



# LAKE TIDES

A newsletter for people interested in Wisconsin lakes

Volume 16 No. 1

Winter 1991

## Pier Inspiration: Loon Lake, Shawano County

by Fern Klug and John Poels

It all started on a hot, summer day in July, '89. We were sitting on John's pier discussing and cussing our "floating weed problem". Those plants were making fishing, boating, and swimming less than pleasurable. Our lake was just too nice to let it deteriorate. There had to be something we could do to help stop this problem. A few days later, John called and asked me to help distribute a notice asking everyone on the lake to attend a meeting to analyze the situation. That was our FIRST STEP!



The next weekend, several of us distributed the meeting notice to every lake property owner. Through the tax rolls, we had found that 98 people owned property on our 305-acre lake. John agreed to chair the meeting, and with the help of several others, they put together an impressive agenda with expert speakers. Tim Rasman (DNR), Carl Rausch (Aquatic Biology), Jim Resick (Shawano

County Agent), and Lowell Klessig (UW-Stevens Point) all agreed to share in the meeting. The agenda was complete; we were ready to go.

The night before the meeting as I tossed and turned in bed, I kept wondering, would anyone show up? Excitement was running high as the big day dawned. As people started arriving, the smell of fresh donuts and coffee permeated the air. Within 20 minutes, the place was packed. I started counting, ...50...70...90...120 people. Wow, what a turnout!

After we heard a short program on aquatic plant control, it became apparent that such actions would need to be done properly. I wondered how we would equitably pay for the benefits. Professor Klessig soon answered my thoughts. His presentation clarified what was happening to our lake and how we could help preserve our lake through an organized approach. Our options appeared to be 1) do nothing and watch our lake deteriorate, 2) form a lake association, or 3) form a lake district. Professor Klessig explained the pros and cons of each of these options. A lake association just didn't sound like a workable solution to our lake problems, but what did the group think? Would they go for forming a lake district, so everyone could help pay for improvements? It was time to ask. My heart was pounding as John brought these options to a vote: option 1 (do nothing)--no hands, option 2 (association)--no hands, and option 3 (lake district)--hands popped up all over the room. It was a unanimous decision to form a lake district.

*(continued next page)*



The next step was to form an ad-hoc committee. Believe it or not, 14 people volunteered. We included representatives from the town and county boards as well. Our goals were to establish a lake district, address our weed problem, and rehabilitate our lake. Meeting on a monthly basis and using Professor Klessig's Guide to Wisconsin's Lake Management Law, the committee defined the district boundaries and drew up a petition for approval by the property owners. The response was phenomenal. Within six months from the first property owners meeting, the town board had approved the petition, and we became the Loon Lake/Wescott Management District.

In a little over a year, we have completed an aquatic plant management program, approved the first budget by the membership, and have applied for a Lake Management Planning Grant. With these funds, we hope to complete a watershed analysis and water quality survey, which will enable us to develop a comprehensive management plan to correct or prevent water quality problems.

It has been a year well spent. As we closed our cottages this fall, the maples looked a little brighter, and the water a bit more clear. We have an increased sense of community pride in sharing and saving our lake. Though the pier is out of the water, the inspiration lives on in our anticipation and willingness to work together as stewards of our natural treasure, Loon Lake. Through the combined efforts of the committee, a cooperative town board, expert resource people, and a willing, caring membership, our hopes became a reality. And it all started from a conversation on John's pier!

## Questions & Answers

**Q: Is bidding required in hiring individuals or firms to carry out parts of the planning projects funded by planning grants?**

**A:** Lake associations are not subject to governmental bidding procedures. In contrast, all public organizations are required to obtain bids if the contract exceeds a statutory threshold (\$2500 for lake districts).

DNR will not request evidence of bidding as part of the planning process. It considers planning activities to fall in the category of professional services, which are not subject to bidding requirements.

Since bidding is generally awkward for most planning activities and since the department is not requiring the procedure, most planning projects will probably be conducted without use of bidding procedures.

### OOPS! Correct Sample By-laws

Page 40 in the eighth edition of the Guide to Wisconsin's Lake Management Law contains an error. In the last paragraph, please add "percent" after "10."

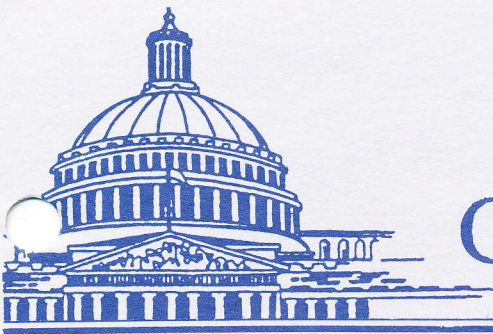
### WANTED:

Used Transporter for Weed Harvesting.  
Contact Bill Reichert, White Lake Preservation Association, PO Box 577,  
Weyauwega WI 54983 (414/392-3529).



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# Capitol Report



## Jet Ski Legislation Proposed

During the year, the staff at Lake Tides hears the concerns of many readers. "It's a high-powered thrill craft that turns on a dime and soars over boat wakes." "We have observed numerous operators who insist on speeding or doing circles in no wake areas." "They are driving these things like stunt toys, not boats." What are they writing about? You guessed it, jet skis.

Although registration of jet skis accounts for fewer than 1 out of every 100 boats, they tallied 20% of the boating accidents in 1989, and an estimated 33% in 1990. In a two week period in early July, three jet ski fatalities occurred in Minnesota and Wisconsin. Just like snowmobiles and all-terrain vehicles, jet skis have the potential, if used improperly, to cause serious harm to the rider and to those around them. As with automobiles, it's not the machine but often the person driving the jet ski that is the problem.

Jet skis are regulated by the same laws as all other watercraft. Unfortunately, some operators are either ignorant of these laws or they disregard them. Law enforcement officials have been swamped with complaints about jet skis, but often have too many square miles of surface water to cover and too little enforcement help. Because of this, certain opponents would like to ban jet skis from Wisconsin surface waters altogether. This is probably unconstitutional. Article IX of the Wisconsin Constitution clearly states that the waters of the state "shall be common highways and forever free." So what is the answer?

Representative Jim Holperin (D-Eagle River) has asked for a preliminary bill to be drafted to regulate personal watercraft. This will help insure that jet ski operators won't endanger themselves and others on Wisconsin surface waters. Jet skis are presently subject to all

boating regulations; the new legislation may include the following:

1. a definition of a personal watercraft;
2. specific rules of operation; such as having a lanyard type cutoff switch, a minimum age of 16 for operation, and a required DNR boater safety course for those between 16 and 18;
3. restrictions on personal watercraft rental, including a requirement of instruction for jet ski renters;
4. definition of prohibited operation or reckless behavior; for example, no weaving through congested boat traffic, no jumping wakes within 100 feet of another craft; and
5. provision for local control, which would allow for local ordinances to further regulate hours and age requirements.

By next summer, this legislation may be available to help regulate jet skis on your lake. If you have concerns regarding this legislation, contact: Representative Jim Holperin, 7 West State Capitol, PO Box 8952, Madison, WI 53708; or your local legislators.

### CLEAN LAKES PROGRAM

The Bush Administration had eliminated any funding for the Clean Lakes Program in its 1991 budget. But during the final days of the 101st Congress, Rep. Les Aspin (D-WI) was successful in securing \$7 million for the National Clean Lakes Program. This includes funding for the clean-up of Delavan Lake. The President is expected to sign the legislation into law. Thus, the program will be funded for another year.



## Proposed Rule Would Improve Wetland Protection

We often become involved in high-cost lake management projects that we feel will improve the water quality of our lakes. In almost all cases, we are trying to reverse some process we have set in motion. Sometimes we fail to remember that nature has done a fair job of keeping water quality high through natural systems without help from humans. We must understand that left intact, these natural systems can play a major role in keeping lakes clean and healthy.

One essential part of these natural systems is wetlands. They provide critical filtration of pollution and sediment. They stabilize stream flow and protect shorelines against erosion. They help replenish stream water supply and provide the most productive habitat for an incredible diversity of fish and wildlife.

Almost half of Wisconsin's original wetlands have disappeared since European contact. These patches of not-quite-land, not-quite-water have been filled, ditched, drained, paved, and polluted by generations of people who viewed wetlands as wastelands. The loss of wetlands is highest in southeastern Wisconsin. Even though the US Army Corps of Engineers has the ability to regulate wetland fill activities, more than 10,000 acres have been lost or modified in the last ten years.

Wisconsin's wetlands would receive more protection under an important new water quality rule (NR 103) that the Wisconsin Department of Natural Resources is proposing. NR 103 would:

- Establish water quality standards that would have to be met and maintained,
- Require the DNR to evaluate whether proposed wetland activities would significantly harm a wetland and review practical alternatives,
- Identify areas of special natural interest and of crucial importance.

With uniform standards in place, the DNR would have the tool needed to issue water quality certification for wetlands which are

regulated under Section 404 of the Clean Water Act by the US Army Corps of Engineers.

Based on water quality standards, DNR would have the ability to deny certification of Corps permit where reasonable alternatives were available or if the project would significantly harm a wetland.

Three formal public hearings where you can file your opinion about the rule will be held:

**December 11, 1-5 p.m., Rm. 421 South State Capitol, Madison**

**December 12, 1-5 p.m., Expo Center, Waukesha**

**December 14, 1-5 p.m., Rm. 451, Vocational and Technical School, Wausau**

For More Information: Copies of NR 103 and a technical support document describing the basis for the rule may be obtained from:

- Pat Trochlell, Wetland Ecologist, DNR Bureau of Water Resources Management, PO Box 7921, Madison WI 53707 (608/-266-2453).
- Dale Simon, Chief Biologist, DNR Bureau of Water Regulation and Zoning (608/-267-9868), same address as above.

Questions or suggestions on the rule also should be addressed to Ms. Trochlell or Mr. Simon.







# Eco-Notes



## Through the Looking Glass:

### Common Lake Invertebrates III

by Ed Stern

**Snails** Snails represent one of the most conspicuous groups of small invertebrates in lakes, where they can be found crawling along the logs, rocks, or submerged vegetation. A snail creeps along on a foot much like that of a clam. It has a head with tentacle feelers, eyes, mouth, and tiny teeth. The snail's soft body is covered by a spiral shell in the majority of species. Snails range in size up to about three inches. The creatures represent an important food item in the diets of many fishes, including suckers, perch, and pumpkinseed.

On the negative side, snails act as the intermediate host in the life cycles of many parasites, especially flukes. Some trematodes (flatworm or flukes) are parasitic to humans. Upon leaving the snail's body, the microscopic fluke larvae may inadvertently penetrate human flesh, resulting in a condition we call "swimmer's itch" in Wisconsin. The proper hosts for many species are fish. The black spots commonly seen on the sides of rock bass and perch are larval flukes that have left the snail's body and become en-cysted in fish muscle tissue.

**Crayfish** Recollections of growing up on Wisconsin's lakes and rivers often include memories of poking around under nooks and crannies in search of our version of lobsters. Rolling over a rock was regularly rewarded by the sight of a beady-eyed creature taking off in full speed reverse. If pursuit was continued, waving claws would remind you of what was in store for an ill-placed finger.

Many lakes contain a rich and diverse assemblage of creatures called "crustaceans;" the word refers to a hard crust or shell. These include numerous groups of microscopic life forms that play an important role in the food

chain. There are also intermediate size representatives which contain two groups of shrimp (sorry, they're too small to eat). But the largest and most conspicuous group are the crayfish. We have eight species of crayfish in Wisconsin.

Most of the attention in recent years has been on the "invasion" of Orconectes rusticus, the rusty crayfish. The rusty crayfish is native to Ohio; today it is found throughout most of the central United States and some of Canada. While we still don't fully understand this species, it is clear that in areas where it has become established there has been an impact on the water community. Since January 1, 1983, it has been illegal to introduce live crayfish to inland waters or to use live crayfish for fishing bait.

Through out the southern gulf states, crayfish are commercially harvested and are popular fare at restaurants when in season. The Wisconsin varieties are rarely large enough or numerous



enough to justify their use. To harvest crayfish in Wisconsin, one must have a valid state hunting or fishing license. Minnesota Sea Grant is currently working on a program of crayfish farming on six ponds near Aitkin.

Crayfish are most active at night and early morning. They feed on a wide variety of living and dead animal and plant material--just like us. During the day they spend part of their time in burrows they construct in the bottom. The burrow can be spotted by looking for a



"chimney" of excavated mud. This time of year, crayfish will slow down their systems and be in a type of hibernation burrowed in the mud or under a rock.

Crayfish function as major predators on the bottom (benthos) of lakes and rivers. They contribute to ecosystem stability by interacting with a subweb of species. Therefore they act as an important mechanism contributing to the regulation of most production processes, particularly the benthic production available to fish.

So ends our journey through the looking glass. If you are interested in learning more about aquatic invertebrates, many reference books are available in your local bookstore or library.

*Ed Stern is Professor of Biology at UW-Stevens Point.*



#### Check These Out!

Freshwater Invertebrates of the United States by R.W. Pennak. 3rd edition, 1989, J. Wiley and Sons.

Taxonomic Keys to the Common Animals of the North Central States by S. Eddy and A.C. Hodson. 1982, Burgess Publishing Co.

Crayfishes and Shrimp of North America by H.H. Hobbs III and J. Jass. 1988, Milwaukee Public Museum.

Guide to Freshwater Annelida of North America by D.J. Klemm. 1985, Kendall/Hunt.

An Illustrated Key to the Freshwater Mussels by E.M. Stern. 1990, Museum of Natural History, UW-Stevens Point.

Pond Life by George Reid. 1987, Golden Books.

## Get in Tune...To Your Lake

A lake is much more than an individual body of water--it's a reflection of how we use the surrounding land. What you do to the landscape directly affects the water quality of lakes and can heighten such problems as unsightly algae blooms, nuisance weeds, siltation, reduction of wildlife habitat, and loss of natural shoreline.

This starts a series of helpful hints on how to keep your lake clean and healthy. Whether you're a lake user or lake-front property owner, be aware of your actions and help keep Wisconsin's blue jewels blue!

### How's Your Lakeshore Looking?

Thoreau called a lake "the landscape's most beautiful and expressive feature." While piers, decks, and cabins may help you enjoy your lake, shoreline development can obscure its natural beauty, masking the landscape's expression. Understand state and local shoreland zoning regulations that are designed to help keep the landscape in harmony with the natural lakeshore, and keep Wisconsin's most expressive feature beautiful.

- Maintain and restore natural vegetation strips along the shoreline, not only to enhance the lake's beauty, but to provide cover and shade for fish, wildlife, and people--also increasing privacy, reducing runoff and noise.
- Contact your zoning office before you begin any construction activity on or near your shoreline.
- All structures, including decks, must be set back 75 feet from the shoreline. Follow standards for shoreline cutting, lot size, sanitation, and construction.
- Design structures to complement the landscape. Use natural colors and build only what you need.
- Try natural-looking boulder rip-rap, instead of sea walls and sheet piles, to prevent shoreline erosion.
- Learn who your local zoning officials are and participate in Board of Adjustment hearings. You can make a difference!





# On the Waters

## Convention Corner

**April 5-6, 1991, Holiday Inn, Stevens Point**

The Wisconsin Lakes Convention has grown from 150 in 1978 to over 500 people in 1990. Exhibits continue to expand, and last year, a well-received poster display was added. If you are interested in putting up a poster on your organization's efforts, please contact Carol Wake at the College of Natural Resources, University of Wisconsin, Stevens Point WI 54481 (715/346-2116).

This year, the editor of Lake and Reservoir Management, Garth Redfield of the National Science Foundation, will provide the keynote. Senator Kohl may attend as well. Two controversial topics will be addressed by panels: 1) The Impact of Agriculture on Lakes, and 2) Boating Conflicts. Twenty-two workshops and seminars will be offered.

But even more important than the program, the exhibits, and the posters, the convention allows community leaders from across the state to share and renew their enthusiasm. You will want to be there. The rooms at the Holiday Inn fill quickly. Call 715/341-1340 and ask for Wisconsin Lakes Convention rates. The rates will be extended in either direction if you want to stay longer.

### Stewardship Nominations

Paul Anderson, a volunteer in the regular Self-Help Monitoring Program, is responsible for inventing the "Wisconsin Self-Help Monitoring Water Sampler," the device that the participants used for collecting the water samples talked about in the article on page 8. He was nominated for the individual stewardship award.

Nominations are needed for individuals or groups that have shown special commitment to the quality of their lake and the quality of

life around the lake. Lakeshore property groups as well as fishing, garden, or other service clubs are eligible. You are encouraged to nominate your own group or another that has demonstrated what can be done to be a good steward of Wisconsin lakes.

Individuals will be judged separately from groups and one stewardship award will be presented in each category. Other nominees judged worthy by the awards committee will receive a certificate signed by the governor.

The deadline for submitting nominations to Diane Lueck, College of Natural Resources, University of Wisconsin, Stevens Point WI 54481, is February 14. But don't wait until Valentine's Day to nominate a deserving person or group.





## Self-Help Lake Monitoring Program Expanded

Carolyn Rumery Betz

The Self-Help Lake Monitoring Program took an exciting turn in direction last summer by expanding the number of tests some volunteers conducted. The basic monitoring program involves 400 volunteers measuring Secchi depth--water clarity--of their lake throughout the spring, summer, and fall. In the expanded program, volunteers on 35 lakes sharpened up their scientific skills and set out to give their lakes an extensive monthly physical exam between July and October.

Along with their Secchi disc, each volunteer was now armed with an arsenal of sampling equipment with which to conduct their tests. They would now collect water samples from the surface to the deepest part of the lake. The water samples were then analyzed by the volunteer for dissolved oxygen, temperature, and pH. Two phosphorus samples were collected, one from the surface of the lake, and one directly off the bottom. These samples were mailed to the State Lab of Hygiene for analysis. Fifteen of the 35 lakes also collected chlorophyll samples for the DNR to analyze. Chlorophyll is a pigment that makes plants green, and in lakes is used as an indirect measure of algae concentrations in the water.

The volunteers who participated in this pilot program assumed a major responsibility. While the Secchi disc readings take only a few minutes, the expanded sampling involved took 2-4 hours. The on-site training session was one of the most important parts of the program, because the volunteers now had to use specialized equipment for each of the tests involved. Each volunteer received a detailed manual explaining how to use each piece of equipment, along with a "cookbook" section to cover the "how-to's" of each sampling episode. Volunteers quickly caught on to the intricacies involved in the sampling.

Since it was a pilot program, we have spent the last few months analyzing the data for accuracy, and asking the participants how they felt about their experiences being a lake

doctor. All the volunteers involved found it a little intimidating at first, but definitely interesting and worth the extra effort. We'll keep you up to date on plans for 1991!

*Carolyn Rumery Betz coordinates the DNR's Self-Help Lake Monitoring Program.*

What does it all mean? The volunteers were gratified by the "instant answers" they derived for the dissolved oxygen, temperature, and pH reading for their lake. They plotted the results on printed graph paper included with their training and data manual to see how these factors changed from one month to the next.

They discovered the following: that dissolved oxygen is important for fish and other living organisms and that in most lakes deeper than 25 feet there is a lot of oxygen at the surface but not much at greater depths. On shallower lakes, there may be oxygen mixed throughout. The temperature of the water may drop off dramatically in a similar pattern to the dissolved oxygen. Using the pH meter showed none of the volunteer's lakes to be sensitive to acid rain.

Phosphorus sampling showed that on most lakes in the summer months there is more phosphorus in the bottom waters than on the surface. These high concentrations may circulate up into the water column when the lake turns over in the spring and fall, which may result in an algae bloom.

**P/S** If you did not receive a copy of the booklet Interpreting Lake Water Quality Data at the 1990 Wisconsin Lakes Convention, single copies are available from Lake Tides, College of Natural Resources, University of Wisconsin, Stevens Point WI 54481.



## The Winding Path

Dear Bob,

You asked for a personal perspective on why shoreland zoning is important, and about my experiences in looking at shoreland development on a variety of lakes.

I have had the opportunity to see a full range of priorities and aesthetics in shoreland development. One of my most pleasant experiences was a stop at the wooded property of a retired couple on Lake Wissota. The small cottage was so surrounded by native trees and shrubs that it was nearly hidden. The winding path to the lake led through dense vegetation, and stepping stones protected against erosion. I found the couple seated on a tree stump, enjoying a morning cup of coffee. They obviously had a great appreciation for the importance of preserving the natural topography and vegetation, and fully understood that the songbirds and other wildlife they frequently observed depended upon their stewardship.

This couple is not unique. I saw many other properties where the land use practices reflected the landowners' conservation ethic. These properties often had a number of things in common: minimal disturbance of soil or vegetation; homes and other structures tended to blend into their surroundings, with earth-tone colors, and by fitting into the natural contours of the land; structures providing access to the lake and near-shore areas were kept to the minimum necessary to serve the function--stairs, walkways, and landings were not "mini-decks." In many cases, summertime boaters and anglers would have to look twice to even see these homes from the lake.

In contrast, the development of many other properties has involved major excavation, changing the entire contours and vegetation of the shore. These landowners set a high priority on neatness, removal of anything "untidy," and often desire an expansive view from their homes. Walkout basements, often requiring major excavation and recontouring, and maintained lawns, requiring fertilizers and herbicides are often desired. Decks and gazebos, even near the shore, are seen as

aesthetically pleasing and enhancing property value. Landowners who develop in this manner often do so with lots of planning, attention to detail, and a large financial investment. They often find it extremely difficult to see how anybody could find fault with their perception of land stewardship.

By far the greatest difficulty in developing support for the restrictions imposed by shoreland zoning among landowners with a "development" philosophy is building an understanding of the cumulative impact of each owner's land alterations on the ultimate lake water quality, and the natural character of the lake. It may be difficult for the landowner to believe that runoff from the impervious surfaces of their deck or patio and their overfertilized lawn can be connected to algae and weed problems.

In contrast, landowners who strive for a minimal impact on the natural character of a lake are often acutely aware that shoreland zoning is one of the few tools available to protect them from the impacts of a neighbor's desired overdevelopment. The buffering effect of natural vegetation along a shoreline can be crucial to protecting a lake from runoff, and providing habitat for fish and wildlife. All too often, the character of a lake can be changed drastically by the development styles of just a few landowners.

Often, the impact of overdevelopment on water quality is only fully recognized when weed and algae problems occur years later--at a time when the corrective measures are far more expensive than the preventive measures would have been originally.

Sincerely, Karen Voss

### **Suspension of Shoreland Zoning Requested**

Certain landowners, unhappy with enforcement, are in favor of a suspension of shoreland zoning. It is important that legislators understand your views on shoreland zoning regulations. If you wish to express your views send your letters to your legislators at the State Capitol, Madison WI 53702, with a copy to DNR Secretary Besadny, PO Box 7921, Madison WI 53707.





## Aesthetics?

Webster defines it as the study of the mind and emotions in relation to the sense of beauty. But what is beautiful? Truth, goodness and beauty have been described as the supreme values. We are attracted to lakes by the sublimity and beauty of nature. Why else would we live there? Yet in our passion to savor what nature affords, we sometimes destroy the very things that entice us.

Nature is beautiful only to the mind prepared to recognize her for her own sake apart from the practical delights she brings. Pressure is increasing to enjoy the natural beauty and aesthetic qualities of Wisconsin's lakes. This elusive concept and the privilege to define it in our own personal way belongs to each of us. The fate of that concept and the natural environment will depend on our conduct as its trustees. Natural aesthetics is a distinctive attribute of our lakes that must be preserved for all to savor.

R. Korth

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