



# LAKE TIDES

*The newsletter for people interested in Wisconsin lakes*

## On The Cutting Edge

### Silver Lake Ice

*Silver Lake a century ago was a sparkling lake and a bustling town. Just 62 miles from Chicago, this Wisconsin duet sat on the cutting edge of history. It was the center of Kenosha County's ice trade and the cradle of aquatic weed cutting. This two-part series opens with the ice trade during its glory years of 1885-1920.*

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Ice on Silver Lake was both a cover and a crop. The cover drew farmers and their strapping sons, who axed and sawed chunks of ice for storage in underground cellars. There, the clammy cargo rested until needed to cool milk and cheese. What the cellars couldn't hold went to brewers and butchers.

After the Civil War, more and more perishable produce was shipped by rail. A growing population demanded fish and beef, pork and poultry, fruits and vegetables. Demand grew as well for ice pops, ice cream, and iced pudding. So a network of railways criss-crossed Wisconsin, hauling

food from farms... and ice from lakes.

Ice harvesting remained in the hands of farmers until 1885, when an ice company came to Silver Lake and cut not a few chunks of ice but several thousand tons. A railroad built a spur line to the lake from Antioch, Illinois, and shipped the cargo to Chicago. Within three years, a dozen ice companies were competing for the silver on Silver Lake.

### Fields of Ice

The ice companies divided Silver Lake's 464 acres into ice fields, starting beyond the shallows and extending offshore as ice and weather permitted. Soon after ice-up, each company brushed and scraped snow so the ice would thicken in the night air. With luck, the ice reached a foot thick by Near Year's.



Gleason's Pictorial Drawing-room Companion, 1854.

Each ice field was staked at the corners and a line etched in the ice between adjacent stakes. A horse-drawn marker plow—an iron box with vertical saw teeth—cut grooves 3 inches deep into the ice cover. At the end of each row, the plow was turned back to mark yet another groove, 22 inches from the previous one. When all rows were marked, the plow cut grooves at right angles to the first ones. Soon the entire field was a checkerboard of grooves, marking squares in the ice, 22 by 22 inches.



Wisconsin Lakes  
Partnership



If the ice was rough, a planer plow with horizontal knife blades followed the marker plow to smooth the ice surface.

With the ice grooved and smoothed, a horse-drawn cutter plow deepened the grooves to 8 inches, or two-thirds of the ice thickness. A sheet of ice, some 400 by 600 feet, was then detached by sawing along the outer lines.

The ice sheet was floated down a channel cut earlier from shore. Along the channel, men with long ice spuds detached strips of some 8-12 ice blocks. These were split into single squares, or ice cakes, each weighing 200 pounds. The cakes were floated onto a steam-driven elevator that hoisted the ice to icehouses or waiting railroad cars.

### Storing the Silver

The icehouses around Silver Lake were humongous, only bigger. Built of cheap lumber on the lakeshore—never mind the ordinary high water mark—the houses consisted of 8-10 rooms, each 36 feet wide (along shore), 40 feet high, and some 200 feet deep (away from shore). Their double-studded walls were a foot thick and stuffed with sawdust.

Dark and damp, the icehouses were the great pyramids of the ice harvesting dynasties. Entombed in hay and snow, the ice cakes were stacked floor to ceiling. Each stack held 40 cakes and averaged 4 tons. An entire room held 1,800 stacks spaced 4 inches apart; a 10-room house held 72,000 tons. Here the cut ice rested until shipped to their commercial afterlife: home iceboxes and wholesale meat lockers.

### The Ice Crews

Each company worked roughly 90-100 men and boys, plus some women and girls in the kitchens and laundries of nearby boarding houses. Local families supplied perhaps 20% of this labor. The rest came from Chicago.

Company scouts went to South Halsted Street and the Loop, built after the Great Fire of 1871, to find

unemployed workers. Some lived at home; others, on streets. Many went willingly, lured by promised of a warm bed, a hot meal, a hint of adventure, and a dollar-a-day wage. Others, too drunk or depressed, were carried off—despite their Fourth Amendment right “to be secure . . . against unreasonable searches and seizures.”

All met at the railyards, where they were loaded onto unheated boxcars—the doors padlocked so no one jumped rail—and shipped to Wisconsin. The austere surface of Silver Lake, at once bright and brittle, was to be their home and work for the next 3-4 weeks . . . and sometimes longer.

The men worked 7 days a week and 10 hours a day, despite only 9 hours of daylight. When a storm or mild weather approached, the day shift went to 12 hours and a night shift was added, with light supplied by kerosene lanterns and bonfires on shore. Meals were served on the ice, to keep the harvest moving and the men occupied.

With ice-up in December and steady cold in January, the ice fields would refreeze to allow a second harvest. A dry but cold February brought clear ice, ideal for home refrigeration and lemonade.



Courtesy of the Wisconsin Historical Society

Each ice crew formed a division of labor. Some became plowers, sawyers, or pike polers. Others became packers in the icehouses or night guards on the ice fields. Everyone had a place. But all was not harmonious.

*Dark and damp, the icehouses were the great pyramids of the ice harvesting dynasties.*





## Ice Fights

Silver Lake failed to ice-up in some Decembers, or the ice failed to thicken. Mild weather or early snow was to blame. A January thaw confined the harvest to thicker ice formed earlier near shore. Perhaps only 5-15% of the ice cover could then be harvested.

Tensions mounted between rival companies. Scuffles might start with a wisecrack, some gear missing at night, or a sawyer cutting into an adjacent ice field. Soon 10-20 men would be wrestling on the ice, fists and poles flying. The fights intensified during mild winters, when ice fields were crowded near shore. Dunkings were a sure bet. Some even drowned and are buried in unmarked graves beneath the Wisconsin sod.

Not all ice fights were physical. Competition led to price fixing and deals with railroads. Mergers and bankruptcies in the 1890's left Silver Lake with a few ice conglomerates. But more trouble was afoot.

## Meltdown

Meat packers grew angry when mild weather disrupted ice shipments. Railroads balked at hauling dripping cargo that rusted their cars. Everyone demanded clean ice.

Chicago passed "sanitary ice laws," prohibiting sales of ice from polluted waters. Opposition to lake ice mounted after typhoid fever swept Chicago in 1901, the epidemic blamed on "bad ice." (One city resident found a fingertip in her iced tea.) Meat packers used more and more artificial ice; railroads hauled more and more dry goods. By 1914, electric refrigerators began replacing the venerable ice boxes.

Still, Chicago continued to accept Wisconsin ice. Even the weather cooperated during the 1910s, the ice coming early and thickening fast. Silver Lake, its ice crew and town residents, perhaps thought the ice trade would last till doomsday. But the end was near.

January 1921 proved to be too nice. Ice failed to thicken beyond six sorry inches. Beat down by wimpy weather and sagging sales, the ice conglomerates folded one by one. Even the icehouses that stood so proudly on shore began to crumble: victims of decay and neglect, of mold and carpenter ants, of fire and lightning.



Courtesy of the Wisconsin Historical Society

Silver Lake itself had changed in 35 years. The lake—its marshes plowed and drained, its shores trampled under foot and plank—was no longer so sparkling. The town—now spread along the west shore with over 300 residents—had grown sixfold.

But cutting of a different kind had already begun on Silver Lake, one born of "green ice" and a desire for weed-free shallows. Silver Lake would be, once again, on the cutting edge.

*By Sandy Engel. At the cutting edge of prose, Sandy harvests lakeborn articles year-round from P.O. Box 648, Woodruff, Wisconsin. His Silver Lake saga will continue in our spring issue.*

*One city resident found a fingertip in her iced tea.*

## Lake Leaders Institute Graduates Crew III

We take pride in announcing the graduation of these dedicated individuals. We look forward to working with them in the future.

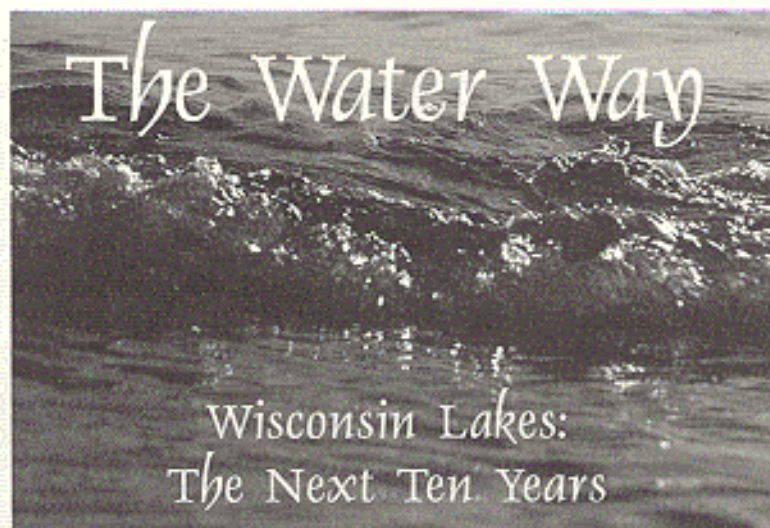
Bill Ave'Lallemant, John Bates, Fred Blake, Konrad Doepke, Jeff Gaber, Bret Hagemeyer, Diane Hanson, Chuck Hartman, Jerry Harvancik, Nancy Hill, Robert Hynek, Richard Johnson, Rich Mann, Karen McNelly, John Meinhardt, Frank Micala, Jeannie Nowak, Doug Peterson, Ken Roesler, Fred Schleg, Dale Schlough, Ed Severson, Frank Splitt, Pete Van Airdale, Allan Witt, June Yantis, and Leonard Zaleski.



## Wisconsin Lakes Convention

March 8, 9, 10, 2001

Stevens Point Holiday Inn



**It is that time again**... time to register for the 2001 Wisconsin Lakes Convention. If you are concerned about the future of the lakes and rivers in Wisconsin and you are looking for an opportunity to learn and network with other individuals that are passionate about Wisconsin waterways, this convention is a must. The largest convention of its kind is bigger and better than ever. If your lake organization needs to get a lot of information in little time, send a delegation to Stevens Point. The convention will provide an opportunity to explore state of the art technologies, gain useful information from experts in the field and speak with decision-makers about issues vital to lakes. This year's convention will feature the unveiling of the **Ten Year Strategic Plan** that will set the direction for the Wisconsin Lakes Partnership for the next decade. We will also feature the **Aquatic Ecosystem Restoration Foundation (AERF)** national team of aquatic plant experts who will conduct a special workshop symposium on aquatic plant management. We encourage you to not only attend, but to invite a friend or other group whose vision will play a role in the future of our lakes. *Attend all or part of the convention but come ready to learn and ready to share.*

### Boating Safety Home Study

Boat operators can improve their operating skills and possibly save money on insurance rates by enrolling in an approved home study boating safety course. After studying the course materials at home, a final written exam can be taken at the Wisconsin Lakes Conference. The course costs \$10.00 and is only available for ages 16 and older. The flexibility of this course will hopefully allow more people to take it. Graduates of the course will receive the DNR Boat Safety Certificate. For the pre-study packet, please contact Leanne LeBoeuf at 608-266-2203 or e-mail at [leboel@dnr.state.wi.us](mailto:leboel@dnr.state.wi.us). Leanne will send out your material and you can pay your \$10.00 when you take the written test at the conference. You can take the exam between 7 and 8 p.m. at the DNR Boating Safety booth on Friday.

### Pre-register for these workshops:

**Hands on web work:** The home computer and the world wide web have become integral to our daily life. Many lake organizations have improved their ability to communicate by developing web sites and using computers to generate newsletters. This year's convention offers a unique opportunity to work with web masters and experts at the UWSP computer lab for hands on training in developing your own web site. Saturday, March 10, 9 - 11 a.m., \$20.00; pre-registration required; class limited to the first 20 people.

**Aquatic Exotic Educational Trunk Workshop:** This two hour workshop, Saturday, March 10, 9-11 a.m., is back by popular demand. Participate in this workshop and create your own exotic educational trunk that can be used at lake fairs or lake meetings. As you create your trunk, you'll network with others that have become "pros" in identifying, monitoring and controlling exotics. \$30.00, pre-registration required; class limited to the first 25 people.

**Lodging Information:** A block of rooms is being held at the **Holiday Inn** (715-341-1340) until February 15, 2001. Rates are \$52.00/single, \$82.00/double, triple or quad. **Be sure to ask for the Lakes Convention block.**

Other nearby hotels include: Comfort Suites (715-341-6000); Country Inn & Suites (715-345-7000); Super 8 (800-800-8000); Road Star Inn (800-445-4667) or contact the Stevens Point Visitors Bureau at 800-236-4636 or 715-344-2556.



## Thursday, March 8, 2001 Wisconsin Lakes Convention

### *Of the People. By the People. For the People: Working Effectively With Local Governments*

Land use planning at the local government level might very well shape the future of Wisconsin lakes over the next ten years. This Thursday work day presents a unique opportunity to learn about the issues, the players, the tools and the skills you need to make a difference. Our lakes are an investment. Each year we spend countless hours working to make sure the investment is safe and sound. This work day will help you in that effort.

**8:00 – 9:00** Registration

**9:00 – 9:10** Opening Remarks - Judy Jooss, President, WAL

**9:10 – 10:00** Smart Growth and Long Term Implications for Wisconsin Water Resources

- David Ceislewicz, Executive Director, 1000 Friends of Wisconsin

**10:00 – 10:45** A Lake is a Reflection of its Watershed: Land Use Planning Tools for Lake Protection

Lakes and Land Use Planning Lake organizations and property owners can and should get involved in local planning efforts. Find out how land use planning, zoning districts, lake classification, shoreland zoning ordinances, subdivision ordinances, voluntary conservation easements through land trusts, and other implementation tools can be used at local levels to protect and enhance your lake. – Bryan Pierce, UWEX, Vilas Co.

Land and Water Resource Management Plans What are they, how will they influence nonpoint control funding and how can they be used at the local level to protect your lake. – Diane Hanson, Land Conservation Dept., Lincoln Co.

**10:45-11:00** Break

**11:00-12:00** Wisconsin Local Governments

How to Work Effectively with Local Governments and Influence Local Decision-Makers

– Rick Stadlerman, Wisconsin Towns Association

Opportunities to Become Involved and Make a Difference - Lake leaders discuss their experiences and explore ways to effectively work with local government. - Chuck Sleeter, Town of Nashville;

Karen McNelly, Waukesha Co.

Putting it all Together - Land and Water Resource Planning in Kenosha Co.

- LeAnn Colburn, Southeastern Regional Planning Commission

**12:00-1:00** Lunch

**1:00 – 3:00** How you can Influence Zoning and Land Use Decisions that Affect your Lake

Some of the issues addressed include:

- Who makes the decisions?
- What are the rules of the game?
- How does this decision/plan affect my lake ?

- Mike Dresen and Lynn Markham, Land Use Education Center, UW-Stevens Point

**3:15 – 4:15** Citizen Process in Action - Local Water Classification Projects

Working with local government to promote long lasting water resource protection and positive working relationships. A panel of three counties share their stories on citizen involvement in local planning efforts. Facilitated by Susan Tesarik, Wisconsin Association of Lakes

**4:15 – 5:15** Citizen Process in Action - The County Lake and River Assoc. Experience

Share experiences, network and explore the potential for county-wide and regional lakes and rivers associations in the local political field. Facilitated by Crew III Lake Leaders: Fred Blake, Washburn County Lakes and Streams Association and Ken Roesler, Lincoln Co. Lakes Association.

Sponsored by The Wisconsin Association of Lakes, UWSP Land Use Education Center, 1000 Friends of Wisconsin, Wisconsin County Code Administrators, Wisconsin Land and Water Conservation Association, Wisconsin Towns Association, Wisconsin Land and Water Conservation Dept.



## Friday, March 9, 2001 Wisconsin Lakes Convention

- 8:00-9:00 Exhibit Hall Opens - Registration - Check in  
9:00-9:15 Opening Remarks  
9:15-9:30 Signs of the Times - A multi-media 35 mm slide presentation  
9:30-10:00 The Plan - Premiering of the Ten Year Strategic Plan for the Wisconsin Lakes Partnership.  
10:00-11:00 What are We Going to Do about It? Key Wisconsin legislators discuss and answer your questions on timely Wisconsin lake issues such as shoreland development and recreational boating.  
11:00-12:00 A Hot Topic - Global warming and its implications for Wisconsin lakes.  
12:00-1:00 Lunch - *Supreme Court Justice David Prosser*  
1:30-2:30 Workshop streams #1: (8 concurrent sessions)  
2:30-3:00 Break in Exhibitors Hall  
3:00-4:00 Workshop streams #2: (8 concurrent sessions)  
5:00-7:00 Exhibitors Social  
7:00-8:00 Boating Safety Exam  
6:00-8:00 Aquatic Ecosystem Restoration Foundation (AERF) discussion

## Saturday, March 10, 2001

- 7:30-8:45 Wisconsin Lake Stewardship Awards Breakfast  
9:00-10:00 Workshop Streams #3 (9 concurrent sessions)  
10:00-10:15 Break in Exhibitors Hall  
10:15-11:15 Workshop Streams #4 (9 concurrent sessions)  
11:15-12:15 Closing ceremony, refreshments and music by..... White Water  
12:30 - 2:00 WAL Annual Meeting (members and non-members welcome )

### Streams and Workshops

1. **Aquatic plant management with chemicals: AERF symposium** - In this stream, experts from around the nation will answer your questions on a variety of aquatic plant issues. You will get the scoop on fish and aquatic plants, toxicity of aquatic herbicides, nuisance aquatic plants, ecological impacts of plant management techniques and why aquatic herbicides affect plants and not you.
2. **Wet Socks and Waders: Aquatic Ecology** - In this stream explore the subject of lake ecology, exotics and shoreland restoration. See page 4 for additional detail on the exotic educational trunk component (Saturday, 9-11 a.m.) of this stream. You must be pre-registered for this two hour workshop (\$30.00).
3. **Laws and Water** - Ask questions and get answers from attorneys specializing in water law and lake organization legal issues. Get legal updates and insights on various lake issues such as boating regulations and ordinances and the implications of the Chapter 30 recodification initiative.
4. **Nuts and Bolts of Lake Management** - This session will explore the day to day details of operating a lake organization. Get tips on everything from purchasing an insurance policy to writing by-laws and dealing with requests for absentee ballots. Tailor-made rivulets will address the issues affecting both lake associations and lake districts in specially crafted breakout mini-sessions. Work with the pros and learn what it really means to operate a lake district or lake association effectively.
5. **If Fish Can Work Together, So Can We!** - The ecology of building relationships to achieve transformative results. This session will provide participants with opportunities to use their experiences working with Wisconsin lakes to explore ways in which they might encourage volunteers, build teams, and use conflict creatively to achieve results that make a difference.
6. **Helping Hands (Self-Help)** - Get up to speed on state of the art monitoring techniques. Learn about the partnership between remote satellite sensing and Self-Help volunteers. Discover what's new in sampling equipment as well as how to use it.
7. **The Business of Lake Management** - Lake businesses from around the region share their expertise and their tips on managing grants and working with consultants.
8. **Visualize the Possibilities:** You, your basin educator, your web site and lake publications. Explore the cutting edge! Discover ways to spice up your web site and newsletters through digital images for web and print publications; and learn how to maintain your web site. Get up to speed on the latest computer visioning software program to see what your shoreland would look like if landscaped in different ways. Also learn how to access existing materials on the web and elsewhere for your newsletters.
9. **Hands-on web work.** Explore the potential for more effective communications via the web. This is a basic course on developing a web site. You must be pre-registered for this two hour workshop (Saturday, 9-11 a.m., \$20.00). See page 4 for additional details.



**Wisconsin Lakes Convention, March 8, 9, 10, 2001**  
**Registration Form - Pre-Register by February 23rd to avoid \$10 late fee.**



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

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

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

Daytime Telephone: \_\_\_\_\_ E-Mail: \_\_\_\_\_

I am representing \_\_\_\_\_ Lake in \_\_\_\_\_ County

My lake has sent a rep. to the Convention \_\_\_\_\_ times. I have personally attended \_\_\_\_\_ times.

\$ \_\_\_\_\_ \$35.00 Thursday, March 8: Of the People, By the People, For the People: Working Effectively With Local Governments

\$ \_\_\_\_\_ \$45.00 Friday, March 9: Lakes Convention Day 1 - includes materials, lunch/breaks, Ten Year Strategic Plan

\$ \_\_\_\_\_ \$35.00 Saturday, March 10: Lakes Convention Day 2 - includes materials, Lake Stewardship Awards Breakfast/Breaks

\$ \_\_\_\_\_ \$70.00 Package Fee for Friday and Saturday (savings of \$10.00)

\$ \_\_\_\_\_ \$35.00/Trunk - Aquatic Exotic Educational Trunk Workshop; limited to 25.

\$ \_\_\_\_\_ \$20.00 - Work on the web, hands-on computer workshop at UWSP Computer Lab; limited to 20.

\$ \_\_\_\_\_ \$5.00/day K-12 Student Fee, meals not included \_\_\_\_\_ Friday \_\_\_\_\_ Saturday

\_\_\_\_\_ Vegetarian Meal Requested

\$ \_\_\_\_\_ Extra meals only (Friday lunch, \$15.00; Saturday breakfast, \$12.00)

\$ \_\_\_\_\_ \$10.00 Late Registration Fee (if postmarked after February 23, 2001)

\$ \_\_\_\_\_ Total Registration Fee Enclosed

Mail form and check payable to UW-Extension, to: UWEX-Lakes, 1900 Franklin St., CNR-UWSP, Stevens Point, WI 54481. Sorry - no telephone or credit card registrations accepted.

**Lodging Information:** A block of rooms is being held at the Holiday Inn (715-341-1340) until February 15, 2001. Rates are \$52.00/single, \$82.00/double, triple or quad. Be sure to ask for the Lakes Convention block.

\_\_\_\_\_ My non-profit lake organization would like a display table/poster space (must provide own display boards; bring easel if possible)

Contact person: \_\_\_\_\_ Phone: \_\_\_\_\_

E-Mail: \_\_\_\_\_

**You will receive confirmation of your registration and your place in the limited attendance workshops.**

## Don't Let Milfoil Foil Your Lake

While boating last September on Lake Minoqua in Oneida County, Laura Herman, DNR Lakes Biologist and Self-Help Coordinator, and her husband, Robin, noticed a Eurasian Water Milfoil (EWM) plant growing near the boat landing. Laura had done the last plant survey on this lake back in 1996 and knew that the healthy aquatic plant community of 38 species did not include EWM. This discovery was lucky for Lake Minoqua. Early identification of this nasty exotic makes eradication or control much easier, and can help prevent the spread into other waterbodies. In this case the Lake Association hired a diver to go underwater to retrieve whole EWM plants near the landing and dispose of them. With any luck, the scuba diver found and destroyed all EWM in this bay. Just to be on the safe side, plant surveys will be conducted next year to make sure all EWM beds were destroyed. If any EWM plants are found, a control strategy will be worked out with the Lake Association.

When it comes to looking at and identifying the plants on a lake, Laura just can't help herself. She finds aquatic plants fascinating. Laura is one of many Eurasian Water Milfoil Monitors throughout Wisconsin. Many EWM Watchers are Self-Help Lake Monitoring volunteers. Others are interested citizens who prize the quality, diversity and beauty of Wisconsin Lakes. They know that exotic species such as EWM disrupt the stability of natural ecosystems and threaten biodiversity. The more volunteers that are out actively looking for this aquatic pest, the better.

### Why Watch for Eurasian Water Milfoil?

EWM was introduced to the U.S. from Europe, Asia and northern Africa. The first authenticated record of the plant was in 1942 in a Washington D.C. pond. Since then, it has travelled throughout the U.S. and can now be found in 46 of the 50 states. As of October 2000, EWM has been verified in 55 counties in Wisconsin and 338 waterbodies. Volunteers play an integral part in learning to recognize the plant and checking local lakes for the presence of EWM. And most importantly, volunteers spread the word - education is the best defense against EWM and other aquatic exotics.

### How do Volunteers Watch for EWM?

Equipped with a training package consisting of fact sheets, reporting forms, stamped envelopes, information on where the plant has been found and what lakes are presently being monitored, EWM Watchers motor around their lake once or twice a summer on clear, calm days checking plant beds and raking up suspect plants. Since EWM has been found growing in depths from 1 to 20+ feet, watchers check both the shallows and deeper water. A rope is attached to a garden or thatching rake allowing the volunteer to get to those plants choosing to grow in the deep reaches of the lake. Beaches are also checked in order to retrieve smaller fragments.

If volunteers find a plant they think is EWM they either bring the sample to their local DNR Service Center for verification or dry and press the sample for later verification. A reporting form is sent to the local Self-Help Coordinator each time the lake is checked, whether or not EWM has been found. A database is maintained with the lakes that have a verified EWM presence.

### Would you like to be an EWM Watcher?

With more than 15,000 lakes in Wisconsin, volunteers are an integral part of all lake monitoring efforts. If you would like more information on becoming an EWM Monitor, please contact the Self-Help Coordinator closest to you. If you are a Self-Help Lake Monitor, you may leave a message on the Secchi Line and your coordinator will get back to you.

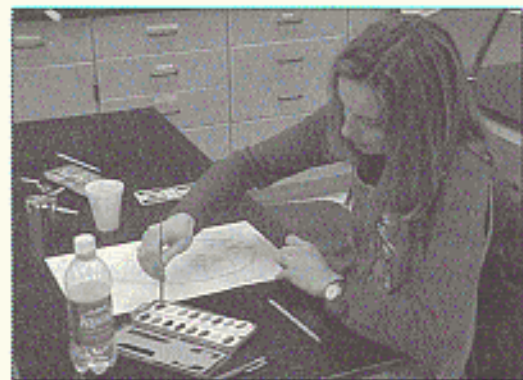
There is a video available entitled "Stop Exotics, Clean Your Boat". The video looks at ways we can stop the spread of EWM and zebra mussels. Just ask your Self-Help Coordinator to borrow the video for a meeting or home viewing.



## Bass Lake Sponsors Workshop

In late November, six teachers from the New Richmond School District and three representatives of the Bass Lake Rehabilitation District (St. Croix County) gathered together to learn more about water education in a Project WET workshop.

Project WET (Water Education for Teachers) is an international program that is active in all fifty states. In Wisconsin, the program is spon-



sored by the Wisconsin Lakes Partnership. Project WET seeks to facilitate and promote the awareness, appreciation, knowledge and stewardship of water resources through the development and dissemination of classroom ready teaching aids. Activities can be used by classroom teachers, youth organization leaders, nature center staff – or in this case – Bass Lake Rehabilitation District members to help educate area youth on the importance and management of their lake.

Workshop participants worked together to complete activities from the Project WET Curriculum and Activity Guide, a collection of over 90 activities that are hands-on, easy to use, and fun. The guide covers diverse topics and is interdisciplinary, meaning it is not all science! Activities also address skills in math, language arts, social studies, fine arts and health.

Terry Leverenz, New Richmond High School science teacher, comments the “activities are well-defined and presented in a way to make them easy to use”. His co-worker in the En-

glish department, Stephanie Kanno, says she has “already modified a few activities to fit with (existing) novel units, native literature, and more.”

Thanks to the Bass Lake Rehabilitation District, who sponsored the workshop, all participants received the Project WET Curriculum and Activity Guide free of charge! If your lake association is interested in sponsoring a Project WET workshop for members and local teachers, contact the Project WET-Wisconsin Coordinator: *Mary Pardee, 715/346-4978; mpardee@uwsp.edu*

## Life Under The Ice

This winter I discovered how to:

- Catch a snowflake
- Make a snow gauge
- Check the snowpack depth and layers

I also learned about:

- How snow produces water
- The effect of snow melt on trees
- The color of snow
- How water layers
- How to make ice castles

Sound like fun? Adopt-A-Lake has a new winter curriculum guide, *Life Under the Ice*.



This booklet is available for teachers, lake lovers, winter adventurers or lake organizations looking for activities for their annual fish jamboree! Contact *Laura Felda, Adopt-A-Lake Coordinator (715-346-3366; lfelda@uwsp.edu)* for information on the booklet, or to schedule a *Life under the Ice* workshop. Happy Discovering!





*More than 40 percent of the registered boats in Wisconsin are between 16 and 39 feet long, compared to just 18 percent 20 years ago.*

## Fueling Around

### Wisconsin considers modifying the Motorboat Gas Tax Formula

**What is the motorboat gas tax formula?** Many of the water programs in Wisconsin are all or partially funded by a transfer of motor fuel tax revenue associated with the amount of gas used by boats. These dollars from boat fuel use are placed in an account in the state's conservation fund and then used for programs like the Wisconsin Lakes Program. The amount of fuel tax revenue transferred is calculated using a 1985 formula that assumes a boat uses 50 gallons of fuel a year. The motor fuel tax is adjusted annually according to a statutory formula (in April 2000 it was \$0.264).

**What does it pay for?** The tax helps pay for water safety patrols and education activities that help keep boaters, swimmers, anglers and other enthusiasts safe on Wisconsin's lakes and rivers. It helps pay for conservation programs that protect water quality in lakes and rivers, fishing opportunities and scenic beauty. This funding source also pays for things like boat access sites, recreational boating projects, lake and river management activities, grants, and dam safety efforts.

**Is boating on the rise?** Boating is on the rise and our waters are feeling the pressure. The number of registered boats in Wisconsin has almost doubled since the late 1960s, growing from 303,000 in 1969 to more than 564,000 in 1999. Boats and boat motors also have been growing bigger, spurring a dramatic increase in the amount of fuel boats use.

**The Proposal.** The DNR is proposing to adjust the motorboat gas tax formula to reflect a more realistic but still conservative 80 gallons of gas a year used by boats in Wisconsin. A 1995 Ohio study estimated that boaters used 299 gallons per year, and when usage figures from a 1999 Minnesota study are applied to the number and types of boats in Wisconsin, the average usage tops 100 gallons.

**What is Best for Wisconsin?** The conventional wisdom believes that money raised by boat use should be used to support boat and water uses in the Badger State. An example is the spread of exotic aquatic creatures by boats. Boats are a vector in the spread of invasive species like zebra mussels and Eurasian watermilfoil. Some states like Minnesota operate inspection programs at boat access sites and have used them to successfully control the spread of these exotics. Wisconsin lacks such a boat inspection program. The DNR has proposed that a portion of the increased revenues from the motorboat gas tax transfer would enable DNR to conduct a more comprehensive education campaign and establish a boat inspection program similar to Minnesota's.

The proposed change in the formula to 80 gallons of fuel a year would reflect current estimates of motorboat fuel usage and the effects of the growing number of motorboats on public safety and the environment. The increase would represent less than 1% of the Wisconsin motor fuel tax collected in fiscal year 2000. The formula change would increase the amount of the motorboat gas tax revenue transferred to the water conservation fund from about \$10.7 million a year to \$17.1 million a year in the year 2002.

**Getting the Most Miles for Our Money.** Wisconsin's lakes and rivers anchor the state's \$8 billion tourism industry. Some folks regard increasing these funds as a fair way to keep Wisconsin waters safe and enjoyable for all citizens and visitors, while protecting water quality, fish populations and scenic beauty. Legislators will need to decide if \$6.4 million is better spent on our 15,000 lakes and 43,000 miles of rivers or converting two miles of a two lane highway into four lanes. **If you have comments or questions contact your local legislator or The Wisconsin Association of Lakes (WAL) at 1-800-542-5273 or e-mail: wilakes@execpc.com**



## UW 'Biocomplexity' Project to Focus on Northern Lakes

A team of University of Wisconsin-Madison scientists have received a grant to conduct a five-year, \$3 million study of how human use of northern Wisconsin Lakes affects sensitive shoreline ecosystems. The grant is part of the National Science Foundation's new program on biocomplexity, which will help foster understanding of how living things at all levels interact with their environment. The UW-Madison study will focus on 50 lakes in Vilas and Oneida counties.

"Lake-edge environments are ideal for this program, because so many things are happening in the near-shoreline area," says Stephen Carpenter, principal investigator and UW-Madison Professor of Limnology. "It's the nursery for most life in a lake and the area where most human impacts occur."

The study will analyze human land use issues such as forestry and recreational development, fish production, near-shore vegetation and habitat, and exotic species problems in the lakes. The goal will be to measure how human use of the lakes affects the overall health of the ecosystem. The scientists will work from UW-Madison's Trout Lake Station, north of Woodruff.

### Wisconsin Lake Stewardship Awards

Consider submitting a nomination for the Wisconsin Lakes Stewardship Awards. Nominating a person or group can be time consuming, but the reward is worth it. Winners and nominees will be recognized at the State Lakes Convention in March 2001 at Stevens Point. The Wisconsin Lake Stewardship award is designed to recognize an individual or group whose outstanding contributions of time and effort have made a positive difference in the well-being of Wisconsin's lakes. Winners of this prestigious award will join a distinguished group of lake leaders that have made their mark on Wisconsin lakes. The following items must be included with the nomination:

- **Letter of Recommendation.** This letter from the sponsor explains why the nominee is deserving of the award.
- **Letters of support.** At least three letters from individuals representing varied interests should be submitted.
- **Supporting information.** Letters, newspaper articles, copies of materials developed, and other items that support the nomination must be included.

**Picking a winner is a tough process. Winners of the Lake Stewardship Award are evaluated based on the following criteria :**

- Participation in a diverse range of activities and an investment of substantial time.
- A demonstration of benefits to a lake or lakes and a willingness to share skills and information.
- A commitment to developing relationships and teaching others about lakes stewardship.

Submit your nominations to UWEX-Lakes, 1900 Franklin St., CNR Bldg., Stevens Point, WI 54481, or [uwexlakes@uwsp.edu](mailto:uwexlakes@uwsp.edu) by February 15, 2001.

*Winners of this prestigious award will join a distinguished group of lake leaders.*

### C A L E N D A R

**Jan. 27, 2001** - Southeast Wisconsin Lakes Conference, Youth Building State Fair Park; contact Wisconsin Association of Lakes at 1-800-542-5253.

**May 5, 2001** - Washburn County Shoreland Restoration Workshop. Contact the Washburn County Extension office for more information at 715-635-4444.

**June 23, 2001** - Washburn County Lake Fair. Contact the Extension office for more information at 715-635-4444.

**Nov. 7-9, 2001** - North American Lake Management Society, 21st International Symposium. Local Host: Wisconsin Association of Lakes.



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## Reflections

"We know enough of our own history by now to be aware that people *exploit* what they have merely concluded to be of value; but they *defend* what they love."

- Wendell Berry