Lake Tides
The newsletter for people interested in Wisconsin lakes

Water So Low It Can't Reach the Shore?

Taking Care of Our Lakes in Times of Declining Water Levels

Wisconsinites have been living through some unusual weather. Southern Wisconsin has been receiving record rains and floods, while the northern and central areas are experiencing oppressive drought. Many northern lakes have seen the water levels declining for years. Some docks are even hundreds of feet from the water, exposing land below the lake's ordinary high water mark (OHWM). Because this newly exposed lake bottom is public land, all Wisconsin residents have a responsibility to be good stewards of this shared resource.

In 1914, the Wisconsin Supreme Court defined the OHWM as "the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation or other easily recognized characteristic."

The telephone rings at the local Wisconsin Department of Natural Resources (WDNR) Service Center. On the line is a lake shore property owner from northern Wisconsin. "My water has been low for so long that I have a bunch of grasses and tall weeds growing in what used to be the lake bottom. I also have trash and old tree branches that would be easy to get out now. What can I do? Can I cut the brush with my weed whacker? Can I drag out those old tree branches?"

Photo by Robert Korth

Avoid Removing Vegetation

These sorts of questions are common during dry times…so what can you do? In general, it is best to avoid removing vegetation and disturbing the exposed lake bed during low water times. Droughts are a natural occurrence and northern Wisconsin lakes have experienced periods of declining water levels in the past. In fact, these water level fluctuations are important for a lake's health, particularly in the near-shore zone.

(Continued on page 2)

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Wisconsin Lakes Partnership

Photo provided by Pamela Toshner

Here is an example of recently exposed lake bed in northern Wisconsin.

Shorelines and shallow areas of lakes play a vital role in providing habitat for fish and wildlife and for protecting water quality. A diverse native plant community provides the best habitat and defends against the establishment of invasive species. Until water levels return to normal, it is important for lake property owners to avoid inadvertently harming exposed lakeshore areas. Minimizing your impact is critical to protecting this fragile ecosystem.

Lakes with very gently sloping shorelines are affected more by low water levels.

Each county has a shoreland protection ordinance that limits the amount of clearing that can be done on land within 35 feet of navigable waterways (the shoreland buffer).

Know the Rules

There are some activities, during low water periods, that may be necessary to maintain access, reduce nuisance accumulations of biological material, and control invasive species like reed canary grass, purple loosestrife, or even spotted knapweed. However, removing threatened or endangered plant species is against the law and can result in fines. Most activities conducted on the exposed lake bed, including beach grooming, cutting or chemically treating plants, are regulated by the WDNR; for more information go to http://www.dnr.state.wi.us/lakes/commonquestions. Keep in mind that each county has a shoreland protection ordinance that limits the amount of clearing that can be done on land within 35 feet of navigable waterways (the shoreland buffer). Check with your local county zoning administrator for details (http://dnr.wi.gov/org/water/wm/dsfm/shore/county.htm).

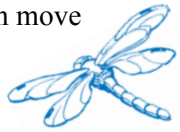
Effects of low water are largely site specific due to variations in shoreline steepness, sediment type, waves, and turbidity.

Impacts on Critters and Plants

A lake's outline, where land and water meet (the near-shore habitat), combined with the littoral zone, that area of a lake where light can penetrate down to grow aquatic plants (often less than 15 feet in depth), are incredibly important to wildlife and plants. The littoral zone harbors and supports key elements of the lake food chain, sustaining the productivity of the lake and the critters and plants living within the aquatic system.

The extent and quality of wetlands adjacent to a water body can also influence the impacts low water levels might have on lake habitat. During lower water levels, fringe wetlands along a lake's edge may decline in productivity.

Other factors impacting fish and wildlife habitat on the lake include the type of lake bottom and aquatic invertebrate community. Cobble lake bottoms that are important to fish reproduction may be high and dry, narrowing the amount of spawning habitat available on a lake. Invertebrates relying on submersed wood and emergent plant stems may find fewer habitats available to them in the near-shore area. Some invertebrates, like dragonflies and mayflies, are mobile and can move to deeper habitat, but those that cannot shift will be in trouble.



What Do the Experts Say?

Susan Knight, an aquatic biologist with the WDNR and the UW-Madison Trout Lake Station, describes the short-term effects of declining water levels. "Beaches are exposed. Wood is left high and dry. Some plant growth occurs on the exposed shore, as the lake is shallower," she says. "Light can reach further into the lake, which sets a depth for plant growth closer to the center of the lake, giving plants an opportunity to grow in different areas." But what does this mean for the lake? Knight describes several characteristics of a lake that play into how declining water levels might impact habitat. "Lake shape (that is its depth and contours), as well as the lake's hydrology and trophic status, affect how habitat is influenced by lower water levels," says

Permit Required?

Some minor vegetation management (except for wild rice) and other activities done by hand do not require permits from the WDNR. The following activities require a permit: cutting plants in an area larger than 30-feet wide, driving a motor vehicle on the lakebed, tilling, and chemically treating vegetation if the area is wet. These permits are designed to assure that the activity does not damage the lake or the sensitive exposed habitat.

- If you want to groom or disk the exposed lakebed area (e.g. beach, vegetation, etc.) on your property along a navigable waterway, a permit is required. This includes grooming or disking in areas of the beds of waterways that are currently exposed because of low water levels. Certain grooming or raking with handheld devices may qualify for an exemption. A permit is required to disturb, remove or redistribute material from the bed of a navigable waterway. Removal of bottom material with handheld devices may qualify for an exemption by following specific standards.

- If you want to cut or mow emergent vegetation that is growing on your exposed lakebed using motorized equipment (e.g. riding lawn mowers, tractors, ATVs, etc.), you need to apply for a permit. If you will be cutting or mowing the vegetation by hand (e.g. push lawn mower, clippers, etc.), a permit is only required if you remove native vegetation in an area that exceeds a single 30-foot wide path per property, measured along the shoreline. You also need a permit if you are removing state or federally listed threatened or endangered plant species. The following non-native invasive species may be removed by hand in an unlimited area without a permit: phragmites, Eurasian water milfoil, curly-leaf pondweed, and purple loosestrife.

- On lakes with connecting streams, dams or other water level control structures, modifications may be considered to temporarily raise or lower the water level due to extreme conditions. However, permanent changes in water levels have significant implications for downstream property owners and users. Project review can be lengthy and locally controversial. Establishing or changing water levels on lakes or flowages will generally require WDNR approval.

Lakes without natural outlets are even more difficult to address. Pumping water into a seepage lake can be expensive and results in very little change in the water level, as most of the water is basically recycled back to the local groundwater system.

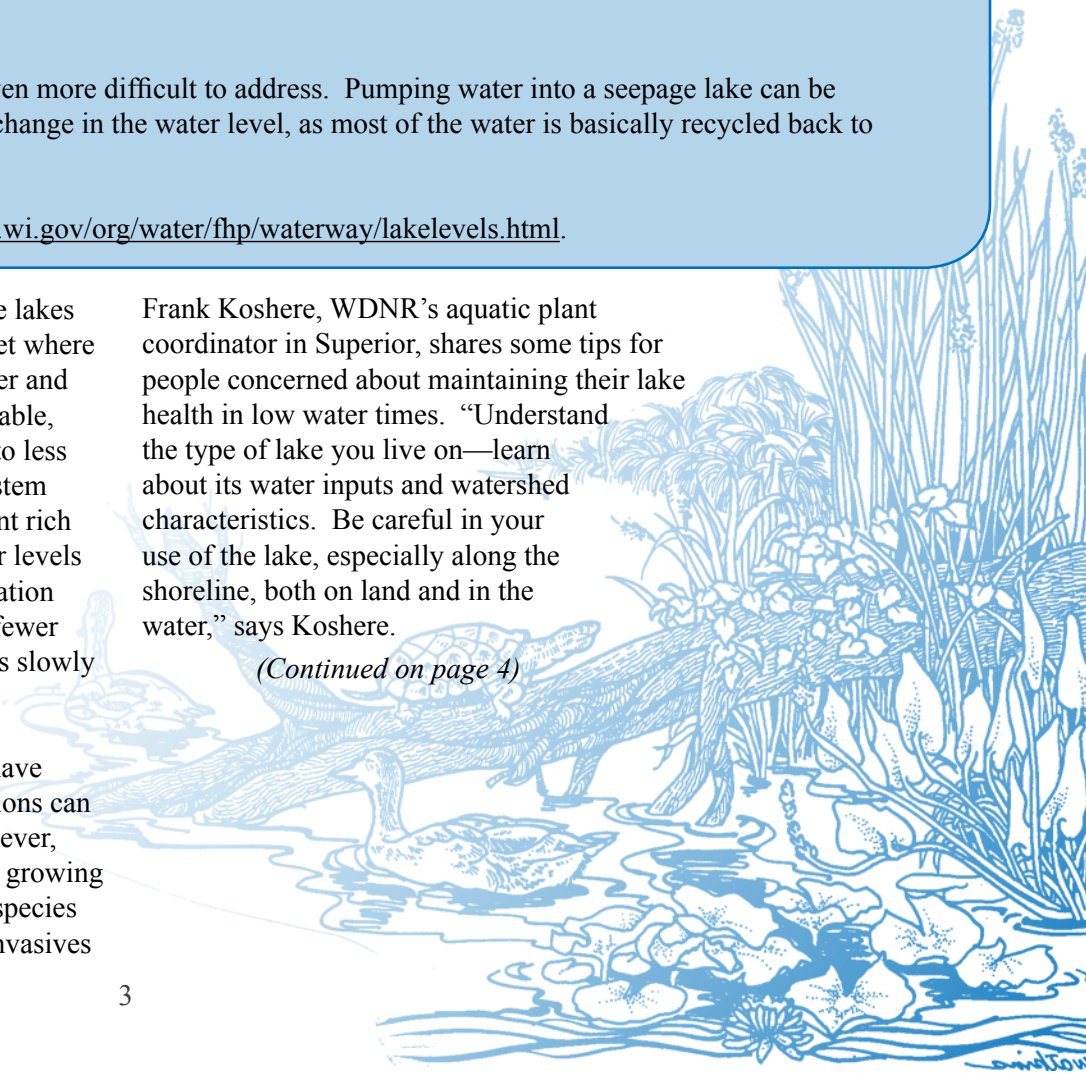
For more information see http://dnr.wi.gov/org/water/fhp/waterway/lakelevels.html.

Knight. For example, shallow seepage lakes (lakes that do not have an inlet or outlet where the main water sources are groundwater and precipitation) can be especially vulnerable, and declining water levels could lead to less diversity and cause a decline in ecosystem productivity. "Plants in deeper, nutrient rich lakes can keep up with declining water levels easier than small, slow-growing vegetation typically found in shallow lakes with fewer nutrients, where the plant life disperses slowly over time," explains Knight.

According to Knight, several studies have found that modest water level fluctuations can lead to increased plant diversity. However, large fluctuations, especially from one growing season to the next, may lead to lower species richness, fewer rare plants and more invasives on the shoreline.

Frank Koshere, WDNR's aquatic plant coordinator in Superior, shares some tips for people concerned about maintaining their lake health in low water times. "Understand the type of lake you live on—learn about its water inputs and watershed characteristics. Be careful in your use of the lake, especially along the shoreline, both on land and in the water," says Koshere.

(Continued on page 4)



"Be careful in your use of the lake, especially along the shoreline, both on land and in the water."
~ Frank Koshere
WDNR Aquatic Plant Coordinator

Shifting boater behavior by getting lake users to go into deeper water away from near-shore areas and shallow water is another strategy to employ. "Having lake users follow slow no-wake zone rules during low water levels is more important now than ever before," he says.

Pamela Toshner, a WDNR lake coordinator in the northern region, suggests lake organizations work with their local resource professionals to identify and protect critical habitats and fragile areas on their lake through sound lake management planning activities. "Grant funding is available to help lake groups do this kind of assessment; knowing where these areas are on your lake can make a difference when trying to protect your lake in low water times," says Toshner. "Reducing nutrient inputs from the watershed to your lake is another key step in lessening the negative impacts declining water levels can have on a lake," she states. Water quality enhancement activities like preserving shoreland buffers, installing rain gardens, initiating sound agricultural practices, adhering to construction site "best management practices," annual septic maintenance, and proper lawn care can help alleviate nutrient and sediment inputs from the watershed that are worsened when water levels decline.

Declining water levels can have positive impacts on aquatic systems.

Low Water Has Benefits

Periodic low water conditions can be beneficial for lake ecosystems. Sediments can consolidate and allow new plants to colonize the lakebed and provide habitat for rare plants and shorebirds. In fact, the growth of Fassett's locoweed (*Oxytropis campestris*), one of our most rare shoreline plants, is dependent upon periodic fluctuations of water levels. This plant is only found in a handful of lakes on the planet (all in Wisconsin), and each of these lakes is subject to a wide fluctuation in water levels. A population recently reemerged on a northern Wisconsin lake after no sightings since 1934 (read more about this plant at www.uwsp.edu/cnr/uwexlakes).

When water levels return to normal, an expansion of new plants becomes habitat for fish and wildlife, removes nutrients from the water, and can increase water clarity. However, human actions that cause water levels to drop farther than this natural variation, or prevent the lake from returning to normal conditions, may harm the lake and its inhabitants over the long-term.

More On Low Water

For more information on this topic check out the flyer "You Don't Know What You've Got 'Til It's Gone" on the UWEX Lakes web site at www.uwsp.edu/cnr/uwexlakes/ecology, or go to the Wisconsin Association of Lakes (WAL) web site for information from a May 2009 seminar focusing on this issue (www.wisconsinlakes.org/events/09may_lowlake.html). Other links to check out include:

- *Wisconsin State Climatology Office - www.aos.wisc.edu/~sco/*
- *Wisconsin Initiative on Climate Change Impacts - www.wicci.wisc.edu/*
- *USGS Water Watch - http://waterwatch.usgs.gov*
- *U.S. Drought - www.drought.unl.edu/dm/monitor.html*

Photo provided by Pamela Toshner

This couple walks along what used to be under water on a lake in Bayfield County.

32nd Wisconsin Lakes Convention

Fringe Benefits: Restoring Wisconsin's Shorelands and Shallows

March 30 - April 1, 2010 (Tuesday - Thursday)

Looking for deals and incentives these days? The 2010 Wisconsin Lakes Convention will be the perfect educational venue to find the answers to all your lake related questions, participate in hands on workshops, and network with experts in the field all in one place for one low price.

Features

- Waterfront History, Policy and Regulation
- Updates to NR 115
- Water Quality and Ecological Health
- Research on Shorelands & Shallows
- Economics of Shoreland Management
- The Land & Water Interface
- Human Dimensions of Shorelands & Shallows
- Lake Organization Capacity Building

SAVE THE DATE!

Other important issues and topics, including shoreland restoration, basic limnology, and trainings for lake district commissioners, Clean Boats Clean Waters and Citizen Lake Monitoring Network volunteers will also be offered.

Special guest Tim Bedore, comedian and radio commentary of Vague but True www.vaguebuttrue.com will be an added value. Please join us at the end of March to learn how each one of us can help protect the shorelands and shallows of our natural beauties, Wisconsin's lakes.

Q&A Lake Districts

We often get phone calls and email 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: Can a lake district change its boundaries?

A: Yes. After a lake district has been established, its boundaries may be expanded or reduced. Contiguous territory may be attached in two ways:

1. A landowner may request attachment by petitioning the board of commissioners. The board may accept the request for attachment by majority vote.
2. The board of commissioners may initiate attachment proceedings by notifying the owners of the affected land and petitioning the county board. The county board proceeds with notice, hearing, and decision in the same manner used to establish a district. The same rights of appeal also apply.

Upon petition of a landowner or motion of the commissioners, territory may be detached from a district if the commissioners find that the territory is not benefited by continued inclusion in the district. The board's decision can be appealed.

Some districts have established procedures and criteria they will review when they consider detachment requests. Views, access and proximity to the water may be important factors for the board to consider in determining benefit. It may also be important to consider whether there has been a change in circumstances affecting the property since the district was created.

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

Citizen Lake Monitoring Network

Knowing where species are not, as well as where they are, is extremely important in being able to track and understand their spread. Knowing how often monitors are looking for species and what they are finding is very important information. Lake managers, researchers, and other DNR staff use the data that is reported through the Citizen Lake Monitoring Network to study lakes and better understand aquatic invasive species. The information reported by volunteers is also provided to the state legislature, as well as federal, tribal and local agencies/organizations who in turn may use this data to help determine funding for invasive species grants and programs.

Reporting is one of the most important parts of monitoring for invasive species.

www.uwsp.edu/cnr/uwexlakes/CLMN

Get Your Monitoring Forms

Secchi and chemistry data sheets, ice-on and ice-off forms, and the newest aquatic invasive species (AIS) monitoring forms are available online. Many volunteers were trained in AIS monitoring prior to these new forms being created. A link to these new forms can be found at www.uwsp.edu/cnr/uwexlakes/clmn or http://dnr.wi.gov/lakes/monitoring/forms.asp.

For the AIS volunteers trained prior to the new online data entry system, please visit http://dnr.wi.gov/lakes/CLMN then click on "How to Submit Data On the Web" under "For Volunteers" in the left-hand menu. This will guide you through getting your user ID and password and how to enter and edit your data.

Reporting is one of the most important parts of monitoring for invasive species. Just think how much more powerful your data will be with the ability to share it throughout the state! This fall, AIS mapping capabilities will be added to the site, so that you can see where AIS are being monitored.

As of spring 2009, we have an updated AIS monitoring manual. It can be found on-line at www.uwsp.edu/cnr/uwexlakes/CLMN under "Publications." We have monitoring and reporting protocols for AIS that may impact our inland lakes. This manual can also be used to help identify plants and critters in your lake…even if you are not a trained volunteer.

If you would like to become a volunteer with the Citizen Lake Monitoring Network, check out our first training sessions in 2010 at the Wisconsin Lakes Convention (see page 5).

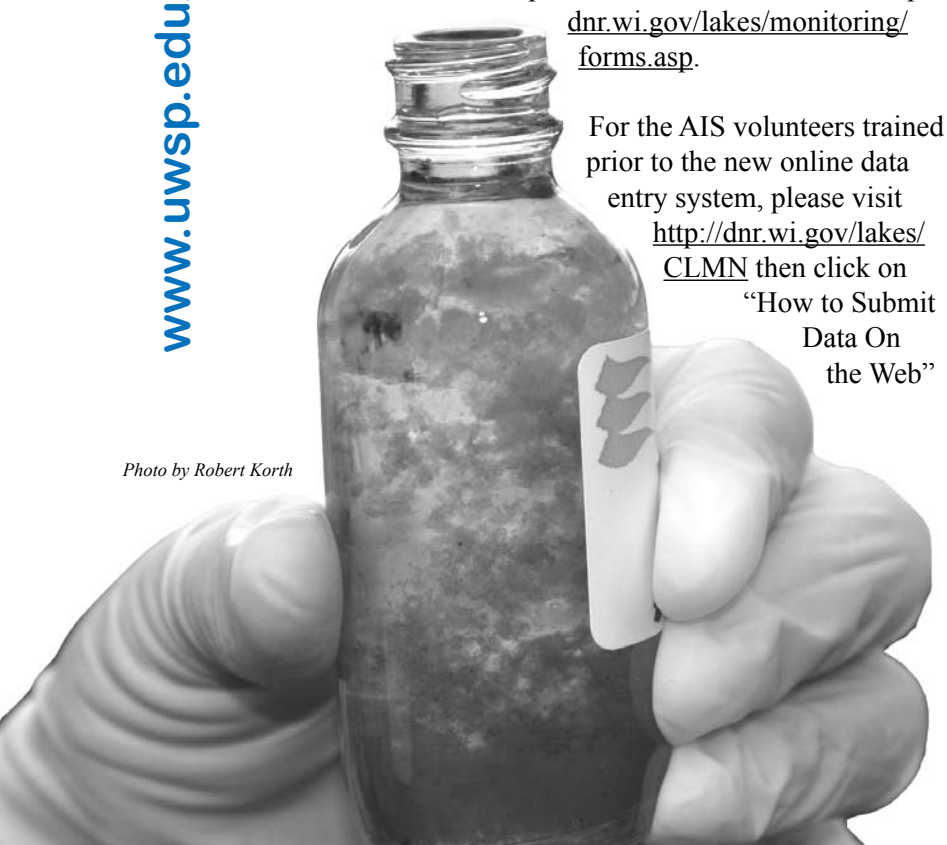
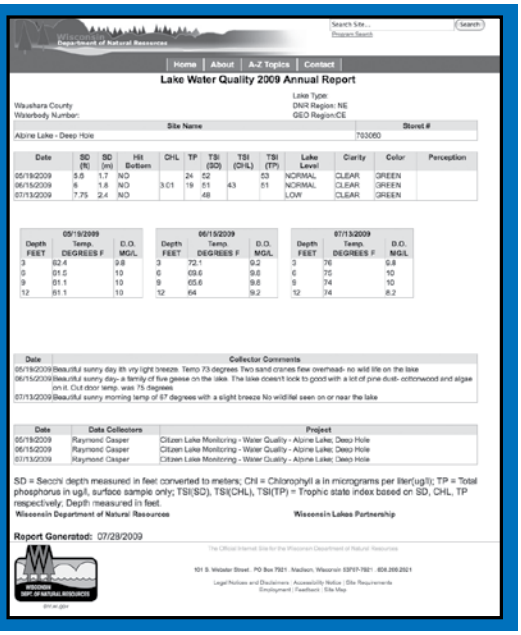


Photo by Robert Korth

Chemistry volunteers, please remember to send your completed lab slip along with your water samples to the State Lab of Hygiene. The lab slips contain very important information that is necessary to ensure your lake chemistry results get added to the correct lake data file.

Review Data from Any Monitored Lake

Go to http://dnr.state.wi.us/lakes/CLMN and under "Monitoring Results" in the left-hand menu, click on "Reports & Data." Click a county name to find maps, reports and graphs on monitored lakes in that county. Here you can create a report (as a web page, PDF or downloadable file) from any year that data was collected and submitted. You will find specifics on lake level, clarity, color, Secchi depth readings, and sometimes, chemistry information.



Lake Water Quality 2009 Annual Report

Lake Type:
Waushara County
DNR Region: NE
Waterbody Number:
GEO Region:CE

Site Name	Stored #
Alpine Lake - Deep Hole	703060

Date	SD (ft)	SD (m)	Hit Bottom	CHL	TP	TSI (SD)	TSI (CHL)	TSI (TP)	Lake Level	Clarity	Color	Perception
05/19/2009	5.6	1.7	NO		24	52		53	NORMAL	CLEAR	GREEN	
06/15/2009	6	1.8	NO	3.01	19	51	43	51	NORMAL	CLEAR	GREEN	
07/13/2009	7.75	2.4	NO			48			LOW	CLEAR	GREEN	

05/19/2009

Depth FEET	Temp. DEGREES F	D.O. MG/L
3	82.4	9.8
6	81.5	10
9	81.1	10
12	81.1	10

06/15/2009

Depth FEET	Temp. DEGREES F	D.O. MG/L
3	72.1	9.2
6	69.6	9.6
9	65.6	9.6
12	64	9.2

07/13/2009

Depth FEET	Temp. DEGREES F	D.O. MG/L
3	76	9.8
6	75	10
9	74	10
12	74	8.2

Date	Collector Comments
05/19/2009	Beautiful sunny day. Bit vry light breeze. Temp 73 degrees. Two sand cranes flew overhead- no wild life on the lake
06/15/2009	Beautiful sunny day- a family of five geese on the lake. The lake doesn't look to good with a lot of pine dust- cottonwood and algae on it. Out door temp. was 75 degrees
07/13/2009	Beautiful sunny morning temp of 67 degrees with a slight breeze No wildlife seen on or near the lake

Date	Data Collectors	Project
05/19/2009	Raymond Casper	Citizen Lake Monitoring - Water Quality - Alpine Lake; Deep Hole
06/15/2009	Raymond Casper	Citizen Lake Monitoring - Water Quality - Alpine Lake; Deep Hole
07/13/2009	Raymond Casper	Citizen Lake Monitoring - Water Quality - Alpine Lake; 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: 07/28/2009

Invader Crusaders

Congratulations to this year's "Invader Crusader" award recipients! The Wisconsin Governor's Council on Invasive Species celebrated the volunteer and professional efforts of the following individuals and groups:

VOLUNTEERS

Susan Kenney - Sauk-Prairie River PALS, Sauk City
Southeastern Wisconsin Invasive Species Cooperative - Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington, and Waukesha counties

PROFESSIONALS

Bill Moore - Ecological Woodland Management, Platteville
Peter Layton - Tallgrass Restoration, Milton
Gypsy Moth Suppression Team - Wisconsin DNR

For more information about the recipients or the award itself, go to http://dnr.wi.gov/news, click the green "Search" tab and type "invader crusader" in the last "90 days". For more about the award itself, contact Courtney LeClair at 608-267-7438.

The Rice Moon Rises Again

Photo by Frank Koshere

It's a hot day towards the end of summer; the air is thick, still, and full of humidity. I'm on the shores of a ricing lake in northern Wisconsin, called Allequash Lake. I step in the lake and the rush of cool water enters the cracks of my old tennis shoes bringing relief from the heat of the day. There are subtle signs of what is to come as trees begin to show autumn colors. People are gathering at the primitive boat landing with their canoes, push poles, and ricing sticks. I can hear the sounds of rice stalks rattling gently against the boat hulls as gatherers make their way out onto the rice beds. The pulse of aquatic life beats with the wings of dragonflies hunting mosquitoes and flocks of geese headed south. It's time again for the ricing season.

Only Wisconsin residents may harvest rice in the state [and] must purchase a wild rice harvesting license.

People from around Wisconsin come to partake in the deeply rewarding experience of gathering this wild food by using Ojibwa harvesting methods that are centuries old. In the end, rice gatherers commune with nature and friends, and if the harvest is good, they also gain a few pounds of wild rice to help them through another Wisconsin winter.

Rice Geography and Life Cycle

Wild rice is an annual aquatic grass. The ricing district stretches from Manitoba, Canada through Minnesota and Wisconsin lake country.

The life cycle of wild rice is fairly simple. The seed drops off of the grass in August or September and sinks quickly into the lake bottom near the mother plant. It will remain dormant in the sediment until spring when warming water and low oxygen conditions stimulate germination; some seed can remain dormant for several years. This extended dormancy helps the plant survive in years of occasional crop failure.

Save Wild Rice

Protect natural wild rice from genetic contamination http://savewildrice.org/

Buy sustainably harvested wild rice online http://nativeharvest.com/catalog

The plant continues to grow into summer with the initial stages underwater. By mid-June, ribbon-like leaves begin floating on top of the water. In July, aerial shoots begin to develop, growing out to heights of 2-8 feet above the water. Flowering starts in late July or early August, with the seeds reaching maturity in 10-14 days. The highest seeds on the stalk reach maturity first.

Ripe seed drops into the lake bottom unless harvested by humans or wildlife. An acre of good rice beds can yield over 500 pounds of seed, but hand harvesting will only capture about 10 to 15 percent of this amount. Because wild rice ripens at a gradual, uneven rate, rice can be harvested repeatedly during the season, which may extend for up to three weeks on a particular lake. Different water bodies will also ripen at slightly different times, so the harvest season may last four to five weeks overall. Ripening is also affected by sediment type, water depth, and other factors.

Count
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A typical four-year ricing period will include a bumper year, two fair years, and one year of bust with little rice.

Wild Rice - An Ecological Treasure

Wild rice is important in the ecology of many lakes and streams. Its nutritious seeds have long been a mainstay for waterfowl, and its beds provide breeding waterfowl with roosting and loafing areas, as well as cover for young.

Photo by Frank Koshere

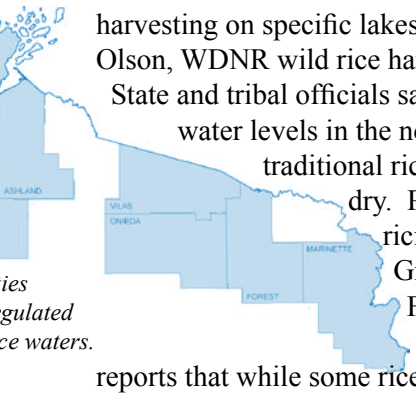
Muskrats built this feed house in a bountiful wild rice lake.

Muskrats enjoy the tender early shoots of the wild rice plant in spring, while many invertebrates use the desiccating vegetation as food and cover later in fall. The habitat it provides to a range of critters from moths

to moose and snails to rails adds to the biodiversity of the lakes and wetlands it occupies. Wild rice can also help maintain water quality by binding loose soils, tying-up nutrients and slowing winds across shallow lakes and wetlands. Lessening the impact of these factors can increase water clarity and reduce algae blooms.

Harvesting & Tools of the Trade

Chippewa Indians, who have harvested rice for centuries, provide the Wisconsin Department of Natural Resources (WDNR) with information on when the rice is ripe for harvesting on specific lakes, according to John Olson, WDNR wild rice harvest coordinator.



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gulated
ce waters.

State and tribal officials say that recent low water levels in the north have left some traditional ricing areas high and dry. Peter David, wild ricing biologist for the Great Lakes Indian Fish and Wildlife Commission, reports that while some rice beds are affected by the recent drought, the rice, like any wild annual plant, will recover.

Unfortunately, some historic rice beds have also been lost due to pollution, large boat wakes, and aquatic invasive species. Especially significant are changes in water levels created by dams that can increase the depth enough to destroy habitat for the rice.

Rice harvest on a number of the most productive wild rice lakes and rivers in Wisconsin is regulated cooperatively:

- On lakes with no specific wild rice season, and on all flowages, rivers and streams, rice may be harvested when it ripens.
- On many of the prime wild rice waters throughout northern Wisconsin, rice may only be harvested during the open season. WDNR staff and representatives of area Chippewa Indian tribes cooperate to determine when rice on specific navigable lakes is ripe. The WDNR, along with rice chiefs from the respective Chippewa tribes, will then determine when the season is open for gathering wild rice on a specific lake. Notices of when lakes are open are posted at places of public lake access at least 24 hours before the beginning of the season.

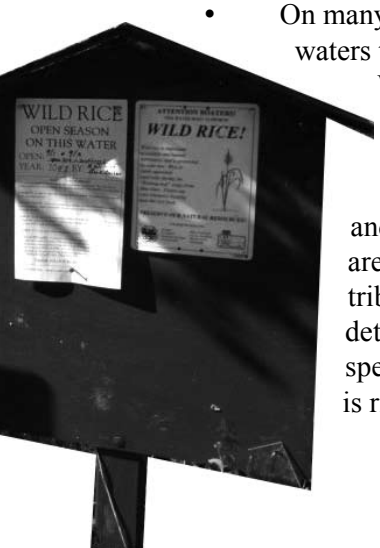


Photo by Patrick Goggin

To protect wild rice beds, no mechanical devices may be used to harvest or gather wild rice.

Only Wisconsin residents may harvest rice in the state. Persons between the ages of 16 and 65 must purchase a wild rice harvesting license. These can be obtained from any vender that issues hunting, fishing and harvesting licenses.


Photo by Frank Koshere

To protect wild rice beds, no mechanical devices may be used to harvest or gather wild rice. Harvesters are limited to gathering wild rice in boats no longer than seventeen feet and no wider than 38 inches that must be propelled by muscular power using paddles or push poles. Ricers must use smooth, rounded, wooden rods or sticks that are no longer than 38 inches and operated by hand. These sticks, called flails, are used to bend the tall stalks over the canoe. As the seed heads are tapped, some rice falls in the canoe and some in the water to seed the bed for future years. Harvesting should be done gently so that the stalks and beds can be harvested again as more rice matures. It is illegal to harvest or gather wild rice in Wisconsin between sunset and 10 a.m. on both regulated and non-regulated waters.

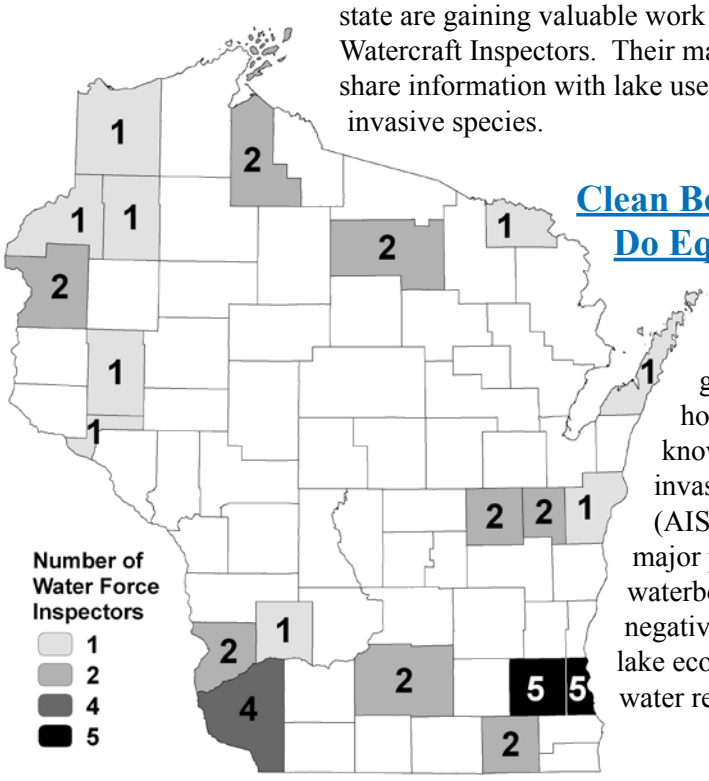
(Continued on page 14)

Investing in Our Future

Recovery Act Benefits Wisconsin Lakes and Young Adults

In the face of a global economic crisis that some say rivals the Great Depression, the American Recovery and Reinvestment Act (ARRA) was conceived. It has been hailed by many as a welcome step towards revitalizing the United States' economy. One of the primary goals mentioned in the ARRA is the creation of millions of jobs to ensure a sustainable, robust economy for the future.

Wisconsin has certainly benefitted from this Act. In April 2009, Governor Jim Doyle announced that Wisconsin received $38 million in ARRA funds to help dislocated workers, youth, and people with disabilities find jobs. The Department of Workforce Development's (DWD) Summer Youth Employment Program is using ARRA dollars to do just that, and, thanks to a partnership among DWD, UWEX Lakes and the Department of Natural Resources (DNR), Wisconsin's lakes are reaping the benefits! This summer, young adults from around the state are gaining valuable work experience as Watercraft Inspectors. Their main goal – to share information with lake users about aquatic invasive species.



Clean Boats Really Do Equal Clean Waters

As many lake groups and lake home owners know, aquatic invasive species (AIS) can pose major problems for waterbodies. Their negative effects on lake ecosystems, water recreation, and Wisconsin's economy are cause for concern, and Wisconsin citizens have been leaders in working to prevent the introduction and spread of AIS for over 30 years. Thanks to the data collected by Clean Boats, Clean Waters (CBCW) Watercraft Inspectors, we now know watercraft inspection is the most effective way to pass on information about AIS prevention to boaters and anglers. While there are both volunteer and paid Watercraft Inspectors, from a variety of groups, at the boat landings each summer, it is becoming clear that paid Inspectors will play a larger role in educational efforts in the years to come. There is still a great need in Wisconsin to increase watercraft inspections, especially on the Great Lakes and inland lakes that already have AIS present. Combine this need with the lack of jobs for Wisconsin's young adults, and you get the creation of Wisconsin's Water Force.

The Water Force

Since June forty-three young adults between the ages of 18 and 24 have been trained to conduct watercraft inspections across the state on waters with an AIS presence. In working at boat landings on AIS-source waters, and often in areas that have not been inspected before, these new Inspectors are filling an important niche. Every young adult is supported by a local supervisor, many of whom are county AIS Coordinators and staff with Land and Water Conservation Departments. In addition, experienced Watercraft Inspectors and Water Guards are teaming up with these new Inspectors during their first days of work to serve as mentors for the young adults as they gain experience educating boaters.

As the weeks of summer have gone by, positive reports from the new Inspectors and the citizens they contact are frequent. Not only is it thrilling to have more inspections taking place on waterbodies that most need them, but it's also encouraging to see the young adults gain experience and skills that will benefit them in the future. "This is an exciting

opportunity to enhance Watercraft Inspections towards a culture of containment, but also add over forty new young adults to Wisconsin's workforce," says DNR Lakes and Wetlands Section Chief Jeff Bode. "Some of the most important job skills are learned through 'real life' experiences."

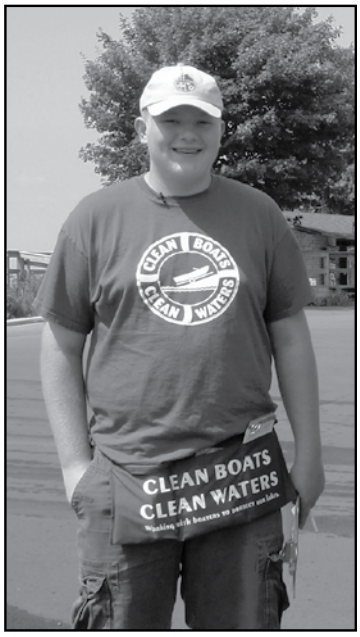
Future Inspections

The Water Force project is ongoing through the end of September, but with the positive feedback from supervisors and AIS staff so far, DWD and DNR are hopeful that this partnership can continue in the coming years. There will always be a role for volunteers, but paid Inspectors are typically able to spend more time at a greater variety of lakes and landings. We are seeing a trend emerging towards lake organizations hiring paid Watercraft Inspectors. "We're looking for a model that works in the future," Bode explains. "Not judged by the number of individuals hired or how much data was collected alone, but by looking for a model of placing Watercraft Inspectors on waters with an AIS presence." The Wisconsin Lakes Partnership continues to explore different approaches to ensure a strong watercraft inspection team, and the Water Force looks to be another promising model to consider for the future.

To learn more about CBCW, visit: www.uwsp.edu/cnr/uwexlakes/CBCW *or contact Erin Henegar,* ehenegar@uwsp.edu, *715-346-4978.*

For more information on the Recovery Act funding DWD received, visit: http://dwd.wisconsin.gov/recovery/.

Photo provided by Diane Schauer



Joe Madison is one of the two young adults hired by DWD with ARRA funds to conduct watercraft inspections in Calumet County. Joe shared information about AIS with many boaters leaving Lake Winnebago this summer.

Partnering with Mills Fleet Farm to Stop Aquatic Hitchhikers

More than three dozen volunteers and natural resources professionals across Wisconsin and Minnesota took part in Mills Fleet Farm Kid's Fishing Day on Saturday, July 11th to educate youth about aquatic invasive species. In addition to learning how to fish, kids learned how to identify and prevent the spread of aquatic invasives in Wisconsin while out fishing their favorite waters. Each store had a station devoted to aquatic invasives species complete with specimens, information and Stop Aquatic Hitchhikers tattoos. Although families were the primary audience, the Mills Fleet Farm staff was also lured to the aquatic invasives station to learn how they could join the fight against invasive species. "This was a great opportunity to educate not only kids, but parents and staff about aquatic invasive species to protect our lakes today and well in to the future" said Diane Schauer, Calumet County Aquatic Invasive Species Coordinator.

Photo by Amy Kowalski

Photo provided by Christal Campbell

Though the final numbers are not in yet for this year's event, a record number of more than 4,000 kids and their families attended the event.

Thanks to all who helped make this event a success! If you're interested in participating in next year's event, please contact Christal Campbell at christal.campbell@wisconsin.gov.

MILLS FLEET FARM

Protecting our Shores

NR 115 Revisions

The state Natural Resources Board has approved the first updates to Wisconsin's shoreline building regulations in more than 40 years. Wisconsin's minimum shoreland zoning standards (NR 115) were originally written in the 1960's and have been revised very little since that time. Development patterns have changed significantly from small family cottages to year-round homes and multi-unit complexes.

Most counties have elected to create ordinances that go beyond the minimum standards.

Most counties have elected to create ordinances that go beyond the minimum standards, but are looking for up-to-date statewide minimums to make these protective measures more consistent. In the years that shoreland zoning has been in place, extensive scientific research has shown up-to-date standards, that can be easily implemented, are critical to protecting Wisconsin waters.

This revision has been a long process to improve lake and river protection, reduce workloads for counties, and produce more flexibility for property owners. The current proposal streamlines code by recognizing the science of shoreland protection and the value of waterfront property. It acknowledges the past work that many counties have put into creating and enforcing shoreland zoning ordinances. The proposal seeks flexibility in development coupled with the demand that the current levels of protection are maintained.

The proposal follows some key principles:

- Property owners may maintain existing buildings and lawns.
- For new buildings, reconstruction or expansion, property owners will need to either save some space for fish and wildlife habitat and runoff absorption - or restore habitat or runoff absorption - in proportion to the project.

Many familiar standards are unchanged, including the 75 foot setback and the 10,000 and 20,000 square foot lot sizes. Property owners would have to limit waterproof surfaces such as roofs and driveways. Buildings within 75 feet of the water would be limited to 35 feet in height.

Homeowners who want to expand a pre-existing structure within 75 feet of the water would have to improve water quality and wildlife habitat. Rules limiting spending on renovations to pre-existing structures to 50% of their value would be wiped out, allowing unlimited repairs and internal remodeling.

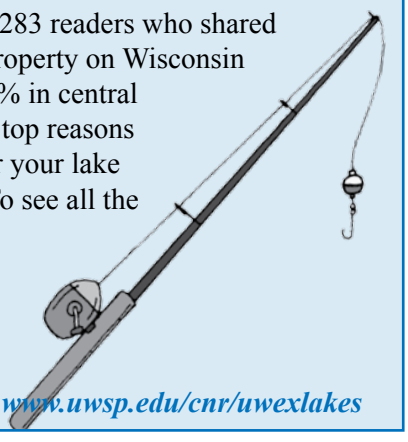
The rules have gone to the Wisconsin Legislature's natural resources committees. Become involved in this process and make sure your elected official sets standards that best suit your lake community. For more information on Wisconsin State Legislature committee meetings and hearings, go to www.legis.state.wi.us.

Fishing for Your Thoughts...

The Spring 2009 *Lake Tides* on-line poll results are in, and many thanks go out to the 283 readers who shared their opinions on Aquatic Plant Management (APM). 270 of them reported owning property on Wisconsin lakes with 51% north of Highway 8, 18% south of Highway 21, and the remaining 24% in central Wisconsin. Respondents let us know 'controlling invasives' and swimming were the top reasons they keep their lake front free of plants. When asked, "Should the state require you or your lake organization to get a permit to remove aquatic plants from the lake?" 66% said yes. To see all the results: www.uwsp.edu/cnr/uwexlakes.

Summer 2009 Poll - Fireworks Over the Water

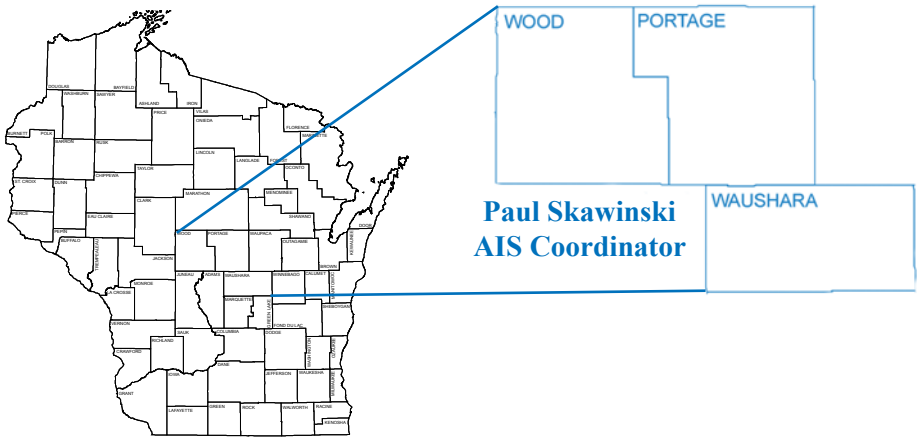
Are you fired up about fireworks over the water? Do they make you 'ooh' and 'aah' or do they make you cringe? Tell us what you think by taking this summer's poll at www.uwsp.edu/cnr/uwexlakes.



www.uwsp.edu/cnr/uwexlakes

Meet Wisconsin's AIS Staff

Paul Skawinski is the AIS Coordinator in Portage, Wood, and Waushara Counties. He works for Golden Sands Resource Conservation & Development Council, based in Stevens Point. Paul's duties include conducting Citizen Lake Monitoring Network (CLMN) and Clean Boats, Clean Waters (CBCW) workshops, coordinating volunteer efforts, responding to new aquatic invasive species (AIS) reports, and helping residents to control existing AIS infestations.



What's new with invasive species in Portage, Wood and Waushara counties?

This year we received a grant from the Wisconsin Department of Natural Resources (DNR) to continue our AIS program. It funds my full-time position, a part-time position, and two full-time summer positions. Last year we installed AIS billboards at each public-access lake in Portage County, and will add three to Wood County lakes this year. Lake groups are seeing the value in the CBCW program, as well as learning to identify plants in their lake.

In your opinion, what is currently the most prominent AIS issue in these three counties?

Eurasian water-milfoil (EWM) is trying to gain a stronger hold on our lakes. Last year, three new lakes in Portage County alone were found to contain EWM. However, all three of those EWM populations are still very small, and we are working extensively with those lake groups to control and contain the EWM. Wood County's most prominent issue was that no AIS surveys had been completed on their lakes before, but those have now been completed, along with a county-wide AIS management plan. Rusty crayfish and curly-leaf pondweed were present in the majority of the lakes. In Waushara County, eutrophication of the lakes from residential and agricultural runoff is a big concern. Lake property owners are being encouraged to maintain native shoreline buffer zones, and avoid over-fertilizing their lawns. Many landowners are learning that healthy shorelines offer protection against not only erosion, but also AIS invasions, as well as provide excellent wildlife habitat.

Why is AIS prevention important to you?

For my entire life, I have been drawn to water. From having five aquariums as a 12 year-old to being an officer in the UWSP Herpetology Society, my primary interests in life have included water. I have learned about the countless interactions that occur in an ecosystem, and how easily that delicate balance can be disrupted by factors like AIS. I grew up appreciating all of the wonderful biodiversity that comes with a balanced lake ecosystem, and it makes me feel great knowing that I am doing my part to ensure that today's children can grow up watching the same turtles and dragonflies that have fascinated me for all these years.

Photo provided by Paul Skawinski

How do you think preventing the introduction and spread of AIS should be addressed?

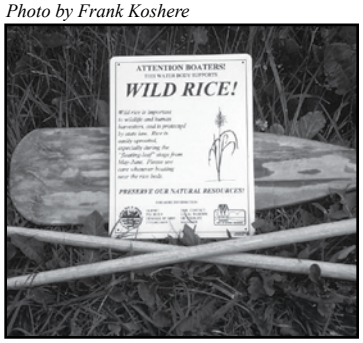
Education is definitely a top priority. Conducting workshops is one of my favorite things to do as an AIS Coordinator, because I know that I am helping the participants to become more educated lake residents. We are all working toward a common goal—to prevent the spread of AIS. If we are to reach that goal, we must all work together, and that includes professionals and private citizens alike.

To learn more about AIS in Portage, Wood and Waushara counties, and how can get involved, contact Paul at 715-343-6278 or skawinsp@co.portage.wi.us. To find out who is working on AIS issues in your area, see www.uwsp.edu/cnr/uwexlakes/CBCW/AIScontacts.pdf.

Many landowners are learning that healthy shorelines offer protection against not only erosion, but also AIS invasions, as well as provide excellent wildlife habitat.

A hundred pounds of green rice usually yields from 35-60 pounds of finished product.

Photo by Frank Koshere



Attention Boaters! This water body supports WILD RICE!
Wild rice is important to wildlife and human harvesters, and is protected by state law. Rice is easily uprooted, especially during the "floating leaf" stage from May-June. Please use care whenever boating near the rice beds. Preserve our Natural Resources!

Paddy rice differs genetically and may be grown commercially using fertilizers, herbicides, and/or insecticides.

Finishing Your Bounty for the Table

A ricing trip may yield anywhere from a few pounds of rice to more than 200! Freshly harvested rice (referred to as "green" rice) can be used for sowing, but if your goal is food for the table, then the rice will need to be finished.

Finishing wild rice involves reducing the moisture content by drying it out and removing the sheath that covers the seed. Traditional finishing is labor intensive and involves parching, "dancing" to loosen the hulls, and winnowing the rice. Some people greatly enjoy this part of the process while others seek the assistance of professionals to help them finish their rice.

Scattered around rice country are places you can bring your green rice for finishing. If you're new to ricing, ask your neighbors where and who they take their rice to for processing when you see each other on the water. Finishers may charge a fee, or may keep a portion of your rice (typically 20-50%) in lieu of payment. A hundred pounds of green rice usually yields from 35-60 pounds of finished product. The color of the finished rice may vary from green-grey to black but the color is more influenced by finishing techniques than by seed origin.

Cultivated/Paddy-grown Wild Rice

Cultivated, or "paddy-grown" wild rice is common in supermarkets and roadside stands at a significantly lower price than hand-harvested rice. Although it may appear quite similar to natural wild rice, it is a fairly separate product, lacking the depth of flavor and nutty consistency of its wild relative. Paddy rice differs genetically and may be grown commercially using fertilizers, herbicides, and/or insecticides. It is also mechanically harvested and finished somewhat differently from natural wild rice. Wisconsin and Minnesota require paddy-grown wild rice to be labeled as such.

Cultural significance

To the Anishinaabe people (Chippewa or Ojibwa), wild rice continues to be a staple in their diet. Known as manoomin (a term derived from "Manitou," meaning Great Spirit and "meenum," meaning delicacy), this "food that grows on water" is woven deeply into their cultural identity including their migration stories and oral history, dance, and ceremonies. The August, or Rice Making Moon, signals the harvest season, which is a time for celebrations of thanksgiving. Wild rice is a central component to other Native American cultures within the rice region, including the Dakota and Menominee (who took their name from this plant).

Journals of early European explorers also emphasized the importance of wild rice. The voyageurs found the plant growing on the lakes and riverways they traversed, and they used it as a food staple. It in part helped the regional fur trade flourish.

The historic range of wild rice is dotted with numerous lakes, rivers or towns named Rice and Manoomin, or bear related names such as "Poygan," derived from the Menominee word for gathering rice. Some believe that no other plant has contributed to more geographic names in all of North America than wild rice.

Compiled from the work of the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) and the Wisconsin DNR

GLIFWC http://www.glifwc.org/
WDNR http://dnr.wi.gov/org/land/wildlife/wildriceharvest.htm

Share Your Lake's History

We need your help! We are creating a publication that will recognize the efforts of the women and men who have invested their time and efforts into the lakes they love. We are looking for the history of your lake, especially stories about the people who were the lake's earliest caretakers. If you have any records, memoirs, publications or other information on the history of your lake, especially from the late 1800's to the 1960's, please contact us at uwexlakes@uwsp.edu or 715-346-2116 to make arrangements for sharing the material.

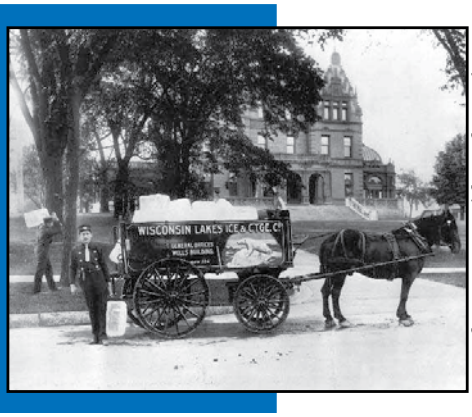


Photo from http://simplymarvelous.wordpress.com/

www.uwsp.edu/cnr/uwexlakes

New on the UWEX Lakes Web Site

Economics of Water - www.uwsp.edu/cnr/uwexlakes/economicsOfWater/
It is a difficult task to tie a monetary value to a body of water or a beautiful view. However, there is a small, but growing body of work that tries to make that connection. Our "Economics of Water" pages hold a collection of papers ranging from the introduction of basic concepts to scholarly research on the tiniest details. From Water Quality to Restoration Projects to Recreation and Property Values, you can read how water can be measurably valuable.

Lake Tides Polls
Are you fired up about fireworks over the water? Tell us what you think by taking the short poll on our web site (www.uwsp.edu/cnr/uwexlakes) and get immediate, real-time results. You can also read the results from the Spring 2009 poll.

Lake List linked to DNR's Surface Water Data Viewer - www.uwsp.edu/cnr/uwexlakes/lakelist/
Now when you look up a Lake Organization in our Lake List, you can link directly to the DNR's interactive map of the lake or lakes in the Surface Water Data Viewer. By clicking on and off layers, the lake map will show Monitoring Stations, Aquatic Invasives, dams, grant information, and much more.

New in the UWEX Lakes Bookstore - www.uwsp.edu/cnr/uwexlakes/publications/
Wisconsin Lakes Partnership Digital Productions DVD - $10 plus s&h
Choosing the Right Waterfront Property - Free plus s&h

www.uwsp.edu/cnr/uwexlakes

CALENDAR

September 19, 2009 – Ocean Conservancy's International Coastal Cleanup
The International Coastal Cleanup (ICC), a worldwide event since 1986, is coordinated each September by the Ocean Conservancy and has been happening in Wisconsin since 1989. Each year the ICC gathers data from the debris collected on waterways around the world.
For more information: www.coastalcleanup.org.

October 27-31, 2009: NALMS 2009 Symposium
The North American Lake Management Society invites you to join them in Hartford, CT this fall for their annual symposium. The theme for 2009 is "Ensuring our Lakes' Future".
For more information: www.nalms.org

To get the most up-to-date lake-related events, go to www.uwsp.edu/cnr/uwexlakes and click on the Lake Event Calendar.

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Reflections

Perhaps the truth depends on a walk around the lake.

~ Wallace Stevens