



## Paleolimnology History in the Mucking

*Lake folks often get into lively discussions over what the lake used to be like...more plants, fewer plants, clear water, murky water... Is there any way to really know for sure? Well, the answer is yes! In fact we can have a good idea of what lakes used to be like hundreds of years ago with a science called Paleolimnology.*

Paleolimnology, sometimes referred to as “History in the Mucking,” is the interpretation of past conditions and processes in lake basins. Each year since their formation, a steady rain of sediments, plant pieces, creature parts and other materials settle to the bottom of our lakes leaving a record of past conditions. Over the eons this fascinating record has remained safe and sound in the sediments waiting for someone who could unlock its secrets. In addition to providing background information on a lake, the sediments hold a record of natural and human disturbances that have occurred in the lake. The response of the lake to these disturbances provides insight into how the lake functions, and provides a better understanding of the significance of trends observed with modern monitoring programs.

### Obtaining a Sediment Core

To extract the lake’s past history a sediment core is usually collected using some type of a hollow tube. The tube is pushed into the lake bottom and a cap is remotely placed on top of the tube to hold the sediment in place until it can be returned to the surface. Once collected, the core is sectioned into intervals usually of 1-2 cm. Each of these sections represent sequential chapters in time, with the top of the core being today and the bottom of the core indicating some time in the past. The time frame of interest in paleolimnological studies often is the last 200 years, which typically covers the impacts of European settlement.

### Questions Answered with Paleolimnology

The science of paleolimnology can reveal many secrets from a lake’s past life. Most natural and human disturbances affecting lakes can be evaluated using paleolimnological approaches.

*(Continued on page 2)*



*Photo provided by Paul Garrison*

*This core was taken from McKinney Lake  
(Big Chub) in Vilas County.*



### *(Paleolimnology continued)*

Nutrient increases and acid rain are issues that have been extensively documented and studied with paleolimnology. Paleolimnology can give us details on the severity of human impacts and tell us within a few decades of when the impacts began. The genesis of events such as erosion, organic pollution from sewage treatment plants and animal feed lots can all be documented. Paleolimnologists can tease many messages from the sediments, such as how many and what types of aquatic plants grew in the lake, changes in species composition, past fish populations, or the frequency of algal blooms. Most recently, trends in climate change are being studied with paleolimnological techniques.

Atmospheric testing by the U.S.S.R. peaked in 1963. It then dramatically declined after the implementation of the Nuclear Test Ban Treaty that same year.

In southern Wisconsin another marker that is often used to confirm sediment dates is arsenic (yes, arsenic). Sodium arsenite was used during the 1950s-60s in a number of Wisconsin lakes to control aquatic plants. Records are available that document how much was applied (*Lake Tides* Vol. 31, No. 2, 2006). The peak in arsenic concentration in the core corresponds with the time of maximum application.

Another dating marker that can be traced in lake sediments is stable lead. It was used in leaded gasoline until its removal in the mid-1970s and provides another time marker to check on the lead-210 dating technique.

## Dating Sediment Cores

An accurate sediment chronology is an essential part of a paleolimnological study. Cores are usually dated to establish the timing of past environmental changes and to determine the rate of input of materials into a lake. Paleolimnologists can accurately date sediment layers because they can be cross-checked against known historical events.

Cores are typically dated by analyzing a series of samples from the surface to a core depth that corresponds with 200 years ago. The most common dating technique for sediments deposited within the last 200 years is the lead-210 technique. Lead-210 is a naturally occurring atom that exhibits radioactivity. It enters lakes primarily through precipitation and dry deposition (i.e. dust), following the decay of an atmospheric gas called radon-222 (radon gas).

Several methods can be used to corroborate the lead-210 dating technique. Testing of atomic weapons has left stratigraphic markers (layers) in the sediments of all lakes around the world. These markers include cesium-137 (a byproduct of atmospheric nuclear testing).

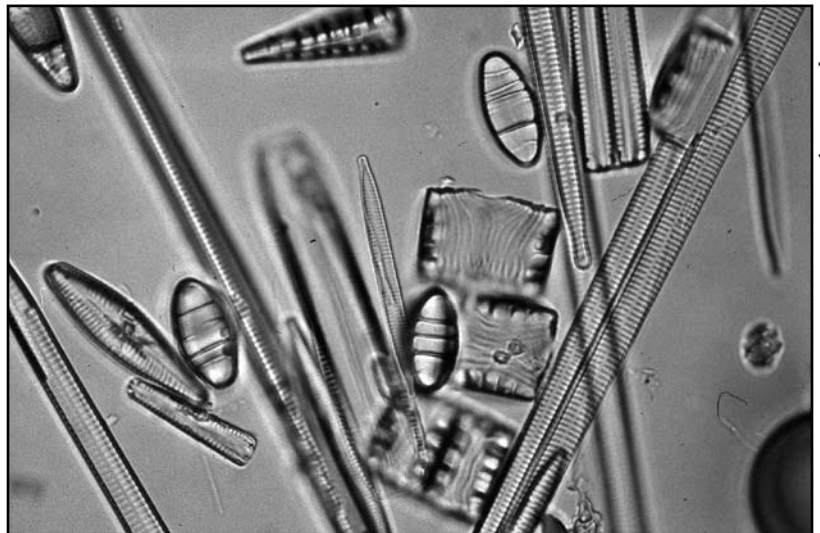


Photo provided by Gina Laliberte, WDNR

*These diatoms, viewed under a light microscope, are an example of those found in a sediment core.*

## A Record in Glass

Fossils are one of the guides to the past life of a lake. The fossils used most are diatoms. These are a special type of algae that possess cell walls made of silica. Silica is the same as glass so diatoms can be preserved for thousands of years in the sediments. Diatoms are particularly useful because most of them live under well-known environmental conditions. This makes them ideal to characterize what past environmental conditions were like when they were living, such as phosphorus

2007 *Paleolimnology for lake management*



1975 *Lead removed from gasoline*



1963 *Atmospheric nuclear testing ends*



1950 *Sodium arsenite used to control plants*



1945 *World War II ends  
Shoreline development begins in earnest*



1848 *Wisconsin becomes a state*



1836 *Logging industry reaches peak*



concentrations. Diatoms have been used to estimate trends in phosphorus, acidification, color, salinity and plant communities. Studies have allowed us to determine that some lakes are naturally acidic while others have become acidic as a result of human activities. Other algal groups such as certain blue-green and green algae are also preserved in the sediments.

Other fossils that are deposited and are useful for re-creating past environments are aquatic insect larvae and zooplankton. Insect larvae can be used to track changes in a lake's oxygen content over time. Zooplankton are often eaten by fish and invertebrates, so changes

in their numbers allow us to infer past fish populations. For example, a decline in large zooplankton is an indication of an increase in plankton-eating fish such as perch or bluegills.

*Paleolimnology is a powerful tool to discover where a lake has been and maybe predict where it is going. This buried treasure of information is stored in lake sediments and we can read the sedimentary records like the pages of an ancient book. Look for more information on paleolimnology in future Lake Tides. ♦*

*by Paul Garrison, Wisconsin Department of Natural Resources*

*Paleolimnology can reveal many secrets from a lake's past life.*

## Q&A Lake Districts

### **Q: What are the requirements for annual meeting notices?**

**A:** The written notice for an annual meeting must be mailed out at least 14 days in advance to all lake district property owners whose names are listed in the tax roll. Written notice must also be mailed out to all electors (resident voters) whose addresses are known (or can be reasonably determined) or the lake district may publish notice of the meeting in two successive issues of the local newspaper.\* The lake district is also required to mail notice of the annual meeting to the Wisconsin Department of Natural Resources (Lakes Management Section, 101 S. Webster Street, PO Box 7921, Madison, WI 53707-7921). *Wis. Stat. §§ 33.30(2)(a)*

To comply with Wisconsin's open meetings law requirements, a lake district should also:

- 1) post the meeting notice at least 24 hours in advance in three locations likely to be seen by the general public. As an alternative, a lake district may give notice by paid

*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.*

publication in the local newspaper (this covers #2).

- 2) provide the local newspaper with a meeting notice.
- 3) give a meeting notice to any additional media source that has requested to be notified.

For more information on Wisconsin open meetings law requirements, see the Attorney General's Open Meetings Law Compliance Guide found at [www.doj.state.wi.us](http://www.doj.state.wi.us).

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).

\*Tax rolls are available to help lake districts generate accurate mailing lists for property owners. Mailing lists for electors (resident voters) are not always readily available, therefore, lake districts have the option of publishing the notice to get the word out to electors.



# EPA Launches National Lake Survey

*The WDNR is planning to use the national lake survey effort to complement and enhance its own lake monitoring and assessment efforts in Wisconsin.*

Our nation's lakes will be undergoing a check-up in 2007 as the Environmental Protection Agency (EPA) initiates a statistical survey. The goal of the survey is to discover what percentages of the nation's lakes are in good, fair or poor condition. A "stress test" will also be performed to examine the relative importance of nutrients, non-native species, lakeshore development, pathogens and other stressors on lake conditions.

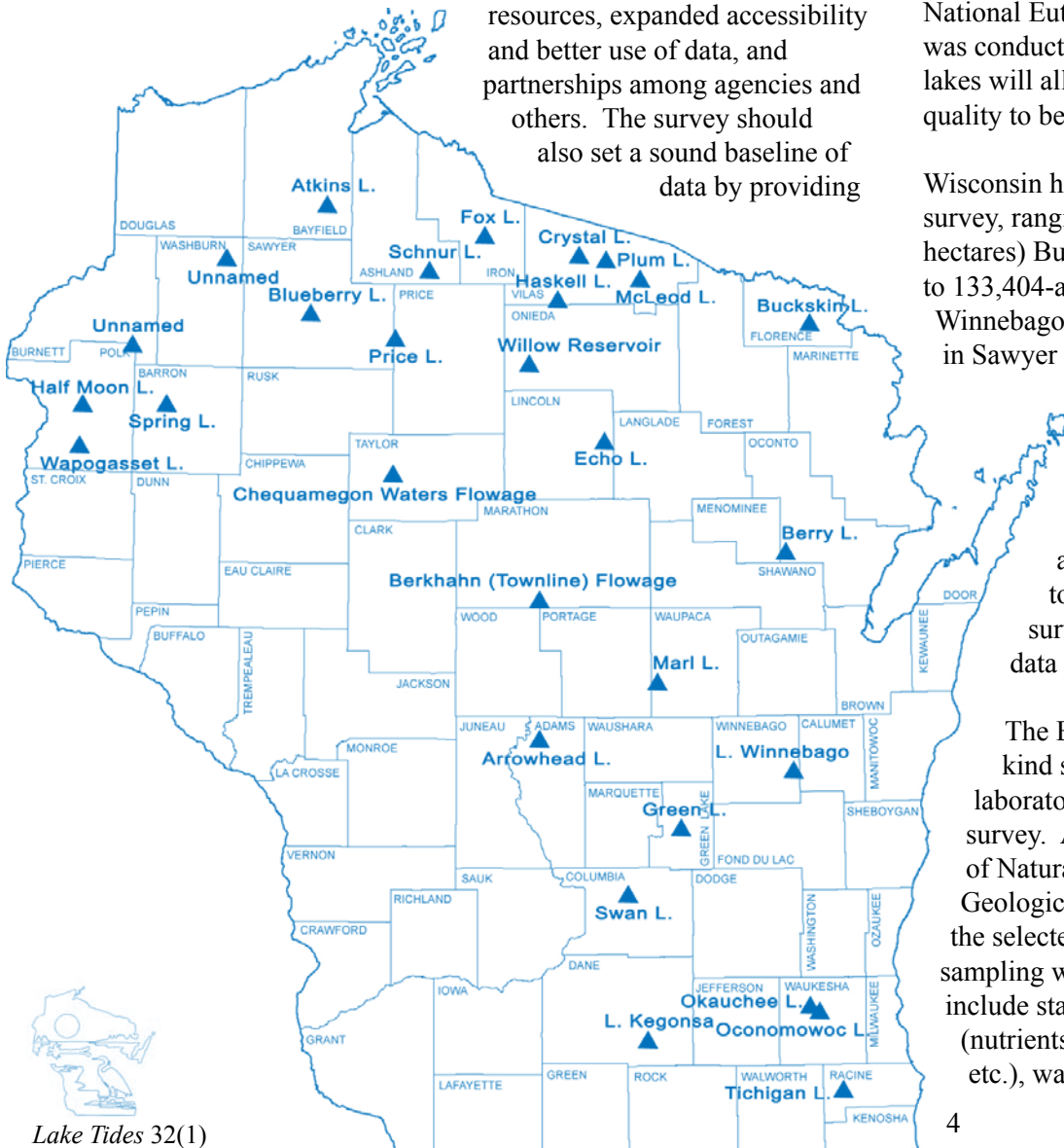
The EPA's approach is multi-faceted, and designed to strengthen state, tribal and interstate monitoring programs. This will encourage more efficient use of resources, expanded accessibility and better use of data, and partnerships among agencies and others. The survey should also set a sound baseline of data by providing

documented information on the extent of water quality problems and key stressors on our nation's lakes.

A total of 909 lakes, representing five size classes and distributed relatively evenly across the lower 48 states, are included in the survey. The lakes were selected randomly (excluding the Great Lakes) from a sample that includes freshwater lakes (natural and man-made) and ponds and reservoirs that are at least one meter deep (3.28 feet) and over 10 acres (4 hectares). A second set of samples will be conducted from 91 of the lakes. These lakes are a subset of lakes from the EPA's National Eutrophication Survey (NES) that was conducted in 1972. Surveying these 91 lakes will allow other potential trends in water quality to be examined.

Wisconsin has 29 lakes included in the survey, ranging in size from 11-acre (4.6 hectares) Bucks Lake in Florence County to 133,404-acre (53,989 hectares) Lake Winnebago. Two of the lakes, Blueberry Lake in Sawyer County and Haskell Lake in Vilas County, are located within tribal jurisdictions. Several of the lakes already have ongoing monitoring through citizen monitoring or other efforts, and that information will be used to supplement the national lakes survey data and provide background data for interpretation.

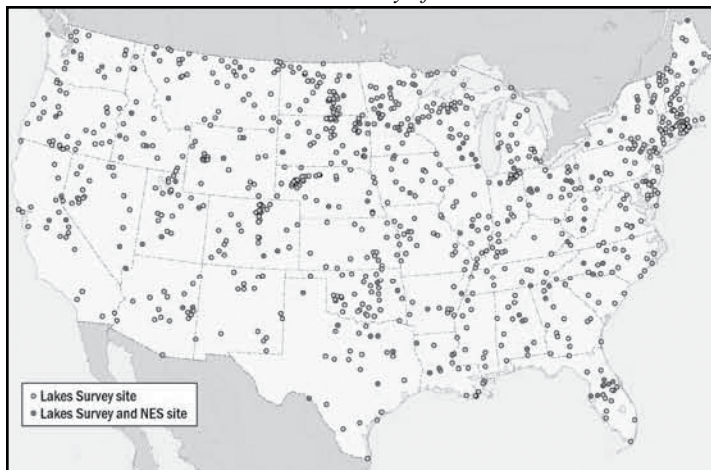
The EPA is providing funding and in-kind services to support the field and laboratory work needed to complete the survey. A team of Wisconsin Department of Natural Resources (WDNR) and U.S. Geological Survey staff will be sampling the selected lakes during a mid-summer sampling window. Samples to be collected include standard water quality constituents (nutrients, pH, color, chlorophyll a, etc.), water clarity, physical profiles,




phytoplankton and zooplankton, a sediment core, algal toxins, pathogens, and benthos (lake-bottom organisms). In addition, a comprehensive shoreline assessment will be performed at 10 sites around each lake. These core indicators will be examined to diagnose the lake's water quality, ecological integrity, and recreational value.

The WDNR staff has been actively involved in refining the sampling design, selecting metrics, reviewing field and laboratory protocols, conducting site reconnaissance, and communicating with other states on plans for the survey. The WDNR is planning to use the national lake survey effort to complement and enhance its own lake monitoring and assessment efforts in Wisconsin. For example, WDNR may add more lakes to better report on lake conditions representative of the full range of Wisconsin lake types. The WDNR may also collect additional data, such as detailed aquatic plant information or enhanced littoral and shoreland habitat parameters.

Source: USEPA's Survey of the Nation's Lakes Fact Sheet



*A total of 909 lakes are included in the national lake survey.*

Results of the national survey of lakes will be analyzed and compiled during 2008, with a final report issued in 2009. For more information on the survey of the nation's lakes, visit [www.epa.gov/owow/lakes/lakesurvey](http://www.epa.gov/owow/lakes/lakesurvey). 

*by Tim Asplund and Marilyn Larsen,  
Wisconsin Department of Natural Resources*



## Moving Expressions

Do you display your love for your lake every time you drive your car? If you have a personalized license plate that is related to Wisconsin's lakes, send us a photo. We'll print it in a future issue of *Lake Tides*.

To share your creative license plate, email a high-quality electronic photo to [uwexlakes@uwsp.edu](mailto:uwexlakes@uwsp.edu) or send a high-quality print to *Lake Tides*, UWEX-Lakes, 800 Reserve Street, Stevens Point, WI 54481.







# 2007 Wisconsin Agents of Change ...at a glance

## AGENTS OF CHANGE

### 2007 Wisconsin Lakes Convention April 26-28, Green Bay KI Convention Center/Regency Suites

Come to the 29<sup>th</sup> Annual Wisconsin Lakes Convention! Wisconsin lakes are changing...and so are we. Wisconsin lake enthusiasts have a strong history of being *agents of change* and making a difference for lakes. Join peers and experts as we descend into the deep knowledge of lakes, from science, to people, to policy. This is one of the largest gatherings in the nation of lake aficionados.

This Wisconsin Lakes Convention focuses on how to be an effective agent for positive change in your lake community. This is an exceptional opportunity to listen, learn, and discuss your lake experiences and questions with others. You will gather a wealth of information, ranging from cutting-edge research to lake management policy. Take home strategies to effectively reach and influence legislators and other decision-makers. Find out how individuals and lake organizations have embraced change and discovered fresh and innovative ways of effectively operating in a changing lake world.

*The three days provide an  
unprecedented opportunity to  
learn, share and network.*

*-2006 convention participant*



### Thursday

9:00-6:30	Exhibit Hall Open
9:30-5:00	<b>Field Trip</b> - Lake Winnebago (off-site)
9:30-12:30	<b>Workshop Block I</b>
11:00-11:30	Refreshment Break in Exhibit Hall
12:30-2:00	Lunch (speaker)
2:00-5:00	<b>Workshop Block II</b>
3:30-4:00	Refreshment Break in Exhibit Hall
5:00-6:00	Networking time
6:00	Dinner
	• Lisa Conley
Evening	<b>Lake Leaders Reception/Hospitality</b>

### Friday

7:30-6:00	Exhibit Hall Open
9:00-11:15	<b>Welcome</b>
	• Scott Hassett
	<b>Plenary Session</b>
	• Dr. John Magnuson
	• Peter Annin
11:30-1:00	Lunch
	• Wisconsin Lake Stewardship Awards
	• Russ Rasmussen
	• Governor Jim Doyle (invited)
	• Senator Mark Miller (invited)
1:00-1:50	<b>Concurrent Sessions I</b>
2:00-2:50	<b>Concurrent Sessions II</b>
3:00-3:30	Refreshment Break in Exhibit Hall
3:30-4:20	<b>Concurrent Sessions III</b>
4:30-6:00	Reception celebrating <i>Agents of Change</i>
8:00-?	<b>Casino Night &amp; music/refreshments</b>

### Saturday

7:30-1:00	Exhibit Hall Open
8:00-8:50	<b>WAL Annual Meeting</b>
8:00-8:50	<b>Get-to-Know Fish &amp; Watershed Groups</b>
9:00-9:50	<b>Concurrent Sessions IV</b>
9:50-10:10	Refreshment Break in Exhibit Hall
10:10-11:00	<b>Concurrent Sessions V</b>
11:10-12:00	<b>Concurrent Sessions VI</b>
12:00	Lunch and Closing Ceremony

*Agenda subject to change.*

# Lakes Convention

## Keynote Speakers



**Dr. John Magnuson**

**“Changing Strategies in a Changing Climate”**

Everyone’s talking about it...climate change. The climate is changing and this change will affect the lakes of Wisconsin. Join Dr. John Magnuson, nationally renowned researcher on climate change and Wisconsin lakes, as he charts a course into the unclear future of Wisconsin’s water resources. The changes that are in motion will demand strategies and actions to deal with the climate effects on freshwater ecosystems.

Emeritus Professor and past Director of the Center for Limnology at the University of Wisconsin-Madison, John is one of our nation’s premiere limnologists. His research interests focus on long-term regional ecology, aquatic ecology, climate change, biodiversity and invasive species. John is recognized internationally in the field of lake science and was the recipient of the “Lifetime Achievement Award” from the American Society of Limnology and Oceanography. John’s work has included the assessments of lakes and streams for the Intergovernmental Panel on Climate Change as well as for the Union of Concerned Scientists’ “Confronting Climate Change in the Great Lakes Region.”



**Peter Annin**

**“Water Wars”**

Water is one of our most treasured resources. The idea of limited water is common elsewhere, but unheard of in the Great Lakes states...or is it? Join former Newsweek correspondent, Peter Annin, as he provides groundbreaking insight into the battle to protect one of North America’s most valuable natural resources. His new book, The Great Lakes Water Wars, has been called the definitive book on the Great Lakes water diversion controversy. Peter will explore the hidden history and precarious future of the highly controversial Great Lakes water diversion issue. What’s the connection between Great Lakes and inland lakes? Join us and find out.

A veteran journalist in conflict and the environment, Peter Annin spent more than a decade reporting on a wide variety of issues for Newsweek magazine. He specialized in coverage of domestic terrorism, including the Branch Davidian standoff in Waco and the bombing of the federal building in Oklahoma City. He also covered droughts in the Southwest, hurricanes in the Southeast, wind power on the Great Plains, forest fires in the West, recovery efforts in the Great Lakes, as well as the causes and consequences of the “dead zone” in the Gulf of Mexico. He currently works as Associate Director of the Institute for Journalism & Natural Resources, a nonpartisan national nonprofit that organizes educational fellowships for environmental journalists.

[www.uwsp.edu/cnr/uwexlakes/conventions](http://www.uwsp.edu/cnr/uwexlakes/conventions)



# Thursday Full-Day Offerings

## Lake Winnebago Field Trip

**9:30am – 5:00pm** (off-site)

Join us as we explore the waterways used by the Native Americans and early European explorers of Wisconsin. As we travel along the Wolf River, Lake Winnebago and the Fox River, we'll put Wisconsin's largest lake into a regional context historically and explore the many challenges and opportunities that face its citizens today. Our stops and discussion will highlight topics both unique to the Lake Winnebago System and shared by other shallow lakes throughout Wisconsin, including eutrophication, shoreland development, habitat restoration, aquatic invasive species, and water level management. Our tour guides will be a host of local agency staff and citizen experts that can offer a unique perspective on the role of the river in the history (and future) of Northeast Wisconsin.

*Space is limited, so sign up early to reserve your spot.*

*Fee: \$25*

*Note: The fee covers field trip transportation via deluxe tour bus.  
Thursday Convention registration is still required.*

## Conservation Marketing: Understanding and Fostering Behavior Change

**9:30am-12:30pm, resumes 2:00-5:00pm** (at the KI Convention Center)

Have you ever pondered how to get people to change their behavior at the lake? This full-day interactive workshop in Conservation Action Marketing® will provide you tools to help raise awareness, inform or educate your audience, bring about attitude and behavior change, and ultimately sustain that behavior change.

Conservation Action Marketing® draws from the best of community-based social marketing, modern ethical business marketing, and environmental education techniques to help you create and deliver a “customer-centered” conservation marketing program. Discover ways to match your conservation message to the needs of your community and help remove barriers to change. See practical examples and learn techniques that can be easily incorporated with your own materials. Learn how to use motivational techniques and communication styles in order to change attitudes and create sustained behavioral changes.

*Limit: 40*

Presenters: Clive Callaway and Sarah Kipp, Founders of *The Living by Water Project*  
Salmon Arm, British Columbia

## What's the Scoop on Thursday?

Thursday is designed to give you an opportunity to explore your favorite topics in-depth. There are two full-day offerings (see descriptions above) and 13 half-day workshops (see pages 9-11). Register for Thursday and choose one full-day option **OR** one morning and one afternoon workshop.

*Register early to save your spot!*



# Thursday Half-Day Offerings

## Morning Workshops

9:30am-12:30pm

### A. Can You Hear Me Now? Giving Effective Testimony to Legislators at a Public Hearing

Do you have an opinion on lake issues? Ever feel that your voice is just not being heard? Then this workshop is for you. Using a mock legislative hearing as a teaching tool, participants will learn the techniques of effective citizen input and equip themselves to communicate with their elected public officials, whether in writing, in person, at meetings, or through the media. Learn how to avoid the pitfalls of poor communication and gain confidence as a lakes advocate.

*Limit: 30*

### B. Educating the Next Generation: Success through Collaboration

Want to actively engage students and youth with lakes and watershed issues? This workshop will give you what you need to deliver hands-on, project-based learning experiences for the next generation. Presenters will share examples of collaborative efforts among groups such as K-12 teachers, lake organizations, environmental education centers, local governments and state agencies. Curriculum materials, funding ideas, and state academic standards will be discussed.

### C. Well-kept Secrets All Lake Property Owners Should Know

This positive and humorous workshop gets to the skinny-dipping truth and takes a fresh look at an encyclopedia's worth of things we know and don't know about lake property. Learn about positive solutions for lake and lakeshore problems that can be applied to any property. Take a sensible look at how to benefit your lake by using your time and money more effectively. Learn why *lawns are losers* and discover new uses for what grows on your property.

### D. Lake District Commissioner Training I: Responsibilities, Annual Meetings and More

Do you feel a little unsure about what you are doing as a lake district commissioner? Whether you are new to your lake district or a seasoned lake district commissioner, this workshop will help you sort through the requirements of being a commissioner and operating a lake district. Topics covered include: how to comply with open meetings and open records requirements, running board meetings and annual meetings, voting requirements, and communicating with members. (An afternoon workshop will cover lake district budget and financing - see page 10.)

### E. Photography: Tips and Tricks for Taking Better Photos

Photographs are powerful. If you want to learn the basics or enhance your photography skills, come learn from a pro. Discover special techniques and approaches that professional photographers use to create stronger images that move and motivate their audience. Whether you use a digital or film camera, you will expand your knowledge of lighting, composition and camera basics. Topics include people pictures, nature photos, close-up techniques, digital images, and the use of presentation and photo software. You are encouraged to bring questions and 2-3 examples of your work to share. Digital images should be on a flash drive device or CD.

## Nominate a Local Lake Steward

Do you know an outstanding person or group who dedicates time and talent to our state's water resources? We encourage you to nominate them for the prestigious Wisconsin Lake Stewardship Award. The categories are:

- ◆ Individual citizen
- ◆ Organized group
- ◆ Youth (individual or group)
- ◆ Educator
- ◆ Public official or employee
- ◆ Business

The nomination deadline is **March 16, 2007**. Recipients and all nominees will be recognized at the Wisconsin Lakes Convention, April 26-28. An online nomination form is available at [www.uwsp.edu/uwexlakes/conventions](http://www.uwsp.edu/uwexlakes/conventions). For more information call the Wisconsin Association of Lakes at 608/662-0923.

(Continued on page 10)



# Thursday Half-Day Offerings (continued)

## Morning Workshops (continued) 9:30am-12:30pm

### **F. Effective Lake Organizations: Developing Leaders and Finding and Keeping Volunteers**

Wondering how to take your lake organization to the next level? Concerned about who will lead and where they are going to come from? Having trouble keeping volunteers (including board members) and finding new people? This hands-on training will help you find answers to these questions and solutions to these challenges, focusing on the development of strong leaders and a system to keep people (old and new) plugged in and moving the organization toward its goals.

*Limit: 30*

### **G. Get to Know Your Neighbors: Frog and Toad in the Morning** (repeated in afternoon)

When's the last time you've been up close and personal with a live frog? Spend some quality time with Wisconsin's frogs and toads. Visit with live mink frogs, chorus frogs, bullfrogs and nine other species. Learn to identify these lake residents, learn their breeding calls and their habits throughout the seasons. Why is the population declining and what about these abnormalities? Come and find out. Learn how to organize and lead a fun "frog night hike" for families and others.

## Afternoon Workshops

2:00-5:00pm

### **H. Lake-Friendly Development: How to Make it Work in Your Community**

Wisconsin's lakeshores continue to see new development and re-development, and the best interests of the lakes are not always considered in the process. In this interactive session, you will learn how development can be done in a lake-friendly way and how you and your local lake group can play an active role in the decision-making process to ensure that lake protection is a top priority.

### **I. Take 'em Fishing! Angler Education**

Taking kids fishing is a great way to help them make connections between good habitat, good fishing and lakes. This workshop will highlight the Wisconsin Department of Natural Resources' Angler Education program. The program is perfect for adults wanting to offer fishing programs and adventures along the water's edge, as it easily lends itself to the after-school club setting as well as summer enrichment and traditional classroom formats for Grades 4-8. Get hands-on training and free materials aligned to state academic standards and scout badge requirements.

*Limit: 30*

### **J. Amazing Comebacks: Shoreland Restoration**

What does it take to change a green lawn into a home for wildlife and a place where water gets cleaned? Come and find out! This shoreland restoration workshop will provide step-by-step instructions on how to develop a plan, prepare a site, choose appropriate native plants, plant them, and maintain the restoration. Learn about shoreland erosion prevention techniques, when you need a permit, how to navigate through the permit process and funding opportunities.

### **K. Lake District Commissioner Training II: Budgets and Financing**

Are you often overwhelmed by the financial aspects of running a lake district? In this workshop we will sort through lake district budget specifics, bookkeeping practices, and funding methods including mill levies, special charges and special assessments. (A morning workshop will cover lake district commissioner responsibilities, annual meetings and other topics - see page 9.)

# Thursday Half-Day Offerings (continued)

## Afternoon Workshops (continued) 2:00-5:00pm

### **L. Aquatic Plant Identification: At the Root of a Healthy Lake Ecosystem**

Learning more about the aquatic plants in your lake is not only fun, but it can help with a myriad of undertakings from developing an Aquatic Plant Management (APM) plan to applying for a grant, or just being satisfied with a positive identification. Learn from experts while working with samples of Wisconsin's common aquatic plants.

*Limit: 25*

*Fee: \$30 (includes materials such as the book Through the Looking Glass)*

### **M. An Introduction to Lake Management Planning**

New information, better methods, changes in technology and new funding programs make planning for the protection, restoration or enhancement of our State's lakes an evolving process. This introductory workshop will explain the basics of lake planning in Wisconsin. Aimed at lake organizations as well as professional service providers, the workshop will show you how to get started, how to determine what type of planning you need, the best methods for collecting and analyzing information, and how to use lake grants and other resources to support your efforts.

**N. Get to Know Your Neighbors: Frog and Toad in the Afternoon** (repeated - see description in Morning Workshop Block, page 10)

### **O. Clean Boats, Clean Waters: Volunteer Watercraft Inspection**

The *Clean Boats, Clean Waters* volunteer watercraft inspection program provides an opportunity to learn how and why educational awareness is so important in preventing the spread of aquatic invasive species (AIS). This workshop will provide you with an overview of AIS, instructions on how to organize an effective volunteer watercraft inspection program, and hands-on training for watercraft inspections and AIS identification. Volunteers are strongly encouraged to purchase a handbook and resource toolkit (available on-site for \$25).

*Limit: 25*

## Agents of Change in the Year 2007?

Yes...it made us think of Bond...James Bond.

To celebrate our convention theme and the year double-0 7, we bring you *Casino Night*. Of course, "Casino Night is too much for one James Bond," so gather up your fellow agents and do some reconnaissance at the Lakes Casino. The Friday evening festivities will include live music, free beer and food, and a chance to try your luck at our *no risk, just for fun, highly entertaining* Blackjack, Texas Hold 'em and Roulette tables.





# Friday/Saturday Concurrent Sessions

## 2007 Wisconsin Lakes Convention

More information including full descriptions, presenters and times can be found on the convention website at [www.uwsp.edu/cnr/uwexlakes/conventions](http://www.uwsp.edu/cnr/uwexlakes/conventions).

### Agents of Change: Public Involvement

Learn how to be a successful agent of change and get involved! Sample sessions:

- Reframing lake messages
- Using surveys as a data collection tool
- Lake restoration and public perception
- Working with county governments
- High school study of atrazine and lakes
- Role of citizen and lake groups in park projects

### The Nature of Things: the Wild Side of Lakes

Getting to know your animal and plant neighbors at the lake can be an interesting, beneficial, and exciting endeavor. Sample sessions:

- Freshwater sponges
- Carnivorous plants
- Wildlife and lakeshore habitat
- Waterbugs and water quality
- Wild rice restoration
- Impacts of lead fishing tackle on loons

### Dollars and Sense: Understanding Lake Economics and Water Law

Explore the legal and economic issues affecting lakes. Sample sessions:

- Update on legal actions and court decisions
- Economic impacts of angling
- Minnesota's alternative shoreland standards
- Wetland laws and decision-making processes
- Short-term lake rentals and their economic, legal, political and social ramifications

### The Ups and Downs of Lake Management: Understanding Lake Levels

Lake levels are often a key factor in understanding and managing lakes. Sample sessions:

- Shallow lake ecology
- Effects of wind, waves, and watercraft on the water quality of shallow lakes
- Water level changes and their impact on aquatic plant communities
- Climate change, human water use, and lakes
- Lake level manipulation as a management tool
- Understanding the effects of stormwater infiltration on water tables and lake levels

### Lake Organizations: Improving their Effectiveness

Gather new information and tools to enhance your lake organization. Sample sessions:

- Lake planning to build consensus and protect water quality
- Running effective lake associations
- Partnering with land trust organizations
- Financing lake organizations through endowment tools
- Hiring and working with a consultant

### Framing the Story: Aquatic Invasive Species

Aquatic invasive species (AIS) can also be *agents of change*. Learn more about the many facets of AIS – prevention, control, public perception, and management. Sample sessions:

- Developing AIS messages and signs
- Mobilizing a successful watercraft inspection effort in the town of Barnes, Bayfield County
- Using hydroacoustics to evaluate AIS treatment
- Large-scale AIS prevention in the Winnebago system
- Invasive aquatic plant treatments
- Using native plants to re-establish lake health

### Topics in Lake Science and Lake Management (Friday sessions only)

Learn more about the science of lake management and the issues affecting lakes. Sample sessions:

- Lake science basics
- Watershed activities and lake implications
- Assessing lake ecosystem health

### Save a Stamp, Register Online!

Save yourself some time and 39 cents by taking advantage of our online convention registration. You can even conveniently pay with a credit card over our secure site. If you have any questions, call us at 715-346-2116.

[www.uwsp.edu/cnr/uwexlakes/conventions](http://www.uwsp.edu/cnr/uwexlakes/conventions)

# REGISTRATION FORM

 Please fill out both sides of this registration form. 

29<sup>th</sup> Annual Wisconsin Lakes Convention - Agents of Change

April 26-28, 2007

KI Convention Center and Regency Suites, Green Bay

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Daytime Phone: ( ) \_\_\_\_\_ Email: \_\_\_\_\_

Affiliation (Lake Org., etc.) \_\_\_\_\_ County: \_\_\_\_\_

## REGISTRATION

*Registration fee includes major meals, breaks and materials.*

Thursday, April 26 (see back of this form)

Friday, April 27

Saturday, April 28

**Full convention, Thursday-Saturday, April 26-28**

*(save \$20 with the 3-day package!)*

Late Registration Fee (after April 16, 2007)

### Regular

☐ \$60

☐ \$75

☐ \$60

☐ \$175

### Early Bird (by March 26)

☐ \$55

☐ \$65

☐ \$55

☐ \$155

Check for  
vegetarian  
meals ☐

☐ \$15

## LODGING

### Lodging Information:

KI Convention Center/Regency Suites  
333 Main Street  
Green Bay, WI 54301  
(800) 236-3330 or (920) 432-4555

### Rates:

\$97 single or double occupancy

\$107 king single or double occupancy

\$20 for each additional person up to a  
maximum of 6

Price includes full breakfast and 2 hours  
of complimentary beverages each evening.

***Please refer to the Wisconsin Lakes  
Convention when reserving your room.***

Nearby Holiday Inn: (920) 437-5900  
(\$89 single).

## PAYMENT

**Registration Fee:**

\$ \_\_\_\_\_

**Thursday Field Trip or Workshop Fee:**

\$ \_\_\_\_\_

*(See other side of form)*

**Late Fee (if applicable):**

\$ \_\_\_\_\_

**Total Enclosed:**

\$ \_\_\_\_\_

Payment method: ☐ Check ☐ Credit Card

Check one: ☐ Visa ☐ Master Card

Cardholder's Name \_\_\_\_\_

Card No. \_\_\_\_\_

Expires \_\_\_\_\_

Or register and pay online at

[www.uwsp.edu/cnr/uwexplakes/conventions](http://www.uwsp.edu/cnr/uwexplakes/conventions)

*You will receive confirmation and  
additional information upon registering.*

**No refunds issued after April 23, 2007.**

 Please fill out both sides of this registration form. 

**Mail this form with your check (payable to UW-Extension Lakes) or credit card information to:**

UWEX Lakes, UWSP/CNR, 800 Reserve Street, Stevens Point, WI 54481 (715) 346-2116 [uwexplakes@uwsp.edu](mailto:uwexplakes@uwsp.edu)

***Or register and pay online with a credit card at [www.uwsp.edu/cnr/uwexplakes/conventions](http://www.uwsp.edu/cnr/uwexplakes/conventions).***

# THURSDAY REGISTRATION

**Register early to save your spot!**

Online registration available with secure payment options at  
[www.uwsp.edu/cnr/uwexlakes/conventions](http://www.uwsp.edu/cnr/uwexlakes/conventions).

www.uwsp.edu/cnr/uwexlakes/conventions

## THURSDAY ALL-DAY OFFERINGS

Choose **ONE** of the all-day offerings **OR** move to the workshops section below.

☐ Lake Winnebago Field Trip  
 9:30 am - 5:00 pm  
*Limited space - register early*  
*Fee: \$25*

☐ Conservation Marketing:  
 Understanding and Fostering Behavior Change  
 9:30am-12:30pm, resumes 2:00-5:00pm  
*Limit: 40*

*see descriptions  
 on pages 8-11*

- OR -

## THURSDAY HALF-DAY WORKSHOPS

### Morning Workshops

9:30am-12:30pm

*Please indicate your **first** and **second** choice.  
 We will try to accommodate your first choice.*

- \_\_\_ **A.** Can You Hear Me Now? Giving Effective Testimony to Legislators at a Public Hearing  
*Limit: 30*
- \_\_\_ **B.** Educating the Next Generation: Success through Collaboration
- \_\_\_ **C.** Well-kept Secrets All Lake Property Owners Should Know
- \_\_\_ **D.** Lake District Commissioner Training I: Responsibilities, Annual Meetings and More
- \_\_\_ **E.** Photography: Tips and Tricks for Taking Better Photos
- \_\_\_ **F.** Effective Lake Organizations: Developing Leaders and Finding and Keeping Volunteers  
*Limit: 30*
- \_\_\_ **G.** Get to Know Your Neighbors: Frog and Toad in the Morning

### Afternoon Workshops

2:00-5:00pm

*Please indicate your **first** and **second** choice.  
 We will try to accommodate your first choice.*

- \_\_\_ **H.** Lake-Friendly Development: How to Make it Work in Your Community
- \_\_\_ **I.** Take 'em Fishing! Angler Education  
*Limit: 30*
- \_\_\_ **J.** Amazing Comebacks: Shoreland Restoration
- \_\_\_ **K.** Lake District Commissioner Training II: Budgets and Financing
- \_\_\_ **L.** Aquatic Plant Identification: At the Root of a Healthy Ecosystem  
*Limit: 25    Fee: \$30*
- \_\_\_ **M.** Introduction to Lake Management Planning
- \_\_\_ **N.** Get to Know Your Neighbors: Frog and Toad in the Afternoon
- \_\_\_ **O.** Clean Boats, Clean Waters: Volunteer Watercraft Inspection  
*Limit: 25*





# Lakes Through A Lens

Display your skills with a camera while showing your love of Wisconsin's lakes. Enter your favorite lake photos in the 5<sup>th</sup> annual photo contest at the Wisconsin Lakes Convention this year. Contest rules and entry forms can be found at [www.uwsp.edu/cnr/uwexlakes/conventions](http://www.uwsp.edu/cnr/uwexlakes/conventions) or by calling 715/346-2116.

## CALENDAR

**February 21, 2007 – Conservation Lobby Day.** Talk with your state Assembly Representative and your state Senator about why lake stewardship is important to you. For more information: [www.conservationvoters.org/Public/index.php](http://www.conservationvoters.org/Public/index.php)

**February 24, 2007 – Regional conference “From Plan into Practice: Solutions for our Changing Lakes.”** Richard T. Anderson Education Center, Waukesha County Technical College, Pewaukee. For more information: [www.wisconsinlakes.org/Events/07planintopractice.htm](http://www.wisconsinlakes.org/Events/07planintopractice.htm)

**Mar 1-2, 2007 – American Water Resources Association (AWRA) 2007 Meeting, Wisconsin Dells.** “The Future of Wisconsin's Water Resources: Science and Policy.” For more information: [www.awra.org/state/wisconsin](http://www.awra.org/state/wisconsin)

**March 3-5, 2007 – Midwest Aquatic Plant Management Society Annual Conference.** Wyndham Hotel in Downtown Milwaukee. For more information: [www.mapms.org/MAPMSConf2007.html](http://www.mapms.org/MAPMSConf2007.html)

**March 26, 2007 – Early bird deadline for the 2007 Wisconsin Lakes Convention.** See pages 6-14 for details and registration information.

**Apr 21-22, 2007 – Lake Home and Cabin Show, Milwaukee.** For more information: [www.lakehomeandcabinshow.com/wisc](http://www.lakehomeandcabinshow.com/wisc)

**May 1, 2007 – Grants Deadlines.**  
**Lake Protection and Lake Classification Grants**  
[www.dnr.state.wi.us/org/water/fhp/lakes/lakeprot.htm](http://www.dnr.state.wi.us/org/water/fhp/lakes/lakeprot.htm)  
**River Protection Planning Grants**  
[www.dnr.state.wi.us/org/caer/cfa/Grants/Rivers/riverplanning.html](http://www.dnr.state.wi.us/org/caer/cfa/Grants/Rivers/riverplanning.html)  
**River Protection Management Grants**  
[www.dnr.state.wi.us/org/caer/cfa/Grants/Rivers/riverprotection.html](http://www.dnr.state.wi.us/org/caer/cfa/Grants/Rivers/riverprotection.html)

**Early Bird Deadline!**  
**March 26, 2007**

Register early for the 2007 Wisconsin Lakes Convention and be an *Agent of Change* for Wisconsin Lakes!



## Lake Tides -- 905032

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University of Wisconsin-Stevens Point  
800 Reserve Street  
Stevens Point, WI 54481

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### IN THIS ISSUE

Paleolimnology.....	1-3
Lake District Q&A.....	3
EPA National Lake Survey.....	4-5
2007 WI Lakes Convention.....	6-14
Agenda At-a-Glance.....	6
Keynote Speakers.....	7
Field Trip & Workshops.....	8-11
Concurrent Sessions.....	12
Registration Form.....	13-14
Calendar.....	15

### Wisconsin Lakes Partnership



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Phone: 715-346-2116  
Editor: Amy Kowalski  
Design & Layout: Amy Kowalski  
Contributing Editors: Robert Korth & Tiffany Lyden, UWEX, Carroll Schaal, WDNR  
Photos by: Robert Korth (unless otherwise noted)  
Illustrations by: Carol Watkins, Chris Whalen

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## Reflections

**I***f we had no winter, the spring  
would not be so pleasant; if  
we did not sometimes taste of  
adversity, prosperity would not  
be so welcome.*

- Anne Bradstreet  
*Meditations Divine and Moral*, 1655  
American poet (1612 - 1672)

