LAKE TIDES

The newsletter for people interested in Wisconsin lakes

Volume 27, No. 3
Summer 2002

When a Tree Falls in the Water...

The trees along our shores provide a home to all sorts of critters. If we are lucky enough to have one of those trees fall into the water, that role continues and the tree quickly becomes a home for a host of creatures ranging from freshwater sponges to muskellunges. Scientists have discovered that some trees stay intact and continue to provide habitat in the water for as long as 750 years.

Researchers call fallen trees and logs "coarse woody debris." Trees are an important feature in aquatic ecosystems, providing physical structure, altering water movement, affecting the distribution of organisms, and influencing the movement of materials. Although less is known about the role of coarse woody debris in lakes than in streams and rivers, it appears to be an important ecological feature of small lakes, providing feeding, protective, and reproductive habitat for a variety of organisms. For example the growth rates of bluegill sunfish (*Lepomis macrochirus*), was positively correlated with the abundance of coarse woody debris in a set of 14 northern lakes studied in 2000.

The area along the shore which grades into shallow water is called the "littoral zone". It is the zone where most human activity takes place. When we discuss lake shoreline development, we normally think of increased nutrient loading and siltation, but recently the decline of tree/coarse woody debris in the

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A Shoreline Examined... and Protected?

Shorelines can be altered rather dramatically when cabins and houses move in. Many property owners "fix up" the shoreline by removing downed trees, cutting back native shrubs, and establishing a grass lawn down to the water's edge. Some bring in trucks of sand to create swimming beaches. In so doing, landowners, often unwittingly, destroy the very setting that drew them to lake front property in the first place. Without a buffer of native aquatic plants, waves can erode away the shore, to the distress of property owners who scramble to find means of preventing the loss.

What is the Value of a Natural Shoreline?

Shorelines are critical in maintaining a lake's health and the diversity of its aquatic biota. In their natural state, shorelines are typically a mix of aquatic and wetland plants, including sedges, bulrushes or cattails, which grade into shrubs and trees as one moves upland. As part of the natural progression of things, trees often fall into the water and slowly decompose. Decaying vegetation supports a wide array of insects that, in turn, are consumed by fish, frogs, and other animals.

Many lakes have a variety of substrates along their shores-cobble, gravel, sand, and silt- each of which provide places for fish to lay eggs and habitat for many insects such as mayflies and dragon files. Together this complex environment provides places for

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Wisconsin Lakes Partnership

water has been identified as an additional impact of development. As shorelines are developed and cleared, humans both remove trees/coarse woody debris from areas in front of their lots and reduce the potential for trees to fall into the water. The result is that developed lakes have up to 10 times less coarse woody debris than comparable undeveloped lakes. In a new study, scientists hypothesized that within a lake there will be less coarse woody debris in developed portions of shoreline than in undisturbed portions; they attempted to quantify the distance over which this effect occurs. Specifically, using docks as a measure of human influence, this study tested whether there is less coarse woody debris than expected near docks and, if so, within what distance of a dock does this reduction in woody debris occur?

Methods

A team from the University of Wisconsin's Trout Lake Station near Boulder Junction studied five lakes in the Northern Highland Lake District in northern Wisconsin: Trout Lake, Big Muskellunge Lake, Sparkling Lake, Diamond Lake and High Lake. Each of the lakes is located in a mixed coniferous/ deciduous forest with oaks, maples, birch, poplar, balsam fir, red pine and white pine as the dominant tree species.

At each lake, the location of each piece of coarse woody debris and each dock was identified using a global positioning system (GPS). Coarse woody debris was defined as logs which were at least partially submerged, greater than 15 cm in diameter, greater than 1.5 m in length, and at least partially in water less than 1 meter deep. The position of each log and dock was recorded during the summer months in 1996-1998.

Results of the Study

The locations of a total of 982 pieces of coarse woody debris and 266 docks were measured in the five lakes. Lakes ranged in density of coarse woody debris from 7.1 - 41.7 logs per kilometer of shoreline and in density of docks from 1.6 - 7.1 docks per kilometer of shoreline.

In four of the five lakes, there was significantly less coarse woody debris than expected within 50-200 meters of a dock. Sparkling Lake, the one exception, had only 6 docks and these were all grouped in one small section of shoreline.

Previous studies have demonstrated that on the whole-lake scale there is a significant negative relationship between the abundance of trees/coarse woody debris in the water and residential development. The current study showed that within a given lake, segments of developed shoreline had less coarse woody debris than segments of undisturbed shoreline. The spatial scale of this phenomenon showed effects of reduced tree/coarse woody debris up to 50-200 meters of a dock.

The team felt several possible reasons could explain such a pattern. First, it is possible that lakeshore owners actively remove trees/ coarse woody debris from areas around their docks for aesthetic or safety reasons, or to simply keep boats from hitting the logs. These logs may have been pulled onto shore and disposed of, moved into deeper water, or moved to other locations further down the shore. Second, lakeshore owners may have chosen to locate their docks in areas free of coarse woody debris. Finally, removal of riparian trees from developed lots could have reduced the numbers of trees available to fall into the lake, ultimately reducing the abundance of coarse woody debris in near shore areas. The three explanations are not mutually exclusive and it is likely that all three processes are operating concurrently. The data collected by the team were not sufficient to distinguish between these alternatives.

Nevertheless, the data did show a reduced abundance of coarse woody debris within a significant distance of docks. It seems unlikely that dock owners would actively clear logs as far as 200 meters away from docks for safety or aesthetic reasons. Yet, distances up to 50 to 200 meters appear to be the zone of influence between human activities and trees/coarse woody debris. Knowledge of this scale of influence is important for lake managers, policy makers, and the public in their analysis of human/lake

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When a Tree Falls in the Water...
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interactions. So the next time a tree falls in the water near your home, consider leaving it there. The new neighbors that are likely to move into this truly low income housing complex can make your lake a better place.

To read the study in its entirety, go to the Lake Tides web site at www.uwsp.edu/uwexlakes/laketides.

Contributed by Timothy K. Kratz, Shawn Giblin, and Julie O'Leary, Center for Limnology, University of Wisconsin- Madison and David W. Bolgrien, United States Environmental Protection Agency, Duluth, MN.

A Shoreline Examined...and Protected?
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northern pike, bluegill, bass, and other fish to spawn, feed, and hide. Loons, ducks, geese, and other water birds nest along banks and feed on aquatic plants and the insects and fish they harbor. Wildlife such as frogs, otters, and mink spend most of their lives along shorelines. Remarkably, eighty percent of the plants and animals on the state's endangered and threatened species spend all or part of their life cycle within the near-shore zone and as many as ninety percent of the living things in lakes and rivers are found along a lake's shallow margins and shores.

Eighty percent of the plants and animals on the state's endangered and threatened species spend all or part of their life cycle within the nearshore zone.

An armored shoreline. Is it good for frogs?

Enter the Human Element

Waterfront property owners have a right to protect their shores for the purpose of erosion control. However, as with any activity that has the potential to adversely affect public interests in navigable water, the placement of shore erosion control measures, such as rip rap and seawalls, are subject to considerations mandated by the public trust doctrine. In other words, proposed activities should not negatively impact a public resource and the public's interest in habitat, water quality and scenic beauty. Section 30.12 of the Wisconsin state statutes grants the Wisconsin Department of Natural Resources (WDNR) the right to issue permits to place materials or structures on the beds of navigable waterways. Some of these shore erosion treatments, however, can be considered detrimental to the public interest.

Replacing natural shorelines with bare rock or walls causes habitat changes that have cumulative environmental side effects on fish and other components of the biologically rich food web. Bare rock or walls generally reduce complex natural near -shore habitats. Riprap replaces natural complex substrate elements with coarse substrates. Shorelines with erosion control structures generally lack woody cover, tree-falls and hanging bank cover. Shorelines with erosion control structures also have less emergent and floating vegetation than sites with no structures. Riprap, vegetated riprap and integrated toe protection cause less adverse effects upon waterways and adjoining property than bulkheads do, and accordingly are preferred over bulkheads as methods to protect shores from erosion in high-energy settings. Gradually, as lakefront lots are developed and subsequently altered, Wisconsin's mosiac of near-shore habitats is simplified and reduced, threatening our biological diversity.

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The Blob

Metamorphosis of a Swim Raft

Many of these floating objects are large, vertical, and available in a range of vivid and bold colors.

First, let's begin with a brief lesson in riparian rights. Waterfront property owners, known as riparians, have certain rights, one of which is to place a pier in the near-shore area next to their property. Wisconsin case law has established that this right may be exercised without obtaining a permit provided the pier is a "reasonable" one (i.e. does not interfere with other property owners' rights, the public's right of navigation, or other public interests in water quality, scenic beauty and habitat). Similarly, a riparian has the right to place a swim raft in the water without obtaining a permit so long as the swim raft does not interfere with public rights, the rights of other riparian owners, and is placed within 200 feet of shore.

Piers, swimrafts, and other water toys.

An earlier issue of *Lake Tides* (Summer 2001) reviewed the proliferation of various water toys such as floating trampolines and inflatable rafts known by the rather unforgettable names of "The Blob" and "The Iceberg," on Wisconsin waters. Many of these floating objects are large, vertical, and available in a range of vivid and bold colors. The visibility of these water toys along the shoreline, coupled with their emergence, en masse, along these same shorelines, drew a significant amount of attention. The Wisconsin State Legislature recently approved rules to manage a select few of these floating objects. New section NR 326.08 of the Wisconsin Administrative Code establishes that "near shore areas are the most heavily used areas of a water body and are the most valuable ecological areas. Extensive and large structures on an individual and cumulative basis interfere with the public's ability to use and enjoy near-shore areas and affect the growth of aquatic vegetation necessary for fish and wildlife habitat." The rule was promulgated based on the perception that swim rafts of a certain dimension pose a threat to these resource values.

The rule, which takes effect September 1, 2002, requires that swim rafts in excess of 200 square feet in area or 38 inches in height obtain permits from the Wisconsin Department of Natural Resources. (The height requirement does not apply to protective covers, diving boards, ladders and slides. Diving boards, ramps, slides and similar accessories, however, are included in the measurement of square footage.) The rule exempts swim rafts which are removed from the water on a daily basis or that are anchored in properly marked and approved swim areas.

For the text of this rule and other legislative proposals, see http://www.legis.state.wi.us.

Enter a Proposed Administrative Rule

A lack of administrative standards for Chapter 30 erosion control structures has not allowed consistent decision-making by the WDNR across the state. Although WDNR guidance recommends denial of shore protection designed primarily for landscaping or "aesthetic" purposes, current guidance has no standard methodology for assessing lakeshore erosion. The proposed rule, NR 328, contains consistent, logical methods for assessing the severity of erosion at particular locations.

The rule improves the consistency and speed of permit decisions and protects near-shore fish habitats more effectively by simplifying regulation of erosion control practices that benefit fish and wildlife, while prohibiting practices that severely degrade near-shore habitats at sites where erosion can be controlled by other methods. The rule reduces the need for case-by-case analysis in two ways:

1) The rule identifies effective and appropriate erosion control practices (particularly restoration of near-shore vegetation and bioengineering approaches) in settings where permits are either not needed or short-form permits will be used; and

2) The rule prohibits erosion control practices that severely degrade near-shore habitats in settings where erosion control can be accomplished through simpler techniques.

The Heart of the Rule

Very generally, the rule uses storm-wave heights calculated by applicants using a simple formula to categorize a site as either a low (<1foot), moderate (=1foot and <2.3 feet), or high (=2.3 ft.) energy site, and specifies appropriate erosion control options for each category. Various erosion control treatments are identified for each site category as: 1) designs typically approved (short-form permit process); 2) designs generally discouraged and critically reviewed by the WDNR (long-form permit process); and 3) designs prohibited.

For low-energy sites (bays, tributary areas, lakes, many shorelines on small lakes), the rule simply recognizes that working with the existing plant community is the best way to limit/control erosion and restore previously lost habitats. Natural vegetation provides erosion control in several ways. Plants form a network of roots that hold soil particles together and stabilize the bank. Exposed stalks, stems, branches and foliage dampen waves, reduce local flow velocities, and dissipate energy against the plant rather than eroding the soil. Vegetation also acts as a buffer to trap suspended sediment and induce its deposition.

In moderate energy settings, some limited use of rock at the toe of the bank along with revegetation of the site is readily permitted to provide erosion control.

In high-energy settings, the rule provides for more aggressive shore protection measures. Under these circumstances, near-shore shoals, bars and beach slopes form as erosion uncovers or sorts out sand, gravel, cobbles, boulders and bedrock from beneath glacial till and other fine soils. These more energy resistant materials are formed into wave-breaking, energy-absorbing barriers that eliminate, or slow, further erosion. In this setting, the allowance of rocks, cobble, and gravel, constructed as riprap treatments minimally alters the site and can meet the waterfront property owners erosion control needs.

Take advantage of an opportunity to participate as this proposed rule package is discussed and revised.

To obtain the time, date and location of a hearing in your region on the proposed rules for erosion control standards for inland lakes and flowages (NR 328), visit the DNR web site at http://www.dnr.state.wi.us/org/caer/ce/news/hearmeet.html.

For more information, contact Paul Cunningham at 608/267-7502 or cunnip@dnr.state.wi.us.

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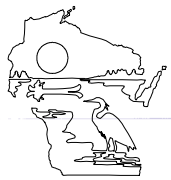

So, How Are We Doing?

How is volunteer data used and what is it telling us about Wisconsin lakes? Some variation of this question is often heard from citizen volunteers. While the data provides lake residents with information about the health of their specific lake and the "hands on" involvement is a tremendous educational opportunity, the data does have important "big picture" uses. Begun in 1986, there are now enough lakes being monitored by citizens with enough repeated observations to allow us to characterize and track the condition of lakes on a statewide or regional basis.

Under the federal Clean Water Act, the state is responsible for reporting to Congress its progress toward "cleaning up" the state's waterways. Every two years, the Wisconsin Department of Natural Resources (DNR) submits what is called the 305(b) Water Quality Report describing its water quality programs and accomplishments. This report is a condition of receiving federal funding that constitutes a substantial portion of Wisconsin's budget for operating its water management programs - including self-help monitoring. You can view the most recent copy of this comprehensive summary at http://www.dnr.state.wi.us/org/water/wm/summary.html.

For the 2001 report, staff compiled information on as many lakes as possible to assess their trophic status and determine trends in water quality. About 70% of this data came from citizen volunteer monitors. While not a perfect statistical representation of the state's lakes, the numbers indicate that about half exhibit what would be considered good water quality (see Figs. 1 & 2) and that overall lake water quality is stable. These data indicate that of the lakes showing trends, more are improving than declining in water clarity.

The data are used in a variety of other ways. It's used as evidence in court cases, permitting matters, and other department decision-making, in addition to answering general inquiries from the public or the media. The DNR incorporates lake data in its basin planning efforts, which is used to direct work plans and priorities. For example, meso and oligotrophic lakes are recommended for protection activities to preserve good water quality. Hyper and eutrophic lakes may be recommended for remedial management actions to restore water quality.

If you want to find out if water quality data has been collected on your favorite lake, go to the DNR's Self Help web site at: http://www.dnr.state.wi.us/org/water/fhp/lakes/index.htm and choose "Self Help" and "Lake Data." It's easiest to begin by entering the county name in which the lake is located and then choose the correct lake name. If there is no data for your lake, maybe you would consider becoming a volunteer? If so, contact your regional DNR Self Help coordinator.

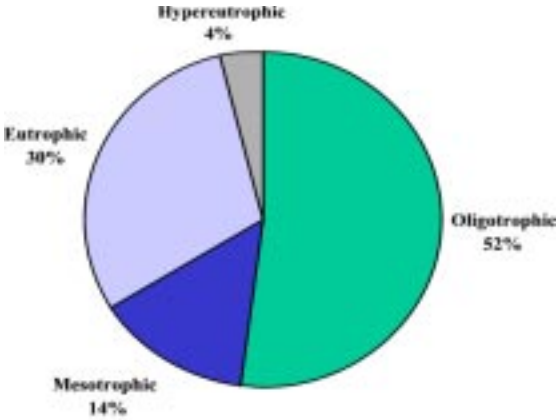

Fig. 1 Tropic Status % of Lakes

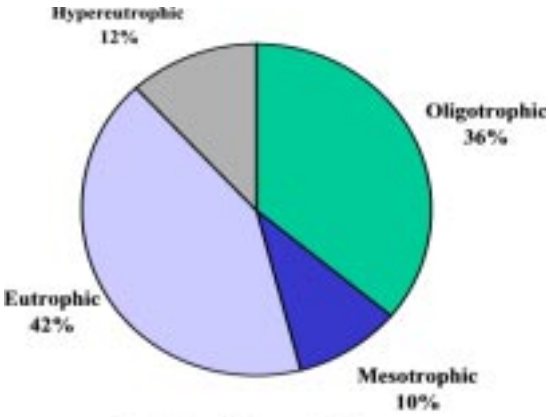

Fig. 2 Tropic Status % of Lake Acreage

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So, How Are We Doing?
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High quality monitoring data supports sound management and DNR relies on the public to gather much of the data. There are over 700 citizen volunteers participating in the program (see box to the right). Interest in volunteer lake monitoring continues to increase, with over 122 new volunteers starting in 2000, and 194 new volunteers in 2001. Citizen volunteers can be proud that the work they are doing is contributing to the protection of Wisconsin's lakes.

Wisconsin Self Help Lake Monitoring Participation - 2001

Parameter	# Volunteers
Secchi Disk Depth	709
Chlorophyll a and Total Phosphorus	354
Temperature and Dissolved Oxygen	165
Eurasian Water Milfoil	75
Purple Loosestrife	54
Aquatic Plants	44
Zebra Mussels	24

Contributed by Carroll Schaal, Lake Partnership Team Leader, DNR, and Jim Vennie, Lake Data Manager, DNR

Changes Proposed to Lake Grant Program

The State's Lake Planning and Protection Grants annually provide $2.6 million in cost-sharing to local lake organizations for a wide variety of lake management activities. A set of administrative rules, titled NR 190 and NR 191, govern how these funds are administered. As priorities change and new legislation gets passed, the rules need to be adjusted and updated. The Wisconsin Department of Natural Resources (DNR) is currently developing a comprehensive rule revision "package" and in September will be requesting the Natural Resources Board to hold public hearings, likely in November, on these changes.

The revision mostly addresses restructuring the Lake Protection Grant rules to clarify and expand existing policies. However, there are some new items of note such as the creation of specific grants for shoreline restoration projects and lake classification implementation projects by counties. Other changes deal with priorities for awarding grants and the application and approval process for grants proposing to implement a lake management plan.

Given that many *Lake Tides* readers will have an interest in commenting on these rules and may not be around in November, this article serves as a "heads up." The proposed rules will not be available for review and comment until after the Natural Resource Board's approval in September. Those interested in reviewing and providing comments should contact Carroll Schaal, Lake Partnership Team Leader, at (608) 261-6423 or email him at schaac@dnr.state.wi.us to get on a distribution list for a copy of the proposal and a schedule for the public hearings. Spanning the hearings is a public comment period when comments can be submitted to the DNR in writing. Hearing attendance is not required to voice your opinion and comments submitted in writing have the same weight and consideration as oral testimony.

This is your opportunity to influence how your state dollars are used to protect Wisconsin Lakes. Your input will count!

Participate in rule-making and help create law!

Adopt-A-Lake

$25,000 Award for M-H-LT Students in National Science Foundation Competition!

A quest by three Minocqua-Hazelhurst-Lake Tomahawk students and their teacher to solve a troublesome Eurasian watermilfoil (EWM) problem in Wisconsin lakes earned them top prize in a national science competition.

Eighth grader, Janelle Zajicek, and seventh graders, Maree Stewart and Luke Voellinger, traveled to Florida June 14th with their teacher, Lisa Ahlers, to present their environmental action plan to prevent the spread of EWM, a serious threat to lake ecology in Wisconsin and 44 other states.

Their plan is to introduce a weevil, a native water bug, into the lakes that are infested with EWM. The weevil feeds on the EWM and keeps the population in check.

With the $25,000 Bayer/National Science Foundation Award the students plan on distributing brochures to bait and tackle shops to help prevent the spread of the master weed, raise weevils in aquariums, build aqua-view scopes for under water plant exploration, host workshops for others to learn and be involved in the care of weevils, and build the equipment needed to fight this troublesome invasive.

The Headwaters of the Wisconsin River, Lac Vieux Desert, are Adopted!

The Phelps School District is once again on the campaign to increase their lake adoptions in Vilas County. LuAnn Grayus' second grade class and Tom Himerl's middle school students adopted Lac Vieux Desert. This partnership between elementary students, middle school youth and lake association members brings a fresh new light to the historical lake.

Lac Vieux Desert's lake association hosted a pontoon "Meet the Lake Day" for the students and teachers. While aboard the floating classroom, the students were introduced to the variety of wildlife, plant communities, excellent fishing habitats and historical information provided by pontoon captains, Fred Caskey, Mary Lou Steiner and Dave Stevens. The adoption process is now in the planning stages as the students will begin to tackle issues next school year. They will be off to a good start with a generous donation of funds to purchase lake monitoring equipment. Congratulations on the new partnership!

Students Attend Lakes and Water Quality Workshop

Middle and high school students participated in the Lakes and Water Quality Workshop held at the Florence Natural Resource Center on Thursday, April 25. The workshop was the third in a series of training sessions for environmental science students before they restore native vegetation to a section of shoreline at the county park on Fisher Lake in Florence, Wisconsin, in late Spring of 2002.

Students were introduced to the study of lakes or "limnology" by learning about the physical, chemical and biological characteristics of lakes in the northwoods. Students then broke into groups and rotated through four "water stations" to learn water testing techniques that they will use the day of the restoration to determine the water quality of Fisher Lake.

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Students Attend Lakes and Water Quality Workshop
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Students made and learned to use a secchi disc to measure water clarity. Students also learned to measure the level of algae using filters and microscopes. Excess algae is caused by nutrients such as phosphorus and nitrogen that come from sediments, manure, pet wastes, grass clippings, improperly maintained septic systems, and misapplications of fertilizers on lawns or farm fields.

Fish "breathe" by extracting oxygen that is dissolved in the water as it passes over their gills. Students learned what levels of dissolved oxygen are necessary for aquatic life, and how to measure dissolved oxygen using a test kit. Cold water can hold more dissolved oxygen than warm water, so they also learned to measure the temperature of water.

Students learned about sampling for macroinvertebrates, such as dragonfly larvae, using dip nets. Some macroinvertebrates are sensitive to pollution and are good indicators of water quality, much like canaries were once used in mines to gauge air quality.

Finally students learned how to prevent the spread of invasive plants and animals such as Eurasian watermilfoil, purple loosestrife, zebra mussels, and smelt by inspecting and cleaning boats and equipment before leaving a water body, emptying bait buckets on land, and removing and destroying purple loosestrife from gardens. Invasive species typically have few natural predators and can grow to large populations that out compete native species.

Invasive species typically have few natural predators and can grow to large populations that out compete native species.

The workshop and Fisher Lake Restoration Project are part of a Learning Expedition, which is a long-term group project. Learning Expeditions are an important component of the approach to learning known as Expeditionary Learning Outward Bound, which has been implemented in the Florence High School and Middle School thanks to a Comprehensive School Reform grant awarded to the district in April, 2001.

The trainings and shoreland restoration are a collaborative effort of UW-Extension, Florence County Public Schools, Florence County Land Conservation, Florence County Lakes and Rivers Association, Florence County Forestry and Parks, Headwaters Basin Educator, and WI Department of Natural Resources. Funding was obtained from the Department of Agriculture Trade and Consumer Protection and the Comprehensive School Reform grant.

Contributed by Corrin Seaman, UW-Extension Community Resource Development Agent, Florence County

Smaller Point of View

I sink slightly as I step on the expanse of sand
Which supports an entire lake full of life.
I am mesmerized as the distant sun falls,
Shimmering atop the vast, rippling surface,
Warming the waves wrapped around me.
I gaze into the glowing water, barely knee-high,
And take note of the minute creatures
Swimming freely about my toes,
And wish I could see the beauty
From yet a smaller point of view.

-Cassandra Tuszka,
Wausau West High School

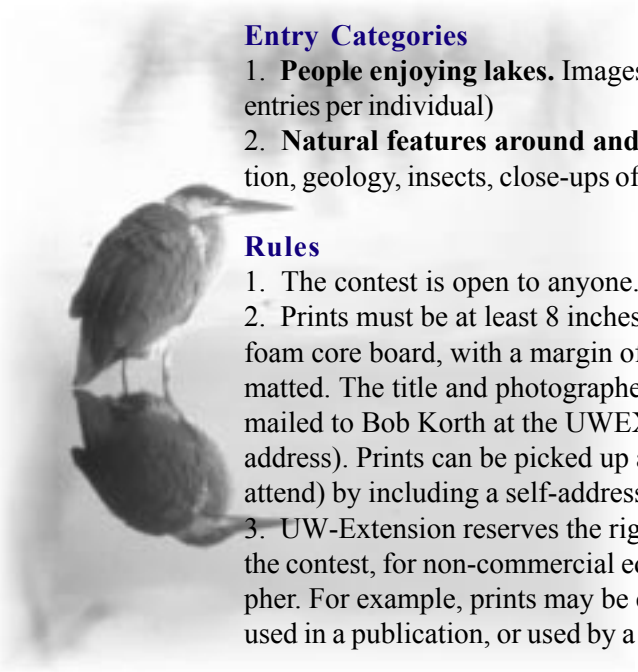
RIVER of WORDS

The Wisconsin Lakes Partnership is working to foster children's appreciation and knowledge of Wisconsin's water resources through the River of Words K-12 art and poetry program. Watch future issues of *Lake Tides* for more artistic expressions, as well as updates on the Wisconsin River of Words program.

For more information, contact Mary Pardee at 715/346-4978 or mpardee@uwsp.edu.

The Wisconsin Lakes Partnership Photography Contest

To celebrate the 25th Wisconsin Lake Convention, UWEX, WDNR and WAL are sponsoring a photo contest. Here is an opportunity to both show the state why you love your lakes as well as display your skill with a camera.



Share your photos!

Entry Categories

1. **People enjoying lakes.** Images with people fishing, canoeing, skiing, swimming (limit: three entries per individual)
2. **Natural features around and in lakes and under water**. Examples include wildlife, vegetation, geology, insects, close-ups of aquatic life. (Limit: three entries per individual.)

Rules

1. The contest is open to anyone.
2. Prints must be at least 8 inches by 10 inches, and mounted on white or black matte board or foam core board, with a margin of at least 2 inches all around. Prints should not be framed or matted. The title and photographer's name and address should be on the back. Entries can be mailed to Bob Korth at the UWEX Lakes Program office by April 4, 2003 (see page 11 for address). Prints can be picked up at the conclusion of the convention or returned (if you do not attend) by including a self-addressed envelope with proper postage.
3. UW-Extension reserves the right to obtain an electronic or film copy of any image entered in the contest, for non-commercial educational or promotional use, with credit given to the photographer. For example, prints may be created for a traveling display that promotes the lake partnership, used in a publication, or used by a lake organization.

Judging: Photos will be judged by a 3-member panel. Criteria for judging include visual impact, technical merit and composition.

Awards and Prizes: At their discretion, judges may award first, second, and third places, and honorable mentions for each of the two categories.

People enjoying lakes -
Prints: 1st, 2nd, 3rd, Honorable Mention(s)
Natural features -
Prints: 1st, 2nd, 3rd, Honorable Mention(s)

All placed entries will receive ribbons and certificates.

1st Place:	$100 prize
2nd Place:	$ 50 prize,
3rd place	$ 25 prize

The prints will be displayed and judged at the 25th Annual Lakes Convention, April 12-13, 2003, KI Convention Center, Green Bay.

Silver Reflections/Golden Projections
Wisconsin Celebrates
25 Years of Lake Partnerships

In celebration of the progress made and the lessons learned in lake management over a 25-year (and greater) time period, we invite you to share your stories with the people of Wisconsin.

We invite you to write about the history, the projects, the personalities, the challenges, and the triumphs of your lake community. Gain state-wide recognition for your efforts! We plan on collecting your lake stories and presenting them at the 2003 Wisconsin Lakes Convention, April 12-13, 2003, Green Bay, Wisconsin.

Specifically, we request that the following information be submitted by January 6, 2003:

1. A 500 word or less narrative describing the issues, changes in use and culture, scope of volunteer effort (time, funds, numbers of individuals, partnerships, significant leadership) and projects that took place over a 25 year (or greater) period ("the silver reflections"). Some lake organizations go back 100 years; others are only a few years old. We also ask that you describe future goals and directions ("the golden projections").
2. Black and white or high quality color photos recording the events and milestones in your lake's history.
3. News clips and other publications that document the history and the hard work.
4. Lake contact name (phone, address, email).
5. Electronic files preferred. Send as an attachment to the email address listed below. Type-written copies will also be accepted.
6. Please send no materials that are "one of a kind." If you want any of the materials returned, please enclose a self-addressed envelope with proper postage.

Stories should be submitted and questions directed to:

Tamara Dudiak
UWEX Lakes Program Office
College of Natural Resources
UW-Stevens Point, WI 54481
715-346-2116
tdudiak@uwsp.edu

Share your stories!

HOMELAND SECURITY

The List of Aquatic Invasive Species Gets Longer

Invasive species often come into new areas with a competitive advantage, having few if any natural predators in their adopted home.

Humans have always had a wander lust, and for as long as we have been moving around the planet we have taken all manner of creatures and plants with us. The list of non-native species transported to our country is very long, some we brought on purpose (apples, potatoes), others by accident (sea lamprey, zebra mussels). Invasive species often come into new areas with a competitive advantage, having few if any natural predators in their adopted home. One study reported by the U.S. Fish and Wildlife Service estimates that the total cost of invasive species in the United States is more than $100 billion a year.

One aquatic invasive that has made headlines from MSNBC and CNN news to the David Letterman Show, goes by the ominous name, Northern snakehead. A reproducing population of this fish was recently found in a Maryland pond, to the alarm of a few regular anglers. Another more tropical species of snakehead, of which there are 28 species worldwide, was found in Florida waters in 2001. The Northern snakehead, *Channa argus argus*, a fish that looks something like a bowfin with plenty of teeth, snake-like head scales, a torpedo-shaped body, and long dorsal and anal fins, is native to China, tropical Africa, and Asia. The snakehead grows up to 40 inches long and can weigh over 15 pounds. The snakehead is also one of a small number of fish species that can survive in very low oxygen conditions and actually live out of water for 3 to 4 days. Consequently, the species is capable of moving over land from water body to water body. The snakehead is a valued food source in Asia, known for its excellent flavor.

The snakehead is sold in this country by the aquarium trade and in some food markets; it has not yet been found in the wild in Wisconsin.

Secretary of the Interior, Gale Norton, has proposed listing the 28 species of snakehead as an injurious species in the United States. Secretary Norton's proposal calls for listing the species as injurious under the 1981 amendments to the Lacey Act, a law intended to curb illegal trading in fish, wildlife, or plants. The listing would prohibit importing these species of fish or transporting them across state lines without a special permit. The Northern snakehead is a temperate species and capable of surviving cold water temperatures (down to 32 degrees). Experts believe that Wisconsin winters are too harsh to allow the snakehead to survive the season, but they also comment, "never say never"."

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A Lesson Learned...

We can all play a positive role in preventing the spread of aquatic invasives.

- Be aware of moving living plants and animals via water equipment (boats, bait buckets, water recreation equipment).
- Never dump live or dead bait in the water.
- Never release aquarium fish.
- Check trailers for plants and clean them before re-launching in another water body. (The 2001-2003 Wisconsin budget bill included provisions which prohibits the launching of boats, trailers or boating equipment in a navigable water if any aquatic plants or zebra mussels are attached.)
- Educate friends and neighbors.
- Stay alert for invasive species and report any findings.

Homeland Security
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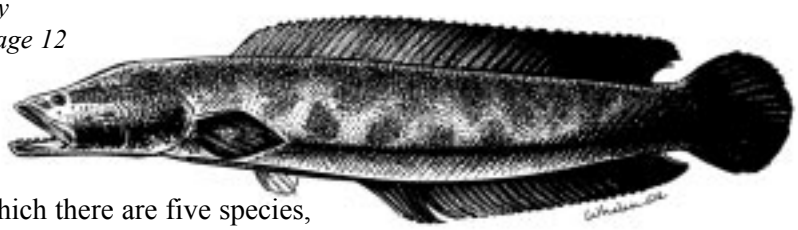

Channa argus argus

The other "outsider" is the Asian carp, of which there are five species, including the grass, bighead and silver carp (which are illegal to raise in Wisconsin). Southern fish farmers introduced these carp in the 1960s and 70s to control phytoplankton and aquatic plants. People speculated as to when these Asian carp would show up in Wisconsin waters. It seems that they have finally arrived. These large river fish are now reproducing in the Mississippi River basin and appear to be moving north. A bighead carp, *Hypophthalmichthys nobilis*, was caught by an Iowa commercial fisherman in lower Pool 9 of the Mississippi River (near Lynxville in Wisconsin).

Although this finding is not necessarily a sign of a reproducing population, if downriver populations are any indication, it won't be long before we see some young-of-year and juvenile bighead carp. These carp can easily migrate and expand their numbers and scale of distribution in Wisconsin via major tributaries of the Mississippi River. These lunkers often weigh in at over 50 pounds and can have a major impact on an aquatic ecosystem.

Contributed by Bob Korth, Lakes Specialist, UW-Extension, Stevens Point

Letters to the Editor

In the Spring, 2002 issue of *Lake Tides*, we ran an article on the potential for Wisconsin to charge user fees on items such as boat trailers and piers to compensate for budget shortfalls.

The article generated many comments with about 51% of individuals against fees and 49% in favor of them. Here are a few examples:

"I believe user fees should be quantified directly in response to the burden put on the particular environment, in this case, lakes. Quiet sports place the least stress on the lake environment (unless conducted by a group such as a youth camp). Motorized sports stress the environment considerably. Therefore, user fees should be on a scale from low to high, the low end being quiet sports such as kayaks and canoes, and the high end, jet skis and speed boats. As far as piers and swim rafts are concerned, the concern there is the color. They should blend with the environment and become as invisible as possible. I would not like to see a user fee used to justify the yellow, red and blue swim rafts, which are contaminating our lakes. When camps are on a lake, they should pay a considerable user fee in principle since their impact on the lake is of a high magnitude, regardless of the type of activity involved. Camps should not have free use of our citizen's lakes."

"…I would like to suggest that your survey is significantly skewed because it only surveyed people at your 2002 Lakes Convention. These are obviously people who can afford to come to the convention and therefore can be presumed to be able to afford to pay the user fees. I protest that such a survey does not, as you allege, "gauge your opinion on user fees (the "your" presumably being those readers of Lake Tides for whom the article was written). (It most certainly does not gauge the opinion of those elderly who happen to be my friends, who live on a lake, but who do not necessarily read Lake Tides) since I faithfully read Lake Tides, but would in no way support such fees and would find them a burden. I feel concern for the environment and for our lakes, but as a homeowner whose property has been reassessed four times in the last six years, I find the insatiable hunger of government at every level for more and more money raised by taxes on me and on all to be worse than excessive, it is a danger to us, perhaps akin to terrorism. Please reconsider your support of these fees."

"Phantom Units": Dockominiums Journey through the Wisconsin Court System

This summer, the Wisconsin Supreme Court issued a decision on a case that has drawn considerable interest and touched on many fundamental questions relating to the public trust doctrine and the transferability of riparian rights. *ABKA Limited Partnership v. Wisconsin Department of Natural Resources*, 2002, grew out of a proposal developed by ABKA to convert a marina on Lake Geneva in Walworth County to a condominium form of ownership.

Abbey Harbor marina was first developed back in 1962 when an area along the shore of Lake Geneva was dredged to create "a marina and boat storage". ABKA gained ownership of the marina in 1973 and, over time, the marina came to consist of 407 boat slips. In 1995, ABKA filed a condominium declaration in an effort to convert the marina into a condominium form of ownership. The declaration envisioned the creation of 407 units. A "unit" in this case, however, did not consist of a condominium or residential unit, but rather a four by five by six inch "lock box." Each unit or "dockominium" came with the standard set of riparian rights as well as the use of an individual boat slip. Each unit sold for approximately $50,000.

"Under s. 30.133, riparian rights must be conveyed as attached to something; here they are attached to nothing."

Wisconsin Supreme Court

The court focused on two main issues: did the dockominium concept violate the state's prohibition again the conveyance of riparian rights, and ; was the dockominium unit a legal condominium unit under Wisconsin condominium law.

On the first question, the court reviewed the basis for the legislature's prohibition against the transfer of riparian rights. The statutory section of interest, s. 30.133 Wis. Stats. states, "no owner of riparian land that abuts a navigable water may convey, by easement or by a similar conveyance, any riparian right in the land to another person, except for the right to cross the land in order to have access to the navigable water." By virtue of ownership of waterfront property, riparians have certain rights. These rights include the right to access the waters, make reasonable use of the water for agricultural, domestic and recreational purposes, and the right to construct a pier. The court pointed out that states across the country vary in the extent to which they allow for the transfer of riparian rights apart from the land to which these rights were attached. Wisconsin, however, represents the exception and, as of 1994 when s. 30.133 was passed, prohibits all transfer "by easement or similar conveyance."

ABKA objected to the applicability of this statutory section on the grounds that the purchasers of the dockominium units were legitimate owners of riparian property and thus there was no attempt to illegally convey riparian rights.

This claim leads us to the second issue addressed by the court: whether ABKA's dockominium unit is a valid unit under Wisconsin's condominium law. The court concludes that the dockominium is not a legitimate unit, refers to it as a kind of "phantom unit," and reaches this decision principally on the grounds that Wisconsin's law requires that the condominium unit have "independent use." The boat slip, which is conveyed with the lock box, clearly has independent use: providing a space to park a boat. However, the court points out that the real unit, according to the condominium declaration, is the four by five by six inch lockbox located in the harbor house. This unit, the court asserts, has no independent use within the meaning of Wisconsin's condominium law and as required by state statute. The argument is somewhat complex, but essentially the court concludes that the lock box is not a valid unit and so the owners do not own real property as claimed by ABKA. As the court stated, "(w)ithout a valid unit, the unit "owners" do not hold real property, and the declaration is left to convey nothing more than riparian rights unattached to any real property interest…Under s. 30.133, riparian rights must be conveyed as attached to something; here they are attached to nothing."

The court concludes by distinguishing residential condominium units from the lock

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Phantom Units
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boxes proposed by ABKA. The court points out that a condominium unit, unlike the lock box, has independent use as living space for people. These units would have been legitimate under state law and would have resulted in riparian status for the purchasers of the units, thus allowing for the use of the boat slip.

The concurring opinion offered by Justice William Bablitch is most interesting as it addresses the public trust issues discussed by the Court of Appeals, but neglected by the Supreme Court. Justice Bablitch agrees with the majority opinion, but points out that the decision does not go far enough in establishing that "dockominiums are a per se violation of the public trust doctrine." Drawing significantly from the brief filed by the Wisconsin Association of Lakes, he states that the transfer of dockage rights through a condominium arrangement is illegal under s. 30.133 because granting one riparian the right to divide the riparian zone into numerous "lots" will ultimately result in serious negative effects on the state's public waters and subvert the protections afforded by the public trust doctrine.

Contributed by Tamara Dudiak, Lakes Specialist, UW-Extension, Stevens Point.

To read the opinion in this case and for other legal resources, go to www.wisbar.org/legalres/index.html#caselaw.

Waters of Wisconsin: Making a Difference

It's a working conference with legs - a gathering of leading water experts and concerned citizens to lay the groundwork for a comprehensive, long-term policy for the use and sustainability of Wisconsin's waters. And it is a place to celebrate, through art, poetry, and music, the importance and beauty of water in our lives, to remind ourselves why this precious and endangered resource must be protected…now!

The challenges and threats Wisconsin's waters face are the stuff of headlines on a regular basis.

The challenges and threats Wisconsin's waters face are the stuff of headlines on a regular basis. Here's your chance to learn more about these problems, the "big picture" they are part of, and help move our state towards possible solutions. The Waters of Wisconsin Forum, to take place **October 21-22, 2002**, at Monona Terrace in Madison will offer two days of discussion, debate, and reflection, and the chance to participate in an effort we believe could significantly improve the future of water in Wisconsin.

For more information about Waters of Wisconsin, visit www.wisconsinacademy.org or contact Amanda Okopski, Forum Director, at aokopski@wisc.edu.

C A L E N D A R

August 14, 2002 - Northern Region Water Resources Workshop, Holiday Inn Express, Rhinelander. 4:00-9:30 p.m., with dinner. Contact WAL at 1-800-542-5253.
August 17, 2002 -Tour shoreland buffers on Wisconsin's deepest lake. Saturday, August 17, 2002, from 8 a.m. until noon. Contact the Green Lake Association, 920-294-6480.
August 22, 2002 - Shoreland Restoration Workshop, 6:30-9 p.m. at the Stephenson Town Hall (located on County Hwy X in Marinette County). Contact Kendra Axness, UW-Extension Basin Educator, e-mail:kendra.axness@ces.uwex.edu, 715-582-1002.
September 6, 2002 – Aquatic Plant Harvesting Seminar, Waukesha County Technical College, 800 Main Street Pewaukee. Registration 7:30-8:30 a.m. Contact 262-392-2162.
September 19-20, 2002 – Lake Leaders Institute, Kemp Station.
October 21-22, 2002 – Waters of Wisconsin Forum, Monona Terrace, Madison. See article above.
October 29 – November 2, 2002 – NALMS, Anchorage, Alaska.
April 10-12, 2003 - Wisconsin Lakes Convention at the Regency Suites in Green Bay.

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Reflections

The more we come to dwell in an explained world, a world of uniformity and regularity, world without possibility of miracles, the less we are able to encounter anything but ourselves.

-Neil Everden, The Social Creation of Nature