



LAKETIDES

The newsletter for people interested in Wisconsin lakes

It Must be El Niño!

How Could Global Climate Change Affect Wisconsin Lakes?

By Katherine Webster

Katherine works for DNR Bureau of Integrated Science Services in Madison.

Volume 23, No. 2
Spring 1998

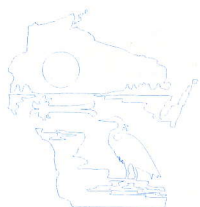
There has been a lot of talk lately about global climate change. The concentration of so-called "greenhouse gases" like carbon dioxide (CO₂) and CFCs is steadily increasing in the atmosphere as a result of human activities. These gases spread throughout the atmosphere, creating a true global issue. The world's nations are debating the best global strategy to follow. But what about Wisconsin lakes? Lake Tides asked a long term trends expert to peer into the crystal ball to consider what a warmer climate may mean for lakes.

At first glance, the predictions of how big an increase in temperature we can expect from climate change seem too small to worry about. With a doubling of CO₂ (2xCO₂), the latest climate models, which have admittedly high uncertainty, predict that Wisconsin should experience an increase in summer and winter air temperature of around 5°C (9°F). Precipitation is predicted to remain the same or decrease by up to 10% in the summer and increase in the north (20%) and decrease in the south (10%) during the winter. Even these seemingly small changes could have dramatic effects on Wisconsin lakes. In addition to these predictions of a generally warmer and drier climate, modelers also predict that the frequency of extreme events, like floods and droughts, will increase.

Recently, there has been a lot of research into how global climate change could affect aquatic ecosystems. There have been three main tools used by these researchers. First, mathematical models have been developed to predict responses ranging from how far lake levels will decrease to how much fish habitat will be lost. Second, researchers have looked at long-term data to link lake features with climatic variation to make predictions about the future. And, third, the recent severe drought in the late 1980's gave us a preview of what might happen following global climate change. Here are some of the predictions for the effects of climate change on Wisconsin lakes.

Ice-Cover

This record mild winter makes us think twice about the possibility of global warming. Global warming is predicted to decrease the duration of ice cover such that in some years, lakes may not freeze at all.



**Wisconsin Lakes
Partnership**



While scientists are certain that climate change will happen, they are less certain of the magnitude of change and the scope of impact on lake ecosystems.

Under a 2xCO₂ warming scenario, predictions are that some Vilas County lakes may not freeze in 1 out of 3 years while Madison's Lake Mendota may not freeze in 9 out of 10 years. The average duration of ice-cover on Lake Mendota has already decreased by 8 days since the turn of the century. More recently, average ice cover has decreased by an additional 6 days. Ice duration has also been linked to el Niño events, such as the one we're currently experiencing. One year after the onset of el Niño, ice break up dates are significantly earlier in southern lakes, but not in northern lakes. Watch your lake to see if it holds true this spring!

Fish Habitat

Fish require certain temperature and dissolved oxygen conditions to survive. One obvious outcome of climate change is the warming of lake waters. This may actually benefit fish who are at the northern edge of their range, which includes many fish species in Wisconsin. In lakes with deeper waters that remain cool during the summer, thermal habitat may actually improve even for fish which like cold water. However, in shallow lakes which do not stratify and thus have no cool water refuge, increased temperatures during summer could be detrimental for less tolerant fish species. As the thermocline (the layer separating warm surface waters from cold bottom waters) becomes deeper in lakes, the area of the water column with sufficiently cool water and adequate dissolved oxygen for fish is predicted to shrink. The potential consequences include impairment of cold water fisheries. Not only could we see a replacement of cold-water fish by warm-water fish, we may also see an increased incidence of invasions by exotic species, now kept in check by our severe Wisconsin winters.

Drier climates equals less nutrients?

Climate change may alter the flow of water to lakes via precipitation, surface inlets and groundwater, and out of lakes via evaporation, lake outlets, and ground-

water. Because water carries minerals, nutrients, and acid neutralizing substances, the flow of materials into lakes will also be affected and many may receive excess nutrients from their watersheds. Under drier conditions such as experienced during drought, the input of phosphorus to lakes decreases, suggesting that eutrophication may be slowed by climate change. Of course, the picture is likely to be more complicated. If there is also an increase in extreme weather events, we may actually see more fluctuation of inputs of phosphorus during flooding and runoff events in both agricultural and urbanized lakes. If the rate of water flowing through lakes becomes slower during warmer conditions, nutrients like phosphorus will accumulate in the water column and the sediments and will not flush as rapidly from the system.

Climate change may also affect the ability of northern Wisconsin lakes to neutralize acid rain. Many of our seepage lakes, which lack surface water inlets and outlets, rely on small inputs of groundwater, rich in acid-neutralizing substances, to counteract the acids they receive from precipitation. During drier conditions, groundwater inputs to these lakes decrease, and may even cease, causing lakes to become more acidic. Thus, lakes may become more sensitive to damage by acid rain as a result of climate change.

The Future

Variability in climate both from season-to-season and year-to-year makes it hard to grasp how seemingly small changes in average conditions could have major impacts on lakes. While scientists are certain that climate change will happen, they are less certain of the magnitude of change and the scope of impact on lake ecosystems. Because climate affects all aspects of lake ecosystems, from the physical habitat to concentrations of important minerals and nutrients, to the composition of biological communities, we are likely to see some complicated and unexpected responses in the future.



The Lake Mary Canoe and other amazing discoveries

The year 2000 is fast approaching and we find ourselves wondering about what the future will hold. Try and reverse that thought process. What was life like here 2000 years ago? In extreme Southeastern Wisconsin east of Lake Geneva and almost on the Illinois Border lies a lake we now call Mary. We don't know what the people who lived there 2000 years ago called it...

On a warm September day of 1996, a young girl out boating with her grandfather on Kenosha County's Lake Mary made an amazing discovery. Pulling up to the dock, the girl noticed a peculiarly shaped piece of wood jutting out of the mud uncovered by the backwash of the boat's propeller. The pair went into the water for a closer look and realized that the sharp curves, smooth surface and pointed end were not natural; they had discovered a fragment of a dug-out canoe at the foot of their pier. Recognizing the fragility of the artifact, the family left the find in the water and reported it to the Kenosha Public Museum.

The museum contacted the State Historical Society of Wisconsin's (SHSW) underwater archaeology program, and underwater archeologists confirmed the discovery to be the bow or stern section of a dug-out canoe. SCUBA diving in the silty murk, the team unearthed two additional fragments of the canoe. The pieces were carefully transported to Madison for immediate documentation and treatment in the Society's artifact conservation lab.

Returning to the site two weeks later, the team continued with a more systematic search for additional pieces, ultimately producing another small fragment. The girl who discovered the canoe was given permission to miss school to document the project. With the help of her younger brother, she filmed the search, interviewed the archaeologists, and recapped the discovery. In exchange for the day off, the budding archaeologists agreed to give a school presentation on the rare discovery.

Only 90-some canoes have been discovered in Wisconsin, and this was the first

to be collected by the underwater archaeology program. First used by Native Americans, these canoes helped establish complex trade and communication networks. Generally constructed out of a single log, dug-out canoes were shaped through repeated charring and scraping. Impressed by the efficiency of the craft, Euro-Americans employed adaptations of dug-out canoes throughout the nineteenth century.

Identified as white oak, a sample of the bow/stern section was submitted for radiocarbon dating. The test measures the rate of radioactive decay of carbon to date an object. The discovery's importance justified the expense of the procedure and was the underwater archaeology program's first use of carbon dating. The results surprised everyone—the canoe dated to 100 A.D. *The "Lake Mary Canoe," as it has become known, is the oldest known watercraft in the state of Wisconsin.*

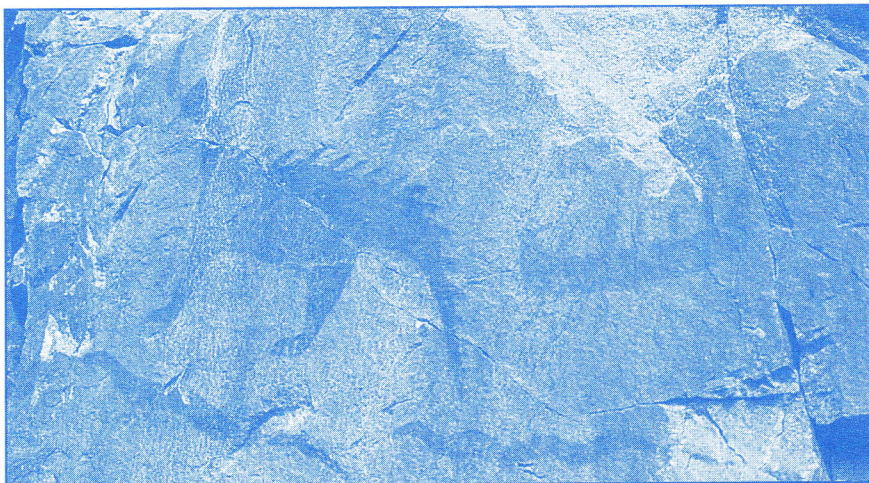
To ensure its long-life, the SHSW is applying conservation techniques to the find. Conservation is the scientific process used to preserve and restore archaeological material. The goal is to preserve the artifact in order to protect the object's historic value.

Several months after the Kenosha find, almost 200 miles northwest, a second canoe was discovered just outside Tomah. Cranberry growers making winter preparations removed a large piece of wood from a floating bog. Once out of the water, they immediately recognized it as a dug-out canoe. The remains were almost completely intact, running its full length from bow to stern. Shortly after being exhumed from the bog, it was resubmerged to prevent decay.

The canoe implies a long antiquity in which its manufacture has been gradually perfected.... It will ere long, perhaps, be ranked among the lost arts.

—Henry David Thoreau





Note the pictograph of an ancient canoe, Agawa Canyon, Ontario, circa 100 B.C.

The landowner notified the SHSW, and an archaeologist traveled to Tomah to analyze the canoe. Briefly documented and assessed, the artifact was left in Tomah until proper transportation and conservation facilities could be arranged. Once in Madison, archaeologists used tweezers and brushes to begin the tedious job of cleaning the plant growth and boring worms that had made the vessel home in the bog. After proper cleaning, treatment began.

Just under 11 feet long, with a maximum beam of 24 inches amidships and maximum height of about 11 inches, the "Cranberry Canoe" is of a classic dug-out shape, long and slender. Metal tool marks, a charred interior, and a plugged hole can be seen on the hull.

The preservation of these canoes was greatly aided by the actions of those who discovered them. By keeping the fragile

artifacts in the water, they bought time for the SHSW archaeologists to properly prepare a conservation plan. When wood is submerged, the structural integrity of the cells is compromised as its water-soluble substances slowly disappear. Aided by Wisconsin's cool temperatures and freshwater, wood can survive for an extended time if it remains hydrated. The problems begin when the artifact is removed from its stable environment in the water. When exposed to air and deprived of conservation treatments, the dehydration that ensues causes the cells to collapse where they will eventually rot away.

The SHSW is conserving both canoes, which require several more months of treatment. The SHSW's Office of the State Archaeologist and Kenosha Public Museum are providing funding for the project. When ready for public display, they will be housed at institutions near their places of discovery. The Kenosha Public Museum will display the Lake Mary canoe, and the Tomah canoe will be at the Cranberry Expo in Warrens.

If you discover any historic material on your lake, help preserve Wisconsin's past by leaving it in place and contacting the State Historical Society of Wisconsin Underwater Archeologist at 608-264-6493.

*By Jeff Gray
Assistant State Underwater Archeologist*

"Once Upon A Lake"—Reflections on the Wisconsin Lakes Partnership

Thank you to all who sent in stories about lake protection efforts in the state of Wisconsin! Many of the stories submitted showed that the commitment to improving water quality, fish and wildlife habitat, and a sense of community is strong in Wisconsin. Several accounts of lake-related projects were incorporated into a short piece available at the Wisconsin Lakes Convention. Copies of this publication, whose purpose was to chronicle the effective teamwork of the Wisconsin Lakes Partnership, may be obtained from your local UW-Extension Community Resource Development agent or DNR Regional Lakes Coordinator. The stories which were not used this time may be used in future publications and *Lake Tides* articles.

Thank you again for your efforts!



Navigating through Lake Classification

Legislation went into effect in October of 1997 permitting counties to receive up to \$50,000 from the state for a lake classification project. At this time, administrative rules to implement the new classification grants are in the process of being developed and will be submitted to the Natural Resources Board at the end of April for review and comment. Public hearings will follow in summer and the rules will likely take effect at the end of 1998.

Several counties in the state are at various stages of a lake classification project. The following is an example of one county's vision for lake classification.

Waupaca's classification system consists of grouping lakes and rivers/streams into five different categories. Minimum state standards require a setback of 75 feet from the ordinary high water mark (OHWM) within shoreland areas and minimum lot sizes of 10,000 square feet for sewered lots and 20,000 square feet for unsewered lots. The discussion below reviews the revised standards on a few critical issues for the five new waterway classes.

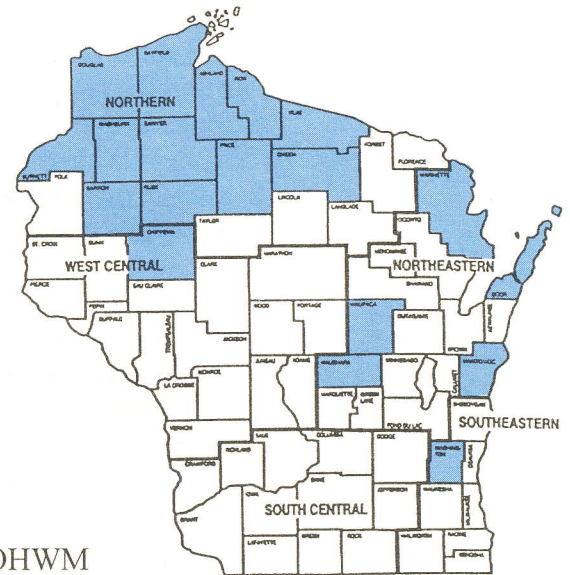
Lakes are grouped into three categories consisting of: wild lakes, moderate development lakes, and general development lakes.

- **Wild Lakes** have a minimum shoreline setback of 300 feet from the OHWM with a 275 foot vegetation protection area. Minimum lot size is 5 acres.
- **Moderate Development Lakes** have a minimum shoreline setback of 100 feet from the OHWM with a 75 foot vegetation protection area. Minimum lot size is 2 acres.
- **General Development lakes** have a minimum shoreline setback of 75 feet from the OHWM with a 50 foot vegetation protection area. Minimum lot size is 20,000 square feet.

Rivers and Streams are grouped into two categories consisting of rivers/streams and trout streams.

- **Rivers/streams** have a minimum shoreline setback of 100 feet from the OHWM with a 75 foot vegetation protection area. Minimum lot size is 40,000 square feet.
- **Trout streams** have a minimum shoreline setback of 125 feet from the OHWM with a 100 foot vegetation protection area. Minimum lot size is 40,000 square feet.

A *vegetation protection area* is the zone between the OHWM and a line which is 25 feet less than the shoreline setback or 35 feet from the OHWM, whichever is greater. Land disturbing activities and vegetation removal are prohibited with a few exceptions. For more information, contact Jeff Henneman at the Waupaca County Zoning Office, 715/258-6255.



Shaded counties are involved in lake classification projects.

Wisconsin Lake Leaders Institute

The Institute is up and running! This program is designed to assist people interested in the future of Wisconsin's lakes develop their leadership skills. Conducted in a retreat setting, these three sessions last two days and one night each. The first and second "crews" of 30 folks have been selected from the large number of applications received. Thanks to all who applied or nominated someone from their lake.



Playing Together, Getting Along on Wisconsin Waters

joins the parade of twenty years worth of lakes conventions. This gathering is billed as one of the largest of its kind in the nation and it lived up to its reputation once again.

Thursday workshops were overflowing and were well received. The sessions offered an opportunity to explore timely topics in greater depth. Topics ranged from lake classification and conflict management to restoring native shorelines and water law.

Friday was kicked off with what has become a tradition—a multimedia slide presentation. Secretary of Administration Mark Bugher discussed the Governor's proposal for lakes and DNR Secretary George Meyer reminded us of how important and powerful the Lakes Partnership has become. The Secretary also discussed the issue of the Crandon mine.

Wisconsin is considered by many to be a leader in natural resource management and a “bell weather” of future trends in lake use policies. One of the many advantages of the state lakes convention is its ability to attract “movers and shakers” in the lakes business from across the nation: Don Corkran, from Mobile, Alabama, director of Bass Anglers Sportsmans

Society (BASS), the largest tournament fishing organization in North America; Howard Park, Washington D.C., with the Personal Watercraft Industry Association; Les Blomberg, Montpelier, Vermont, director of the Noise Pollution Clearing House; Dick Snyder, Mercury Marine; Nito Quitevis, representing the American Waterski Association, to name a few. This was an incredible opportunity for those attending to speak in person and candidly to decision makers on industry positions and the issues of the day.

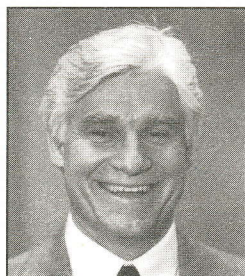
Stewardship Awards

Recognizing the hard work and dedication of volunteers is an important part of the Lake Convention. This year Stewardship Awards were presented to **Mary Platner** (Individual), **Sheboygan County Conservation Association** (Group), **Jeff Bode** (Public Service), and **New Auburn High School Lakes Project** (Adopt-A-Lake Sign Recognition). They join an illustrious list of remarkable women and men who have been willing to give unselfishly of themselves for something they believe in... healthy Wisconsin Lakes. Congratulations to the winners as well as the many hard-working nominees!

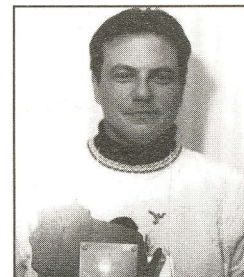
If finding ways to keep your lake the best it can be is important to you, plan on attending next year's convention, March 12-13 1999.



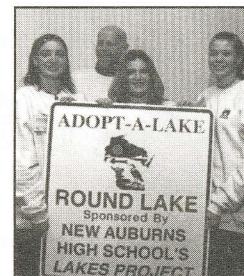
Mary Platner, Alma-Moon Lake, received the 1998 Wisconsin Lake Stewardship Award-Individual.



Jeff Bode, Wisconsin DNR, received the 1998 Wisconsin Lake Stewardship Award-Public Service.



Tony Ulezelski, accepted the 1998 Wisconsin Lake Stewardship Award-Group for the **Sheboygan County Conservation Association**.



Students from **New Auburn High School Lakes Project**, with Advisor, Jim Brakken, received an Adopt-A-Lake sign for their efforts.



We Need to Hear from You!

One of the most important missions of the Lakes Partnership is to provide you with the lake information you want and need in a format that is easy for you to use. The Lakes Convention has long been the crowning jewel of that effort. In order to ensure that we are meeting your needs, we are asking for some insights from those of you unable to attend. You may be thinking "I don't need to fill out another survey," but please do. This is one of the best ways we have to hear from a group that numbers in the tens of thousands. The information you provide is shared with staff from the Department of Natural Resources, Wisconsin Association of Lakes, UWEX County agents, and others, and directs the future of our educational efforts for Wisconsin Lakes.

1. Did you know there is a state lake convention? **Yes No**
2. A large convention that can draw legislators and industry attention to lake issues as well as deliver good educational programs is important to our lake organization and me.
Yes No Not sure
3. The state convention: (check the boxes that you agree with)
☐ Is too expensive
☐ Is too far to travel
☐ Does not offer the information we need
☐ Is an important part of our lakes educational program
4. I have attended the State Lakes Convention _____ times in the past.
5. Should we change the time of the year the convention is held? **Yes No**
6. What season / month would you prefer _____
7. How many days should the convention run? _____
8. How could we improve the convention? _____

9. Which topics are of interest to you (number 1-7, highest to lowest interest):

___ Aquatic Plants	___ Boating Issues	___ Grant Programs
___ Fishing	___ Shore Landscaping	___ Working with Consultants
___ Conflict Resolution	___ Adopt-A-Lake/WET	___ Water Law
___ National lake issues	___ Lake Organization Law	___ Recruiting Volunteers
___ Industrial use of water	___ Real Estate/Development	___ Land Use
___ Limnology	___ Insurance	___ Student presentations
___ Wildlife near lakes	___ Operating a lake organization	
___ Septic/Sewer systems	___ Other _____	
10. Which category best describes you?

___ Lake Association board	___ Lake District Board	___ Student
___ Local Government	___ Private Consultant	___ Self-Help volunteer
___ Person interested in lakes	___ State Agency	___ Other _____

Please mail the survey to Wisconsin Lakes Partnership 1900 Franklin, CNR Bldg,
University of Wisconsin Stevens Point, Stevens Point, WI 54481 or FAX 715/346-4038





"The sequence was: drip, spatter, slide, rustle. How many times had my canoe slid to shore with that identical sequence of sounds?"

These words, written by May Theilgaard Watts in Reading the Landscape of America, evoke an image of a quiet lake shoreline ringed with vegetation. Excessive plants and algae are but two symptoms of the overriding concern of volunteer lake monitors: the ever-increasing impact of civilization on our lakes.

This impact can manifest itself in many ways: accelerated nutrient enrichment of lakes (resulting in more plants and algae), pressure on the fishery populations, conflicts arising from poor shoreline development practices, and recreational use conflicts, among others.

At the 1998 Wisconsin Lakes Convention, many volunteers enjoyed energizing discussions on how to minimize these human impacts, learn about available resources, and outright celebrate working within the Lakes Partnership on our common goal of lake protection.

Before we can meaningfully protect a lake, we must first know something about it. The Self-Help workshop focused on this requested topic: Understanding and Sharing Lake Data. To make the best use of lake data, volunteers need to understand and share this data with lake organizations, local units of government, and lake users. The workshop reviewed watershed influences on nutrients in lakes and explained how water clarity, chlorophyll and phosphorus measurements give insight to lake nutrient status.



Self-Help volunteers share questions and concerns at the Self-Help Workshop during the 1998 Wisconsin Lakes Convention in Stevens Point.

Congratulations Self-Helpers!

Laura Herman received an award for Outstanding Professionalism by fellow DNR staff at the annual DNR Fish and Habitat Statewide Staff meeting. Laura has shared her positive attitude, creativity and energy with lake partners for the past 18 years, much of that time with the Self-Help program. Laura planned the Volunteer Workshop in 1996 and 1997. She also initiated Island Watch and was instrumental in developing the aquatic plant monitoring portion of Self-Help.

Jo Temte, past Self-Help Coordinator, was nominated for a Wisconsin Lake Stewardship Award. Besides giving superb leadership to Self-Help for four years, she initiated educational programs for schools and was a formative visionary for the newly published aquatic plant guide, *Through the Looking Glass*.

Mary Platner, a Self-Help volunteer on Alma-Moon Lake, Vilas County, and past president of the Wisconsin Association of Lakes, received the Individual Wisconsin Lake Stewardship Award for years of enlightened leadership and dedicated service.

Jeff Bode, DNR Section Chief of Lakes and Wetlands, has provided enthusiasm, leadership, commitment and continuity to the Wisconsin Lakes Partnership for the last decade. Jeff was instrumental in the formation of the Partnership and the development of the balanced program of education, monitoring and technical assistance for lakes. For this he received the Wisconsin Lake Stewardship Award for Public Service.

Youth Presentations a Hit at Lakes Convention!

For the third year, students and youth groups presented results of their Adopt-A-Lake projects at the statewide Lakes Convention. Six groups, from Asa Clark Middle School (Pewaukee), Lucky Hills 4-H Club (Taylor County), Three Lakes High School, New Auburn High School, Cambridge High School and Lake Holcombe FFA, shared information on their projects with an enthusiastic audience. Topics ranged from controlling purple loosestrife, to community projects and lake use surveys, to name just a few.

The students were warmly received for their efforts. Evaluation forms showed a vast majority of respondents want to see youth presentations and involvement at the state convention. Comments included: "Youth representatives are our future LEADERS!" "They are the inheritors of our lakes." "They are the future. They need to be (and are) concerned at an early age." "Youth have energy and they need to develop an appreciation for lakes."

A special treat for youth participants was a poolside pizza party on Friday evening, sponsored by the WAL Youth Fund. Students were able to share pizza and fish printing, as well as share information about their projects, obstacles they've overcome, and successes they've achieved in an informal, fun setting. We'd like to thank all who donated money to the WAL Youth Fund on their Convention Registration forms. If you would like to contribute for future student efforts at the Lakes Convention, contact Libby McCann, Adopt-A-Lake Coordinator at 715/346-3366.

Great 1998 Secchi DipIn!

It's that time of year again to prepare for the Great Secchi DipIn! Wisconsin citizen monitors and Adopt-A-Lake groups were active participants last year, and we hope you will consider participating again this year.

The DipIn is a demonstration of the potential of volunteer monitors to gather important information on our lakes, rivers and estuaries. Each year, volunteers take a Secchi disc

measurement on one day around the week of July 4th. This year, readings can be taken between June 27 and July 12th. These Secchi values are then used to produce a map of water transparency for the U.S. The DipIn is sponsored by the U.S. Environmental Protection Agency and the North American Lake Management Society.

Why participate?

- 🌊 You can help generate an almost instantaneous map of transparency!
- 🌊 Help monitor national and regional water quality trends!
- 🌊 Prove that volunteers can make a difference in our ability to monitor the environment!

The DipIn is open to any member of any active lake volunteer monitoring program. In Wisconsin, a Great 1998 Secchi DipIn brochure will be mailed to Adopt-A-Lake participants and DNR Self-Help Lake Monitors later this spring. If you would like more information, please contact the Adopt-A-Lake Coordinator at 715/346-3366 or the Self-Help Lake Monitoring Coordinator at 608/266-8117. Please join us as we DipIn!

CALENDAR

Through 4/15 - Once Upon A Lake, exhibit at Cable Natural History Museum, 715/798-3890.

3/9-5/1 - Storm Drain Stenciling Project: Adopt-A-Lake and Water Action Volunteers team up on this project. Order stencils ("Dump No Waste: Drains to Lake") from Libby McCann, 715/346-3366.

4/22 - EARTH DAY! Governor Thompson lends his support and proclaims Earth Day 1998 as *Environmental Education Works for Wisconsin!* Day. Share your EE programs!

4/23 - Project WET Workshop at WSST Convention, Appleton. Call Libby McCann, 715/346-3366.

4/24 - Project WET Workshop at Riverside Urban Environment Center, Milwaukee. Call Deb McRae, 414/761-1151.

MAY - National Wetlands Month! Order the Wetland Tool Kit, a collection of resource materials, from the Milwaukee League of Women Voters, 414/475-2100.

6/13-21 - Lake Superior Visiting Naturalist Series, visit the water quality education tent at various Lake Superior state parks. Call Cambridge High School, 608/423-3262 ext. 21, for exact locations.

6/19-20 - U.P. WaterFest '98, Marquette, MI. Contact MI Tech. University, 906-487-33431.

6/20 - Northwest Wisconsin Lake Fair, Coon Lake Park, Frederick. Contact Kay Fandel, 715/485-3725 or Dave Ferris, 715/349-2186.



News From the Legislature

AB 664 (Introduced by Representatives Otte, Ladwig, Gronemus, Zukowski, Brandemuehl, Plale, Hasenohrl, Hoven, F. Lasee, Olsen, Albers, Owens, Grothman, Ainsworth, Goetsch, Duff, Walker, Musser and Ryba; cosponsored by Senators Huelsman, George, A. Lasee and Welch) The state is under a duty to hold navigable waters of the state in trust for the public and to protect the public's right to use the water for navigation, recreation and other purposes. Statutory law does not specify a test for determining navigability. Courts have held that a stream is navigable if it is possible to float a small craft like a canoe on the stream at some point during the year for recreational purposes. This bill introduces a new test for the DNR to use in determining the navigability of streams, sloughs, bayous and marsh outlets. Under this proposed test, the body of water at issue must be able to float a 16-foot canoe with a 6-inch draft carrying a person who weighs not less than 120 pounds. Alternatively, it may be shown to be navigable by statistically calculating its annual recurring water flow based on the water that would be produced by a 4-hour to 6-hour storm with a recurrence interval of at least 2 years. The statute also requires that the stream, slough, bayou or outlet have an identifiable stream history and naturally occurring bed and bank and that the waterway provide quality recreation for a period of at least 24 consecutive hours at least once a year.

AB 862 (Introduced by Representatives Gard, Johnsrud, Albers, Ainsworth, Huebsch, Schafer, Musser and Zukowski; cosponsored by Senator Drzewiecki)

Counties are required under section 59.692 of the Wisconsin Statutes to adopt shoreland zoning ordinances for land within a certain distance of a navigable waterway. Administrative rules promulgated by the department of natural resources set forth standards for buildings, structures and management within these areas. For example, the rules establish building setbacks, minimum lot sizes, and restrictions on nonconforming uses (uses which violate the zoning ordinance, but which are allowed to continue because they were in existence when the ordinance became effective). All buildings and structures which are in the shoreland zone are subject to these shoreland controls under current law. This bill provides that *only* buildings that are designed to be used, in whole or in part, for permanent housing for human beings or for trade, indus-

try or commercial purposes, are subject to shoreland ordinances.

AB 807 (Introduced by Representatives Albers, Gronemus, Jensen, Sykora, Seratti, Green, Musser, Spillner, Ainsworth, Brandemuehl, Johnsrud, Schafer, Hahn, F. Lasee, Gunderson, Olsen, Harsdorf, Otte, Freese and Porter; cosponsored by Senators Welch, Drzewiecki and Schultz)

Current law holds that counties, towns, villages or cities are required to hold public hearings whenever such a political subdivision proposes to amend an existing ordinance or introduce a new zoning ordinance. This bill sets forth that if such an amendment or new ordinance has the effect of changing the allowable use of any property, the public notice shall include a statement to that effect. Also, the bill requires that the zoning agency for the unit of government make a good faith effort to identify each person whose property is affected by the proposed zoning ordinance or amendment in a way which changes the allowable use of the person's property. This identified person must then receive notice of the public hearing and of his opportunity to comment at least 10 days before the public hearing. Any person who does not receive the written notice is not required to comply with the proposed zoning ordinance or amendment.

AB 808 (Introduced by Representatives Albers, Gronemus, Jensen, Sykora, Seratti, Musser, Spillner, Goetsch, Brandemuehl, Johnsrud, Schafer, Hahn, Gunderson, Otte, Freese and Skindrud; cosponsored by Senators Welch, Drzewiecki, Schultz and Farrow)

Current law gives significant deference to ordinances adopted by local units of government such as city, villages, towns and counties. Assuming the ordinance is reasonably related to a legitimate public purpose, the ordinance or resolution is presumed valid. Presently, an individual who wishes to challenge the ordinance has the burden of showing that the ordinance is unreasonable and arbitrary and capricious. This bill would shift the burden of showing the validity of an ordinance to the unit of government when the ordinance is intended to protect the natural values of environmentally sensitive areas. The board would be required to prepare a comprehensive written record documenting the rationale for the newly created or amended ordinance or resolution. If the ordinance is challenged in court, failure of the board to produce clear, satisfactory and convincing evidence indicating the rationale for such an ordinance would result in its invalidation.



Dear Lake Tides Editor;

Enclosed is a copy of an article that the Department of Natural Resources and McGinnis Lake Association have agreed should be published in your newsletter as part of a settlement agreement in a case involving spraying for weeds and algae in McGinnis Lake. I would ask that you be so kind as to include this short article in your next newsletter.

*Very truly yours,
Thomas M. Croke*

The McGinnis Lake Association would like to make other lake associations aware of our recent experience. Our association was cited by the DNR for incorrectly and improperly doing weed control. We were cited for both treating areas of the lake not approved on the permit and using chemicals without first obtaining a permit. The forfeiture for the Association and three members conducting the treatment totaled over \$4,000. It could have been much higher if we had not reached a plea agreement. As part of our settlement, we have been asked to write this article so that others may learn from our experience.

Our recommendation to other groups is: **Be sure you are aware of the proper way and methods to control weeds. Chemical treatment of aquatic plants in waters of the state requires an approved permit from the DNR.** In our case, we have now chosen to have a professional do the weed control. The cost of the consultant was slightly higher than if we had treated the lake ourselves, but the results were better and we eliminated the liability of incorrectly controlling lake weeds. **SO, IF IN DOUBT, contact the DNR for proper information or use the services of a professional. We have definitely learned a lesson the hard way!**

Editor's Note: This is a very unusual reason for a lake organization to send an article for Lake Tides to publish. We would be interested in hearing your comments on using this newsletter as part of a settlement agreement. Send your letters to Robert Korth at UWEX-Lakes, CNR-UWSP, Stevens Point WI 54481 or e-mail to bkorth@uwsp.edu

The Living Shores, a new video, was premiered at the Lakes Convention. This video is designed to raise awareness of the near shore areas and give ideas to restore shoreland areas. This beautiful presentation uses state of the art computer animation, showing what changes will occur when various management practices are implemented on the land. This superb video was a cooperative effort of the Minnesota Extension, Minnesota DNR, Wisconsin DNR and University of Wisconsin Extension. [Cost: \$17.00 per copy (\$15.00 plus s/h)]

Through the Looking Glass... A field guide to aquatic plants, is now available! This book contains detailed and highly accurate information essential to identify aquatic plants, delivered in a fun and friendly manner. This 248-page guide contains over 120 original pen and ink illustrations of North American aquatic plants and is combined with detailed descriptions, natural history and folklore to make this guide one of a kind. It is ideal for those who need technical information or for the person with little understanding of aquatic plants or the world in which they live. [Cost: \$20.00 per copy (\$17.95 plus s/h)]

To order these publications, send checks payable to WAL to P.O. Box 126, Stevens Point WI 54481. For bulk orders, call 1-800-542-LAKE (5253).

Spotlight on...

*New
books
and
videos*



Lake Tides - 8580

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Vol. 23, No. 2
Spring 1998

Non-Profit Organization
U.S. Postage
PAID
Permit No. 19
Stevens Point, WI

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2,574.00
BETSIE GRAHAM
BIOLOGY
UWSP 00000

Printed on recycled paper with soy ink.

Wisconsin Lakes Partnership



Published Quarterly

Editor: Robert Korth, Tamara Dudiak
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Reflections

Beauty. The sleek wet heads of children of all ages, the clear lake water dripping from healthy tanned bodies (and the wide range, from micro to maxi, of flaming pink sunburns), the lake in all its manifestations, from satin-still to flecked with gold, to stormy gray frothing with whitecaps, to icebound, frosted with snow. Blue skies, clouds, storms gathering and breaking over the lake, sunsets, black night skies dotted with stars (and man-made satellites) and, sometimes, magnificently draped in northern lights.

Child with turtle, child with fish and fish pole. Child with grubby paws and berry-stained mouth. Child rowing boat, dog-paddling, swimming across lake accompanied by boat. Child reading, laughing, brooding. Infinite child in infinite poses. Masterpieces for my museum.

Marie Elliot

Casey-Loon Lake, Washburn County

Excerpted from "The Yoo-Hoo From Loon Lake" 1973