



## What Have You Done for Me Lately? A Quick Glance at Lake Grants

*During the past 15 years, over \$30 million has been invested for the management and protection of Wisconsin's lakes through 1,464 grants. The grants, awarded by the Wisconsin Lakes Partnership, are funded by a portion of the excise tax on gasoline sales that is attributed to motor boat usage. How has this money been invested? Is Wisconsin's lake grants program serving its purpose?*

Three related funding opportunities exist within the lake grants program: lake planning grants, lake protection and classification grants and, currently in their second year, aquatic invasive species control grants.

### Lake Planning Grants

Lake planning grants (up to \$10,000) began in 1990 with many of the early projects involving water quality monitoring. This data collection is an important first step toward setting lake management goals. Projects involving watershed analyses, nutrient budgets, plant surveys, habitat analyses, educational programs and social surveys often follow in larger-scale, phased lake management planning projects.

To date, nearly 1,200 lake planning grants have been awarded, providing nearly \$10 million worth of state financial assistance. On top of that, local matching contributions exceed \$3 million including the investment of thousands of hours of volunteer time. Because of this we have a wealth of information on water quality, watersheds, nutrient budgets, aquatic plants, habitat, and recreational use of the waters of Wisconsin.

Not only have these grants helped organizations gather information and data about Wisconsin lakes, but management plans have been implemented that will help preserve lakes and the quality of our experience while visiting them. The Cloverleaf Lakes Protective Association in Shawano County provides one

example. With the help of lake planning grants, the folks at Cloverleaf gathered water quality data, surveyed aquatic plants, and prepared base lake and watershed maps. Working with the public, they developed management recommendations and currently are in the middle of a three-year grant-funded project to get control over a Eurasian water-milfoil infestation. In 2005, the Town of Belle Plaine and the Association partnered to purchase some remaining undeveloped shoreline with a \$189,000 lake protection grant.

### Lake Protection and Classification Grants

Since 1994, lake protection and classification grants (up to \$200,000) have provided funds to organizations to help implement lake management plans, purchase property and conservation easements, restore wetlands and shorelands, develop ordinances and implement county lake classification projects.

While lake protection and classification grants make up less than 20% (272) of the total number of grants awarded in the lake grants program, their awards total over \$20 million, two-thirds of the total monetary amount awarded to date. Lake classification grants have enabled counties to increase the minimum lot size and enact other zoning improvements to protect thousands of smaller lakes (generally less than 100 acres) throughout the northern part of the state from over-development.

*(Continued on Page 2)*

*(A Quick Glance at Lake Grants, continued)*



*Are lake grants helping you protect your lake? Share your grant stories and experiences.*

In their first five years of existence, lake protection grants helped organizations acquire nearly 3,500 acres of land, and that amount continues to grow. In 2000, grant funds helped the Natural Heritage Land Trust purchase 117 acres along Fish Lake in Dane County. The property includes 1,600 feet of lakeshore frontage. Three years ago, Washburn County purchased Hallstrom Woods with assistance from a lake protection and classification grant. This 596-acre property completely encompasses the frontage and access of a 44.5 acre wild lake, several wetlands, and a majority of the upland watershed for the lake. Organizations throughout the state are purchasing land and conservation easements to ensure that gems like these remain preserved for generations to come.

### **AIS Control Grants**

As the threat of invasive species continues to grow in Wisconsin, aquatic invasive species control grants have been made available to support local efforts in preventing and controlling aquatic invasive species infestations. Awards range from \$10,000 for projects involving identification and removal of new infestations, to \$75,000 for projects involving education, prevention, planning or the restoration of native plant species.

Sixty-eight aquatic invasive species control grants have been awarded, providing funds for organizations to develop plans, eradicate and control purple loosestrife and Eurasian watermilfoil, and conduct whole-lake treatments of aquatic invasive species. Although this particular grant opportunity is new, awareness of the threat that invasive species pose is not. As early as 1991, a lake planning grant was awarded to the Round Lake Property Owners Association to study Eurasian watermilfoil in Big Round Lake in Sawyer County. The aquatic invasive species

control grants will continue to be an important funding opportunity for organizations in their efforts to battle this growing threat to our native species, ecosystems, local economies, and recreational activities.

### **What's Your Story?**

The distribution of lake grants awarded – in numbers and dollars – somewhat mirrors the distribution of Wisconsin's lakes with roughly one-third of all lake grants awarded to the northern region of the state. The northeast and southeast regions have received 21% and 18%, respectively, of the lake planning grants awarded followed by the west central (15%) and south central (10%) regions. Among lake protection grants, including aquatic invasive species control grants, the northeast and south central regions of the state have each received just over 20%, followed by the southeast region (16%) and the west central region (10%).

So no matter where you're located in Wisconsin, lake grants are certainly providing financial assistance to organizations concerned with management of Wisconsin lakes. But are Wisconsin lakes being protected? Only time (and long-term trend data) will tell for sure. The DNR will be conducting the most comprehensive review of lake quality trends this year in preparation for its biennial federal Water Quality Report to Congress. However, in the interim, the DNR wants to ask the people working to protect these resources what they think. Are lake grants helping you protect your lake? Email your lake grant stories and experiences to [Carroll.Schaal@dnr.state.wi.us](mailto:Carroll.Schaal@dnr.state.wi.us) or mail them to Carroll Schaal, DNR, PO Box 7921, Madison, WI 53707-7921. Lake grant stories will be shared in future issues of *Lake Tides*. 🌊

*by Marilyn Leffler and Carroll Schaal,  
Wisconsin Department of Natural Resources*

**Find out more about the lake grants program:**  
<http://www.dnr.state.wi.us/org/water/fhp/lakes/index.htm>

**Contact your regional lakes coordinator:**  
<http://www.dnr.state.wi.us/org/caer/cfa/BUREAU/LakesContacts.pdf>



# Blue-Green Algae

*It has been a hot summer in Wisconsin. On some lakes, remarkable smells are wafting on the breeze and beaches are closing. Sometimes the odors and green cover over the water are caused by blue-green algae, a group of algae that is making the news these days. So what exactly is this stuff?*

To have a basis for talking about blue-green algae we need to put them into a basic biological and ecological context. One of the first things we learn about biology in school is that living things are made up of cells. There are two types of cells – the more ancient and less specialized cells like those in bacteria (the fancy word for them is prokaryotes) and the larger, more specialized cells like those of plants, animals, and fungi (these cell types are called eukaryotes).

Our biology teacher also told us that ecosystems have three types of organisms that interact to manipulate matter and energy. There are producers that can make their own food (usually by photosynthesis), consumers that eat pre-existing food items, and decomposers that digest dead and dying material for food. In lake systems, decomposers include bacteria and fungi while consumers are all animals from the single-celled protozoans to snails to the fish and birds. Producers are submerged or emergent plants and algae.

The term algae (which is plural, the singular is alga) is a non-technical term for a dozen or so different groups of photosynthetic organisms that are not plants. Basically, if it's a producer and a botanist doesn't call it a plant, then it's an alga. These algal groups include prokaryotes and eukaryotes and range from microscopic single-celled organisms to massive, multicellular kelps (that grow over a hundred feet in length) and seaweeds found in the ocean. Algae can contain pigments that will make it nearly any color you can think of – red, brown, green, and blue-green are the most common. A typical Wisconsin lake might have representatives of six or seven of these algal groups throughout the year.

Two of the more common algal groups in the Midwest include green algae that often accumulate in massive amounts during the summer, forming slippery, golden-brown mats in rocks and sediments that receive light; and blue-green algae that can form mats on the bottom or float free in the water column.



*Outboard churns up thick algal soup.*

The blue-green algae are more precisely referred to as Cyanobacteria and they are often a major component of our lakes. They are the only prokaryote algae, and fossil evidence indicates that the process of photosynthesis first occurred in the blue-green algae about 3 billion years ago. They are the oldest group of producers on the planet and over this time scale they have adapted to nearly every habitat on Earth (fresh and salt water from frozen pack ice to boiling hot springs, soil, on/in plants, on/in rocks, on/in animals). Biologists believe several thousand species of blue-green algae may exist.

While prokaryotes are usually considered unspecialized organisms, some of the blue-green algae can produce specialized cells. One of these cells is a very resistant spore stage called an akinete. It can tolerate very harsh conditions, even those that kill the regular blue-green algal cells. The other important specialized cell is called a heterocyst and

*(Continued on Page 4)*

*Provided by Wisconsin Department of Natural Resources*



*Lakes that are low in phosphorus generally face less of a problem with blue-green algae.*

*(Blue-Green Algae, continued)*

it can do a very rare thing – convert atmospheric nitrogen (nitrogen gas) into a form of inorganic nitrogen that algae and other plants can use. Nitrogen gas, while plentiful (80% of atmosphere), is inert and unusable by algae and plants. Nitrogen can be a scarce nutrient in some ecosystems and the ability to convert nitrogen gas into a usable form gives the blue-greens a substantial advantage under those conditions. These important cellular adaptations and the fact that these ancient organisms have an amazingly adaptable physiology allow them to tolerate conditions that kill most other algae and most plants.

Blue-green algae range from single-celled to colonies of cells enclosed in a sticky sheath to filaments of cells that may be branched or unbranched and may have a sheath. The sheath is important for blue-greens because critters that eat algae have a hard time digesting the material, which tends to stick in

mouth parts and digestive systems. That means most animals shy away from eating blue-greens. This gives blue-green algae an advantage over other algae which do not produce such a sheath. As more easily digested algae are consumed by a lake's animals, ever larger populations of blue-green algae are left behind.

If you put all these advantages together – tolerant of extreme and variable conditions, hardy survival stage, nitrogen manipulation, adaptable physiology, and nasty sheath – you get a group of organisms that is hard to control. Under some conditions they can dominate a lake to the point of rendering it barely navigable, smelly and unpleasant to swim in, and potentially toxic. There are a variety of blue-green algal toxins and they can produce potentially serious liver and/or central nervous system problems. The first officially autopsied human death attributed to ingestion of blue-green algae toxin occurred in Dane County last year, where a teenager died after

## Welcome!

The Wisconsin Lakes Partnership welcomes the following people to the Lakes Team:

**Kim Becken, Office Manager, UW-Extension Lakes Program**

Kim comes to the Lakes program after assisting the Biology Department at UW-Stevens Point for the past nine years. Kim will assist UWEX and DNR personnel as well as the general public. She will help coordinate the Wisconsin Lakes Convention, Lake Leaders Institute, *Lake Tides* newsletter, and other Wisconsin Lakes Partnership publications and events. Contact Kim for help with finding publications or to assist with any lake-related questions at 715/346-2116 or [kbecken@uwsp.edu](mailto:kbecken@uwsp.edu).



**Kevin Gauthier, Lake Coordinator, Northern Region, WDNR**

Kevin is the new Lake Coordinator located in Rhinelander. Since 2001, he served as a WDNR Fisheries Creel Survey Technician working out of Woodruff. Kevin will be the lead technical contact person for the nine counties in the eastern half of the northern region (Forest, Florence, Iron, Langlade, Lincoln, Oneida, Price, Taylor and Vilas) for nonfisheries lake management issues including lake grant projects and aquatic plant management. Contact Kevin at 715/358-9231 or [gauthk@dnr.state.wi.us](mailto:gauthk@dnr.state.wi.us).

**Tim Asplund, Statewide Aquatic Ecologist/Limnologist, WDNR**

Tim will support DNR regional lake coordinators, lake research scientists, citizen lake monitors, lake consultants and lake organizations to ensure lake management policies and activities maximize lake ecosystem health while meeting local community needs. Besides extensive work with groundwater legislation, Tim worked as a lake research scientist monitoring lake ecosystems, developing new approaches for managing shallow lakes and exploring the impacts of motorboats on Wisconsin lakes. Tim can be contacted at 608/267-7602 or [tim.asplund@dnr.state.wi.us](mailto:tim.asplund@dnr.state.wi.us).



diving and splashing around in an algae-covered golf course pond.

So why aren't all lakes overrun by out-of-control populations of crazed blue-green algae? Lakes generally have enough nitrogen, but not the high amount of phosphorus that blue-green algae need. This is the one advantage we have over the blue-greens. Lakes that are low in phosphorus generally face less of a problem with blue-green algae. This advantage is lost when phosphorus runs into the lake from outside sources such as leaky septic systems, lawn fertilizers, underlying lake sediments, or other watershed inputs (agriculture, municipal, industrial). Once this advantage is lost it is hard to regain because biological systems are very good at trapping and recycling important nutrients like nitrogen and phosphorus.

A final point to remember, all lakes are destined to accumulate nutrients and sediments with increasing amounts of plant and algal growth over time and eventually most will fill in. The natural time frame for this could be thousands or tens of thousands of years if outside and/or human inputs are minimal. With human inputs accelerating the process it could be hundreds or thousands of years instead (or less). Many of our lakes in Wisconsin have had human inputs long enough to begin showing this acceleration of lake aging, called eutrophication. Lake algal surveys (especially when combined with watershed and water chemistry analysis) provide a snapshot of where a lake is on this continuum by evaluating the type and amount of blue-green algae present in the system. 💧

*by Dr. Robert Bell, Professor and Chairman, UW-Stevens Point Department of Biology. At UWSP, a multi-disciplinary team of biology and water specialists from the Department of Biology and the College of Natural Resources work together to evaluate Wisconsin's lakes.*

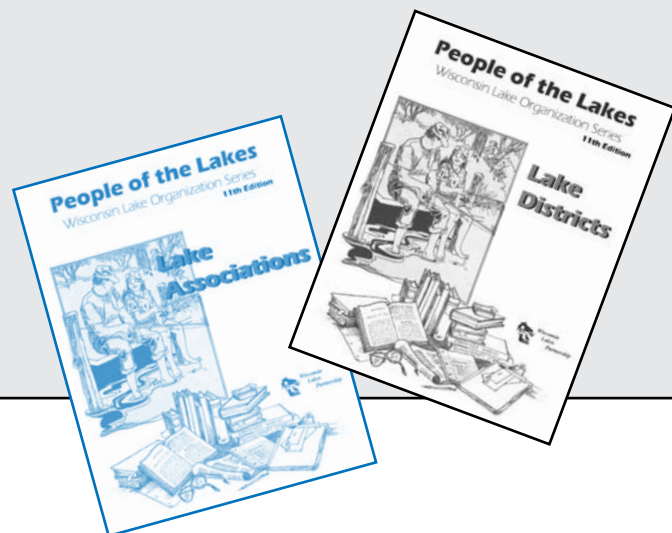
## New Edition of Lake District Guide

How do we form a lake district? What legal procedures does our lake district need to follow? How do we incorporate? What about voting?

For over 30 years, the Guide to Wisconsin's Lake Management Law has been a fundamental tool for people with lake organizational questions. This year the guide is getting a facelift, along with some major changes we hope will make it even better. For this new (11th edition) of the publication, the guide has been split into two books with new titles and much more information. They will incorporate recent legal changes to the lake district law from Wisconsin Act 275, along with specific requirements, procedures and helpful suggestions.

New technologies and the growth of the internet are changing the way we get our information. To keep your information fresh we will be offering an online version where you can always get the latest edition of the guide, laws, regulations, forms and contact information.

Look for the 11th edition coming soon!



# NR 326

## Pier Rules Moving Ahead

Adoption of final revisions to NR 326, the state's pier rules, is tentatively scheduled for the September 2005 meeting of the Natural Resources Board. More than 300 citizens and organizations commented on a rule developed by a citizen Stakeholder Group last fall. DNR staff are making changes in response to those comments and preparing a final proposal for consideration by the Board. After the Natural Resources Board adopts final rule revisions, the rules are submitted to the legislature for committee review. Hopefully the revised NR 326 will go into effect in late 2005. Stay tuned on the progress of rule revisions at the following DNR web page: <http://dnr.wi.gov/org/water/fhp/waterway/piers.shtml>. You can also find information and brochures on current pier regulations at this website.

by Lisa Lehmann  
Wisconsin Dept. of Natural Resources

## Update Wisconsin's Shoreland Management Program

The Wisconsin DNR needs your comments on the NR 115 proposal! **Comments will be accepted until August 26, 2005.** You can review the proposal at <http://dnr.wi.gov/org/water/wm/dsfm/shore/news.htm>. Comments can be emailed to [toni.herkert@dnr.state.wi.us](mailto:toni.herkert@dnr.state.wi.us) or sent to Toni Herkert, Wisconsin DNR - WT/2, PO Box 7921, Madison, WI, 53707-7921. A comment form is included on the website to assist you in organizing your comments.

Wisconsin's Shoreland Protection Program, found in Chapter NR 115 of Wisconsin Administrative Code, contains statewide minimum standards for shoreland development that are designed to protect water quality, fish and wildlife habitat and scenic beauty along navigable lakes and rivers. The revision effort seeks to protect public rights in navigable waters while allowing property owners the flexibility necessary to make reasonable use of their properties.

Comments  
encouraged!

# NR 115

## 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](mailto:uwexlakes@uwsp.edu) so we can include it in a future issue.

**Q: Are lake districts a unit of government?**

**A: Yes**

Unlike a lake association, a lake district is actually a governmental body, similar to a town or county (but often without paid staff). As such, there are certain rights and responsibilities that come along with being a unit of government.

First and foremost, lake districts MUST follow Chapter 33 of the Wisconsin Statutes, the chapter that sets forth the legal powers and operations of lake districts. A copy of Chapter 33 can be found on the Wisconsin legislature's website:

<http://www.legis.state.wi.us/statutes/Stat0033.pdf>

A lake district has statutory responsibilities to the waterbody, local citizens and taxpayers. Some of those responsibilities include things like public notices, open meetings and open records laws. More detailed information can be found online at:

<http://www.uwsp.edu/cnr/uwexlakes/districts>



# Hydrilla?

## Don't you mean Godzilla?

What a monster! Hydrilla (*Hydrilla verticillata*) is considered the most problematic aquatic plant in the United States, although it has not yet been found in Wisconsin. This plant is native to Africa, Australia, and parts of Asia but was introduced to Florida in 1960 via the aquarium trade. California officials have also traced hydrilla infestations to shipments of mail-order waterlilies. By the 1990s, hydrilla was well established in southern and southwestern states where control and management cost millions of dollars each year. During a ten-year period, Florida spent \$56 million dollars for hydrilla control, but still the acreage of the plant doubled.

Hydrilla forms dense mats of vegetation that interfere with recreation and destroy fish and wildlife habitat. Besides the impact to recreational fishing, hydrilla greatly slows water flow. Large mats of fragments can collect at culverts and clog water control pumping

### Prevent the Spread of Invasive Species

- Never transplant water garden plants or release animals into lakes, streams, wetlands or stormwater ponds
- Check the plants you buy for unwanted and potentially invasive hitchhikers (seeds, plant fragments, snails, insects, or fish)
- Be aware of the regulations regarding possession, transport and sale of invasive plants and animals
- Learn how invasive plants and animals spread from lake to lake
- Recognize which plants and animals are potentially invasive in Wisconsin
- Properly compost or dispose of unwanted plants and animals

For more information about invasive species, visit this website:  
<http://dnr.wi.gov/invasives/>

stations. Because the plant can alter water chemistry and oxygen levels, major infestations limit sport fish weight and size.

Unlike other problem aquatic plants which reproduce mainly by fragmentation, such as Eurasian watermilfoil, hydrilla spreads by seeds, tubers, plant fragments, and turions. Turions are compact "buds" produced along the leafy stems. They break free of the parent plant and drift or settle to the bottom to start new plants. They are 1/4 inch long, dark green, and appear spiny. Tubers are underground and form at the end of roots. They are small, potato-like, and are usually white or yellowish. Hydrilla produces an abundance of tubers and turions in the fall. One square meter of hydrilla can produce 5,000 tubers. Tubers may remain dormant for several years in the sediment. Tubers and turions can withstand ice cover, drying, herbicides, and ingestion and regurgitation by waterfowl. Once hydrilla becomes established, it is readily spread by waterfowl and boating activities.

Hydrilla closely resembles *Elodea canadensis*, a native plant in Wisconsin. Hydrilla can be distinguished from Elodea by the presence of tubers, leaves in whorls around the stem (generally five leaves per whorl), serrations or small spines along the leaf edges, and the reddish midrib of a fresh leaf.

Will hydrilla spread to Wisconsin waters? Although most infestations are located in southern states, Wisconsin is not exempt from the menace. Russia is currently battling this monster at the 50° N latitude range, which is equivalent to the US/Canadian border. 💧

# Heron Majesty

**I**t was a wonderfully hot July day on Sawmill Lake in Washburn County. I was paddling a sunny yellow kayak around the shore of the small, wild lake. There were only two other craft out there, carrying anglers, but they were out of sight around a slight bend. The little cove on the southeast side was all mine. Well, mine and the hundreds of bluegills staring

up at me from their home in the clear water. They were hiding under the cool green shade of the water lily pads, whose brilliant white flowers had called me over to that particular spot.

It was a slight movement of the otherwise still great blue heron on the shoreline which dragged my attention from the bluegills. As I watched, the heron hunted over the edge of the water on its long legs, so slowly that its movements were almost imperceptible to me. Its legs moved, and its head was up on a straight neck. With no hurry, it moved its neck into an "S," lowering its head over the water. Meanwhile, the wind

pushed my kayak towards the heron. I hoped I wouldn't scare it off before I could see it catch a meal. But it was almost there...a couple more seconds of this quiet posing, and...BAM! The heron's head shot down, and it came up with...nothing. Hrumpf. All that anticipation (on my part) and concentration (on the heron's part). He flew off to a different part of the lake to try again.

Great blue herons are common sight to many of us. We see them feeding on our lakes, near marshes, and flying overhead on giant wings. But what are they up to when they are out of human sight? Where do they go when they leave Wisconsin for the winter?

Great blue herons are the largest North American members of a family which includes

herons, egrets and bitterns. While we often see them as individual hunters, they are not solitary birds. Herons nest in large colonies, called a heronry or a rookery. Nesting in numbers helps them ward off attacks from predators such as raccoons, hawks, snakes, bald eagles and opossums. In Wisconsin and most of the U.S., rookeries occur in lofty trees. Real estate in treeless habitats include shrubs and cacti.

In our corner of the world, great blues arrive to their breeding grounds in early spring, males a few days ahead of the females. The males work busily to build or repair a nest that will be two to three feet wide. As no lumber yards are available, twig stealing is common.

Herons' courting rituals include stretching and snapping necks, clattering bills, ruffling feathers, and slow flying. Both males and females "dress up" for courting time. Their normally yellow bills and greenish brown legs flush red, the skin between their eyes and bills turns a lime green, and they sport fresh plumage on their chests and backs.

Females lay two to five greenish-blue eggs in the twig nests lined with soft material such as pine

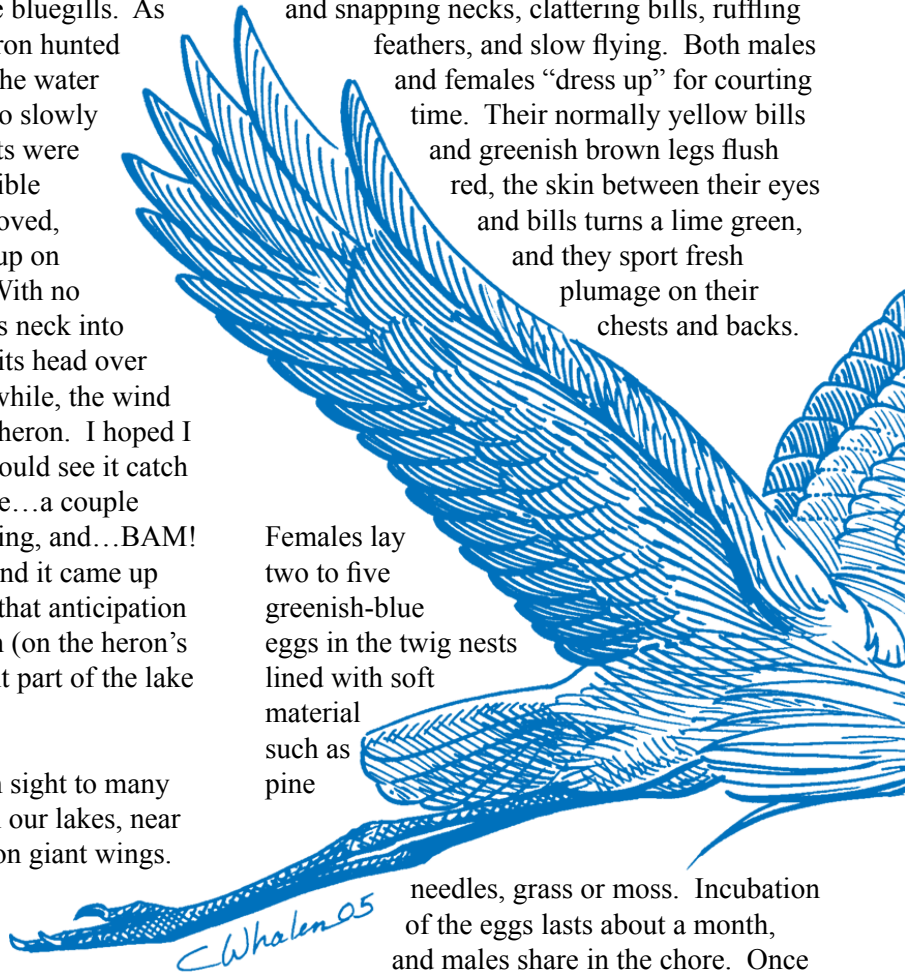
needles, grass or moss. Incubation of the eggs lasts about a month, and males share in the chore. Once

hatched, both parents work to feed the young birds for about two months. Despite the care, almost 70% of great blues die in their first year. Smaller nestlings often starve or are

*Provided by Dr. Hays Cummins, Miami University*



*Herons nest in large colonies, called a heronry or a rookery.*



pushed from the nest and never make their first flight. Those who are stronger and live to fly out on their own are inexperienced hunters who fall prey to predators or human-placed dangers such as fences and utility wires.

Those great blues who survive to adulthood grow to be about 6.5 pounds and 4 feet tall with a wingspan of up to 6 feet! Henry David Thoreau once said, "When the heron takes to flight, what a change in size and appearance! ...There go two great undulating wings pinned together, but the body and neck must have been left behind somewhere." Indeed, the large wings of the heron outsize its body as they beat with a languid and unhurried rhythm. While its size in the air is comparable to the sandhill crane, the wingbeats are different. As another easy indicator, the heron flies with its neck folded in an "S" while the crane's neck

is straight. You might hear a distinctive "kraak" when the bird is flying overhead.

The heron, although a relatively quiet bird, also emits a call when disturbed or greeting other herons.

Successful hunting of fish, frogs, salamanders, snakes, crayfish, dragonflies, grasshoppers, and even small mammals and birds is aided by keen eyesight, long legs and a 5-1/2 inch dagger-like bill.

Hunting is accomplished by two methods: "standing" and "walking slowly." Prey caught using either of these methods is swallowed immediately; if the prey is too big, the heron will kill it by beating it on the ground and then pick it apart.

The cold winters in Wisconsin force the great blues, like other birds, to migrate southward. Unlike the human version of "snowbirds," birds migrate for a food source. Our great

# Great Blue Heron

*Graceful bird---sometimes silver, sometimes blue,  
I watch you in the evening light---standing alone.  
Wading in the tall grass around the edges of your nesting place.  
With eyes---quick, keen,  
The lightning dart of your bill  
Captures a wriggling minnow among the reeds.  
Up in the dusky sky, your mate calls  
"Skee, skee," as he flashes over the lake.  
His waving plumes signal greetings---  
And his arrival home.*

Joanne Linden  
Eau Claire, Wisconsin

blues, flying at an impressive 20-30 miles per hour, likely set their sights on the lakes and marshes of southern states or Mexico to spend the winter. They make this trip twice yearly, and it can be for many years. The two oldest known great blues lived until 23 and 20 years, respectively.

While the population of great blue herons is stable now, that was not always so. In the late 19th and early 20th centuries, birds with flamboyant plumage were shot for their feathers, which decorated hats. The Migratory Bird Treaty Act of 1918 put a stop to that practice and saved the great blue (and many other species) from extinction. Today, their main threat is human development. For a successful breeding season, nests need to be located away from disturbances. While there are a few established rookeries in more urban areas, they are anomalies. More commonly, disturbances clear out a rookery. There are many documented instances of a housing development or other human disturbance forcing herons to find a new home. If this occurs during nesting season, a generation of herons is lost.

Preserving rookery sites and consideration for a healthy great blue population today will allow some person many years in the future to kayak around a bend in the shoreline of a small, wild lake and watch as a tall, majestic bird walks slowly in pursuit of bluegills. 🐟

by Mary Pardee  
UW-Extension Lakes Program

*The Great Blue  
Heron has been the  
Lake Tides mascot  
for 14 years.*



# Partners in Preservation

## Saving Through Land Trusts

**H**ave you ever thought about what will happen with your lake property when you're gone or what will happen to that big hunk of shore that's been owned by some organization or individual for years? Wouldn't it be nice if that big parcel of land could be conserved - kept intact for its natural beauty, as a home for wildlife, or just a positive place for your lake?

More and more landowners are turning to land trusts to answer these questions.

Provided by Bryan Pierce



*Willa Schmidt conserves 1,500 feet of natural shoreline and 12 acres of woodlands on Snipe Lake with the help of a land trust.*

### What is a Land Trust?

A land trust is a nonprofit, non-governmental conservation organization whose purpose is generally to work with landowners to protect or preserve land. The largest and probably most well-known land trust in the country is The Nature Conservancy. Recently many

smaller land trusts have formed in Wisconsin to meet increasing demands for conservation at the local level. Land trusts are one of the fastest growing conservation movements in the country today.

There are more than 50 land trusts in the Badger state. They range from small groups operated by volunteers to large land trusts with professional staff. Typically a land trust will choose to focus efforts on a specific geographic area or region. Gathering Waters Conservancy, an umbrella organization for Wisconsin land trusts, maintains an online directory of the land trusts operating in Wisconsin and the areas they cover at <http://www.gatheringwaters.org>.

### What Does a Land Trust Do?

A land trust works with individual landowners, communities, and lake and river associations interested in permanently protecting land. Depending on the situation, there are a variety of conservation options available. One of the most common options is a land protection agreement (or conservation easement), which is a legal agreement between the landowner and the land trust that permanently protects land by limiting specific things such as future uses, development, or subdivision of the property.

That's exactly what Willa Schmidt did when she decided to preserve her land. She worked with the Northwoods Land Trust (NWLTL) to permanently conserve her 1,500 feet of natural shoreline and 12 acres of woodlands on Snipe Lake, west of Eagle River in Vilas County. "Willa Schmidt has left an incredible legacy for the future," said NWLTL Executive Director Bryan Pierce. "By voluntarily placing permanent restrictions on her property, she is ensuring that the conservation values of her property will be protected long into the future."

"The land remains private land and is not removed from the tax rolls," said Pierce.



“The property can be sold or passed on to heirs, but the easement restrictions remain in place. The land trust holds these ‘development rights’ in perpetuity, and takes on the job of annually monitoring the property and legally enforcing the easement in the future, if necessary, to ensure that the landowner’s conservation interests are carried out in perpetuity.”

Because each parcel of land and an owner’s vision for that land are unique, each land protection agreement is unique – the result of conversations and negotiations between the landowner and land trust. With land protection agreements, the landowner maintains ownership, but the land trust takes on the responsibility for annually monitoring and enforcing the terms of the agreement forever – even when that property gets sold or passed on to other future owners. Because a land trust takes on those legal responsibilities in perpetuity, they will usually tend to focus on larger parcels having significant conservation value. Small parcels, or those with a small amount of lake or river frontage, may not always be the best ‘fit’ for land protection agreements. However, there are other important ways small landowners can contribute to lasting conservation options at a local level.

## **Working in Partnership**

Willa Schmidt’s property was one of the last remaining large parcels of undeveloped shoreline on Snipe Lake. Lake residents had long been interested in seeing that stretch of shoreline stay natural, but without the monetary resources to purchase the land outright, they knew there was a good chance it would get sold and divided up into small parcels. In this case, the Snipe Lake Association was able to work cooperatively with Ms. Schmidt and the land trust to permanently protect the property. “This is a great example of working cooperatively with the local lake association,” said Pierce. “The Snipe Lake Association partnered with Schmidt and NWLT by contributing funds to help cover the costs of the easement and the endowment needed to annually monitor the easement and legally enforce it in the future if necessary.”



On Cloverleaf Lakes in Shawano County, lake residents wanted to permanently protect a 25-acre island. They formed a non-profit citizens group, and are working in partnership with the town and the landowner (who donated part of the cost) to purchase the island. The lake association donated funds and is working hand-in-hand with the citizens group. With grants and donations they will be able to buy the island and maintain it in a natural state for the future generations to enjoy.

*Gibson Island,  
Cloverleaf Lakes,  
Shawano County*

## **Are there Financial Benefits?**

In addition to land protection easements, there are a variety of other conservation options that landowners can use to protect land including land donations, bargain sales, registry programs, reserve life estates, and bequests in wills. Depending on what option is used and the individual financial situation of the landowner, there can be significant income tax, estate tax, or even property tax advantages. Look for more articles on preserving land through Lake Protection Grants, and with other government agencies and organizations in future issues of *Lake Tides*. 💧

*by Tiffany Lyden  
UW-Extension Lakes Program*

For more information on land trusts and conservation options, visit Gathering Waters Conservancy: <http://www.gatheringwaters.org>  
Land Trust Alliance: <http://www.lta.org>

*Land trusts are one  
of the fastest growing  
conservation  
movements in the  
country today.*



# Volunteer Monitoring Update

## The 2005 Great North American Secchi Dip-In

Were you part of the Great North American Secchi Dip-In this year? From June 25 until July 17, volunteers around the world collected and reported water clarity data. The Dip-In began in 1994 in six Midwestern states, including Wisconsin. It has expanded in participation to almost 400 programs and 6,500 volunteers in all fifty states, three Canadian provinces, and six other countries. A true demonstration of the power of volunteer monitoring, Dip-In participants have created over 32,000 records which are used to map regional differences and detect

Jesuit priest who first used the disk more than 150 years ago. The disk is lowered into the water, and the depth at which the black and white are no longer distinguishable is a measure of the clarity of the water.

Consider taking part in future Great North American Secchi Dip-Ins as an individual, lake organization or community. Calling attention to this event can be an effective way to generate interest and publicity for the quality of our lakes. Various states have had governors, federal and state representatives, and local officials participate in Secchi dipping for water quality.

The Great North American Secchi Dip-In is sponsored by Kent State University. You can find more information about it at <http://dipin.kent.edu/index.htm>.

by Michelle Washebeck  
Wisconsin Department of Natural Resources

### The Great North American Secchi Dip-In reports some fun Secchi facts!

#### Deepest Recorded Secchi Depth

80 meters (262 feet) on October 13, 1986 in the Weddell Sea, near Antarctica.

#### Smallest Secchi Depth

1-2 cm (0.4-0.8 inch) in Spirit Lake, Washington, after the eruption of Mt. St. Helens. The water of the lake was colored black by the decaying trees in the lake.

#### Largest Secchi Disk

1.2 m (3.9 feet) in diameter

#### Smallest Secchi Disk

2 cm (0.8 inch) used to measure strength of coffee



trends in water clarity. Wisconsin's Self-Help Lake Monitors are encouraged to report their information at the Great North American Secchi Dip-In website at <http://dipin.kent.edu/index.htm>.

Some of you may be asking, "What in the world is a 'secchi' and why would anyone dip one?" Most volunteers use a Secchi disk to measure water clarity. Water clarity is affected by the color of the water and by particles of silt or clay or small plants called algae, and therefore is a measure of some forms of pollution. The disk itself, commonly colored black and white, is named after a

## New Study of Atrazine in Lakes

The Wisconsin Department of Agriculture Trade and Consumer Protection (DATCP), in conjunction with the DNR, is initiating a survey of atrazine (a commonly used corn herbicide) in Wisconsin lakes. In August, investigators will contact self-help citizen monitors in a set of 100 lakes chosen to meet certain geographic and size criteria to enlist their help in collecting water samples for analysis. DATCP will use the results of this survey to select lakes for a more detailed study in 2006, as well as to determine if further monitoring for pesticides in lakes is warranted. Please contact Paula Allen at DATCP ([peallen@wisc.edu](mailto:peallen@wisc.edu)) or Tim Asplund at DNR ([tim.asplund@dnr.state.wi.us](mailto:tim.asplund@dnr.state.wi.us)) for more information. Stay tuned for more details and results in future issues of *Lake Tides*, as well as at the Wisconsin Lakes Convention!



# What do you think about *Lake Tides*?



*Lake Tides* has been around for 30 years! From time to time we ask for your feedback to see if you are satisfied with the information you receive. Please take a moment to complete this survey. Your suggestions will help us provide you with a more valuable newsletter!

## 1. What is your overall rating of *Lake Tides* as an educational tool for those interested in lakes?

- ☐ Excellent
- ☐ Good
- ☐ Average
- ☐ Fair
- ☐ Poor

## 2. Please rate the following aspects of *Lake Tides*:

	Excellent	Good	Average	Fair	Poor
Graphic Design/Look	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Writing Style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Content/Topics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of Understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 3. What types of articles do you like to read in *Lake Tides*? (Check all that apply)

- ☐ Law and legislation
- ☐ Animals and plants
- ☐ Environmentally-friendly practices
- ☐ Lake organization concerns
- ☐ State issues
- ☐ National issues
- ☐ Other \_\_\_\_\_

## 4. What specific issues would you like to see covered in future issues of *Lake Tides*?

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## 5. Which of the following have you done as a result of reading *Lake Tides*?

- ☐ Copied articles for local lake newsletters
- ☐ Adopted environmentally friendly practices
- ☐ Visited a referenced website
- ☐ Contacted a person to learn more about a topic
- ☐ Attended a meeting or wrote a letter

- OVER -



6. Do you recommend *Lake Tides* to others?

- ☐ Yes  
☐ No

7. Do you share your copy of *Lake Tides* with others?

- ☐ Yes (How many others? \_\_\_\_\_)  
☐ No

8. Do you access *Lake Tides* online?

- ☐ Yes  
☐ No

9. What else can we do to make *Lake Tides* more interesting and pertinent to you?

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UWEX-Lakes Program  
University of Wisconsin-Stevens Point  
Stevens Point, WI 54481

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Stevens Point, WI 54481

Tape or Staple Here!

## READERSHIP SURVEY INSTRUCTIONS

Dear *Lake Tides* Reader,

Thank you for filling out this readership survey. We need your feedback to help us provide you with a useful and valuable newsletter.

To make sure the survey makes it through the mail, please:

1. Fold the survey on the dotted lines.
2. TAPE or STAPLE the two sides. The post office will not deliver this without it being sealed.
3. Stick on a stamp and drop it in the mail.

We appreciate the time you have taken to complete this survey. THANK YOU!



# Hands Across the Water

2006 Wisconsin Lakes Convention

April 20-22, 2006

## Call for Presenters

The Wisconsin Lakes Partnership is inviting proposals for stimulating presentations, field trips and workshops for the 2006 Wisconsin Lakes Convention. The convention will focus on civic engagement skills in supporting clean, healthy lakes and waterways in Wisconsin. Sessions will also feature topics such as lake science and management, lake organization information, wildlife, fisheries and aquatic plants.

Guidelines for submissions and topics, and an application form can be found on the UWEX-Lakes website at [www.uwsp.edu/cnr/uwexlakes](http://www.uwsp.edu/cnr/uwexlakes). Click on Conventions/Events. If you would like a paper copy, contact (715) 346-2116.

The deadline for submission is September 23, 2005.

## Partnership Photography Contest

Show your love of Wisconsin's lakes and display your photography skills by entering the Wisconsin Lakes Partnership photo contest. Photos will be displayed at the 28th annual Wisconsin Lakes Convention. See details on the convention website.

[www.uwsp.edu/cnr/uwexlakes/conventions](http://www.uwsp.edu/cnr/uwexlakes/conventions)

## One fish... Two fish... What Fish? Who Fish?



Ever wanted to know the identity of a strange fish you are seeing in your lake or catching on your line? The UW-Center for Limnology, DNR, and Wisconsin Sea Grant Institute have teamed up to offer the Fish Identification Database, a resource for researching fish of Wisconsin. The database contains a key that helps you to identify a fish, starting with simple features like tail shape or number of spines. Multiple pictures of each species and their distinguishing features assist in finding an identifying name for your fish. Click on <http://www.wisfish.org/fishid/> to begin using this easy and fun database.

## CALNDAR

**August 18, 2005** – “Rain As a Resource” Bus Tour, New Richmond.  
Visit <http://clean-water.uwex.edu> for details.

**August 24-25, 2005** – Advanced Lake Leader Workshop, Long Lake, Shawano Co.  
Contact the UWEX Lakes office at (715) 346-2116 for details.

**August 27, 2005** – Rock River Coalition Conference, Fort Atkinson High School.  
8:30 am to noon. Contact Suzanne Wade at [Suzanne.wade@ces.uwex.edu](mailto:Suzanne.wade@ces.uwex.edu) for details.

**September 15, 2005** – “Rain As a Resource” Bus Tour, Hudson.  
Visit <http://clean-water.uwex.edu> for details.

**October 21-22, 2005** - 2005 Citizen-based Monitoring Conference, Manitowish Waters – Lake Jörn. Contact Erin Crain (608)-267-7479 or [erin.crain@dnr.state.wi.us](mailto:erin.crain@dnr.state.wi.us). For more information see <http://atriweb.info/cbm>

**November 9-11, 2005** - North American Lake Management Society Annual Meeting, Madison. See <http://www.nalms.org> for details.





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**Wisconsin Lakes Partnership**



*Published Quarterly*

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Printed on recycled paper with vegetable-based ink.

## Reflections

**T***"The battle to restore a proper relationship between man and his environment, between humans and other living creatures, will require a long, sustained political, moral, ethical and financial commitment far beyond any commitment ever made by any society in history. Are we able? Yes. Are we willing? That's the unanswered question."*

Earth Day 1970  
Gaylord Nelson  
1916-2005

