wisconsin Lakes Partnership Convention Welcome Reception**

Friday, April 25

6:45-7:45am	Sunrise Yoga
7:30am	Registration opens
8:00am	Exhibits open (until 6:00pm)
8:00-8:50am	**Sunrise Concurrent Sessions 1**
9:00-10:45am	**Welcome, Digital Production, and Kick-off Keynote Speaker**
11:00am-Noon	**Concurrent Sessions 2**
12:15-1:30pm	**Lunch**
1:45-2:25pm	**Concurrent Sessions 3**
2:35-3:15pm	**Concurrent Sessions 4**
4:00-5:00pm	**Poster Presentations - Networking Visit Exhibitors & Educational Displays**
5:00-6:00pm	Networking time
6:00-8:00pm	**WI Lake Stewardship Awards Banquet**
8:00-11:00pm	Lakes Partnership After Hours

Saturday, April 26

7:30am	Registration opens
8:00am	Exhibits open
8:00-8:40am	**Concurrent Sessions 5**
8:50-9:50am	**Keynote Speaker Dr. Tyrone Hayes**
10:30-11:30am	**Concurrent Sessions 6**
11:45am-1:15pm	**Luncheon closing**
1:30-4:00pm	**Tours & Workshops**

**Agenda subject to change.*

We welcome lake lovers near and far to join us back in Stevens Point for our annual learning and networking event! This year's convention features an "a la carte" format that allows attendees to customize their experience based on their needs and learning goals. We have an expanded menu of workshops and tours offered all day on Thursday and Saturday afternoon – descriptions of the workshops are included on the following pages, with even more details on the convention website (see below). If someone can only make it to one workshop, they can now simply choose that option!

Friday's agenda includes four concurrent sessions in six different topical streams, ranging from *Aquatic Invasive Species* to *People, Policy and Politics*. Our Friday morning plenary session emphasizes our theme of getting *back to the point* of lake management with a panel of lake scientists discussing the evolution of lake challenges over the past three decades. Dr. Carl Watras, Research Scientist; Dr. Susan Knight, Botanist and AIS Specialist; and Dr. Tim Kratz, Director of the Trout Lake Station will engage in a moderated discussion with Glen Moberg from Wisconsin Public Radio. They will highlight the long-term experiments carried out at Little Rock Lake in Vilas County and the management implications of lake research in Wisconsin.

Saturday's agenda is intentionally geared towards citizens and folks who have never made it to the Lakes Partnership Convention who want to learn more about the art and science of caring for lakes. Our Saturday morning keynote, Dr. Tyrone Hayes, will join us from the University of California – Berkeley, where he directs a path-breaking research and teaching program focusing on frogs and ways that we can help these charismatic amphibians. If you've always wondered what the Lakes Convention was about, but could never make it in the past, we sincerely hope you will join us for Saturday's sessions – you will not be disappointed!

For all the details, go to the Wisconsin Lakes Partnership Convention website at

www.uwsp.edu/uwexlakes/conventions

Thursday Pre-convention Workshops

Pre-registration required.

For more in-depth descriptions of workshops, tours and main convention sessions, go to our website at www.uwsp.edu/uwexlakes/convention.

Thursday All Day
9:00 am - 4:30 pm

Lake District Commissioner Training

Whether you are new to your lake district or a seasoned Lake District Commissioner, this workshop will help you sort through the requirements of operating a lake district. Learn about how Wisconsin statutes impact your district, annual meetings, board communications, district budgeting and more.

Connecting Wisconsin and Nicaragua Through Nature: Lakes, Birds, and People

Wisconsin and Nicaragua have been forming community relationships through the Partners of the Americas program for nearly 50 years. Both places share an abundance of lakes, and migratory birds that summer in Wisconsin and winter in Central America form a natural bond stretching across thousands of miles. This full-day mini-conference will explore the environmental and social connections between Wisconsin and Nicaragua, a nation blessed with lake resources but challenged by poverty and looming ecological changes.

Using WordPress to Build Your Organization's Website (Limit 12)

WordPress is an inexpensive webpage design and content management system. This full day workshop will take you through all the steps of creating and then updating and maintaining your organization's website. Participants will need to provide their own laptop or tablet with wireless internet capability as they will be creating and editing webpages throughout this hands-on workshop.

Thursday AM
9:00 am - Noon

Volunteer Recruiting and Management: Best Practices for State and Local Government

Volunteers are an integral part of our Lakes Partnership, and many local agencies and organizations count on volunteers to make specific projects successful. This workshop will provide participants with best management practices and practical advice for recruiting, training, and recognizing volunteers. Using these ideas, you will be a more successful project manager and spend less time and energy fretting about volunteers.

Navigating the Board of Adjustment

Come to this workshop to learn about county shoreland zoning standards under NR 115; links between shoreland property values, water quality, fisheries and wildlife; and the role of local officials and citizens in influencing land use decisions. The workshop will discuss the role of elected officials and the board of adjustment in making zoning decisions. Shoreland property owners and new, aspiring and veteran officials are encouraged to attend.

Shoreland Health Inventory for County Land & Water

(Limit 20) - additional $10 fee

In this workshop, we will guide you through the process of field data collection, GIS work flows, and advanced spatial analysis to map and prioritize shorelines. The workshop will include instructor-led demonstrations and hands-on exercises. The intended audience are county conservation staff, resource professionals, and others interested in shoreline health. Experience with ArcGIS is expected.

**Early bird pricing through April 3, 2014.*

Day	Cost*	Details
Thursday	$15 each	morning and afternoon workshops**
Friday	$80	includes Thursday night welcome reception, keynote speakers, lunch, award dinner, breaks and materials
Saturday morning	$40	includes keynote speakers, lunch, break and materials
Saturday afternoon	$15 each	workshops and tours** (some include additional fees)

***Pre-registration is required for all workshops/tours.*

Only $110

Thursday 7:00pm — Saturday 1:15pm

Save $10 by registering for the full convention!

Convenient and secure online registration - www.uwsp.edu/uwexlakes/conventions

Pre-registration required.

Thursday Pre-convention Workshops

Thursday PM
1:30 - 4:30 pm

Erosion Control

Looking for erosion solutions? By identifying and understanding the various causes and the effect of erosion factors, certain techniques can help you control or eliminate erosion altogether. This presentation gives you answers: samples, photographs, case studies, drawings, and techniques to help you face this challenge with success.

Manual Removal of Eurasian Watermilfoil (EWM)

When conducted properly and employed early, manual removal can be a highly effective, low-cost strategy with minimal negative impacts to the native aquatic plant community. This workshop will discuss identification of EWM and similar species, as well as mapping, removal, and disposal. Photographs, as well as video footage will be shown to illustrate the removal process.

Legal Issues for Non-profits

This workshop aims to answer many of the legal questions that lake associations frequently ask by providing access to an attorney whose practice focuses on small nonprofits. We will combine short educational presentations with discussions of participants' issues in a free flowing exploration of legal topics often faced by Wisconsin's lake associations.

SWIMS/Viewer for Professionals *(off-site, shuttle included - Limit 20) - additional $10 fee*

This workshop presents a general walk-thru of the DNR's online data viewers, and participants will learn how to maximize the available tools. You will learn how to create a quick map, add graphics, share maps, add your own data to the viewer, and many others. Time will also be set aside at the end for questions and answers as well as a brief overview of new tools and functions that will be coming for Summer 2014.

Using WILMS *(off-site, shuttle included - Limit 20) - additional $10 fee*

The WiLMS model is a lake water quality-planning tool that uses an annual time step and predicts spring overturn (SPO), growing season mean (GSM) and annual average (ANN) total phosphorus concentration in lakes. This workshop is geared towards professionals and serves as an entry into a summer course designed for practitioners needing continuing educational credits.

Groundwater and Breweries Tour *(off-site, shuttle included - Limit 20) - additional $20 fee*

Join two of the state's groundwater experts on a fun and fact-filled tour of the Stevens Point Brewery and Central Waters in Amherst. We'll highlight the connections between the beverages we enjoy and groundwater quality and quantity. We'll also explore the impact of groundwater use on lakes and rivers.

Saturday Workshops and Tours

Estate Planning

In this presentation, you will learn about the legal arrangements that can be created to keep your special place in the family over multiple generations in a manner that is fair for all. You will also learn about the role that land trusts can play in helping to preserve and protect your cherished resources and potentially provide tax saving benefits to your family.

Fund Raising for Lake Organizations

Participants will learn the difference between fundraising and development, the basic process of creating budgets and development plans, and the role of membership dues, grants, and individual and business gifts for meeting your group's goals. The workshop will also include a brief discussion of changes to the DNR's Lake Grant program.

Energy Efficiency & Renewable options at your property

Cabins and second homes present many opportunities to reduce your annual energy bills. The facts provided in this workshop and the tools that will be shared will give you a place to start to make both your home and your second home more efficient and comfortable.

Pre-registration required.

DIY Lake Monitoring Gear *(Limit 30) - additional $30 fee*
Make your own lake monitoring equipment! We will have stations with materials where you can build the following: lake view scope, Eurasian water-milfoil collection bag, crayfish trap, waterflea collection net and a snail and mussel collection net. We will also have examples and directions of other lake monitoring equipment that you may have an interest in.

Clean Boats Clean Waters Workshop *- additional $25 fee*
Whether you're new to watercraft inspections or an experienced inspector, join us for the updated Clean Boats, Clean Waters Workshop to receive the latest training and materials! You'll learn how to use the new conversational approach during inspections, what prompts will assist you in using the revised datasheet, and how to share this data online. Everyone will receive the latest materials and resources to start or refresh inspection efforts on their local lakes.

Citizen Science 101
Nature lovers can take advantage of volunteer monitoring opportunities ranging from lake water quality to loons, frogs, butterflies, dragonflies, deer, even wolves and other carnivores. This workshop will introduce the range of opportunities available and connect your interests to specific volunteer efforts.

The Natural Step: A Systematic Approach to Community Sustainability
If we only focus on individual challenges facing the environment like polluted runoff or habitat loss, we miss the systemic ways that such problems are often connected. The Natural Step provides a logical, holistic view to guide sustainability efforts and track progress. This workshop will provide an overview of the Natural Step and give examples and ideas for putting sustainability into practice.

Raingarden Installation *(off-site - Limit 20)*
This hands-on workshop covers the ins and outs of rain garden installation and basic stormwater management. You will learn the initial steps to prepare and design a rain garden. Then we will put those lessons into practice and plant a large-scale raingarden to see how our native plant species work in this application.

Lake Data on the Web *(off-site - Limit 20)*
Join us for this hands-on workshop and learn how to enter your lake data into the statewide database (SWIMS). Get updates on the DNR and UWEX Lakes websites and create professional looking maps with the DNRs Surface Water Data Viewer and other online tools.

Save the Frogs workshop at CWES *(off-site, shuttle included - Limit 24) - additional $10 fee*
Youth participants from junior and senior high are invited to sign up for a field workshop on frogs as part of the convention. A shuttle bus will transport participants to and from Central WI Environmental Station (CWES). Activities include field survey for frogs and salamanders, basics of frog and toad identification, and analysis of ideal habitats for frogs and other wildlife.

Schmeeckle *(off-site - Limit 40)*
Schmeeckle Reserve was created to protect and restore native ecological communities, serve as an outdoor classroom, and provide recreational opportunities to all visitors. Join us on an informative tour of the Schmeeckle visitor center, the Wisconsin Conservation Hall of Fame, and the recently completed 17 acre wetland restoration project at Moses Creek.

Groundwater and Breweries Tour Description on pg. 12

UWSP Campus Sustainability Tour *(off-site - Limit 20)*
UW-Stevens Point has been actively reshaping the campus in an effort to become more sustainable, environmentally-friendly. The campus recently incorporated parking lots that yield zero stormwater, green roofs, and raingardens into the landscape to reduce the effects of polluted runoff. Solar panels and innovative waste management systems also reduce UWSP's ecological footprint. Join us on a tour of these changes to see what 21st Century practices look like, including the newly-completed LEED Gold residence hall.

Saturday Workshops and Tours
1:30 - 4:00 pm

Grants, They Are A-Changin'

By Carroll Schaal, Lakes and Rivers Section Chief, Department of Natural Resources

adapted from Bob Dylan's The Times They Are A-Changin'

Come gather 'round people
From Wisconsin sublime
And admit that the waters
Around you aren't fine
You might need a grant
From DNR for a time
If the lakes to you are worth savin'
Then find the new deadlines and applications online
For grants they are a-changin'

AIS Early Detection and Response applications will continue to be accepted year around.

The Department of Natural Resources Bureaus of Water Quality and Community Finance have developed an action plan covering the next two to four years to integrate the Lake Planning and Protection, Aquatic Invasive Species and River Planning and Management Grant programs into a more comprehensive "waters" grant program. Together, these programs provide over $6 million in cost-share funds to support locally-sponsored water resources management projects. The goals are to improve quality outcomes and customer service while reducing staff workload. The first two years will set the groundwork for a comprehensive administrative code revision to follow.

Streamlining

The first step in 2014 is the creation of a more streamlined grant review process of which a key component is consolidation of grant application deadlines. In December the Department aired a proposal for public comment to eliminate the May 1 and August 1 grant deadlines and create a November 15 deadline along with retaining the February 1 deadline to eliminate year-round grant work for staff. Consolidating grant activity in the winter should free up staff time during the open water season so they can focus on monitoring and other needed fieldwork.

After careful consideration of the 27 comments received, the Department's final decision was to move the November 15th deadline to December 10th and realign the types of applications due for each deadline. Planning project applications (Lake Planning, Lake Classification & Ordinance Development, River Planning and AIS Education, Planning, and Prevention, including Clean Boats Clean Waters) will be due December 10th. Implementation project applications (Lake Protection, River Management, and AIS Established Population Control, AIS Research & Demonstration and Maintenance & Containment) will be due February 1st. AIS Early Detection and Response applications will continue to be accepted year around. The chart on the next page summarizes the changes.

The streamlining effort also includes consolidated and improved electronic application forms to eliminate duplication and make sure only needed data is captured. Electronic applications will support quicker review and reduce complexity for customers and staff alike. At the same time, the Bureau of Finance has reduced the paperwork burden lessening documentation requirements needed for applicants to get reimbursed for grant eligible activities.

The final guidance and the public comments are posted on http://dnr.wi.gov/Aid/Grants.html. The new application forms and instructions will be available by Sept. 1, 2014 on the same site. Questions can be sent to Carroll Schaal, at 608-261-6423 or carroll.schaal@wi.gov.

Program Name	*Administrative Code Reference*	*Application Deadlines*	*Grant Award Date*
AIS Education, Planning & Prevention; Clean Boats, Clean Waters	NR 198 sub. II	Dec 10	Feb 15
Lake Planning	NR 190	Dec 10	Feb 15
Lake Classification & Ordinance Development	NR 191 sub.IV	Dec 10	Feb 15
River Planning	NR 195.04	Dec 10	Feb 15
AIS Established Population Control, Maintenance & Containment, Research & Demonstration	NR 198 subs IV, V & VI	Feb 1	April 15
Lake Protection	NR 191 subs II, III, V	Feb 1	April 15
River Management	NR 195.05	Feb 1	April 15
AIS Early Detection & Response	NR 198 sub. III	Continuous	Continuous

**** Changes in effect after the Feb. 1, 2014 deadline for AIS and Lake Planning Grants***

CALENDAR

March 4-5, 2014 – Fox-Wolf Watershed Alliance Conference, Neenah, WI
For more information: www.fwwa.org

March 10-12, 2014 – WLWCA Annual Conference, Appleton, WI
The Wisconsin Land and Water Conservation Association's 61st annual conference will be held at the Radisson Paper Valley Hotel in Appleton this year.
For more information: www.wlwca.org/conference.html

March 13, 2014 – Red Cedar Watershed Conference, Menomonie, WI
Whether you farm, live along the water or live in town, this impacts everyone. Join us for a day of exploring how we can all be a part of the solution. For more information: www.uwstout.edu/profed/redcedar

March 13-14, 2014 – American Water Resources Association 38th Annual Wisconsin Section Meeting, Wisconsin Dells, WI
"Mining and Wisconsin Waters"

March 25-28, 2014 – Wisconsin Rural Water Association (WRWA) Technical Conference, Green Bay
For more information:
www.wrwa.org/2014-annual-technical-conference/

April 3, 2014 – Early Bird Deadline, Wisconsin Lakes Partnership Convention

April 24-26 – Wisconsin Lakes Partnership Convention, Stevens Point, WI
"Back to the Point" in Stevens Point - more details on pages 10-13.

May 12-14, 2014 – AWRA Spring Specialty Conference, Salt Lake City, UT
The theme for this conference is "GIS and Water Resources VIII – Data to Decisions". For more information: www.awra.org/meetings/SnowBird2014/

Lake Event Calendar

Stay up-to-date on lake gatherings around the state and beyond. Check out the Lake Event Calendar at www.uwsp.edu/uwexlakes/Calendar. See something missing? Click the 'Add an Event' link and fill out the short form, or email us at uwexlakes@uwsp.edu.

Lake Tides -- *905032*
College of Natural Resources
University of Wisconsin-Stevens Point
800 Reserve Street
Stevens Point, WI 54481

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Web site: www.uwsp.edu/uwexlakes
E-mail: uwexlakes@uwsp.edu
Phone: 715-346-2116
Editor: Amy Kowalski
Design & Layout: Amy Kowalski
Regular Contributors: Patrick Goggin, UWEX & Carroll Schaal, WDNR
Contributing Editors: Erin McFarlane & Eric Olson, UWEX
Illustrations by: Carol Watkins & Chris Whalen

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Reflections

The fire is dying now,
my lamp is growing dim
The shades of night are liftin'
The morning light steals
across my windowpane
Where webs of snow are driftin'

~ Gordon Lightfoot
(from *Song for A Winter's Night)*