

Purple Loosestrife Beetle Rearing Project



Purple Loosestrife

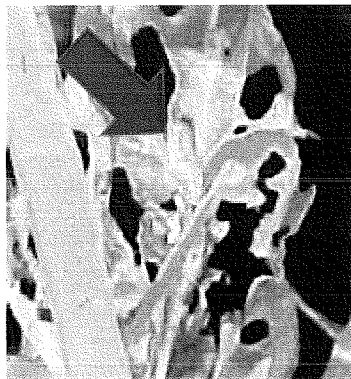
Sixth graders with the Luck Girl Scout Troop are working with the Polk County Land and Water Resources Department to raise and release a tiny insect with a big appetite—the *Galerucella* beetle. These beetles feed extensively on the foliage of purple loosestrife, a wetland invasive plant that displaces native vegetation, provides little to no wildlife benefits, and has the potential to devastate wetland ecosystems.

Although small stands of purple loosestrife are easily managed by removing flowers and applying herbicide, extensive stands are best managed through beetle control. The beetles feed extensively on the foliage of purple loosestrife plants stressing the plant enough so that it is unable to produce seeds. Seed production is the main way purple loosestrife is spread from one area to the next, with a single plant capable of producing over a million seeds. As a result, using beetles to control purple loosestrife can result in long-term, sustainable population control.



Adult Beetle

The Girl Scouts—with LWRD assistance—first located and potted purple loosestrife plants and subsequently used aspirators to “suck” beetles into a vial. The girls next put a fine mesh cage around the plants and placed ten beetles on each plant. Since the plants are caged, beetles are allowed to reproduce free of predators and their populations quickly multiply into the hundreds. The Girl Scouts will be monitoring the beetles throughout the summer. Around July the beetles will be released at purple loosestrife sites in Polk County.



Beetle Larvae

Luck Girl Scouts raise beetles for purple loosestrife control

LUCK - Sixth-graders with the Luck Girl Scout Troop led by Chelsey Foeller are working with Katelin Holm from the Polk County Land and Water Resources Department to raise and release a tiny insect with a big appetite - the galerucella beetle. Galerucella beetles feed extensively on the foliage of purple loosestrife, a wetland invasive plant that displaces native vegetation, provides little to no wildlife benefits, and has the potential to devastate wetland ecosystems. Although small stands of purple loosestrife are easily managed by removing flowers and applying herbicide, extensive stands are best managed through beetle control. The beetles feed extensively on the foliage of purple loosestrife plants stressing the plant enough so that it is unable to produce seeds. Seed production is the main way purple loosestrife is spread from one area to the next, with a single plant capable of producing over a million seeds. As a result, using beetles to control purple loosestrife can result in long-term, sustainable population control.

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If you are interested in raising galerucella beetles for

purple loosestrife control and would like more information or are aware of any new stands of purple loosestrife in Polk County please contact Katelin Holm, katelin.holm@co.polk.wi.us, 715-485-8637. - submitted

POLK CO. LAND & WATER Agency Free Press 6.12.12 pg 4A *Luck Girls Scouts raise beetles for purple loosestrife control*

Sixth graders with the Luck Girl Scout Troop led by Chelsey Foeller are working with Katelin Holm from the Polk County Land and Water Resources Department (LWRD) to raise and release a tiny insect with a big appetite—the Galerucella beetle.

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Clean Boats Clean Waters programs throughout the county will be beginning this weekend with fishing opener on Saturday. Carl Holmgren and the staff from the Polk County Land and Water Resource department were on hand training Unity students to monitor Balsam Lake. Pictured with the instructors were from left: Elaine Butala, Mercedes Kobs, Kourtney Collins, Savannah Sande, Michelle Jorgensen, Jena Alling, and Cullen Madison. *County Ledger Press 5/3/12 Front page*



Clean Boats, Clean Water

The Horseshoe Lake Improvement Association invites the public to the Horseshoe Lake Public Landing located on County Road T - Horseshoe Drive, Turtle Lake, WI on Saturday, June 9th for a presentation by Kaitlin Holm, Polk County Information Specialist at 9:00 a.m. A short information packed hour is planned.

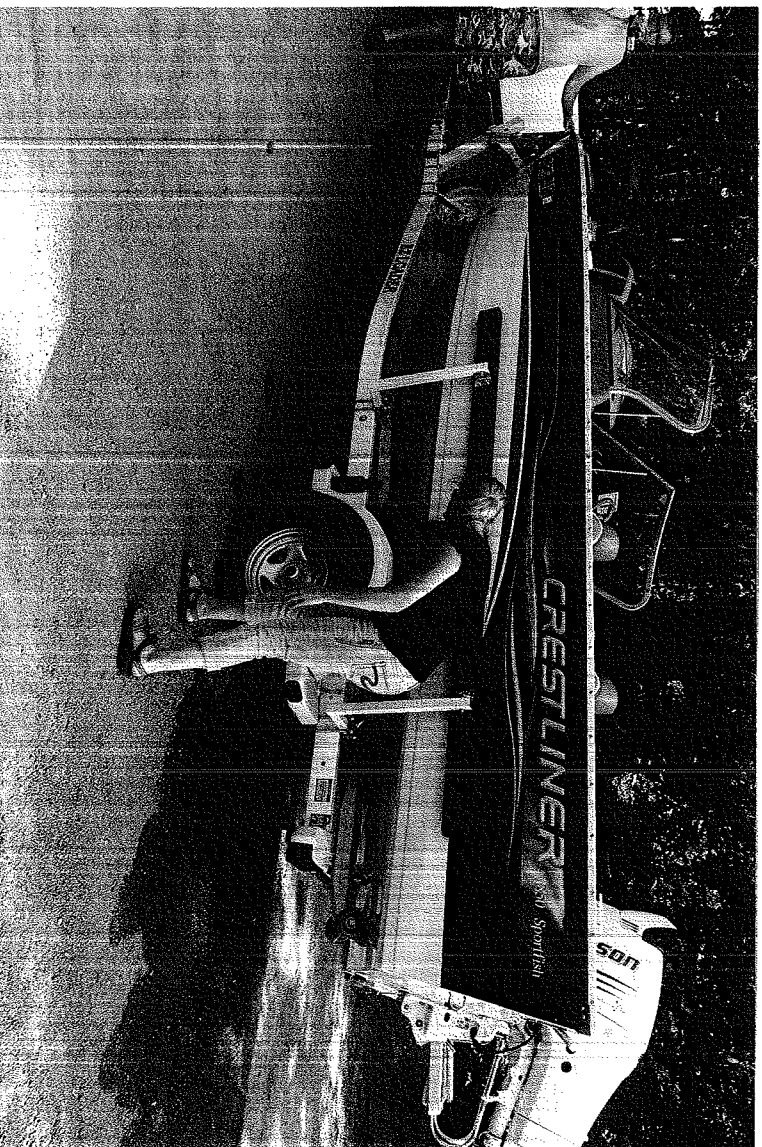
Ms. Holm will provide important information regarding the identification of many Aquatic Invasive Species, how to inspect your boat

and equipment when entering and leaving lakes, promote stewardship and responsible boating practices.

We are blessed to have many beautiful lakes and rivers to enjoy but we each must do our part to assure they remain healthy for the future generations.

Any questions feel free to contact Jack Sullivan, HILIA Landing/Monitoring Coordinator at 715-986-2963.

Front page
The Times 6/7/12





Clean Boats, Clean Water *Watercraft Inspection Program*

The Clean Boats, Clean Waters program is an opportunity for citizens to conduct a boater education campaign in their community. Through Clean Boats, Clean Waters, volunteers are trained to organize and conduct watercraft inspections that help stop the movement of aquatic invasive species (AIS) across the state.

What do Clean Boats, Clean Waters volunteers do?

The three main tasks completed by volunteers are:

- Informing and educating boaters about aquatic invasive species
- Performing watercraft inspections
- Collecting and reporting watercraft data

Clean Boats, Clean Waters volunteers are not at landings to enforce ordinances and laws. Rather volunteers are at boat landings to raise awareness of AIS and encourage and demonstrate the steps necessary to avoid spreading invasive species.

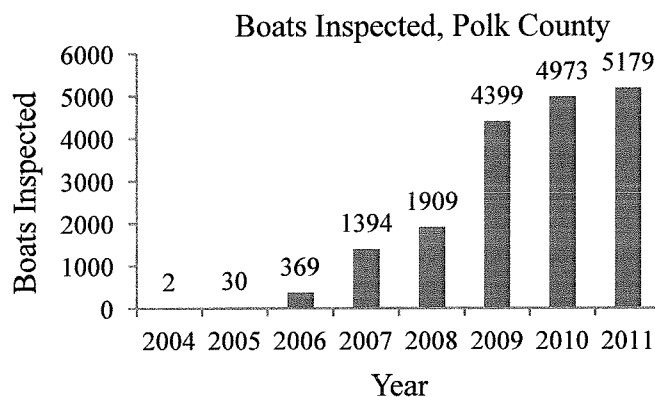
What prevention education message should Clean Boats, Clean Waters volunteers provide?

There are four main AIS prevention steps that volunteers should share with boaters:

- Inspect boats, trailers, and equipment
- Remove all attached aquatic plants and animals
- Drain all water from boat, vehicles, and equipment
- Never move plants or live fish away from a water body

Polk County Data

Eleven lakes in Polk County currently have Clean Boats, Clean Waters programs. In 2011, over 5,000 boats in Polk County were inspected for aquatic invasive species and over 10,500 people were contacted with the Clean Boats, Clean Waters message.



The Sun
pages 5-
August 4
201

Program educates public about "evil river invaders"

by JASON DEMOE
Contributing Writer

The threat of invasive species in our waterways is not lost on Katelin Holm, an educator with the Polk County Land and Water Resource Department. Holm travels the county, sharing information on how invasive critters harm our abundant waterways.

"Polk County is rich in water resources,

boasting 437 lakes and over 300 miles of streams and rivers," Holm said. "An increasing number of lakes are being infested by populations of aquatic invasive species."

Holm brings the book, Up North at the Cabin, to her educational children's programs to help them understand the importance of the lakes. On July 25 in Osceola,

Invaders See page 6

Invaders from page 5

Holm talked with children about their favorite things to do at the river.

Of course, her educational expertise extends beyond children. Much of what she has to teach is important for boaters to understand.

"Just like you can get a ticket for speeding in a car, you can also get a ticket for driving down the road with plants on your trailer," Holm said. "Local ordinance provides for a \$200 to \$500 fine, but if a State DNR officer stops you, the fine could exceed \$2,000."

Aquatic invasive species are plants, animals and pathogens that are not native to a specific lake or river. A

species is regarded as invasive if it is introduced to an area and becomes capable of establishing population and spreads widely throughout the new location.

A species Holm highlighted was the Eurasian Water Milfoil, an aquatic plant that forms large floating mats of vegetation along the surface of lakes and rivers.

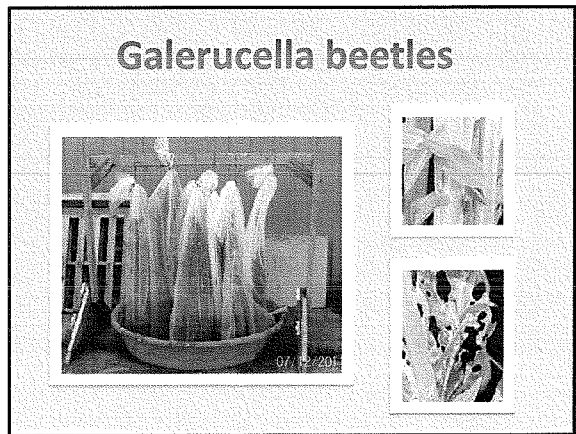
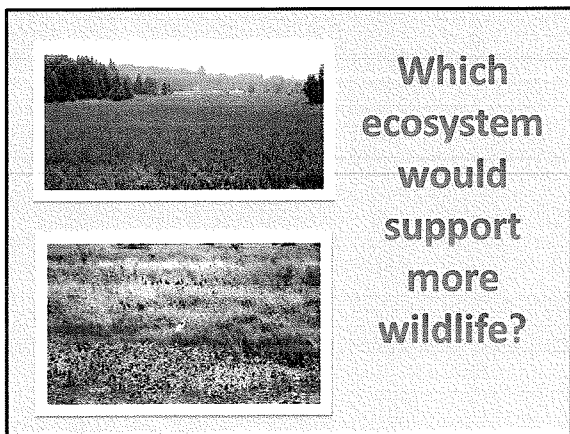
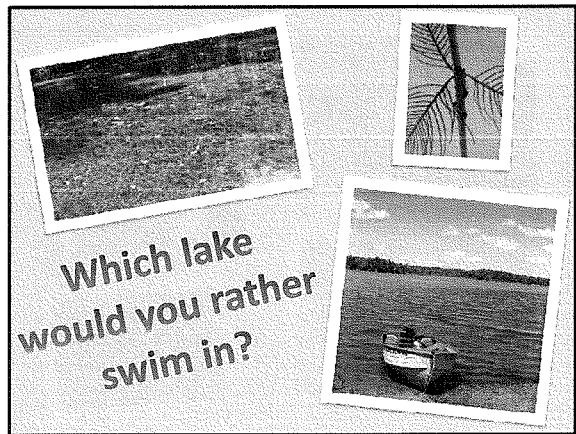
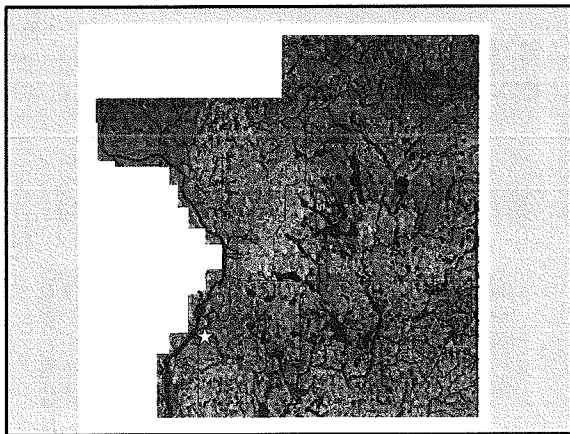
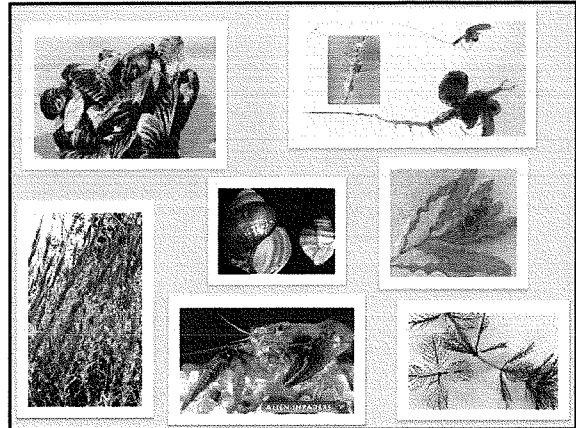
"This infestation is not something that you would want to swim in," Holm said. "More importantly, it poses a great threat to fish that would normally dart out to catch their food. The fish don't know how to react to a thick mass of plant in their way. If a

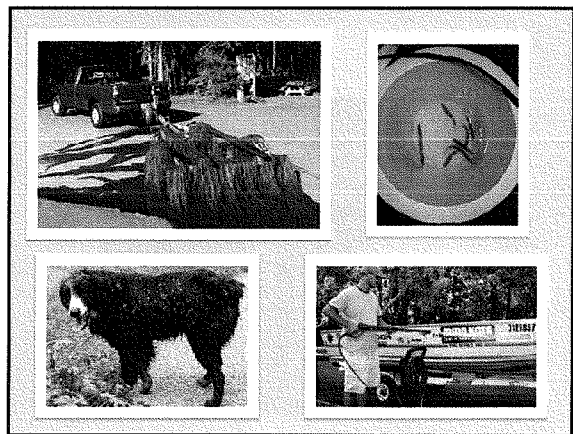
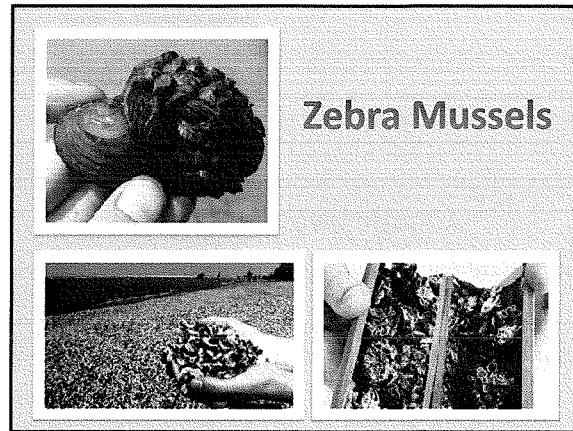
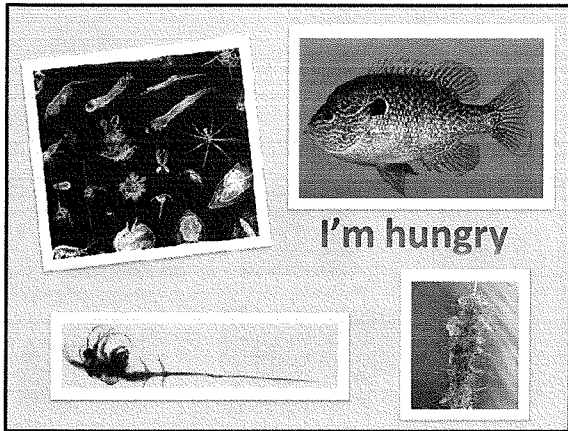
small piece of milfoil is on your boat and you transport it to a lake that has not been infected, that piece will grow roots and spread."

Other common invasive species in this area include rusty crayfish, curly leaf pondweed, spiny waterflea, and zebra mussels.

"The most important and obvious things are to inspect boats and remove all aquatic plants and animals before leaving the water," Holm said. "Always buy your bait from a licensed dealer and dispose of leftover bait in the trash can as opposed to dumping it over the side of your boat in case the bait is infected with some disease."

Aquatic Invasive Species





Invasive Species Merit Badge Pilot

October 5-7th Eagle River District

Program Presentation Side Boards

Pre-work: Scouts will have researched at least one invasive species not found in their local area prior to checking in on October 5th. We are looking for two presenters per station. Presenters will only need to be at the work site near New Richmond from 11 am to 5 or 6 PM on October 6th.

Principles of Chemical Application (Station 1): Lee 4-Control

- Have fun with the scouts.
- Make the station memorable
- Bring hands on activities, equipment, tools to help promote learning in your station and talk about the safety equipment necessary to use these tools.
- Explain and demonstrate the proper usage and care of equipment you will use to treat invasive species. Maybe hand sprayers, backpack sprayers, atv sprayers, etc or other chemical application equipment keeping the first two bullets in mind.
- Describe and show some of the proper safety gear that could be worn when applying chemicals. (Don't make it scary. Emphasize that chemicals are important and when you use them correctly this safety gear shouldn't need to be worn, but it is there to ensure your safety, etc...)

Equipment Showcase (Station 2): Glup

- Have fun with the scouts.
- Make the station memorable
- Explain and demonstrate the proper usage and care of equipment you will use to treat invasive species. Maybe hand sprayers, backpack sprayers, ATV sprayers, etc. or other chemical application equipment keeping the first two bullets in mind.
- Utilize hands on activities if possible to keep scouts engaged.

Oak Savanna Restoration (Station 3):

- Have fun with the scouts.
- Make the station memorable
- Name and talk about at least two invasive species found within this habitat, how they got there and how to treat them.
- Talk about a microorganism such as those that cause oak wilt, etc...that impact terrestrial plant. What makes these organisms invasive?
- Mention and define the terms terrestrial plants, animals and insects, native species.
- Show examples of native species.
- Utilize hands on activities if possible to keep scouts engaged.

Invasive Species Spread/Vectors (Station 4):

- Have fun with the scouts.
- Make the station memorable

Invasive Species Merit Badge Pilot

October 5-7th Eagle River District

Program Presentation Side Boards

- Define vector, pathway, habitat, biodiversity. What makes an invasive species so invasive (plant biology and seed dispersion)
- Give example of invasive terrestrial animal/insect. (emerald ash borer?).
- Utilize hands on activities if possible to keep scouts engaged.

Aquatic Species Management (Station 5): Jeremy Williamson; Polk County

- Have fun with the scouts.
- Make the station memorable
- Use and describe the meaning of Aquatic, Aquatic Plant, Aquatic animals/insects.
- List the similarities and differences between terrestrial and aquatic invasive plants.
- Name and talk about at least two invasive species found within this habitat, how they got there and how to treat them.
- Identify at least one invasive animal and why it is invasive and how we are treating it.
- Be creative and hit your agency focal points such as aquatic hitch hikers, etc...
- Bring hands on activities, equipment, tools to help promote learning in your station and talk about the safety equipment necessary to use these tools.
- Utilize hands on activities if possible to keep scouts engaged.

Local Invasive Species “What’s going on in the local area?” (Station 6): Bill Hogseth WI DNR

- Have fun with the scouts.
- Make the station memorable
- Identify several local invasive species and discuss how to develop a management plan for the infestation. Touch on the importance of an integrated approach.
- Show examples of native species
- Utilize hands on activities if possible to keep scouts engaged.

Bio Control (Station 7): Mike Mlynarek USFWS

- Have fun with the scouts.
- Make the station memorable
- What are bio controls and how are they used. Touch on integrated management techniques and how bio controls are a part of this equation.
- Utilize hands on activities if possible to keep scouts engaged.

Grazing/ Plant Biology (Station 8):

- Have fun with the scouts.
- Make the station memorable
- Name and talk about at least two invasive species found within this habitat, how they got there and how to treat them.

Invasive Species Merit Badge Pilot October 5-7th Eagle River District Program Presentation Side Boards

- Gear presentation toward grazing as a tool and use the following terms: Ecosystem, native species, introduced species (not necessarily invasive but are not local), displacement, threatened and endangered species. Try to show some examples of these terms on the landscape.
- Utilize hands on activities if possible to keep scouts engaged.

Note: Requirements 1, 2 and 4 will be touched upon during Troop breakout sessions and during the introduction presentation on October 6th.

General agenda for the day

Check in starts at 8:30 AM

Turn in Permission Slips

Locate First Aid Station

Mixed work teams will assemble. Your team may consist of Cub Scouts and their adult partners and Boy Scouts and Venturers.

Team Leaders will direct activity

Walk to work area

Many Opportunities for informational presentations

Lunch break

Tour Demonstration Area

Continue Conservation Project

Afternoon invasive species learning stations

Closing Ceremony starts at 5:30PM

Registration information online at
<http://eagleriver.nbsa.org/Events/Activities/DistrictwideActivities/ConservationDayofService.aspx>

What to bring, what you'll do

Come as your schedule allows. The event is open to all Eagle River District Cub Scouts, Boy Scouts, Venturing Crews and their families. *

This Conservation Day is a hands-on field day designed to introduce Scouts of all ages to issues related to habitat restoration. It will provide opportunity for Service hours appropriate to all levels of Scouting to be applied to Journey to Excellence.

Work at a pace you are comfortable with.

Suggested Items to bring

Small Daypack

Hat

Work Gloves

Long Sleeve Shirt

Filled Water Bottle

Small first aid kit

Closed-toe footwear –NO Sandals

Rain jacket

Trail snack

Lunch is included in the day's fee

* Not suitable for toddlers or pre-schoolers.
Five years old suggested as minimum age. No limit at maximum age – use your common sense.

Service Hours

The participation in a Service Project is usually applied to one advancement requirement at a time.

However there may be parts of the event that can be applied to various Achievement, Elective, Rank, or Merit Badge requirements.

Completing advancement requirements is a natural outcome of many of our events, even when they are not specifically identified. Look through your Cub or Scout handbook and sign-off on items that were covered today

Conservation Service Project

Bird Study

Wildlife habitat concerns

Pollution effects

Tool Safety

Weather issues

Plant and Animal Identification

And various other opportunities to work toward other awards...

Conservation Day Service Project

Record your participation and turn this portion into your Scout Leader.

Name _____

Address _____

City _____

State _____

Age _____

Pack / Troop / Crew # _____

Check Scouting Level:

____ Lion or Tiger Cub Scout

____ Wolf or Bear Cub Scout

____ Webelos Scout

____ Boy Scout, current rank

Scout

Tenderfoot

Second Class

First Class

Star

Life

Eagle

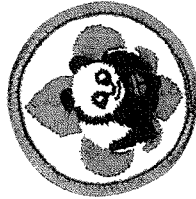
____ Venturing Scout

Write a brief statement of what you did.

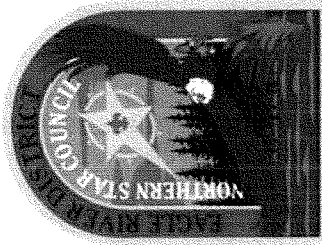
Today I helped ... _____

The primary goal of today's event is to encourage outdoor activities and to be engaged with others in the Scouting community. Scouting is a 'game with a purpose' and today was an opportunity to be involved with local conservation issues

Check your Handbook for details on the World Conservation Award.



Event Sponsors:



Friends of the
St. Croix Wetland
MANAGEMENT DISTRICT



2012
Event patch

Conservation Day Service Project Saturday, October 6, 2012 *9 am – 6 pm

*Registration begins at 8:30

Oak Ridge Waterfowl Production Area
Star Prairie, Wisconsin

2 miles East of WI Hwy 65 on 220th Ave, 1
mile south of Star Prairie/ County H.
(Approx. 5 miles north of New Richmond)

Fee - \$2 [per person]

Sponsored by
US Fish and Wildlife Service
Friends of the St Croix Wetland Mngt District
and
Eagle River District Activities Committee
Boy Scouts of America

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 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

Zebra Mussels – Provided by Jeremy Williamson, Water Quality Specialist and Aquatic Invasive Species Coordinator, Polk County

Zebra mussels are aquatic invasive mussels with a D-shaped shell exhibiting alternating black and white stripes. Since they are able to attach to hard surfaces, zebra mussels can clog water intakes and damage equipment such as boat motors. When water bodies are infested with zebra mussels their shorelines become littered with sharp shells, impeding human recreational opportunities. Additionally, they damage ecosystems by harming fisheries and smothering native mussels, snails, and crayfish.



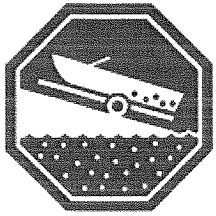
Figure 1. Zebra mussels from Bass Lake, St. Croix County, 2011.

Zebra mussels arrived in the Great Lakes in the late 1980's from contaminated ballast water. Since that time they have expanded in range in Minnesota and Wisconsin including the St. Croix River and the 7 county Twin Cities metro area.

Zebra mussels have not been found in Polk County; however, in 2010 they were discovered in Bass Lake in St. Croix County (Figure 1). In response to the discovery of zebra mussels in Bass Lake in St. Croix County in 2011, an extensive monitoring program was implemented for zebra mussels in Polk County Lakes located north of Bass Lake. Vertical and horizontal plankton tows were taken and

analyzed for aquatic invasive species. Fortunately, these samples yielded no zebra mussel veligers (larvae). Additionally, spiny water fleas were not found in any of the lakes sampled.

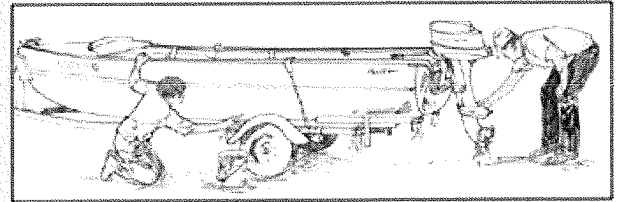
We are fortunate that zebra mussels have not been found in Polk County lakes yet. However, our lakes are still very susceptible, so remember to inspect your boat, remove any vegetation, animals, or sediment, and drain the live well before leaving or entering a lake.



**STOP AQUATIC
HITCHHIKERS!**

STEPS YOU CAN TAKE TO STOP AQUATIC HITCHHIKERS

INSPECT boats, trailers and equipment for plant and animal material.



REMOVE all attached aquatic plants, animals, and mud before launching and before leaving the water access.

DRAIN all water from your boat, motor, live wells, bait containers, and all equipment before leaving the water access.

NEVER MOVE plants or live fish away from a waterbody.

BUY minnows from a Wisconsin licensed bait dealer.

DISPOSE of unwanted bait and other animals or aquatic plants in the trash.

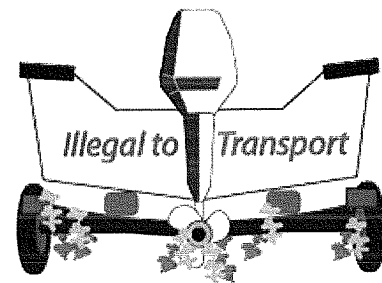
REPORT any new sightings to the Polk County Land and Water Resources Department 715-485-8699.

Polk County cares about our water resources!

LOCAL ORDINANCE

Boaters must remove all aquatic plants and invasive animals before launching and leaving the landing.

Fines - \$200-\$500.



Polk County Ordinance 10-08

Polk County has elected to address the concern for future spread of aquatic and terrestrial invasive species by adopting an Illegal to Transport Ordinance.

AQUATIC INVASIVE SPECIES

are plants and animals that don't naturally occur in Polk County waters and cause ecological or economic harm. Below are examples of invasives found in Polk County



Purple Loosestrife

Is a perennial that grows 3-7 feet tall and has a distinct 4-sided stem. The plant develops spikes of purple-pink flowers which bloom in July-September. Purple loosestrife invades many types of wetlands including marshes, river and stream banks, lake edges, and ditches.

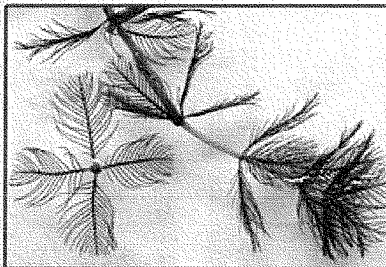
Phragmites or Common Reed

Is a perennial wetland grass that grows 3-20 feet tall and has dull rigid, hollow stems. Phragmites often invades moist habitats including lake shores, river banks, and roadways.



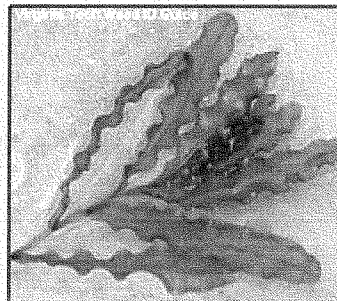
Eurasian Water-Milfoil

Is an aquatic plant with delicate feather-like leaves arranged in whorls (circles) around the stem. Each leaf is made up of 12-21 leaflets and the plant is usually limp when out of water.



Curly Leaf Pondweed

Is an aquatic plant with reddish-green leaves that are 3 inches long and have distinct finely toothed wavy edges. The plant itself grows from 1-3 feet long and usually drops to the lake bottom by early July



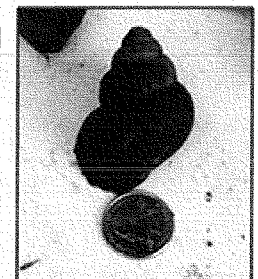
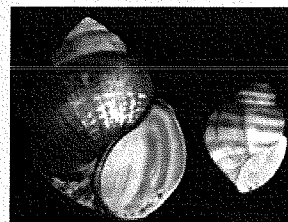
**Zebra Mussels have not been found in Polk County; but were found in 2011 in Bass Lake in St. Croix County.*

Zebra Mussel

Is a tiny ($\frac{1}{4}$ to $1\frac{1}{2}$ inch long) clam with a yellowish or brownish D-shaped shell. Shells have alternating dark and light colored stripes, hence the name zebra. Zebra mussels can firmly attach to solid objects.

Chinese and Banded Mystery Snail

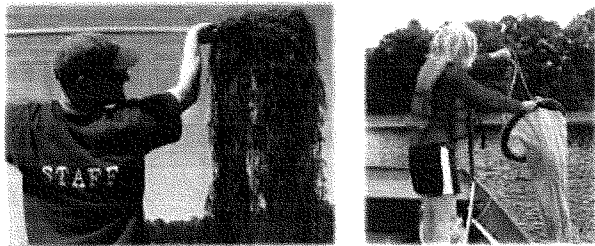
Are large snails that are olive in color. The banded mystery snail has a distinct striped pattern.



Aquatic Invasive Species Monitoring and Control

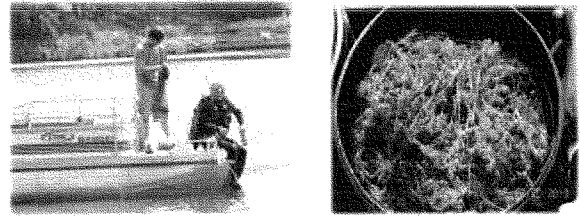
WDNR Statewide AIS Early Detection Monitoring

*Extensive protocol completed on ~10
lakes/year*



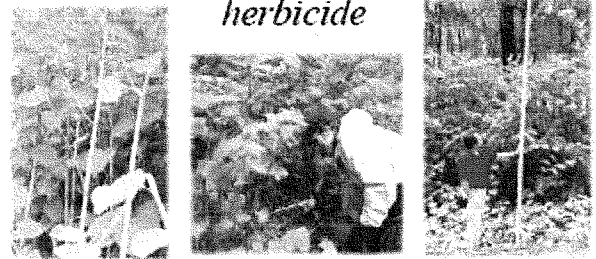
Eurasian Water Milfoil

*Monitor susceptible lakes and hand pull
small stands*



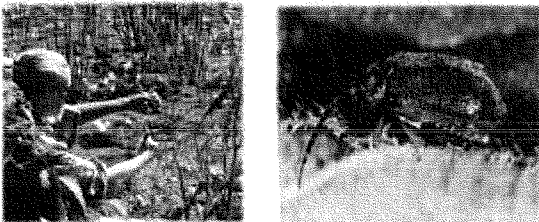
Japanese/Giant Knotweed

*Foliar application and stem injection of
herbicide*



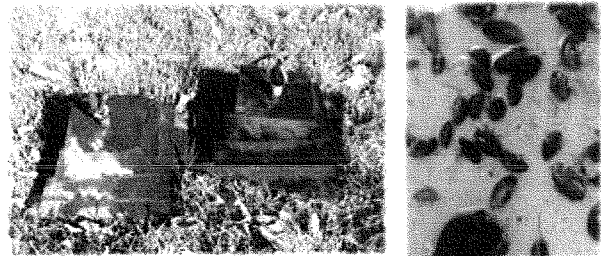
Purple Loosestrife

*Rear & release beetles at large stands
and cut /bag flowers & apply herbicide
at small stands*



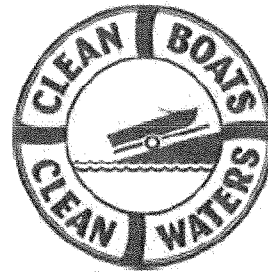
Zebra Mussels

*Monitoring susceptible lakes for early
detection*



Aquatic Invasive Species Education and Training

Information & Education at Lake Meetings and Community Events



Clean Boats,
Clean Waters
*Four presentations
scheduled for
training volunteer
monitors in 2012*



Youth Education
AIS education for schools



Clean Boats, Clean Waters
Story Hour

*Presentations scheduled at seven Polk
County Libraries and one youth camp
in summer 2012*

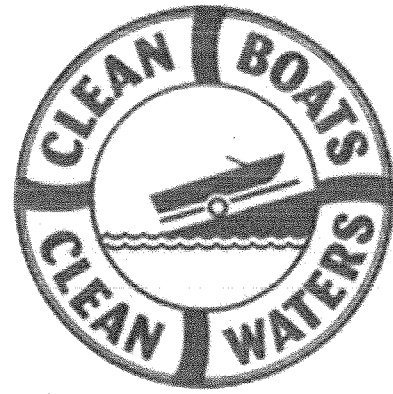


Signage at Boat
Landings

*Install new DNR AIS
signs and Polk County
AIS Ordinance signs
and distribute signs to
lake organizations*



Clean Boats, Clean Waters

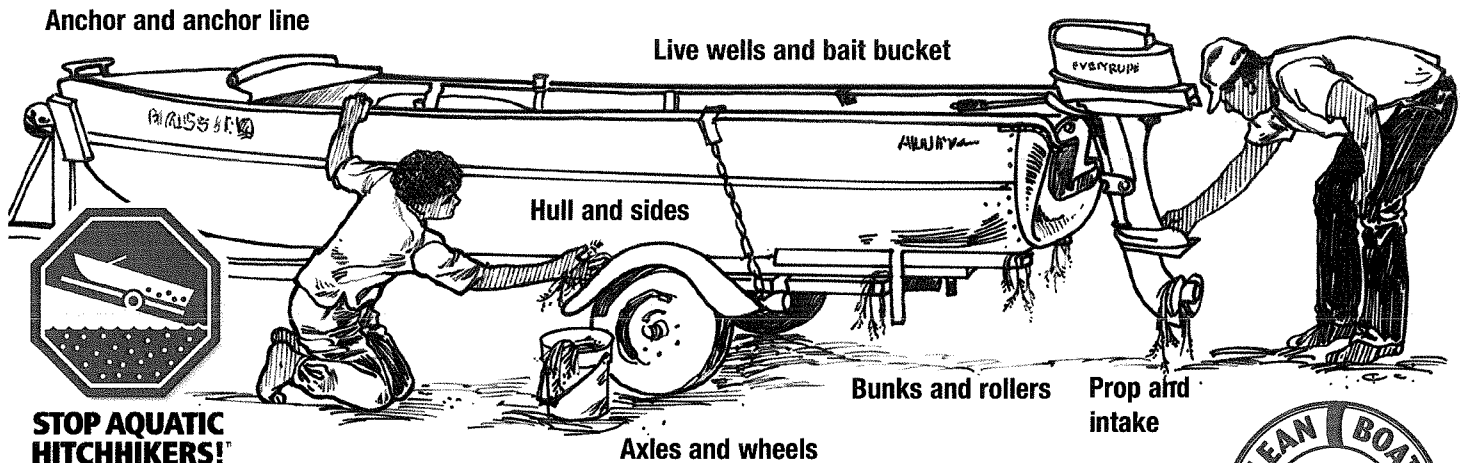


- Invasive plants and animals threaten Wisconsin's water and land by outcompeting native plants and animals and disrupting natural habitat systems.
- Boats, trailers, fishing nets, personal watercraft, and other equipment can act as transportation devices for aquatic invasive species, allowing invasive species to become established in new areas.
- Clean Boats, Clean Waters is a program designed to provide an opportunity for volunteers to help stop the spread of invasive species throughout the state by using the "Stop Aquatic Hitchhikers" message.
- Through Clean Boats, Clean Waters volunteers are trained to organize and conduct a boater education campaign in their community.
- At Clean Boats, Clean Waters training sessions volunteers learn how to:
 1. Identify aquatic invasive species
 2. Report potential new invasive species
 3. Perform boat and trailer checks
 4. Set up a boat launch monitoring program
 5. Record pertinent data
 6. Spread the Clean Boats, Clean Waters message



Stop aquatic hitchhikers...

Clean your boat and equipment to prevent the spread of invasive species!



In Wisconsin it's the law*... failure to follow these steps can lead to fines up to \$2000.

Aquatic invasive plants and animals like Eurasian water milfoil, Curly leaf pondweed, rusty crayfish, and zebra mussels are easily transported by boats and equipment as boaters travel from one lake to another. The fish disease Viral Hemorrhagic Septicemia (VHS) is easily spread when fish are transported from one waterbody to another.

It is important for all of us to follow these preventative steps for all water activities, not just boating and fishing. These activities include:

- Using personal watercraft
- Shore and fly-fishing
- Sailing
- Scuba diving
- Waterfowl hunting

Be diligent! Even small fragments, roots or seeds transported by your boat can grow and infest another lake.

Before you leave a body of water:

- **Inspect** boats, trailers, and equipment.
- **Remove** all attached aquatic plants, animals, and mud before launching and before leaving the water access.
- **Drain** all water from boat, motor, bilge, live wells, bait containers and equipment before leaving the water access.
- **Never move** plants, live fish, bait, or fish eggs away from a water body.
- **Buy** minnows from a Wisconsin licensed bait dealer.
- **Dispose** of unwanted bait in the trash, not in the water or on land.

Additional steps

- Spray, rinse, or dry your boat and equipment to remove or kill species not visible. Spray/rinse with hot or high pressure water OR dry your boat for 5 days before entering another lake or river.
- Disinfect boats and equipment to kill species and fish diseases using a mixture of two tablespoons of household bleach to one gallon of water.

* State of Wisconsin: Section 30.715 WI Act 16 prohibits launching a boat or placing a boat or trailer in navigable waters if it has aquatic plants or animals attached.

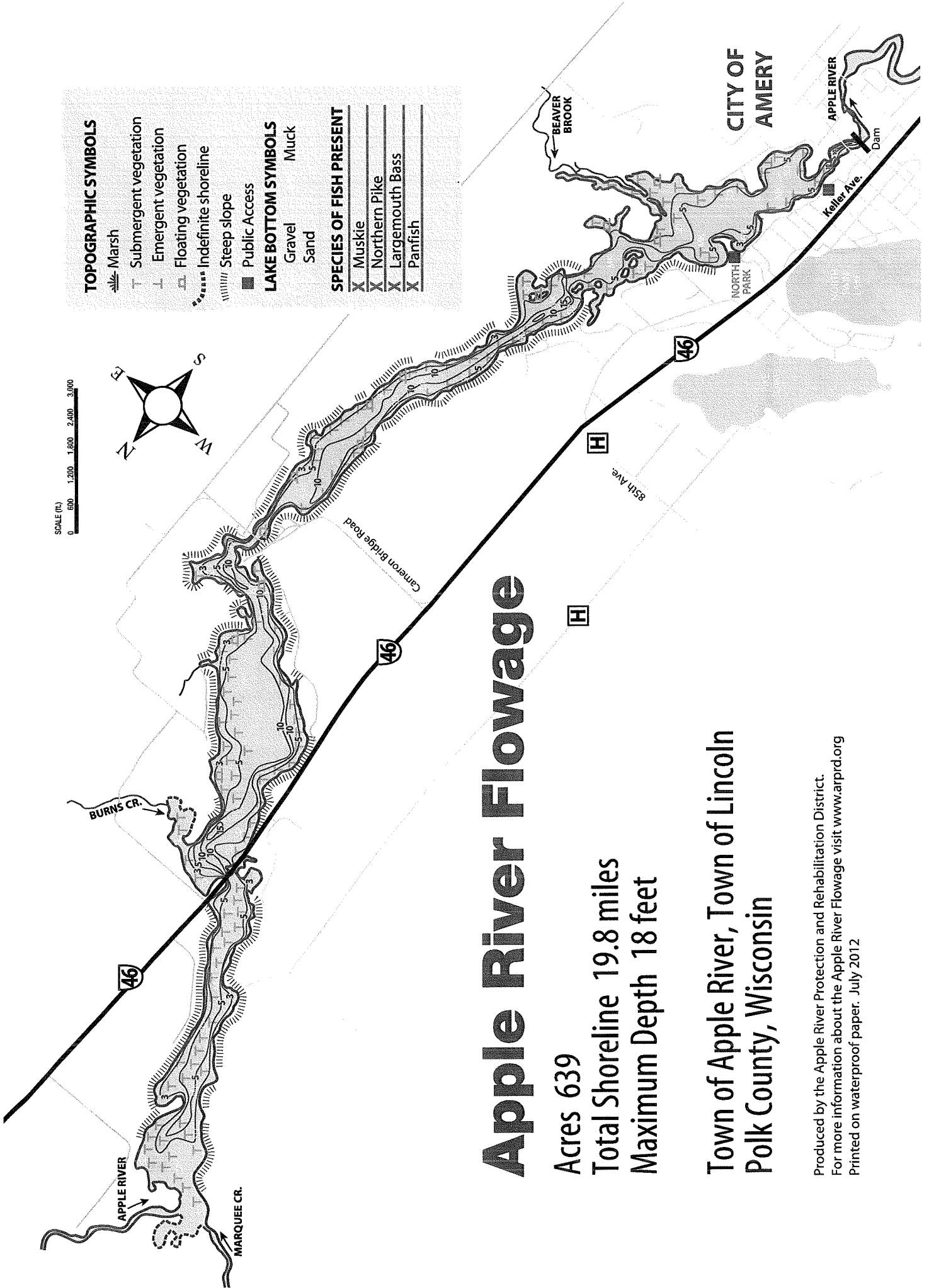
* Polk County Ordinance 29-11: prohibits launching or operating on a public roadway any boat, boat trailer, or hunting, trapping, fishing, or boating equipment, including canoes, lines, anchors, nets, decoys, and waders if aquatic plants or invasive animals are attached.



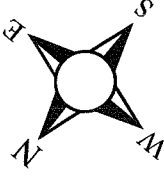
Polk County Sheriff
715-485-8300

(non emergency)

EMERGENCY DIAL 911



SCALE (ft.)
 0 600 1,200 1,800 2,400 3,000



TOPOGRAPHIC SYMBOLS

- Marsh
- Submergent vegetation
- Emergent vegetation
- Floating vegetation
- Indefinite shoreline
- Steep slope
- Public Access

LAKE BOTTOM SYMBOLS

- Gravel
- Sand
- Muck

SPECIES OF FISH PRESENT

- X Muskie
- X Northern Pike
- X Largemouth Bass
- X Panfish

Apple River Flowage

Acres 639
 Total Shoreline 19.8 miles
 Maximum Depth 18 feet

Town of Apple River, Town of Lincoln
 Polk County, Wisconsin

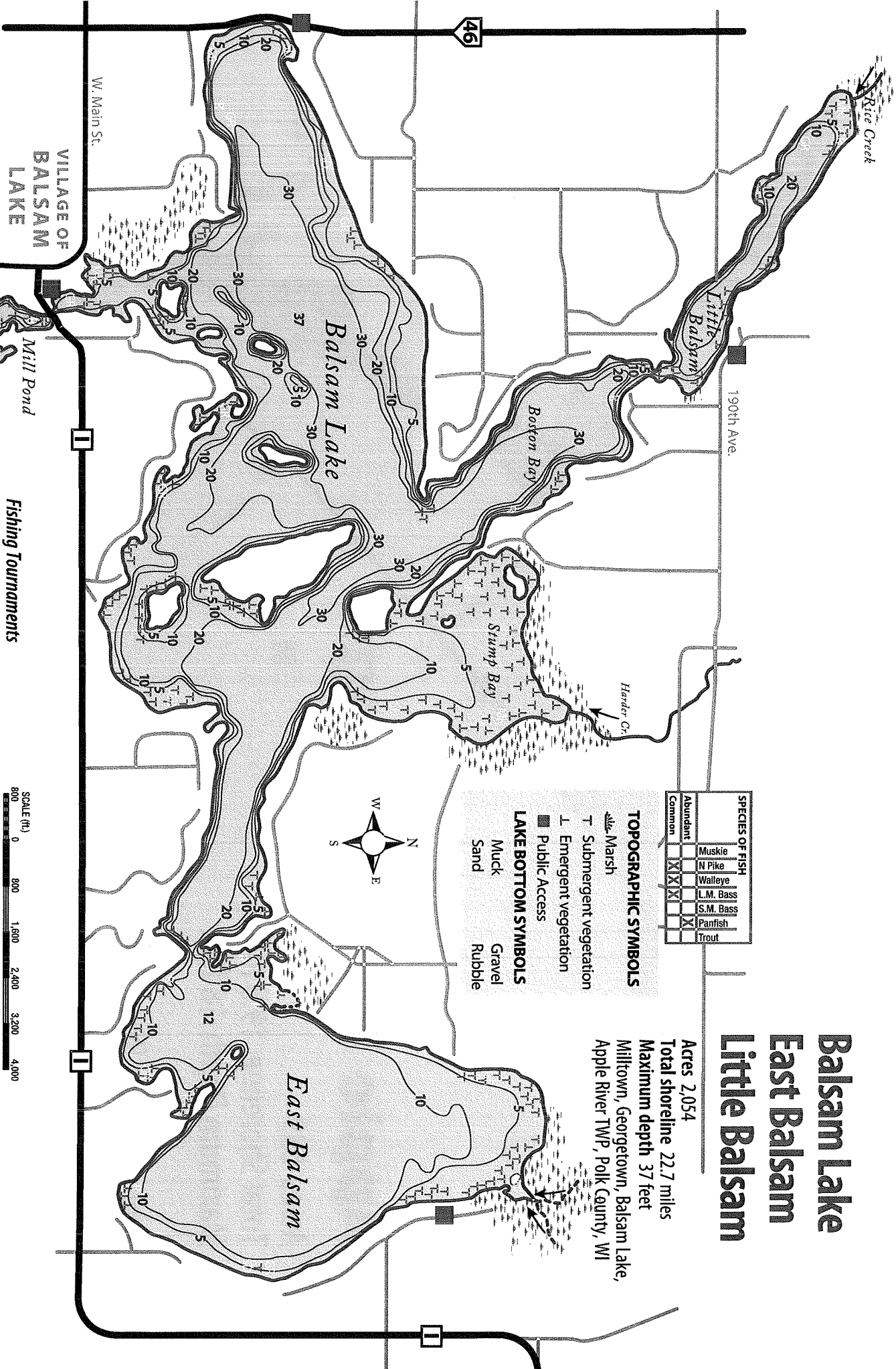
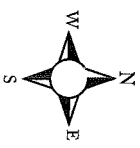
Produced by the Apple River Protection and Rehabilitation District.
 For more information about the Apple River Flowage visit www.arprd.org
 Printed on waterproof paper. July 2012

Balsam Lake East Balsam Little Balsam

Acres 2,054
 Total shoreline 22.7 miles
 Maximum depth 37 feet
 Miltown, Georgetown, Balsam Lake,
 Apple River TWP, Polk County, WI

SPECIES OF FISH	
Abundant	Common
Muskie	X
N Pike	X
Walleye	X
L.M. Bass	X
S.M. Bass	X
Panfish	X
Trout	X

- TOPOGRAPHIC SYMBOLS**
- Marsh
 - Submergent vegetation
 - Emergent vegetation
 - Public Access
- LAKE BOTTOM SYMBOLS**
- Muck
 - Sand
 - Gravel
 - Rubble



Fishing Tournaments
 may require WI DNR permits.
 Get info at 715-637-6864.
 Report violations to 1-800-TIP-WDNR.

Produced by the Balsam Lake Protection and Rehabilitation District.
 For more information about Balsam Lake visit www.balsamlakewi.com
 Printed on waterproof paper. July, 2012

Big Blake Lake

Total Acres 217

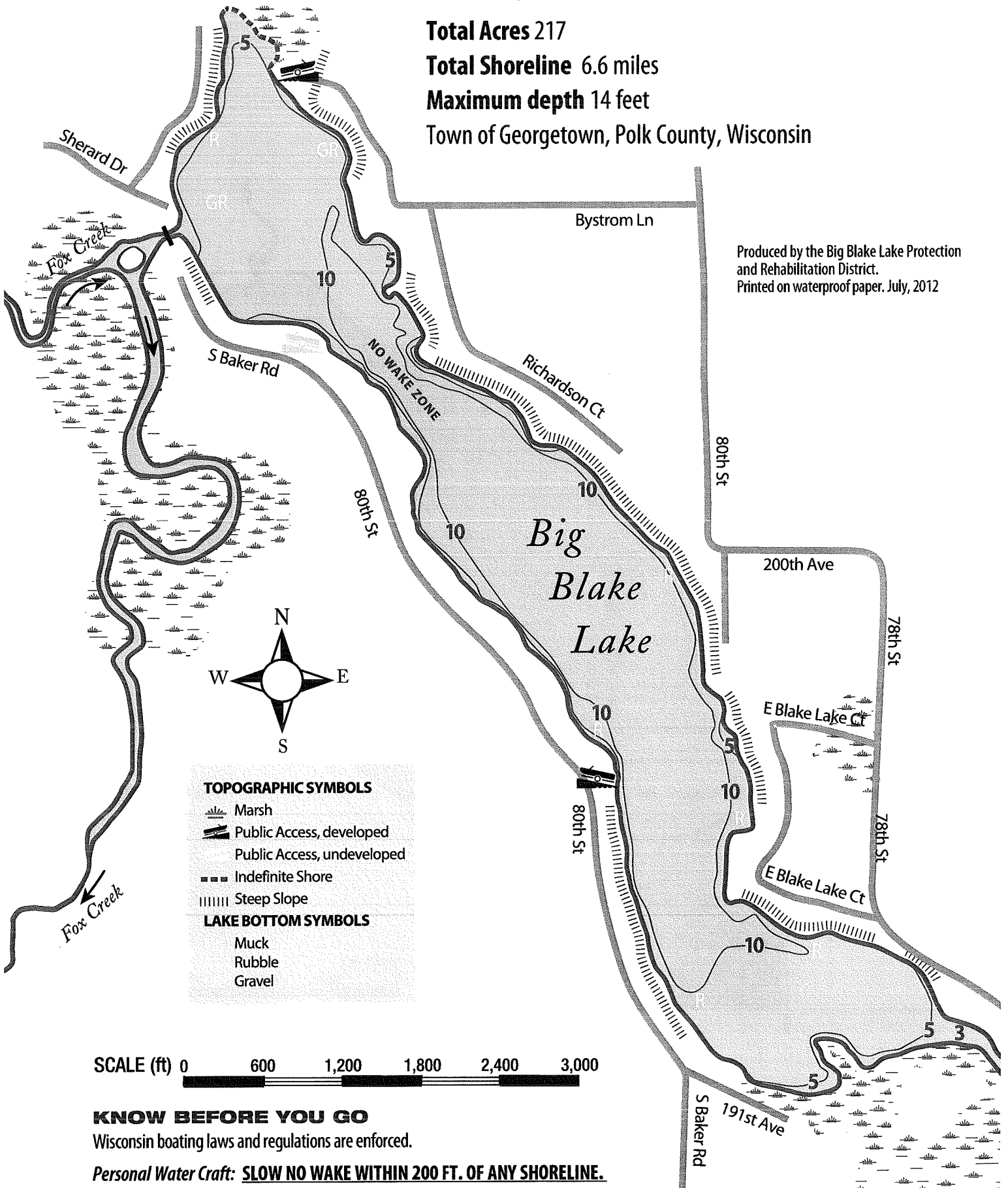
Total Shoreline 6.6 miles

Maximum depth 14 feet

Town of Georgetown, Polk County, Wisconsin

Produced by the Big Blake Lake Protection and Rehabilitation District.

Printed on waterproof paper. July, 2012



TOPOGRAPHIC SYMBOLS

- Marsh
- Public Access, developed
- Public Access, undeveloped
- Indefinite Shore
- Steep Slope

LAKE BOTTOM SYMBOLS

- Muck
- Rubble
- Gravel

SCALE (ft) 0 600 1,200 1,800 2,400 3,000

KNOW BEFORE YOU GO

Wisconsin boating laws and regulations are enforced.

Personal Water Craft: SLOW NO WAKE WITHIN 200 FT. OF ANY SHORELINE.

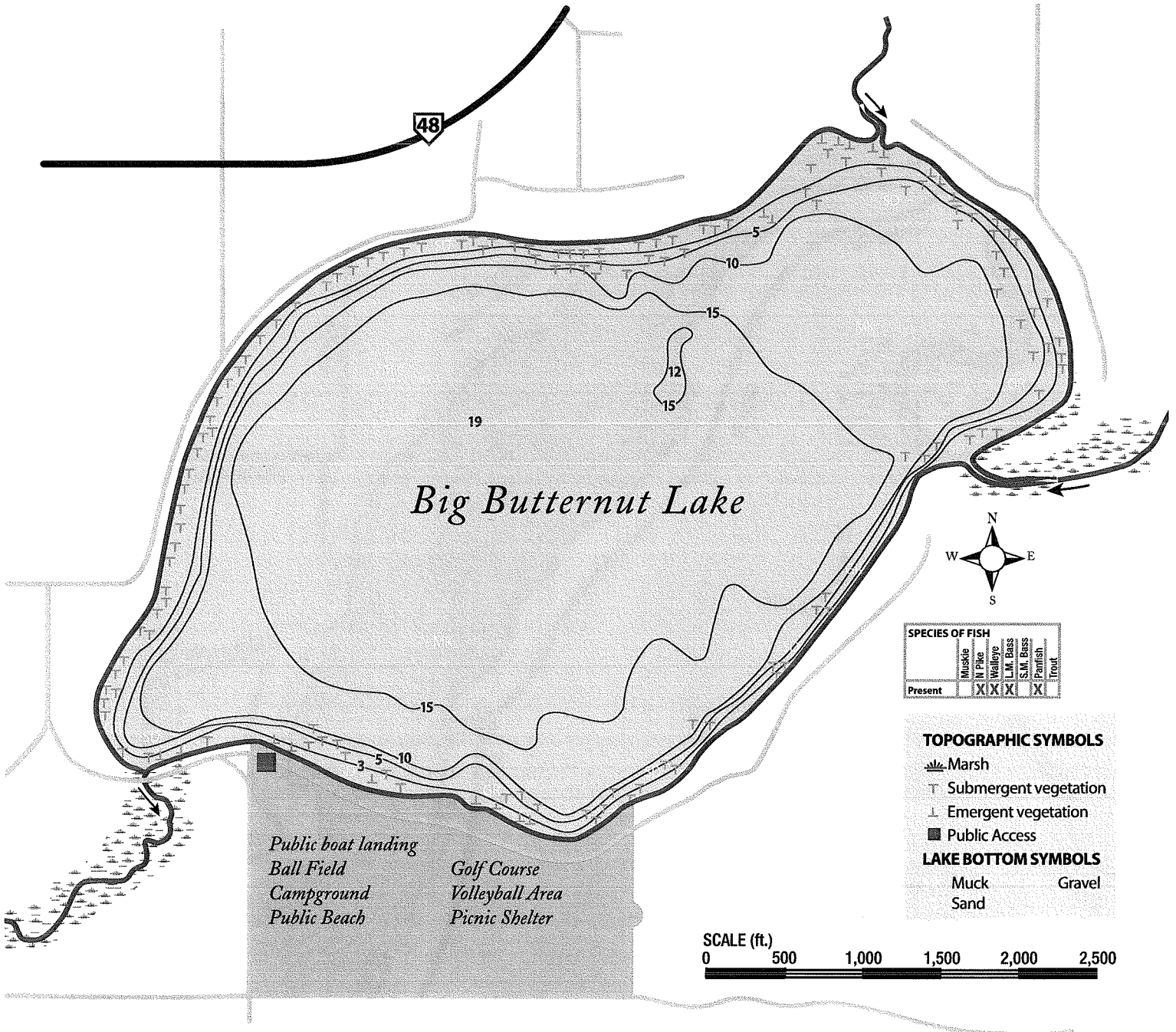
Big Butternut Lake

Total Acres 384

Total Shoreline 3.4 miles

Maximum depth 19 feet

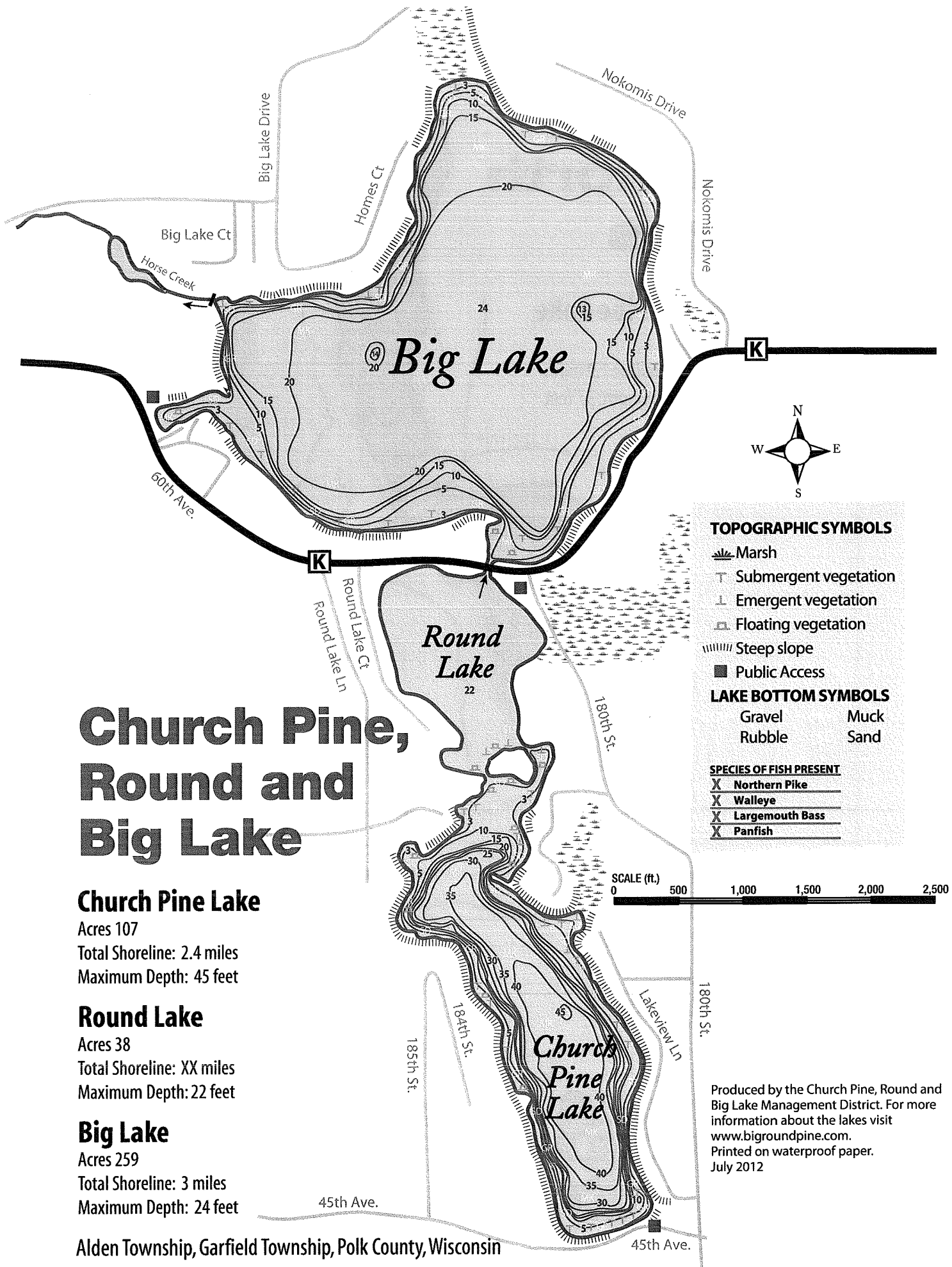
Village of Luck, Town of Georgetown, Polk County, Wisconsin



KNOW BEFORE YOU GO

Wisconsin boating laws and regulations are enforced.
Personal Water Craft: SLOW NO WAKE WITHIN 200 FT. OF ANY SHORELINE.

Produced by Big Butternut Lake Management District.
 Printed on waterproof paper, July, 2012



Church Pine, Round and Big Lake

Church Pine Lake

Acres 107
 Total Shoreline: 2.4 miles
 Maximum Depth: 45 feet

Round Lake

Acres 38
 Total Shoreline: XX miles
 Maximum Depth: 22 feet

Big Lake

Acres 259
 Total Shoreline: 3 miles
 Maximum Depth: 24 feet

Alden Township, Garfield Township, Polk County, Wisconsin

TOPOGRAPHIC SYMBOLS

- Marsh
- Submergent vegetation
- Emergent vegetation
- Floating vegetation
- Steep slope
- Public Access

LAKE BOTTOM SYMBOLS

- | | | | |
|--|--------|--|------|
| | Gravel | | Muck |
| | Rubble | | Sand |

SPECIES OF FISH PRESENT

- Northern Pike
- Walleye
- Largemouth Bass
- Panfish



Produced by the Church Pine, Round and Big Lake Management District. For more information about the lakes visit www.bigroundpine.com. Printed on waterproof paper. July 2012

Pipe and North Pipe Lakes

Pipe Lake

296 Acres

Total Shoreline: 4.5 miles

Maximum Depth: 68 feet

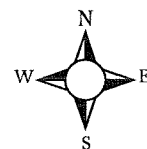
North Pipe Lake

55 Acres

Total Shoreline: 1.9 miles

Maximum Depth: 37 feet

Johnstown Township, Polk County, Wisconsin



TOPOGRAPHIC SYMBOLS

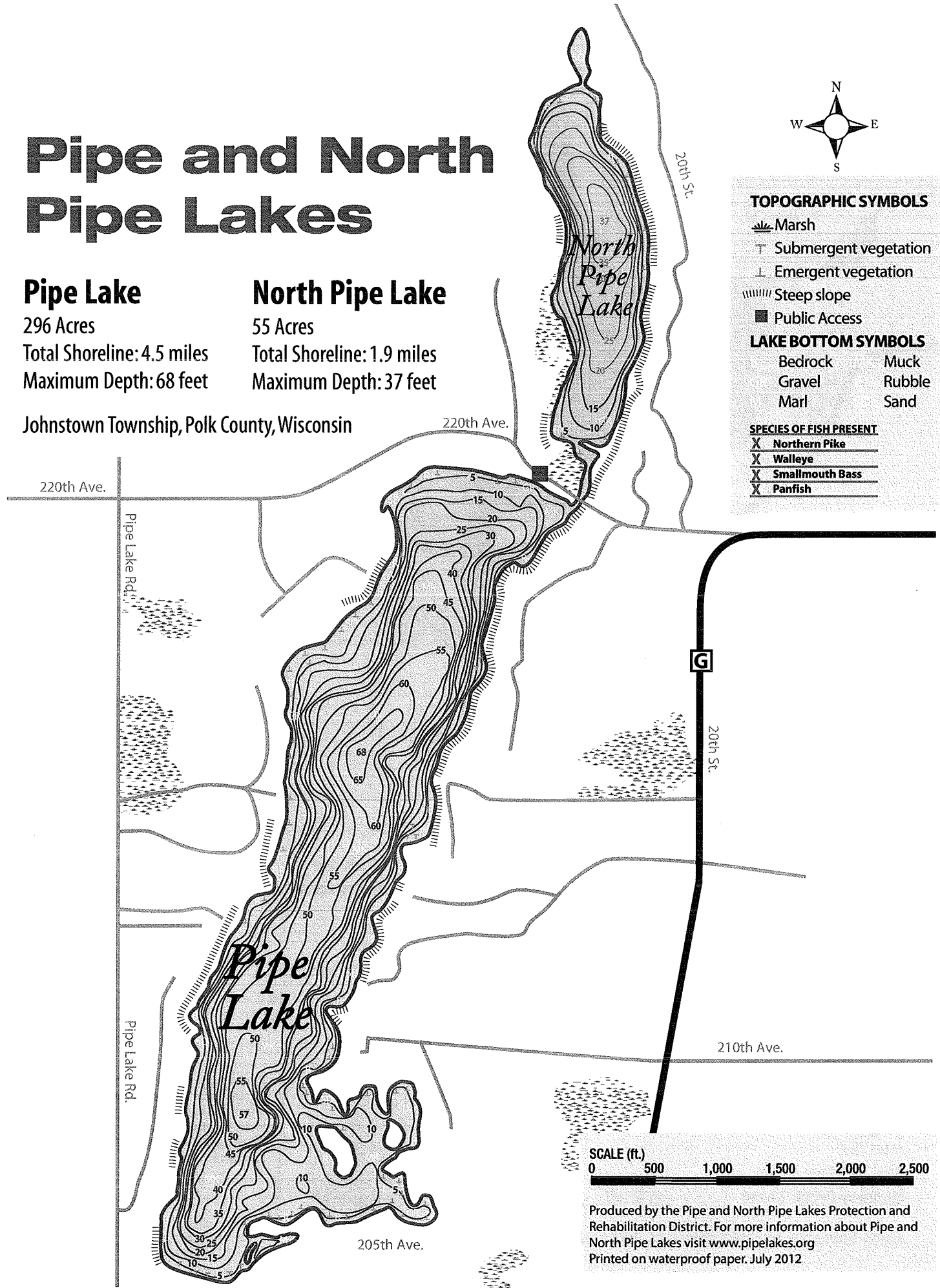
- Marsh
- Submergent vegetation
- Emergent vegetation
- Steep slope
- Public Access

LAKE BOTTOM SYMBOLS

	Muck
	Rubble
	Sand

SPECIES OF FISH PRESENT

- Northern Pike
- Walleye
- Smallmouth Bass
- Panfish



Produced by the Pipe and North Pipe Lakes Protection and Rehabilitation District. For more information about Pipe and North Pipe Lakes visit www.pipelakes.org
 Printed on waterproof paper. July 2012

Bone Lake

1,781 Acres
 Total Shoreline: 12.5 miles
 Maximum depth: 43 feet

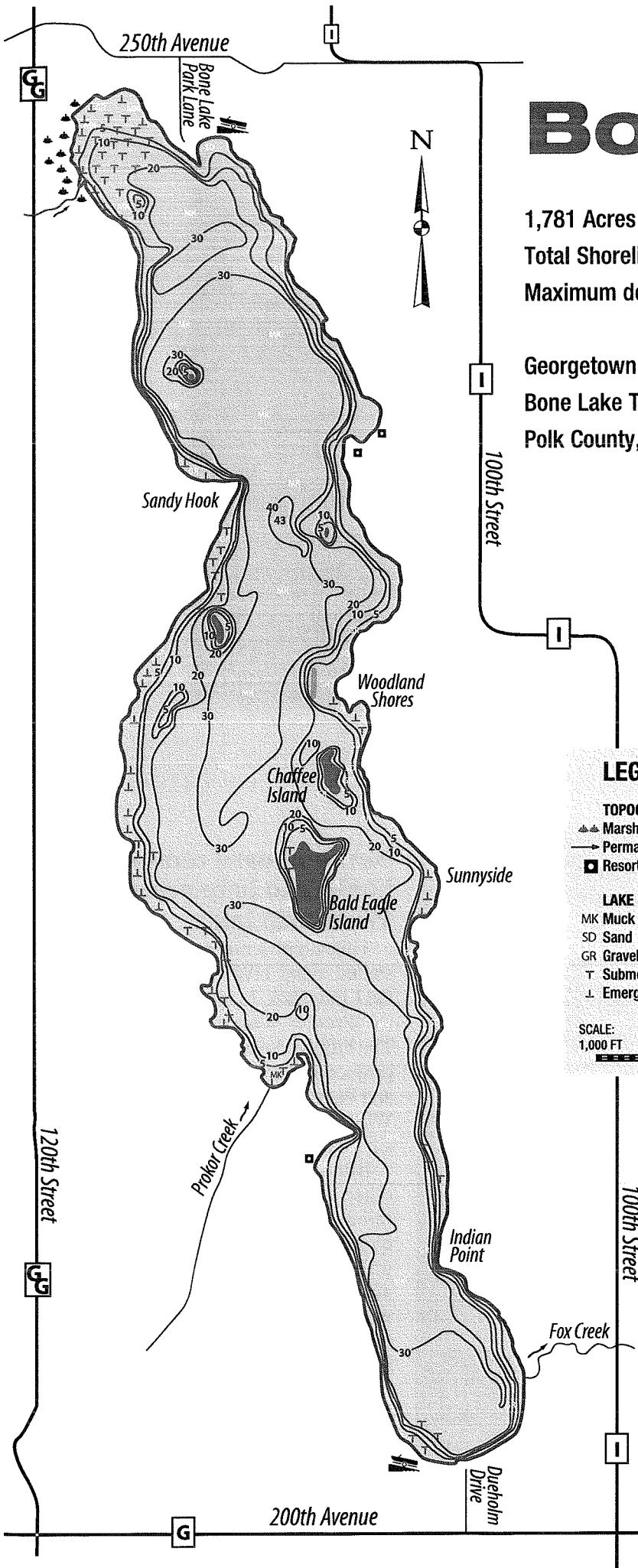
Georgetown TWP and
 Bone Lake TWP
 Polk County, Wisconsin

All watercraft:
NO WAKE WITHIN 100 FT.
OF ANY SHORELINE

Personal watercraft:
NO WAKE WITHIN 200 FT.
OF ANY SHORELINE

KNOW BEFORE YOU GO
 Bone Lake water safety patrol in operation. Wisconsin boating laws and regulations are enforced.

Fishing Tournaments may require Wisconsin DNR permits. Get info at 715-637-6864. Report violations to 1-800-TIP-WDNR.



LEGEND

TOPOGRAPHIC SYMBOLS

- Marsh
- Permanent Inlet/Outlet
- Resort

LAKE BOTTOM SYMBOLS

- MK Muck
- SD Sand
- GR Gravel
- T Submergent vegetation
- ⊥ Emergent vegetation

	SPECIES OF FISH						
	Muskie	N Pike	Walleye	L.M. Bass	S.M. Bass	Panfish	Trout
Abundant				X			
Common	X	X					X
Rare					X		

Boat Launch

SCALE:
 1,000 FT 0 1,000 2,000 3,000 4,000 5,000

Produced by the Aquatic Invasive Species Prevention Committee of Bone Lake Management District. Printed on waterproof paper.

For more information about Bone Lake, WI visit www.bonelakewi.com

Reminder for boaters

This month a billboard was installed along Hwy. 87, north of the Lions Park, St. Croix Falls, to remind boaters to "Protect Wisconsin Lakes." The billboard was a collaborative project of the Polk County Land and Water Resources Department, Wisconsin DNR and the Wisconsin Lakes Partnership. Billboards have been used in other Wisconsin counties to remind boaters that state law requires everyone to inspect boats, trailers and equipment; remove all attached aquatic plants, animals and mud before launching/leaving the water access; and to drain water from all equipment before leaving the water access. - Photo submitted

*Inter-County Leader
August 22, 2012
Page 6, Sec A*



New billboard reminds boaters to help protect Wisconsin lakes

This month a billboard was installed along HWY 87, north of the Lions Park, to remind boaters to "Protect Wisconsin Lakes". The billboard was a collaborative project of the Polk County Land and Water Resources Department, Wisconsin DNR, and the Wisconsin Lakes Partnership.

Billboards have been used in other Wisconsin counties to remind boaters that state law requires everyone to inspect boats, trailers, and equipment; remove all attached aquatic plants, animals, and mud before launching / leaving the water access; and to drain water from all equipment before leaving the water access.

Amery Free Press 3/21/12

Keeping lakes clean

July 4th, 2012
Inter-County Leader
Section B, page 3

Students patrol for invasive plants and animals

by Gregg Westigard
Leader staff writer

BALSAM LAKE – Lakes are the heart of Polk County, large and clean, an inviting place for residents and visitors to spend leisure time fishing, swimming and boating. But all that could change. The lakes are under threat from unwanted aliens, aquatic plants and invasive animals that are eager to find a home in the lakes. If they move in, the native fish can disappear and the clear shorelines can be overtaken by masses of weeds.

A group of Unity school students are helping fight the invasion. Last weekend, as they have for many weeks, students from the Clean Boats, Clean Water program spent their days at the boat landings on Balsam Lake, greeting all the visitors to the lake and explaining to them how they can help keep the aliens out of the lake.



Volunteers from Unity explain the dangers of transporting invasives to boat owners at Balsam Lake. – Photos by Gregg Westigard



Anna Ebensperger (foreground), Cole Beckman and Cassandra Hanson are some of the 35 Unity students taking part in the Clean Boats, Clean Waters campaign to protect area lakes.

People can and must, because it is the law in Wisconsin and Minnesota that everyone moving a boat from lake to lake is required to clean their boats when leaving a lake. All weeds must be removed from boats, motors and boat trailers. The water plug on the boat must be removed so water drains out and is not transported. The inspection and cleaning applies to equipment also, flotation devices, fishing gear and waders. Live bait must be disposed of and not taken to another lake.

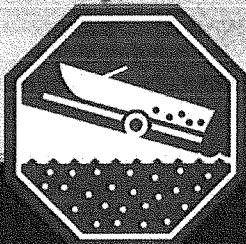
It's the law, and if people aren't concerned about damaging the lakes they use and enjoy, they might be concerned about the fines they will pay if they don't follow the law and are caught. The fine is \$200 to \$500 for each offense plus court costs.

The message is "Keep it clean and enjoy the lakes for years to come."

WI BOATERS PROTECT WI LAKES!



1-800-TIP-WDNR



**INSPECT
REMOVE
DRAIN**

IT'S THE LAW!