

A Boost from Bait Businesses Helping Address AIS in Wisconsin

By Kajsa E. Dalrymple, UW-Madison, Dept. of Life Sciences Communication

Wisconsin bait businesses are both aware of and concerned about the risks associated with aquatic invasive species and are taking action to help stop the spread of these plants, animals and diseases in Wisconsin's lakes and rivers.



A recent study, conducted by researchers in the University of Wisconsin-Madison's Department of Life Sciences Communication, explored the possible role that Wisconsin bait businesses play in communicating to anglers and boaters about aquatic invasive species (AIS) and fish diseases like viral hemorrhagic septicemia (VHS).

AIS, which include a variety of over 20 species of plants and animals, are a serious threat to Wisconsin's lake and river systems and can alter the natural relationships among native species by affecting their environment. AIS are also negatively impacting the economic value of lakes and rivers in the state.

According to the study, about 68 percent of bait business owners said that they had heard a lot about the problem of AIS in Wisconsin, with 59 percent believing that AIS are a serious threat to Wisconsin's fisheries.

Although bait business owners believe that AIS are a problem in Wisconsin, only about 45 percent felt that they were knowledgeable about the spread of invasives. Bait business owners felt even less confident in their customers' understanding of the issue, with only 14 percent claiming that their clientele knew "quite a bit" or "very much" about the spread of AIS in Wisconsin.

While owners may lack confidence in anglers' and boaters' understanding of the problem of AIS, about 71 percent of people working in the Wisconsin bait industry believe that they can play an important role in the prevention of AIS and VHS, and over 70 percent indicated that they display educational materials about these issues in their stores.

"Wisconsin bait business owners are important partners in helping spread the word about aquatic invasive species to anglers and boaters because they are the people who interact with these audiences on a daily basis and have witnessed the damage that AIS can cause to the fishing industry," said Bret Shaw, environmental communication specialist for the University of Wisconsin-Extension and principal investigator on the study.

Respondents to the survey also offered several suggestions as to how future outreach

(Continued on page 2)



T. Lyden

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Wisconsin Lakes Partnership



Sign at Angler's Bait Shop Bar & Grill in Fremont, Wisconsin.

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programs may reach bait customers. Specifically, bait business owners believed that the best method for reaching people is through fishing organizations and online web sites.

They also suggested reaching people through conversations at boat landings, television public service announcements, and newspaper articles.

Additionally, the bait business owners pointed to outreach methods that they are most likely to participate in. They listed "putting up signs and posters" as their preferred method of outreach followed by "handing out publications," "selling containers with AIS/VHS laws on them," and "handing out stickers."

"Gaining feedback from Wisconsin bait business owners is essential in creating effective communication messages," says

Dominique Brossard, co-investigator on the study and associate professor in the Department of Life Sciences Communication at the UW-Madison. "With the help of people working in the bait business, we are more likely to encourage behavior change among anglers and boaters throughout the state, and will be more successful in protecting Wisconsin's lakes and rivers."

Brossard and Shaw have been working closely with the state Department of Natural Resources and UW-Extension to research how to communicate more effectively in the state to prevent the spread of AIS in Wisconsin.

"Protecting Wisconsin's natural resources is a shared responsibility," says Shaw. "We are fortunate that many bait businesses are doing their part to make a difference." 💧

Jump on Board Take Part in the 2011 Landing Blitz

With the summer boating season fast approaching, we are gearing up for another successful mid-summer landing blitz. This year's blitz will take place over the 4th of July weekend when boat traffic is high and the potential to spread aquatic invasive species (AIS) is great. University of Wisconsin-Extension is partnering with the Wisconsin Department of Natural Resources (DNR) and counties across the state to promote an increase in media coverage surrounding aquatic invasive species, along with an amplified presence of watercraft inspectors at landings all over Wisconsin.

The 2011 Landing Blitz will begin Thursday, June 30th and continue through Monday, July 4th. As part of this year's event, we are encouraging all *Clean Boats, Clean Waters* inspectors to get out on their landings and share AIS prevention information with the boaters and anglers enjoying the lakes! Join your fellow inspectors around the state in demonstrating the required prevention steps boaters must take, providing stickers for boaters to place on their trailer posts to remind them of these steps, and educating boaters and anglers on Wisconsin's invasive species laws.

Contact Jon Fischer at the DNR if you or your lake organization plan to be a part of this year's efforts to increase AIS awareness during one of the busiest weekends of the boating year. Partnering organizations will be provided with Stop Aquatic Hitchhikers towels to hand out at the landings and media resources to help highlight the event locally.

Jon Fischer ~ (608)-261-6450 ~ Jonathan.Fischer@wi.gov



**PREVENT THE SPREAD OF
INVASIVE SPECIES
IT'S THE LAW**

PENALTIES MAY EXCEED \$2000

Before launching and before leaving YOU MUST:

- ✓ **INSPECT** boats, trailers, and equipment.
- ✓ **REMOVE** all attached aquatic plants and animals.
- ✓ **DRAIN** all water from boats, vehicles, and equipment.
- ✓ **NEVER MOVE** plants or live fish away from a waterbody.*

 **STOP AQUATIC HITCHHIKERS!**
Prevent the spread of invasive species, it's the law

*Limited exceptions apply. Visit WWW.DNR.WI.GOV and search for "BAIT LAWS."

What's Afloat?

Wisconsin's Recreational Boating Survey

By Kim Peterson, Edward B. Nelson, and Dreux J. Watermolen, Bureau of Science Services,
Wisconsin Department of Natural Resources

With more than 640,000 boats registered for use on Wisconsin waters, demand for access to our lakes and rivers remains substantial. The Wisconsin Department of Natural Resources (DNR) Bureau of Science Services recently surveyed recreational boaters to better understand this demand and to help the DNR's law enforcement program plan its boating safety and enforcement work. Lake lovers of all types may be interested in our approach and findings.

Our survey spanned an entire seven month boating season (April – October 2007). We randomly selected more than 14,000 boats from state registration lists, and then partitioned this sample into fourteen sub-samples of 1,000 boats each. We mailed a questionnaire to a sub-sample of boat owners every two weeks. We asked boat owners about their boating activities in general and about their particular experiences during the two weeks prior to receiving our questionnaire. With an overall response rate of 65% and the random sampling procedures, data gathered for this study can be generalized to the total population of Wisconsin registered boats.

Boats Used Often

Boat owners regularly use their boats. When asked if they had used their boat in Wisconsin in the last two years, slightly more than 82% of all respondents told us yes. Boating activity begins early but slowly in the year (March – April), peaks in early summer (June – July), then tapers off gradually through autumn (September – October). The average number of days boated in each time period follows a similar pattern. Boating activity tends to peak on weekends, and Fridays generally see more activity than other weekdays, as might be expected.

Size Matters

Boats range in size from 5 ft. (a jet ski) to 68 ft. long (a sailboat), with the most frequently reported length being 14 ft. (mean = 17 ft., median = 16 ft.). Sixty-nine percent are powered by outboard motors and another 9% by inboard/outboard motors. Frequent combinations include outboard and electric motors (typically, for craft used for fishing) and sail with outboard motor (for larger sailboats). Boat motors range in horsepower from 1 HP to 940 HP, with 25 HP being the most frequently cited horsepower (mean = 74 HP, median = 45 HP).

Favorite Places

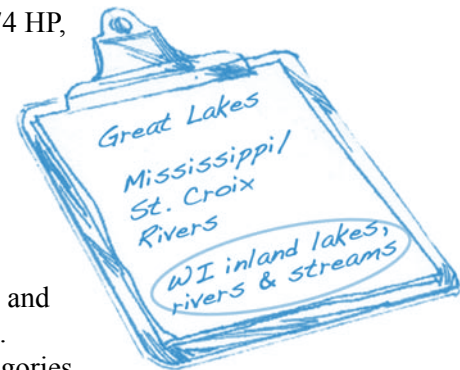
We asked about boating on three general categories of water:

- 1) the Great Lakes
- 2) the Mississippi and St. Croix rivers, and
- 3) WI inland lakes, rivers, and streams.

Respondents could circle as many categories as they had boated on during the two-week period we asked about. Responses suggested that most boat owners had boated on waters in just one of the three categories. The majority of this activity (84%) took place on Wisconsin's inland lakes, rivers, or streams. Boaters boated in every county in Wisconsin, but lakes in Vilas

(Continued on page 4)

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(What's Afloat? continued from page 3)

and Oneida counties received the most use, followed by those in Waukesha, Winnebago, Walworth, Dane, and Sawyer counties.

We also asked on which one Wisconsin river, lake, or stream they used their boat most (in order to differentiate boaters who had specified more than one category of boating waters). Boaters identified 2,716 distinct water bodies or combinations of two or more that they used equally. Lake Michigan was most frequently cited, followed by the Wisconsin, Mississippi, and Wolf rivers and Lake Winnebago. Long Lake, Green Bay, Lake Geneva, and the Rock River were also popular.

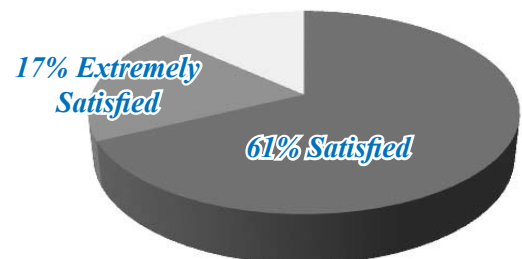
Fun on the Water

When we asked how many people were typically in their boating party (including themselves), a majority of boaters (73%) answered three or less. Party sizes varied throughout the season, however, increasing modestly in the warmer summer months.

When asked which activities they had engaged in while boating, a majority of respondents (43%) said that they fished from their boat. Not only was fishing from a boat the most frequently reported activity, it was also the activity that most respondents (60%) said they spent the most time at. Cruising or sailing (24%) was the second most frequently cited

activity. Water skiing (12%) and swimming (13%) were also popular. Boaters reported an average of roughly 1.8 activities, which suggested that a great many boaters do just one thing while boating.

How satisfied are Wisconsin boaters?

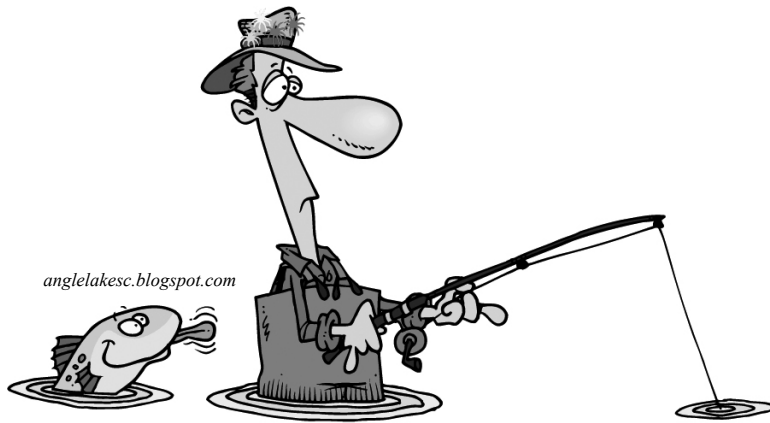


We asked boaters how satisfied they were with their recent boating experiences. Eighty-eight percent indicated they were at least satisfied, with slightly more than 17% saying they were extremely satisfied. We then asked what one thing would have improved boating experiences most. More fish and better weather topped the list of improvements, but higher water levels and less boat traffic also received many votes. As the boating season progressed from spring into summer, perceptions of crowding increased and then decreased somewhat into autumn.

We asked boaters if others on the water caused problems or interfered with their activities in any way. Respondents were generous with

60% of respondents said they spent most of their time on the water fishing.





during all boating occasions included in the two-week time period, plus any money spent getting ready for these occasions. Expenditures for boating occasions varied widely. Boaters indicated they spent an average of \$47 on groceries, \$21 on packaged goods (beer, wine, liquor), \$55 on automobile

On average, respondents spent approximately \$350 per boating excursion.

their answers, noting most problems stem from boater interactions with one another coupled with a lack of knowledge and/or a lack of consideration (more on this topic in a future issue of *Lake Tides*).

Contributing to the Economy

We asked boat owners for details about spending associated with their boating trips. Our goal was to capture expenditures made

expenses, \$43 on sporting goods, and \$17 on temporary moorings associated with their trips. In addition, they told us they spent an average of \$72 on lodging, \$51 on restaurants, \$20 on amusements and gifts, and \$27 on other things during their boating trips. On the whole, the data reported for these questions appeared to be well considered estimates of boater spending during the period asked about and suggested a considerable economic impact from boating. 💧

Wisconsin's Own Wins Worldly Water Award

University of Wisconsin-Madison limnologist Stephen Carpenter has been awarded the 2011 Stockholm Water Prize! It was announced in Stockholm, Sweden on March 22, in connection with the United Nations World Water Day. Carpenter will be formally awarded the crystal sculpture and \$150,000 by King Carl XVI Gustaf of Sweden at a ceremony on August 25th during 2011 World Water Week in Stockholm.

Professor Carpenter is one of the world's most distinguished authorities on lakes and fresh water ecosystems, and his work has re-framed our understanding of freshwater environments and how humans and the surrounding landscape impact lake ecosystems.

This award honors those "whose work contributes broadly to the conservation and protection of water resources and to improved health of the planet's inhabitants and ecosystems."

Congratulations Steve! To learn more about the Center for Limnology and the important work they do, please visit <http://limnology.wisc.edu/>.



Jeff Miller: UW-Madison News

2011 Convention Wrap-up

Speaking for Lakes



I was impressed at the scope of info available from research, lake resources, status updates to art and the joys of lake living. GREAT JOB!

This was my first convention and it was great! It was invigorating to be with so many like-minded people and to have so many choices of sessions to go to. I was impressed with your organization and structure as well as the facilities, staff and food at the Hotel Sierra. Thanks!



As the logo for the 2011 Wisconsin Lakes Convention suggests, it's time to "speak for lakes." However, critters and plants that depend on healthy lakes cannot directly make the case for good decision making in our world of hearings, rules and laws. So, it's up to us – the people of the lakes. Eric Eckl, the guest speaker at our opening plenary session on Tuesday, April 12 shared some insights on how to do that. He discussed some of the ways we can engage the "outside world" and help folks understand that the work we do matters.

During the Wednesday morning plenary, painter and biologist Terry Daulton, naturalist and poet John Bates and scientist Emily Stanley took us on a journey of how they and other artists and scientists blended their talents and knowledge to create the exhibit

"Drawing Water: Artists and Scientists Explore Northern Lakes." This exhibit made its debut at the convention and will be traveling throughout the state to encourage lake lovers to think about a different way to speak for their lakes (go to <http://lter.limnology.wisc.edu/tearts/> for details). Eric Engbretson, an underwater photographer, added to the plenary's theme of "blending arts and science," by sharing his expertise to give participants a fish eye view of lake life; what a treat!

These amazing plenary sessions were a great part of a full, three-day gathering that included 17 hands-on workshops, 37 concurrent sessions, a film festival and several hours of networking time to allow concerned citizens and lake professionals to share stories and learn from each other. Participants also met various exhibitors and collected valuable resources at educational booths.

Convention Archive? Yep, We've Got that!

Did you come to the convention this year, but didn't have time to attend all of the sessions you had hoped? Do you wish you could review some of the session presentations you did attend? Well, you're in luck! The 2011 Wisconsin Lakes Convention archives are available now on the UWEX Lakes web site. Just go to www.uwsp.edu/cnr/uwexlakes and click on the "archive" link, and you will find:

- ◆ Presentation Materials
- ◆ Exit Survey (electronic)
- ◆ Convention Packet Materials (agenda, presenter list, etc.)
- ◆ Stewardship Award Winner information
- ◆ Photo Contest Winners
- ◆ Digital Productions "Speaking for Lakes" and "The Wisconsin River"
- ◆ 20-Year Volunteer Monitors' Interviews

Never Attended the Wisconsin Lakes Convention?

Maybe a quick glimpse at some of these materials will pique your interest enough to spur you to attend next year. You can even check out convention archives back to 2007!

ATTENDANCE

of participants = 486

of states = 8

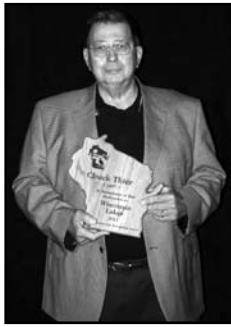
of counties = 56

2011 Wisconsin Lake Stewardship Award Winners

Wednesday evening, April 13th, was a time to honor Wisconsin Lake Stewardship Award winners – the highest honor bestowed to anyone for lake protection in Wisconsin. We would like to congratulate this year's winners:



Business:
Cheryl Clemens
Harmony Environmental



Citizen:
Chuck Thier



Group:
Friends of Lake Wingra



Public Service:
Spencer Black



Youth:
Brad Baas



Lifetime Achievement:
Jeff Bode, Bob Korth



2011 Wisconsin Lakes Partnership Photo Contest Winners

Natural Features In and Around Lakes and Underwater

1st place - *Surfacing*
Mike Murray

2nd place - *Daybreak*
Brenton Butterfield

3rd place - *Gilbert's Lake Morning Mist*
Rip Maclay

Honorable Mentions:

Pretty in Purple - Brenton Butterfield

On Top of the World - Paul Skawinski

Evening Gold - Nancy Pierce

Splash of Sunshine - Richard Matzke

Cool Symmetry - Dan McFarlane

Clear Water and Lake Superior Stones - Gary Becker

People Enjoying Lakes

1st place - *If There's No Wind, Row*
Chris Hamerla

2nd place - *A Flurry of Mayflies While Fishing*
Chris Hamerla

3rd place - *Three Teens on Stone Beach*
Gary Becker

Honorable Mentions:

In the Fog - Richard Matzke

Sunset Sailing - Kevin Warning

Kissy Fishy - Carol Warden

Walking on Water - Kevin Warning

Mike Murray



"Surfacing" won first place at the 2011 Wisconsin Lakes Partnership Photo Contest in the category "Natural Features In and Around Lakes and Underwater."



A Spot of Tea

Getting To Know Our Native Plants

By Patrick Goggin, UWEX Lakes Specialist

Derek Anderson



Labrador tea (*Ledum groenlandicum* Oeder) is a workhorse shrub of our northern Wisconsin open bogs (treeless wetlands) and lowland forests that reaches a height of 1½ to 5 feet. It is most recognizable by its thick evergreen leaves. The edges of these leaves curl downward and they are woolly, often with orange hairs beneath their waxy topcoat of green. Its fragrant white flowers have five petals and are arranged in clusters that begin popping out in May and on into June.

James R. Sime



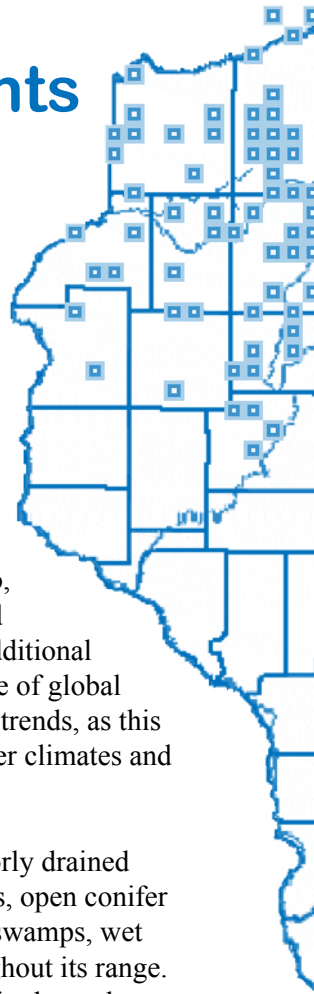
Its fragrant white flowers have five petals and are arranged in clusters that begin popping out in May and on into June.

Labrador tea is distributed throughout Canada, Alaska, and the northern fringe of the United States. The southernmost Pacific and Atlantic coast extents of Labrador tea are in Oregon and New Jersey. As a result of land use, climatic, or other changes, Labrador tea is vulnerable or rare in several states at its southern limit including Ohio, Connecticut, New Jersey, and Pennsylvania. It may be in additional jeopardy in the future because of global climate change and warming trends, as this shrub is well-adapted to cooler climates and conditions.

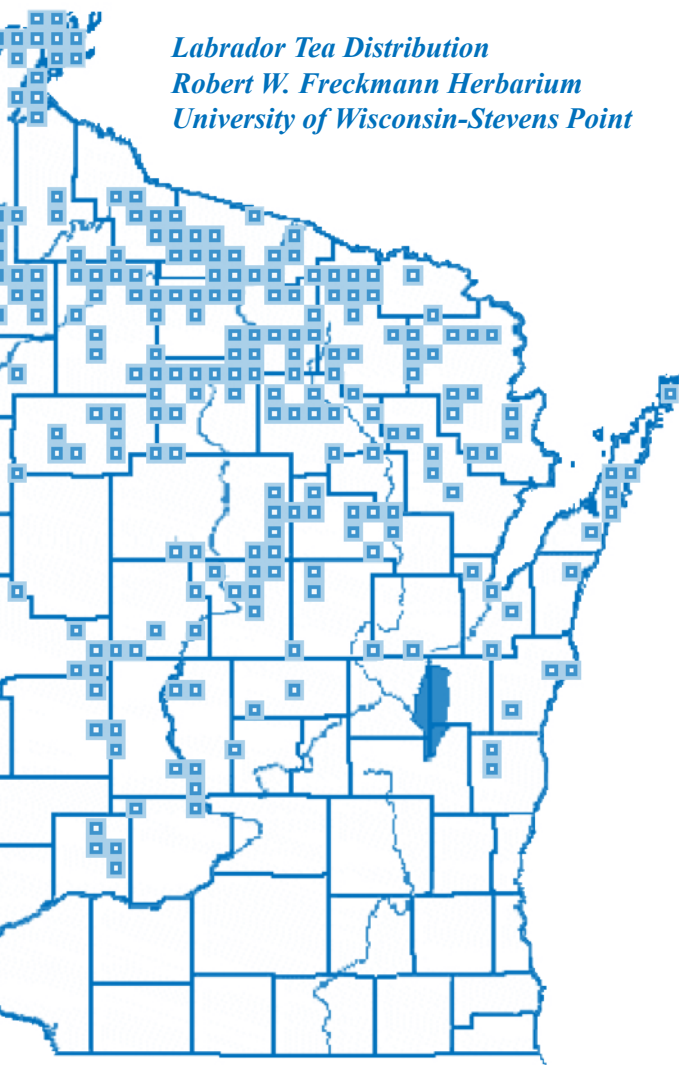
Labrador tea is typical of poorly drained habitats such as boreal forests, open conifer bogs, treeless bogs, wooded swamps, wet barrens, and peatlands throughout its range. Feather mosses are common in the understory of Labrador tea wetland habitats—these include plants like big red stem moss (*Pleurozium schreberi*), splendid feather moss (*Hylocomium splendens*), and knights plume moss (*Ptilium crista-castrensis*), all of which help keep the roots of Labrador tea in “wet feet” conditions.

The common name of Labrador tea in part comes from its many medicinal uses. In Huron H. Smith’s *Ethnobotany of the Menomini Indians* (1923) and *Ethnobotany of the Forest Potawatomi* (1933), the author describes assorted uses for a tea solution of this plant’s leaves utilized for combating fever, aiding head issues and sore eyes, helping with kidney problems, assisting in muscle pain and rheumatism relief, and helping to alleviate rashes and certain allergies.

Research into flower pollination of Labrador tea has shown that hidden nectar sources of the plant’s flower are visited by many types of insects. One study in a southern Ontario



Labrador Tea Distribution
Robert W. Freckmann Herbarium
University of Wisconsin-Stevens Point



peat bog recorded over twenty insects per hour visiting Labrador tea flowers. Labrador tea had the greatest diversity of insect visitors of the plant species studied in this bog, and bees were most common. In a different study, results suggested that butterflies may also rely on the nectar from the Labrador tea flower. While insects utilize the plant significantly, it is not popular to the palates of deer, caribou, elk, moose, and mountain goats. Snowshoe hares have been known to munch on it a little bit.



This underbelly shot of the Labrador tea leaves show they curl downward and are woolly - often with orange hairs beneath their waxy topcoat of green.

So next time you're trouncing around a bog and perusing the wildflowers, mosses, and shrubs found there, pay closer attention to the Labrador tea. You just may see a parade of insects enjoying a nectar feast. For more information, visit the UWSP herbarium web site at <http://wisplants.uwsp.edu/scripts/SearchResults.asp?Common=Labrador-tea>. 💧

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: Other than the “Public Comment” line item often found on a Lake District board meeting agenda, are people in attendance, other than actual board members, allowed to interject or give opinion on items being discussed?

A: **No.** Meetings of a Lake District's Board of Commissioners are exactly that, a meeting at which the elected and appointed members of the Board conduct and execute the business of the Lake District. There is no requirement that electors and property owners or other persons be allowed to participate in the discussion, but some district members attend just to observe. Any verbal participation by persons other than the Board is at the discretion of the Chairperson who leads the meeting (§33.29(3)(a), Stats.).

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



Setting A Good Example

Local Innovation in Shoreland Management

By Susan Tesarik, Education Director, Wisconsin Lakes

Over the years, many counties have upgraded their shoreland zoning rules to be more protective than the statewide minimums required by state law. While recent changes to state law increase some development standards (such as capping impervious surface areas on waterfront lots and requiring mitigation to offset negative effects of certain developments very close to the water), there already is a rich set of experience among Wisconsin counties in implementing more progressive shoreland development standards.

Statewide minimum shoreland zoning rules for counties are in ch. NR 115, WI Adm. Code. Changes to NR 115 went into effect Feb. 1, 2010. All counties will need to review their shoreland zoning ordinances for consistency with the new rule. Counties have until February 1, 2012 to update their shoreland ordinances to be consistent with or exceed the new standards identified in NR 115.

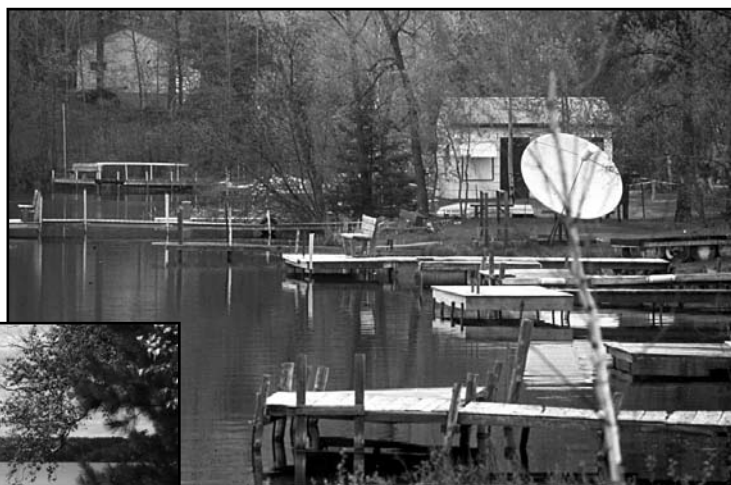
To date most of the counties that have completed classification projects have chosen to address shoreland development concerns and adopted stronger local shoreland regulations. Some counties are using their classification projects to guide watershed and countywide lake planning efforts as well.

Thirty-three counties, mostly in the lake-rich areas of Northern Wisconsin, have grouped their waters according to common characteristics and are using their classification systems to better manage those waters. Most counties have tailored shoreland development standards (such as lot sizes, structure setbacks and buffer areas) to better protect the most pristine and sensitive waters, while leaving more basic standards on waters that are already heavily developed.

County Lake Classification

Local innovation in shoreland zoning over the past decade has been fostered by lake classification grant funding offered through the Department of Natural Resources (DNR) Lake Protection Grants Program. These grants help counties inventory surface waters and then use that information to design and implement local land and water resource management programs.

Classification systems have been adopted in 17 counties, with different shoreland zoning rules for each water class—ranging from very protective to the status quo of statewide



R. Korth

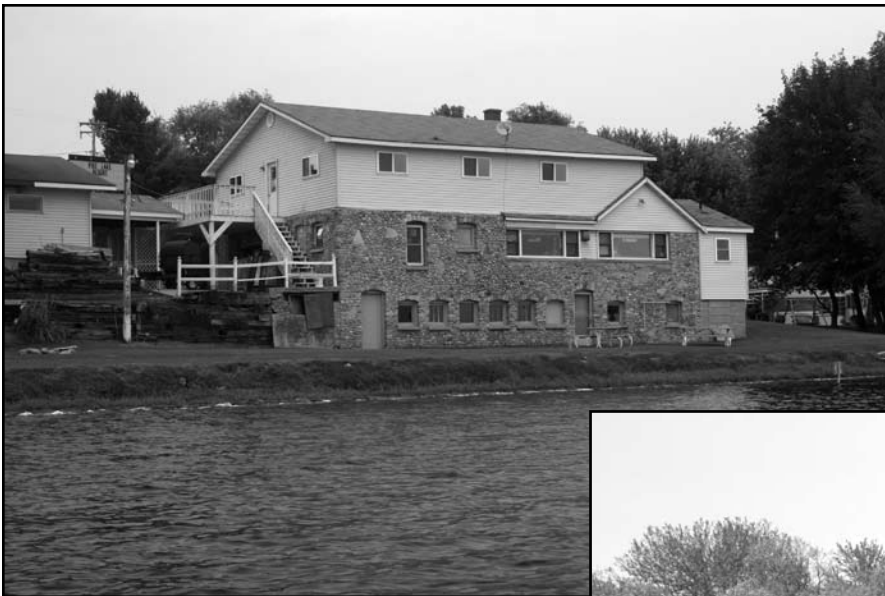
Above is an example of a heavily-developed shoreline.



R. Korth

To the left is an example of a well-managed shoreline using native plants as a buffer between the land and the water. This lake also appears to be less developed.





To the left you see a lakefront property that includes a considerable amount of impervious surface. The structure is also extremely close to the water's edge.

Below is an example of how natural habitat can minimize runoff from impervious surfaces to the lake.



minimum rules. A few more counties are currently working on classification projects that may include significant shoreland zoning upgrades when completed, and a few others have adopted significant shoreland zoning upgrades without a classification system.

Counties are successfully using many innovations in their shoreland zoning rules, such as performance standards, impervious surface area caps, and mitigation. A few examples follow.

Impervious Surface Area Standards

Impervious areas are hard surfaces such as pavement, buildings, driveways and compacted soils that prevent infiltration of water, increasing the amount and velocity of runoff to lakes and streams. As we discussed in the last issue of *Lake Tides*, impervious surface area limits are one of the new standards in NR 115. Counties will have some flexibility in determining how to administer this new standard in their shoreland ordinances.

Approximately 21 counties currently address impervious surface areas for some or all shoreland lots. Some have set an impervious area cap on a per lot basis: for instance, the total square footage (in ground floor area) of all structures on any shoreland lot cannot exceed 20% in Sheboygan County. Waupaca County requires that at least 75% of a shoreland lot remain in vegetative cover.

Sawyer County's shoreland ordinance states that the maximum total area of impervious surfaces shall not exceed 15% of a total shoreland lot area within 300 ft. of the ordinary high-water mark (OHWM). The limitation on impervious surfaces may be increased to no more than 25% only with a Conditional Use Permit. The limitation on impervious surfaces located more than 300 feet from the OHWM may be increased to no more than 30% only with the submission and approval of a Rainwater/Snow Run-off Retention Plan.

Combining a percentage limit with a square footage limit is one way to prevent very large areas of impervious surfaces on large lots. For example, in Price County no more than 15% or 10,000 square feet, whichever is less, of the area located within 200 feet of a navigable lake, river, or stream of any lot may be impervious. The impervious surface limit may be exceeded if a stormwater management plan shows that there will be no increase in

Counties are successfully using many innovations in their shoreland zoning rules, such as performance standards, impervious surface area caps, and mitigation.

(Continued on page 12)



Impervious surface area limits are one of the new standards in NR 115. Counties will have some flexibility in determining how to administer this new standard in their shoreland ordinances.

stormwater discharge from the lot as a result of the proposed construction for a specified storm event.

Bayfield County limits impervious surfaces on shoreland lots within 300 feet of the OHWM to no more than 4,500 square feet or 15% of the lot area, whichever is greater. To exceed this limit, a performance standard of no increase in storm water discharge from the lot development must be met. Others have refined their standards to include separate limits for buildings and other hard surfaces. For example, in Langlade County no more than 15% of a shoreland lot within 200 feet of the OHWM may be covered by buildings, and no more than an additional 5% may be covered by other impervious surfaces.

Lincoln County varies dimensional standards for shoreland development for three classes of lakes and rivers. Larger lot sizes, frontage widths, building setbacks, and buffer area requirements are required on their most sensitive waterbodies. Waterbody class also determines impervious surface coverage limits in Langlade:

- 15% of the lot can be impervious on high sensitivity waters,
- 18% on moderate sensitivity waters, and
- 20% on low sensitivity waters.

Similarly, on Class 1 waters in Washington County, principal structures cannot cover more than 15% of the lot area, and the total amount of impervious surfaces cannot exceed 30% (Class 2 and 3 waters have different impervious surface area limits).

Mitigation

Mitigation is another standard in NR 115 that counties will have flexibility in administering at the local level.

Mitigation is another standard in NR 115 that counties will have flexibility in administering at the local level. While it's a new requirement in the statewide minimum standards, a number of counties have experience with mitigation requirements already in their ordinances. Mitigation offers reasonable choices for property owners to improve infiltration of runoff, restore shoreline buffer functions, or take other measures to offset development impacts in exchange for exceeding the 15%

impervious surface area cap, expansion of structures closer than the required shoreline setback, and development on lots that do not meet current size requirements.

To increase the flexibility and acceptability of mitigation many counties allow property owners to choose mitigation measures from a list of options with point values assigned to them. Counties set the number of mitigation points required for proposed activities (proportional to the amount/degree of impacts from the proposed project), and then allow landowners to choose from a menu of mitigation options to obtain the necessary points.

For example, Waupaca County uses a menu approach to mitigation which first requires privately owned wastewater treatment systems to be evaluated and upgraded as needed to comply with current code, and that erosion and stormwater control practices be implemented. The county then provides a menu of mitigation options—with point values assigned to each—from which landowners choose practices up to the total number of required points. Other practices to choose from include:

- ◆ restoring shoreland and sideyard buffer areas (points vary by amount of area restored to natural vegetation),
- ◆ removing accessory structures within the setback area,
- ◆ using exterior building materials that blend with natural shoreland vegetation,
- ◆ removing artificial sand beaches,
- ◆ replacing seawalls for shoreline protection with bioengineering techniques, or
- ◆ other practices as agreed upon by the Zoning Department.

Polk County gives us another example of a flexible mitigation standard. In response to property owners' need for flexibility in development standards, their ordinance includes mitigation options that take into account unique property characteristics.

If a property owner wishes to improve or expand a nonconforming structure or increase a lot's impervious surface area within 300 ft.

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Shoreland Development Guides and Technical Assistance

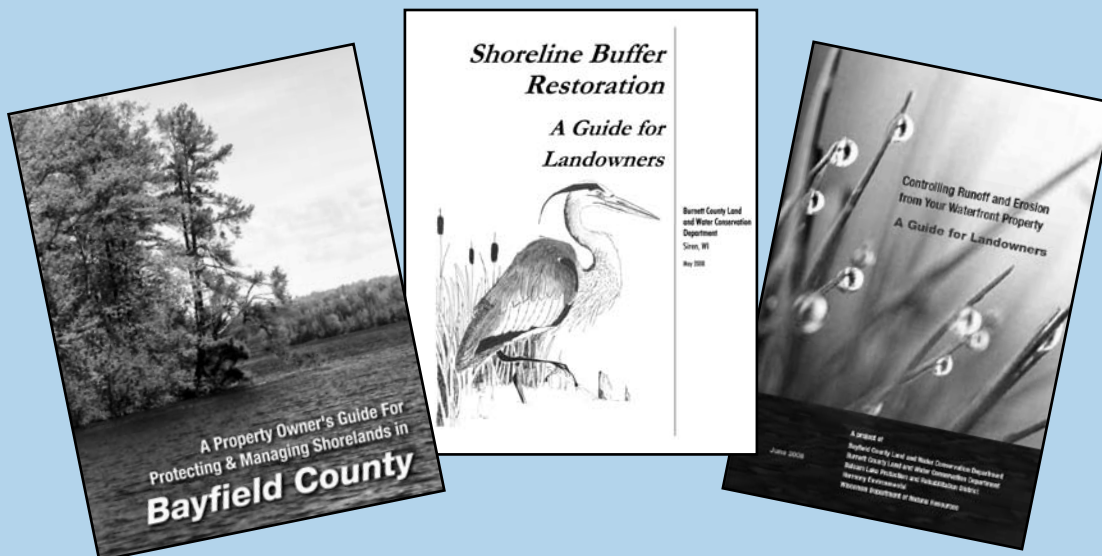
Several other counties have also created shoreland development guides after adopting significant shoreland zoning changes. These guides are colorfully illustrated booklets that simply and visually describe shoreland zoning and land development rules. The guides also offer tips on lake-friendly waterfront living, such as:

- ◆ Ways to add beauty to yards, attract beneficial wildlife, and deter nuisance wildlife.
- ◆ Simply answering the question, “Why do we have this in our shoreland zoning ordinance,” helps explain the benefits of sound development practices.

Many counties also have active shoreland restoration technical assistance programs. They are largely a result of shoreland zoning upgrades that have strengthened shoreland buffer standards or set mitigation requirements in exchange for permitted expansion of nonconforming structures or reduced building setbacks on substandard lots. In other cases, counties have developed educational programs to encourage waterfront property owners to voluntarily restore natural shoreland vegetation.

Activities include:

- ◆ Demonstration sites in public parks.
- ◆ Tours of restorations on private properties.
- ◆ How-to manuals or guidebooks for property owners. These are tailored to local conditions with lists of appropriate native plant species, places to get materials, etc.
- ◆ Workshops to provide training and updates for contractors, landscapers, and developers about appropriate erosion control methods in shoreland areas, restoration techniques, and mitigation requirements associated with county zoning ordinances.
- ◆ County staff to assist landowners with site planning, design, and appropriate plants to use.
- ◆ Cost-sharing programs that provide financial incentives for landowners to install shoreland restoration projects.



(Setting a Good Example continued from page 11)

of the OHWM, mitigation is required. The simplest option is to limit the lot's impervious surface areas to 15% and restore a shoreland buffer area so it meets the ordinance standards. However, if that doesn't work for a property owner, they can instead calculate other ways to achieve compliance with the Land Use Runoff Rating (LURR).

The LURR calculates the amount of stormwater runoff under various types of land cover, slope, and soil types. Polk County's target number is 69, representing the allowable runoff from developed lots. Higher LURR

numbers indicate that too much runoff is being generated on the lot and corrections need to be made to either intercept the runoff (such as retention ponds or diversions) or improve the land cover.

To help implement the ordinance changes, Polk County created a shoreland property owners handbook to help people calculate the

LURR, choose mitigation options, and better understand other development rules.

Making It Work for Your County

If you are hoping to emulate some of the aforementioned standards in your shoreland zoning rules, we suggest you contact that specific county zoning office. You can also contact Susan at the Wisconsin Lakes office if you have questions about the process.

608-661-4313

stesarik@wisconsinlakes.org

Find out what lake organizations have done in the way of shoreland restoration and protection by checking out the *Lake List* on the UWEX Lakes web site. Just go to www.uwsp.edu/cnr/uwexlakes and click on Lake List in the left column. You can then choose "Shoreland Restoration/Protection" as one of the management activities, and see what is listed in the directory. If the lake organization you belong to should be included, but is not there, tell us by emailing uwexlakes@uwsp.edu or calling 715-346-2116. 💧

NR 115 Resources

Looking for resources regarding NR 115? Look no further! Go to the "Shorelands & Shallows" area of the UWEX Lakes web site and click "NR 115 Resources".

www.uwsp.edu/cnr/uwexlakes

Get Involved in AIS Prevention – Attend a Workshop



'Tis the season for aquatic invasive species (AIS) volunteer opportunities! If you're interested in learning more about how to monitor your lake for AIS or would like to share AIS prevention information with others, consider attending a Citizen Lake Monitoring Network workshop and/or a Clean Boats, Clean Waters workshop. Participating in either of these trainings is FREE, and you'll learn more about AIS and how you can take action to protect Wisconsin lakes!



Find out where workshops have been planned so far by visiting the links below.

CBCW schedule: www.uwsp.edu/cnr/uwexlakes/cbcw/workshops-schedule.asp

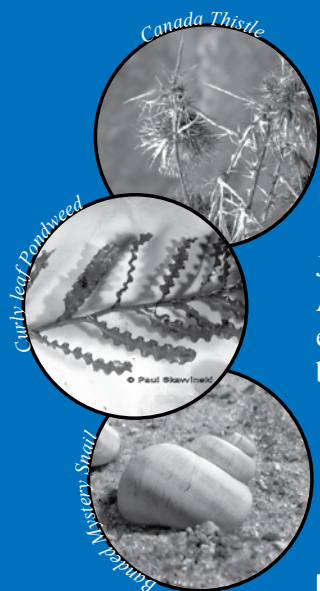
CLMN schedule: www.uwsp.edu/cnr/uwexlakes/clmn/schedule.asp

You can also check the online Lakes Calendar at www.uwsp.edu/cnr/uwexlakes for these workshops and other lake related opportunities.



Help Celebrate Invasive Species Awareness Month

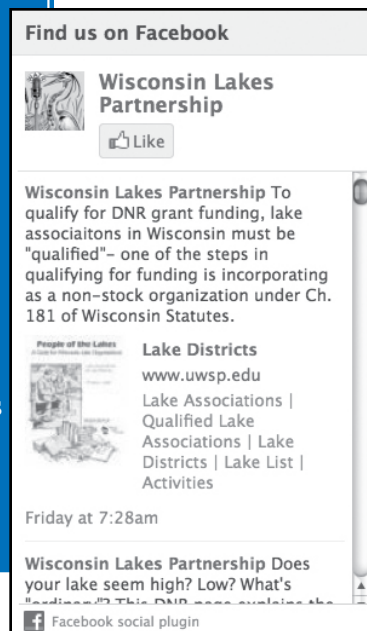
June 2011 is Wisconsin's Seventh Annual Invasive Species Awareness Month (ISAM)! Join your fellow lake lovers and enthusiastic staff in sharing this year's theme – slow the spread by sole and tread. A variety of workshops, field trips, and lectures will be offered around the state on the impacts of invasive species in Wisconsin. To find events in your area and learn more about how to get involved, visit:
<http://invasivespecies.wi.gov/awareness/>.



Photos by Paul Skawinski

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Hey, don't forget to "like" us, or recommend us to your friends, on Facebook. Not into that whole Facebook thing? That's OK, you can still read all of our information about current lake events, check out our photos and catch up on what is happening in between reading issues of Lake Tides. Just go to www.uwsp.edu/cnr/uwexlakes and view the "Find us on Facebook" box at the bottom of the left column. Looks like this



CALENDAR

June 17: "Celebrating Lakes Day" in Vilas County - Moon Beach Camp (7250 Birchwood Drive, St. Germain, WI) west of Eagle River off of Highway 70 - 8:30am – 2:30pm

All are welcome to attend "Celebrating Lakes Day" hosted by Wisconsin Lakes and the Vilas County Lakes Association (VCLA). The morning program will provide several presentations on research that is currently taking place on Vilas County lakes. Then we'll tour recent shoreline restoration projects and rain gardens. A number of displays and vendors will be on hand as well. VCLA will present their Blue Heron Shoreland Stewardship Awards at this event to area waterfront property owners that exemplify lake-friendly waterfront living. Registration fee is \$15, which includes lunch and snacks. Please pre-register with Wisconsin Lakes at (608) 661-4313 or online at www.wisconsinlakes.org. Registration deadline is June 10, 2011.

June 24: 2011 Northwest WI Lakes Conference in Minong, 7:30 am - 3:45 pm

Dr. Nancy Langston, Professor in the Department of Forest and Wildlife Ecology and the Gaylord Nelson Institute at UW-Madison, is the conference's keynote speaker on the topic, "Toxic Bodies: The Struggle for Healthy Watersheds." For more information, go to www.northland.edu/soei and click on "2011 NWLC Brochure". You can also register on this web site or call (715) 682-1223.

June 25-July 17: Secchi Dip-In

Take part in this worldwide event! Go to www.secchidipin.org for more information about how to share your data (you can even share data from previous years).

August 1: Lake Planning & AIS Control Grants Application Deadline

For more information about these grants contact your WDNR Lake Coordinator or go to <http://dnr.wi.gov/lakes/grants/>.



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IN THIS ISSUE

Bait Businesses Help with AIS....	1-2
2011 Landing Blitz.....	2
What's Afloat - Boating Survey.....	3-5
Award to Steve Carpenter.....	5
WI Lakes Convention Wrap-up...6-7	
Labrador Tea.....	8-9
Lake District Q&A.....	9
Local Innovations in	
Shoreland Management.....	10-14
CBCW & CLMN Workshops.....	14
Invasive Species Awareness.....	15
"Like" Us On Facebook.....	15
Calendar.....	15

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Reflections

Clouds come floating into
my life, no longer to carry
rain or usher storm, but to
add color to my sunset sky.

~ Rabindranath Tagore

