

Buff Up Your Shoreline



For many of us, our lakeshore represents the sweep of one's heart, a place filled with memories of growing up, catching fish, watching frogs and whiling away the sweet summer days. For the past decade, the domestication of our shorelands has altered the character of our shores in a negative way, but change is afoot. People around Wisconsin have been rethinking what is best for the lakes, and for their families, and taking on the task of restoring their shorelands to a natural state. Lake residents and organizations, natural resource agencies from the Wisconsin Department of Natural Resources (DNR) to local land conservation committees, as well as tribal entities, energy companies, and businesses such as resorts and restaurants, have all embraced the idea of restoring shoreland buffers. A lot of great things can come from this effort. If restoration improves wildlife habitat, then there is more for our families to enjoy. If a shoreland buffer enhances water quality, then it helps our lakes become healthier and more satisfying for everyone.

Often these projects form teams including local contractors, nurseries, consultants, and others specializing in shoreland work. Miles of shoreline have been returned to more naturalized habitat, with the full complement of structure including trees, shrubs, and ground layers of native sedges, grasses, ferns, and wildflowers.

People have done so, in part, because the restored shores hold a promise of revitalized habitat, and of new areas that are more inviting to green frogs, turtles, mink, otters, and young fish. These renewed shorelines also buffer lakes from increased nutrients and sediments that can reach them through surface water. But how successful have we been at improving

ecological conditions, biological diversity, or productivity of damaged lakeshores?

Dan Haskell, a graduate student with Michigan Technical University (MTU), has worked diligently over the last two years to get us answers. He explained the origins of the Wisconsin Lakeshore Restoration Project as a partnership on Vilas County lakes. "This project seeks to quantify the ecological and water quality benefits associated with buffer renewal by measuring the value of fish and wildlife habitat restoration," he said. This partnership includes shoreland owners, lake groups like the Found Lake Association, state agencies like the DNR and the Department of Agriculture, Trade and Consumer Protection (DATCP), Vilas County Land and Water



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Wisconsin Lakes Partnership

LakeTides

The newsletter for people interested in Wisconsin lakes

Before



C. Scholl

After



C. Scholl

Before and after shots of the Hyam property on Found Lake where an asphalt boat launch and manicured lawn were replaced with native vegetation and erosion control measures.

Conservation Department (LWCD), a local nursery (Hanson's Garden Village) and MTU.

"The project compares and contrasts habitat and water quality between developed and undeveloped lakes," says Mike Meyer, a DNR wildlife research scientist. Four developed lakes will get significant stretches of shoreland buffer restored. "Baseline data from these lakes will then be compared with untreated controlled sites on the same lake and to reference sites on undeveloped lakes with similar chemistry, size, type, and landscape positioning," said Meyer.

"We started the project on Found Lake, in Vilas County," said Haskell. High winds hit the northern shoreline of this lake in 1999, leaving many downed trees. Shoreland property owners were left with large gaps in their lakeshore buffers. "We had an opportunity for lakeshore landowners, state and county resource professionals, local lake organizations, area businesses, and others to make a difference for their lakes," stated Haskell. "The response from the lake community was terrific!"

First they set up a study design and partnership between DNR, Vilas County LWCD, and Chuck Thier, the president of the Found Lake Association. "In 2006, we began pitching the idea of doing shoreland restoration and erosion

control work on waterfront properties using the funding sources of the research study to help riparians," said Carolyn Scholl, Vilas County Conservationist. "We asked prospective landowners to commit to the ten-year length of the study," she said.

Several families signed contracts for the conservation plans to move forward. In the spring of 2007, restoration of these sites began in earnest. "Our team spent over \$40K restoring these shoreland buffers, planting 4,500 plants on six different properties located on the north shore of Found Lake," stated Scholl. "The sites extended along nearly 1,300 feet of frontage," she said.

Another indispensable partner with the project has been DATCP conservation engineer Stacy Dehne, who was vital to helping design erosion control treatments for Found Lake shoreland property owners. "Working together with DNR water resource specialists, Vilas County, area businesses, and local contractors, we are testing the effectiveness of different shoreline erosion control treatments on the Found Lake sites, such as biologs, ShoreSox®, EnviroLok® bags, and soil lifts," said Dehne.

So what is the study measuring for the benefit of fish and wildlife habitat? Biotic surveys include baseline inventories done before the conservation work begins. Measures of relative abundance and the diversity of native vegetation are taken. Surveys for herptiles, breeding birds, small mammals, and furbearers are also completed initially, and then they are repeated annually as the conservation projects continue over the ten-year period of the study.

"The project compares and contrasts habitat and water quality between developed and undeveloped lakes."

Mike Meyer, DNR wildlife research scientist.

Two of the 'workhorse species' used in shoreland restorations are Water Willow and Blue Flag Iris.



The project is also examining the use of woody habitat on restored plantings. Researchers are monitoring changes in soil temperature and moisture between sites with no wood on the ground, 25% woody habitat cover, and 50% woody habitat cover. “We are interested in whether or not the woody habitat provides some microclimate support to the plantings such as increased moisture and cooler soil conditions. Perhaps this woody habitat can lessen the amount of plant mortality,” says Haskell.

Each of these 10x10 foot woody habitat treatments had the same suite of shrubs, grasses, and forbs planted in them. “We call them the ‘workhorse species’,” says Patrick Goggin, a lake specialist for UW-Extension Lakes, who started with the project when working for Vilas County and now assists with study logistics and helping to write the planting plans.

“The woody habitat treatment plots each have two shrub species, sweet fern and snowberry. Also included are a little bluestem grass, several wildflowers, barren’s strawberry, bergamot, big-leaf aster, columbine, and pearly everlasting,” said Goggin. “We’re anxious to see how these species do over time,” he said.

Landowners are essential partners in the project. Some come to the project looking to address erosion control concerns or replace the decimated tree canopy from the 1999 storm. Many are excited about the visual changes to their shorelines. Where scraggly lawn once stood are now stands of appealing native trees, shrubs, and wildflowers. “We love the native blueberries,” noted the Kloepfers, one of the property owners who had their shoreline buffer restored. Even their granddaughter helped with digging the plantings at their site.

Another landowner who is participating in the project is Richard Kobelt, whose family has owned their modest lakeside resort since the 1960’s. The wind event in 1999 toppled red pines over 100 years old on their site and downed other trees like paper birch, oak and maple. Mr. Kobelt was impressed by the scale of the shoreland restoration on his site. “This is more than I thought they would do,” said

Kobelt. “I couldn’t believe what they had done. There are so many different shrubs and plants that will make this a beautiful waterfront again. They have really outdone themselves.”

Two key steps the landowners agree to in their contracts are temporary fencing and a thorough watering regime following the plantings. In 2008, year two of the project, several additional sites were included in the study. Preliminary work has begun on Moon Lake, also in the St. Germain area of Vilas County.

For more information about the Wisconsin Lakeshore Restoration Project in Vilas County, go to http://vilaslandandwater.org/cost_share_program_pages/cost_share_lakes_project_page.htm or contact Carolyn Scholl, Vilas County Conservationist at 715-479-3747 or cascho@co.vilas.wi.us.

For more information on what you can do to “buff up your shoreline,” go to <http://www.dnr.state.wi.us/org/water/wm/dsfm/shore/restoration.htm>.

*By Patrick Goggin
UW-Extension Lakes Specialist*

“I couldn’t believe what they had done. There are so many different shrubs and plants that will make this a beautiful waterfront again. They have really outdone themselves.”

*Richard Kobelt, participating
Found Lake landowner*



Mike Meyer

Land owners are key to the success of the Wisconsin Lakeshore Restoration Project. Pictured here at their Found Lake property are the Kloepfers, with their granddaughter, just after their native shoreland planting was installed in the summer of 2007.



Groundwater

Are We Drinking Our Land Use Habits?

95% of Wisconsin communities rely on groundwater as their primary source of water for everything from drinking water to washing clothes.

Here in Wisconsin we often refer to groundwater as our buried treasure. It's not hard to understand why when you learn that 95% of Wisconsin communities (nearly 70% of the state's residents) rely on groundwater as their primary source of water for everything from drinking water to washing clothes. In addition to supplying water for our everyday needs, groundwater also supplies much of the water to our valuable lakes, rivers, streams and wetlands.

Groundwater is not the mysterious resource that people once believed it to be. It is actually a local resource that originates as rain or snow melt infiltrates the ground. Sometimes the ground reaches a point where all the empty space in between the soil particles or cracks in the bedrock are completely filled with water; this is our groundwater resource. It is not an underground river or lake like some people may think. Our groundwater does not come all the way from Canada or Lake Superior. In fact, most water pulled from residential wells probably infiltrated into the ground within a half or quarter of a mile from the well.

Water in the natural environment is never just pure H₂O. Water is the universal solvent and will dissolve small amounts of the elements that it comes in contact with as it moves through the soil and bedrock. Any chemicals that we use or apply to the land surface will also dissolve in water and many times end up contaminating our groundwater. Many people are often surprised when they test their water and find out that their water shows elevated levels of common contaminants.

Homeowners are encouraged to have some basic tests performed on their well to understand whether it is safe to drink. The most important test that a homeowner should have performed on a private well is a coliform bacteria test. This test is performed to ensure that the well is sanitary and capable of producing water that is safe to drink.

Another important test that homeowners should consider is the nitrate-nitrogen test. Nitrate is very mobile in water and is a good indicator of whether your well water has been impacted by local land use activities. The natural level of nitrate-nitrogen in Wisconsin's groundwater is generally less than 1 milligram per liter (mg/L). Levels above 1 mg/L generally indicate that the groundwater has been impacted by local land use and may indicate the possibility of other contaminants. The source of nitrate in groundwater is generally from nitrogen fertilizers being applied to crops or lawns, septic systems, or decomposing organic matter including manure and other bio-solids applied to fields. Water with levels above 10 mg/L exceeds the federal safe drinking water standard and should not be consumed by infants less than six months of age and women who are pregnant.

The data collected from drinking water wells can often be useful for providing insight into our state's overall groundwater quality. A recent study by the Department of Agriculture, Trade and Consumer Protection (DATCP) looked at the occurrence of agricultural chemicals in Wisconsin's groundwater. Between January 2007 and June 2007, 398 private drinking water wells were sampled as part of a statewide survey. The purpose of the survey was to obtain a current picture of agricultural chemicals in groundwater and to compare the levels in the 2007 survey with levels found in earlier surveys conducted in 1994, 1996 and 2001. Wells were selected to represent groundwater that is typically tapped into by private wells. Samples were analyzed for nitrate-nitrogen as well as 32 agricultural chemicals.

Based on statistical analysis of the sample results, it was estimated that the proportion of wells in Wisconsin that contained a detectable level of a pesticide or pesticide metabolite was 33.5%. The estimate of the proportion of wells that exceeded the 10 mg/L enforcement standard for nitrate-nitrogen was 9.0%.

[Groundwater] is not an underground river or lake like some people may think.



Areas of the state with a higher intensity of agriculture generally had higher frequencies of detections of pesticides and nitrate-nitrogen. The two most commonly detected pesticide compounds were the herbicide metabolites alachlor ESA and metolachlor ESA, which are breakdown components of the herbicides alachlor and metolachlor.

The statewide estimate of the proportion of wells that contained the herbicide atrazine and/or any of its metabolites was 11.7%. The estimate of the proportion of wells that exceeded the 3 parts per billion (ppb) enforcement standard for total chlorinated atrazine residue was 0.4%. When detected in private wells, the summed concentration of pesticide was generally less than 1.0 ppb. While most of the wells tested in this survey produced water that had relatively low levels of agricultural chemicals, it does show that groundwater in Wisconsin has been, and continues to be, impacted by local land use activities.

This study is a good reminder that anytime you apply chemicals to a field or lawn there is a chance for these chemicals to find their way into groundwater. Our groundwater and drinking water are directly linked to the chemicals we use in our land use practices. Since groundwater and surface waters are intimately connected, it's easy to see that these results have implications for our lakes and rivers.

The full report of this study is available online at the DATCP web site: <http://datcp.state.wi.us/arm/agriculture/land-water/environmental-quality/pdf/ARMPub180.pdf>

Homeowners may also be interested in a Department of Natural Resources Brochure entitled "Better Homes and Groundwater" which is available online at: <http://www.dnr.state.wi.us/org/water/dwg/pubs/bhgw.pdf>

By Kevin Masarik, Groundwater Education Specialist, College of Natural Resources, University of Wisconsin-Stevens Point
kevin.masarik@uwsp.edu

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Reducing Mercury Benefits Wisconsin Waters

On October 8, 2008, Governor Doyle released a statement declaring that, as of the first of the year, the Wisconsin Department of Natural Resources (DNR) will begin implementing a clean air rule which will require coal-fired power plants in the state to reduce their mercury emissions by 90% over the next six years. Wisconsin's DNR has been working with the Public Service Commission and the Department of Health Services to help this action become a reality. This rule will not only accomplish the 90% mercury reduction goal set by the Governor two years ago, but will also help reduce sulphur dioxide and nitrogen oxide emissions beyond the current federal and state requirements. This rule looks to help maintain healthier lake ecosystems in Wisconsin, and benefit animals directly impacted by mercury like loons and fish.

To read Governor Doyle's column "Securing a Cleaner Future" go to http://www.wisgov.state.wi.us/journal_media_detail.asp?locid=19&prid=3749. For more specifics on Wisconsin's mercury rule, visit <http://dnr.wi.gov/air/toxics/mercury/rule.htm>.



Photo from Oregon Outdoor Journal



CLMN

Twenty-three Years of Volunteer Data

Highlights from the 2008 Monitoring Season

We now have 1100 lakes being monitored for water clarity. Of these lakes, 510 have volunteers who collect lake temperature profiles, 470 have volunteers who collect water chemistry data, and 410 have volunteers who also collect dissolved oxygen levels. Plus, we now have over 400 Aquatic Invasive Species volunteers. Incredible!

Loon Ranger training sessions were held in conjunction with several spring refresher sessions in the northwoods. These were so successful that this pairing will again take place in 2009 and will be expanded to additional CLMN workshops. Details of these workshops will be in the spring *Lake Tides* newsletter.

Secchi refresher trainings were well attended this season. These trainings are necessary to

ensure quality data is collected. It also enables us to review the trainers' techniques so we have the assurance that all volunteers receive the same training, giving the network statewide consistency.

At several CLMN workshops, volunteers were offered an opportunity to take part in a secchi quality assurance pilot project. Volunteers were asked to go out over the open water season and take secchi disk readings like they normally do (collecting ascending and descending readings using the clothespin method). They were then asked to repeat the same process two additional times each sample period. This data will be analyzed for variability and presented in a future *Lake Tides* newsletter, as well as on the CLMN web sites.

It was our second year of running blanks and replicate water samples. We do this to ensure that volunteers are following proper protocols and cleaning their equipment correctly. In 2007, there was not a noticeable difference in the replicate data as compared to the regular sample data, so we anticipate the same for 2008 data.

Volunteers and other lake users can now download the annual lake quality reports online

at <http://dnr.wi.gov/lakes/clmn/> (click "Reports & Data" on the left and then select your county and lake name). The "Annual Report" displays the data collected at a site in 2008. You can also review previous reports by clicking on the year you have an interest in. As you enter new data, the report automatically updates, giving users a current report (see image here). If you have not yet entered your 2008 data into the Surface Water Integrated Management System (SWIMS), please do so.

Date	SD (ft)	SD (m)	TP (Bottom)	CHL	TP	TSI (SD)	TSI (CHL)	TSI (TP)	Lake Level	Clarity	Color	Perception
07/17/2008	7	2.1	NO		49				NORMAL	CLEAR	YELLOW	1-Beautiful, could not be nicer
08/30/2008	8.5	2			50				LOW	CLEAR	YELLOW	1-Beautiful, could not be nicer

Collector Comments
 07/17/2008 High overcast- thunderstorms approaching. Dead calm. Observed substantial regrowth of fly pads in bloom. Few loosestrife plant in bloom on north shore. High overcast- thunderstorms approaching. Dead calm. Observed substantial regrowth of fly pads in bloom. Few loosestrife plant in bloom on north shore. High overcast- thunderstorms approaching. Dead calm. Observed substantial regrowth of fly pads in bloom. Few loosestrife plant in bloom on north shore. High clouds- thunderstorm approaching- dead calm. Observed new growth of fly pads- a few purple loosestrife on north shore. Water clear. Temp 78 degrees.
 08/30/2008 clear and sunny. light sw breeze. beautiful day.

Data Collectors
 07/17/2008 Clyde Elio
 08/30/2008 Clyde Elio

Project
 Citizen Lake Monitoring - Water Quality - Lake Galilee; Deep Hole
 Citizen Lake Monitoring - Water Quality - Lake Galilee; Deep Hole

SD = Secchi depth measured in feet converted to meters; CHL = Chlorophyll a in micrograms per liter(ug/l); TP = Total phosphorus in ug/l, surface sample only; TSI(SD), TSI(CHL), TSI(TP) = Trophic state index based on SD, CHL, TP respectively; Depth measured in feet.
 Wisconsin Department of Natural Resources
 Wisconsin Lakes Partnership

Report Generated: 10/27/2008

Here is a screen shot of the 2008 report from Lake Galilee in Ashland County. This is the kind of information you can get from any lake in the state that is being monitored for water quality.



Additional pages have been added to the CLMN web sites to make data management easier for volunteers and other web users. The list of waterbodies in Wisconsin where aquatic invasive species (AIS) have been verified can be found at <http://dnr.wi.gov/lakes/AIS/index.asp?folder=CLMN>. These files will be updated as new information comes in, which will help us ensure the most current data is available. If you have an interest in learning more about a particular AIS, you can find the data at: <http://dnr.wi.gov/invasives/> (click on “plants” or “animals” on the left and then click on the species that interests you).

Our goal is to keep Wisconsin’s CLMN at the forefront of water quality and aquatic invasive species monitoring, and we are well on our way in doing that. Thanks to all volunteers and trainers for a safe and productive year.

For more information about the Citizen Lake Monitoring Network, go to www.uwsp.edu/cnr/uwexlakes/CLMN or contact Laura Herman at laura.herman@uwsp.edu or 715-365-8998.

Send In Your 2008 Data

If you have not yet sent in your data, please enter what you collected this season on SWIMS and return your data worksheet to your local CLMN contact or send it directly to Laura Herman, 107 Sutliff Ave, Rhinelander, WI 54501. Even if you only had the chance to do the monitoring once this summer, we can still use your data.

R. Korth



Volunteers

Q&A Lake Districts

We often get phone calls and emails from Lake Tides readers with a variety of questions about lake districts. Do you have a question about lake districts that you would like to see answered in Lake Tides? Send it to uwexlakes@uwsp.edu so we can include it in a future issue.

Q: Do lake districts need to abide by open meetings and public records policy?

A: You betcha! Wisconsin’s open meetings and public records laws recognize the importance of having a public informed about government affairs; this includes government entities like lake districts. Effective citizen oversight of the workings of government and government employees is essential to democratic representation and confidence in government. Citizen access to both meetings of government and their public records are vital aspects to this principle. Government bodies need to fully comply with these open meetings and public records laws to foster a policy of open government for all Wisconsin citizens. Compliance documents are available from the Wisconsin Department of Justice to help lake district boards, members, and others navigate the policies in place to help promote transparency in government. Check out the Wisconsin Department of Justice web site for more information: <http://www.doj.state.wi.us/site/ompr.asp>.

For more information on lake districts, see *People of the Lakes: A Guide for Wisconsin Lake Organizations*, www.uwsp.edu/cnr/uwexlakes/districts.



Stopping the Spread

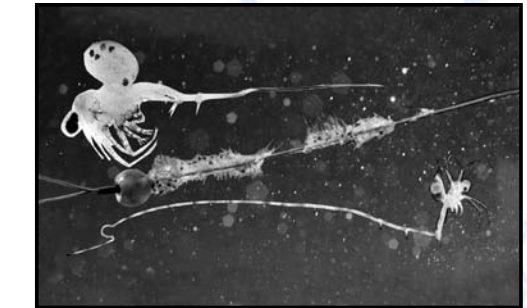
A Proposed Rule Aims to Identify, Classify, and Control Invasive Species

NR 40 is the DNR's best regulatory attempt to curb the spread of AIS thus far.

While we are all familiar with Eurasian water-milfoil, did you know that there are over a dozen other equally-troubling aquatic invasive plants waiting for an invitation to colonize Wisconsin lakes? Invasive algae and types of aquatic bacteria can also pose risks, both ecologically and from a human-health standpoint. In addition, new invasive fish and invertebrates continue to make their way to Wisconsin aquatic ecosystems every year. The Wisconsin Department of Natural Resources (DNR) has proposed a new rule, known as NR 40, as our best regulatory attempt to curb the spread of invasive species.

The proposed rules will establish a classification and regulatory system for invasive species. The rules will set restrictions on actions such as selling, transporting, and planting or releasing certain species to the wild without a permit, as well as allow the DNR to work with local units of government and landowners to quickly contain new populations of invasive species likely to become problematic.

The proposed rule does this in two ways. First, it identifies existing and imminent invasive species and limits their possession or use. The Species Assessment Group meetings, which took place last summer, helped rank each species in one of five categories. The most restrictive are the **prohibited** and **restricted** categories. There is a category for **caution**, when the potential for invasion is unknown, **non-restricted**, when a species is too ingrained into our environment to remove, and **pending**, for invasives that may be assessed in the future. Second, the rule identifies key pathways by which aquatic species are moved around. For example, under the proposed new rule, it would be: 1) illegal to launch or transport a boat with any aquatic plants attached, and 2)



*Under NR 40, the Spiny and Fishhook Waterfleas are currently listed as **prohibited**.*

mandatory for everyone to immediately remove aquatic plants and animals and drain all water from recreational or commercial gear prior to leaving a launch area.

The DNR has worked closely with the Wisconsin Council on Invasive Species in developing the proposed rule and has conducted informal listening sessions to receive feedback, completing formal hearings in August. The DNR is now considering a vast array of comments received prior to the September deadline and incorporating many of the comments in a revised version of the rule. While regulations serve a role in slowing the spread of invasives, we each play a part in this effort. Many thanks goes to the educators and citizens who work on behalf of our lakes, rivers, and streams each day! Look to *Lake Tides* for more information on this rule as it becomes available.

By Jennifer Hauxwell, Bureau of Science Services, Science Operations Center Wisconsin Department of Natural Resources

To read more about the Species Assessment Groups and the Wisconsin Council on Invasive Species, see the *Fall 2007* issue of *Lake Tides* (Vol. 32, No. 4).

For more information and a copy of the proposed rule, visit <http://dnr.wi.gov/invasives/classification/>



*Under NR 40, the aquatic invasive species Eurasian water-milfoil would be categorized as **restricted** because, while it is a nuisance species, it is quite widespread in some parts of the state, making it impossible to prohibit.*



Stopping the Spread

Fire Departments Work to Suppress Fires...and AIS

Firefighters and local fire departments have joined the charge against the spread of aquatic invasive species (AIS). After learning AIS can hitch a ride on fire suppression equipment, members of the Wisconsin Fire Department Advisory Council are engaging fellow fire fighters to operate and maintain dry fire hydrants and other fire suppression equipment to minimize the spread of invasive species. A dry hydrant is a non-pressurized pipe installed at a water body that is in close proximity to an all weather road. These hydrants provide firefighters with a way to replenish their tanks with water from a nearby water body. In locations that lack a pressurized fire hydrant, dry hydrants are a vital source of water for battling a fire.

However, any time water is transferred from one water body to another, there is the potential for aquatic invasive hitchhikers to be moved. In an effort to help ensure that these invasives are not transferred along with the water, firefighters will join boaters and anglers in taking prevention steps to assure AIS are not spread from lake to lake. Taking prevention steps will protect our lakes and fisheries and save millions of local community and state dollars from dealing with the consequences.

In Oneida County, fire chiefs are working with their Land and Water Conservation Department to come up with practices to prevent the spread of AIS. When it came to their attention that invasive species could be moved along with lake and river water in tanker trucks while maintaining dry fire hydrants, the chiefs were quick to respond. Working together, they are developing best management practices for dry fire hydrant maintenance. Soon, these practices will be shared statewide with local fire departments and state firefighters who use lake and river water to suppress fire.

The practices under development are similar to the steps taken by boaters and anglers to help prevent the spread of AIS, and focus

primarily on avoiding the transfer of water from one water body to another. Examples of updated maintenance practices include back-flushing with well or municipal water, re-circulating water from the lake or river with an off-line pump, or draining most lake and river water prior to disinfecting equipment with chlorinated household bleach.

Fire departments, the Fire Department Advisory Council, Department of Natural Resources (DNR) fire staff and DNR water conservation staff will continue to work together to finalize these best management practices, providing procedures and training for local fire departments that utilize natural water for fire suppression. A common goal unites them: to provide safe, cost-effective practices for preventing the spread of aquatic invasive species.

By Jeff Bode, DNR Lakes and Wetlands Section Chief and Chris Klahn, DNR Fire Specialist and Montello Assistant Fire Chief

To view lists of water bodies that have one or more AIS present, please visit <http://dnr.wi.gov/lakes/ais/>. To view the Oneida County ordinance related to this subject go to <http://www.uwsp.edu/cnr/uwexlakes/laketides/vol33-4/Text-only.htm>.

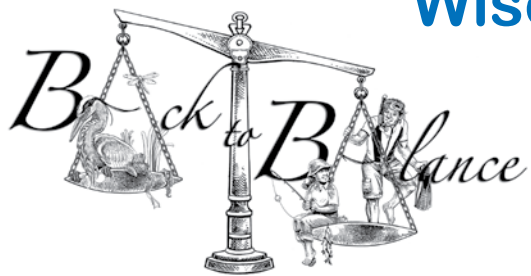
After learning AIS can hitch a ride on fire suppression equipment, members of the Wisconsin Fire Department Advisory Council are engaging fellow fire fighters to minimize the spread of invasive species.



A dry hydrant is a non-pressurized pipe installed at a water body that is in close proximity to an all weather road.

R. Korth





Wisconsin Lakes Convention

Back to Balance

An Aquatic Invasive Species Symposium

March 18-20, 2009

KI Convention Center, Green Bay, WI

"A good discussion increases the dimensions of everyone who takes part."

Randolph Bourne

We are being confronted with one of the most significant issues to face Wisconsin lakes in many decades...the slow but steady spread of a host of aquatic invasive species (AIS). This issue is considered to be so vital to the health of Wisconsin's water bodies, that it was decided to focus the bulk of the Wisconsin Lakes Convention on better understanding AIS. In this light, the Wisconsin Lakes Partnership has gathered some of the world's foremost experts, policy makers and managers on this subject, to offer an AIS symposium. These professionals will cover prevention, management and research aspects from a global perspective right down to your local water body.

If you see AIS as a threat and want to hear about state-of-the-art management techniques and what the science is telling us, don't miss the 2009 Wisconsin Lakes Convention. If you want a clearer understanding of your options, and where our next steps with AIS policies are heading, then attending this event is a must.

Join hundreds of concerned citizens to participate in a gathering that will include exceptional plenary sessions, workshops, concurrent sessions, and poster presentations covering not only AIS, but shoreland restoration, lake science, and volunteer opportunities as well.

Detailed information will be available in the next *Lake Tides*, and at <http://www.uwsp.edu/cnr/uwexlakes/conventions>.

CALL for POSTERS

Deadline: December 1, 2008

An important element of the convention this year will be a poster session highlighting noteworthy projects and research on aquatic invasive species. Posters will provide an educational opportunity for lake stewards, researchers, educators and managers in Wisconsin and surrounding states. We invite you to participate in this exciting forum.

When: Thursday, March 19, 2009 from 12:30 to 2:00 pm. You are required to attend your poster during this time.

Questions: please contact the UWEX-Lakes office at (715) 346-2116 or uwexlakes@uwsp.edu.

For more information and to submit your abstract, go to <http://www.uwsp.edu/cnr/uwexlakes/conventions> and click on "Call for Posters".

The Wisconsin Lakes Convention does not endorse specific products or services. Therefore, posters presented by individuals representing corporations or projects conducted by corporations should avoid the use of trade or brand names and refer to the products or services by a generic descriptor.

Nominate a Local Lake Steward

Deadline: January 26, 2009

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

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

Recipients and all nominees will be recognized at the Wisconsin Lakes Convention, March 18-20. An online nomination form is available at www.uwsp.edu/uwexlakes/conventions. For more information call the Wisconsin Association of Lakes at 608-661-4313 or 800-542-5253.



Picture This!

You enter the Wisconsin Lakes Partnership photography contest and win \$100! It could happen!

Show us the beauty and uniqueness of your favorite Wisconsin lake and how you enjoy it. It's easy. Just go to our web site at <http://www.uwsp.edu/cnr/uwexlakes/conventions>, or contact Amy at 715-346-4744 to get the official rules and an entry form.

All photo entries will be displayed at the 2009 Wisconsin Lakes Convention in Green Bay. You can enter up to four photos (two in each category) that show "people enjoying lakes" and "the natural features in and around lakes and under water."

www.uwsp.edu/cnr/uwexlakes/conventions

New Wetland Toolkit

New informational tools to protect Wisconsin's remaining wetlands, as well as current and prospective property owners, are now available online. State and federal laws prevent building or making other "improvements" on or near wetlands unless the property owner can show it is unavoidable and receives the necessary permits. In this regard, it is important that people know if the property has wetlands, and understand the constraints and benefits these wetlands can bring. Examples of these benefits include reduced flooding, cleaner runoff to lakes and rivers, fish and wildlife habitat and recreation.

"Wetlands aren't always obvious, and these new tools will help people know if they have wetlands before they buy or build," says Wisconsin Department of Natural Resources (DNR) Secretary Matt Frank.

The DNR worked with the Wisconsin REALTORS® Association and the Wisconsin Wetlands Association to develop a real estate addendum that people can complete with their offer to purchase. The Addendum W – Wetlands is a legal document that allows buyers an opportunity to verify that wetlands are present on a property and to negotiate a mutual remedy with the seller, which might include the ability to rescind or modify the offer terms, if wetlands are confirmed.



The other new tools, which local government organizations also collaborated on with the DNR, can all be found on the DNR's web site at <http://dnr.wi.gov/wetlands/locating.html>. These include:

- Enhanced web pages and a video guide, "Waking Up to Wetlands," to walk people through the steps they can take to learn if there are wetlands on a property;
- Online, interactive maps indicating wetlands;
- A downloadable checklist of plants, trees and other wetland clues people can look for on a property.

R. Korth



Clean Boats, Clean Waters

2008 Watercraft Inspection Data Report



Every summer brings new experiences for Wisconsin's watercraft Inspection program and inspectors. Some highlights this year: watercraft inspectors shared the latest viral hemorrhagic septicemia (VHS) rules with boaters and anglers at the landings, nine Department of Natural Resources Water Guards joined aquatic invasive species (AIS) prevention efforts by conducting inspections and sharing AIS information with citizens, and more boats were inspected by volunteers and paid inspectors in 2008 than ever before! This fact is only one of several exciting trends in this summer's data. Here are some 2008 numbers describing watercraft inspection efforts from across the state:

- 41,656 boats were inspected by volunteers and paid inspectors
- 91,706 people were contacted about the 'Clean Boats, Clean Waters' message
- Over 25,000 hours were spent conducting watercraft inspections
 - ~ 60% hours by paid inspectors
 - ~ 40% hours by volunteers
- 16% of boats had plants attached when arriving at the landing
- 88% of boaters removed plants before entering the water
- 25% of boats had been in another water body in the last five days
- Boaters and other landing users were asked about whether they took each prevention step after they last used their boat and equipment.
 - 92% said they inspected their boat and equipment for plants and removed any found
 - 91% said they drained all water from their boat and equipment
 - 67% said they disposed of their unused bait
 - 57% said they put their fish on ice to ensure they were not leaving the landing with any live fish
 - 67% said they either washed their boat and equipment with hot or high pressure water or dried them for 5 days

More boats were inspected by volunteers and paid inspectors in 2008 than ever before!

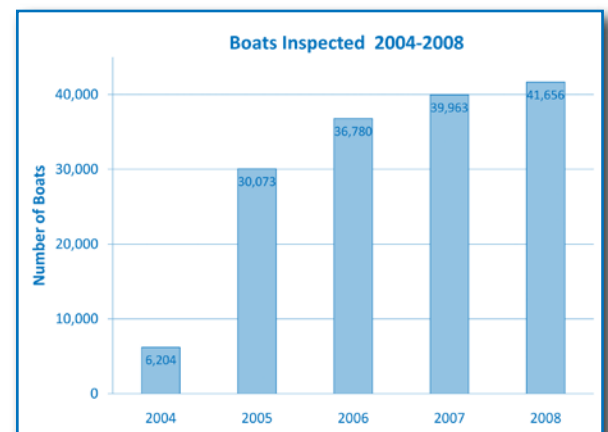


Provided by Diane Schauer

- 89% of boaters stated that they were aware of the AIS launch law
- 16% of all boats inspected had plants attached; Of these, the majority of the boaters (88%) removed the plants as requested.

So how do these numbers compare to data collected in previous years? Let's compare 2008 data to the information collected back in 2004, when Clean Boats, Clean Waters first started.

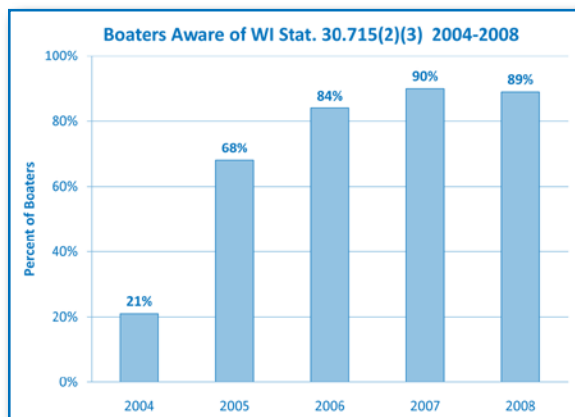
Even though an all-time-high of 39,963 boats were inspected in 2007, inspectors exceeded that number by more than 1,500 in 2008. Thanks to the efforts of volunteers, paid inspectors, and Water Guards, the numbers achieved a new height!



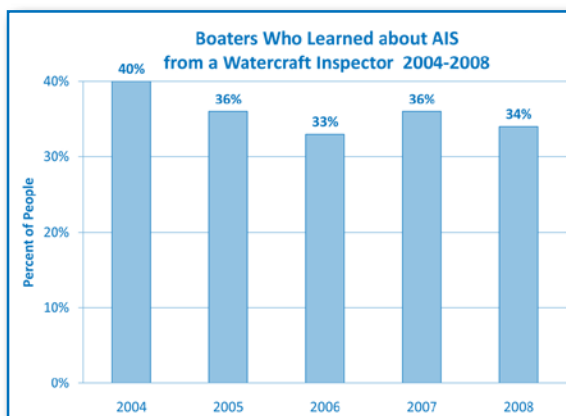
More people were contacted during watercraft inspections this year than ever before, as well. Last year showed a small dip in the number of folks contacted. However, as you can see in 2008, over 12,000 more contacts were made this year than in 2007. Congratulations inspectors!



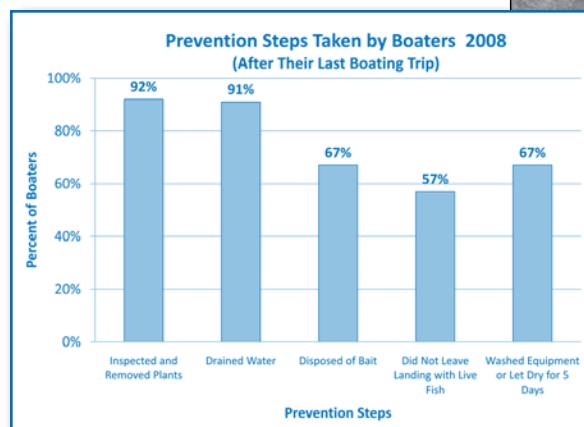
At first glance, this next graph seems to indicate that the number of boaters who said they are aware of the 'Illegal to Launch' law is holding steady. However, when the increased number of boats inspected is taken into account, it becomes clear that actually more people stated they were aware of the law in 2008 than in 2007.



When citizens are asked how they first learned of AIS, the most popular answer continues to be "from an inspector". Watercraft inspectors have been the main source of AIS information for boaters and anglers since CBCW inspections first began. This statistic expresses much about the value of face-to-face communication at the landings.



In past years, boaters were asked if they took the recommended AIS prevention steps. This year, inspectors broke this question down into the specific steps, asking folks at the landing if they took each step after their last boating trip. As you can see from the data in the graph below, most people indicated that they check their boat and equipment for plants and remove them, as well as drain their water.



These exciting data trends wouldn't exist if it weren't for all of the volunteers and staff who collect and report inspection data. Thanks to all of you who have worked so hard to prevent the spread of AIS! It's clear we're making a difference for Wisconsin's water bodies.

To receive the electronic version of the complete 2008 Data Summary or for more information about Clean Boats, Clean Waters, go to www.uwsp.edu/cnr/uwexlakes/cbcw or contact Erin Henegar at erin.henegar@uwsp.edu or 715-346-4978.

When the increased number of boats inspected is taken into account, it becomes clear that actually more people stated they were aware of the ['Illegal to Launch'] law in 2008 than in 2007.



Keeping Lakes in the Family

Children's Books Help Us Share the Magic of Lakes



Fall is a time for reflection and witnessing the changes in nature. As we sit back and prepare for the holidays, here are some lake-related books to share with that special child in your life. Curl up to read some of these wonderful stories together and reveal your own lake experiences. While these books may have been designed for children, they're a great fit for anyone who enjoys wonderful illustrations and fun stories. These fun, educational options also make great gifts for your local library or school, where many people can enjoy the magic of lakes.

For readers ages 4-8:

Granddad's Fishing Buddy

Written by Mary Quigley and illustrated by Stephane Jorisch

Dotted with childlike details, such as baiting a hook with a length of red licorice rather than a worm, the story unfolds in a quiet but absorbing way. This picture book celebrates the comfortable companionship of a girl and her grandfather, while also depicting the appeal of fishing.

The Web at Dragonfly Pond

Written by Brian "Fox" Ellis and illustrated by Michael S. Maydak

This book provides a substantial amount of information embedded in a story that is fun to read. The illustrations powerfully show the reality of the food web and the interconnectedness of life.

Pond Year

Written by Kathryn Lasky and illustrated by Mike Bostock

Two six-year-old "scum chums" fashion miniature rafts from twigs with leaves for sails, gather frogs' egg jelly and watch as tadpoles form, construct mud slides for racing crawdads, examine salamanders, damselfly wings, etc. This book is both a comical salute to friendship and a field guide.

Beaver Pond Moose Pond

Written and illustrated by Jim Arnosky

A pond is the watery home of a beaver, whose industriousness has made way for other animals. When daylight comes, a heron, a moose, and ducks visit the pond: it's their territory while the beaver sleeps. But sunset brings the master builder back to claim his home and complete a link in nature's scheme. Also see Otters under Water and All Night Near the Water by Jim Arnosky.

Loon Lake

Written by Jonathon London and illustrated by Susan Ford

A girl and her father, camping out beside a lake, hear a loon at sunset. Papa tells his daughter a tale of how the loon got his "necklace," the white feathers that encircle his neck. Written from the girl's point of view, this story creates a mood of quiet delight in the observation of nature. The clean lines of the richly colored pictures sensitively depict the child's experience as they focus on the wildlife and the lake itself.

By Lakes & Rivers

Edited by Tessa Paul

A factual book gives children interesting facts and lavish illustrations about otters, beavers, frogs, herons, loons and more. This book describes the homes that different creatures live in, and the clues they leave behind.



*Books to the ceiling
Books to the sky
My piles of books are
a mile high
How I love them
How I need them
I'll have a long beard by
the time I read them*

by Arnold Lobel

For readers ages 8-12:

Pond

Written and illustrated by Gordon Morrison
A delightful sketchbook beginning with the appearance of red-winged blackbirds in early spring, Morrison documents in text and art the myriad plant and animal life that flourishes in and around the waters of a healthy pond. The detailed watercolor illustrations are outstanding. Further information is presented in small ink drawings and tiny text tucked in below the main narrative.

Watching Water Birds

Written and illustrated by Jim Arnosky
Personal observations accompany magnificent up-close views of these water birds as they wade, dive, swim, or fly. Life-sized paintings show the birds' true colors in this introduction to the joys of watching wildlife.

If you are looking to satisfy your own lake interests, go to the UWEX Lakes web site at www.uwsp.edu/cnr/uwexlakes for these next three titles.

For readers ages 12 and up:

How's the Water

This volume provides planning tips for recreational use on Wisconsin's lakes and rivers.

Through the Looking Glass

This delightful, large-format field guide to aquatic plants in North America is accessible and inviting to general readers, yet detailed enough for use by botanists and natural resource managers.

Life on the Edge...Owning Waterfront Property

This refreshingly practical and easily understood publication is about what local homeowners can do to protect and enhance their lakes.

*By Lynn Markham, Land Use Specialist
UW-Extension Center for Land Use Education.
Descriptions adapted from existing reviews.*



CALENDAR

December 1, 2008 –Call for Posters Deadline

Have you been involved in any aquatic invasive species projects or research? If you would like to share your successes, conundrums and/or findings, apply today! Just go to <http://www.uwsp.edu/cnr/uwexlakes/conventions> and click on "Call for Posters". More details on page 10 of this issue.

Groundwater Model Workshops for Educators

January 21, 2009 – Eau Claire, Beaver Creek Reserve

January 27, 2009 – West Bend, Riveredge Nature Center

February 4, 2009 – Mount Horeb, WGHNS Core Lab

Educators from schools and nature centers that provide environmental training to students grades 6-12 are encouraged to apply for a free groundwater sand tank flow model along with training and tools that can improve their programs. **Application deadline: November 1, 2008.**

For more information: <http://dnr.wi.gov/org/water/dwg/gw/educate.htm>

January 26, 2009 – Nomination Deadline – WI Lake Stewardship Awards

Nominate an individual or group who dedicates time and talent to Wisconsin's waters for this prestigious award (see page 10 for more details).

For more information: www.uwsp.edu/cnr/uwexlakes/conventions

February 1, 2009 – Application deadline for Lake Planning and AIS Control Grants.

For more information contact your DNR Lake Coordinator or go to www.dnr.state.wi.us/org/caer/cfa/Grants/Lakes/invasivespecies.html

March 18-20, 2009 – 31st Annual Wisconsin Lakes Convention, KI Center, Green Bay.

Agenda details and online registration will be available in January 2009. Register before the March 1st early bird deadline and save your hard-earned cash!

For more information: www.uwsp.edu/cnr/uwexlakes/conventions

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Reflections

We forget that the
water cycle and the life
cycle are one.

~ Jacques Cousteau

