

Clean Boats, Clean Waters



Watercraft Inspection Program



Wisconsin Lakes Partnership



Science



Citizens



Education

CLASS, TODAY WE'RE GOING TO STUDY WHY IT'S BAD TO INTRODUCE INVASIVE SPECIES...



Wisconsin: A Gathering of Waters

- 11,190 square miles of water
- 15,081 lakes
- 43,000 miles of rivers and streams
- 5.3 million acres of wetlands
- 6.4 million acres of Great Lakes
- Estimated 1 million boats on waters each year!





Welcome to the Challenge!

What are Invasive Species?

- Non-native species that can “take over”
- Not all non-native species are invasive
- Successful because:
 - No natural predators, parasites, etc.
 - Native species can't hide, compete, or fight back
 - Often aggressive, prolific, and mature early



How do they get here?

- Shipping - ballast water
- Intentional introduction - stocking
- Canals - migration from the ocean
- Nursery industry
- Anglers/Bait industry
- Aquaculture
- Aquarium trade



How do they spread?



- Boaters
- Anglers
- Other water users (sea planes, SCUBA, etc)
- Water garden & aquarium owners
- Natural dispersal



Why do we care?

- Economic impacts
 - Sport and commercial fishing
 - Tourism
 - Water users & property owners
- Ecological
 - Native fish, invertebrates, plants impacted
- Recreational impacts
 - Boating
 - Angling

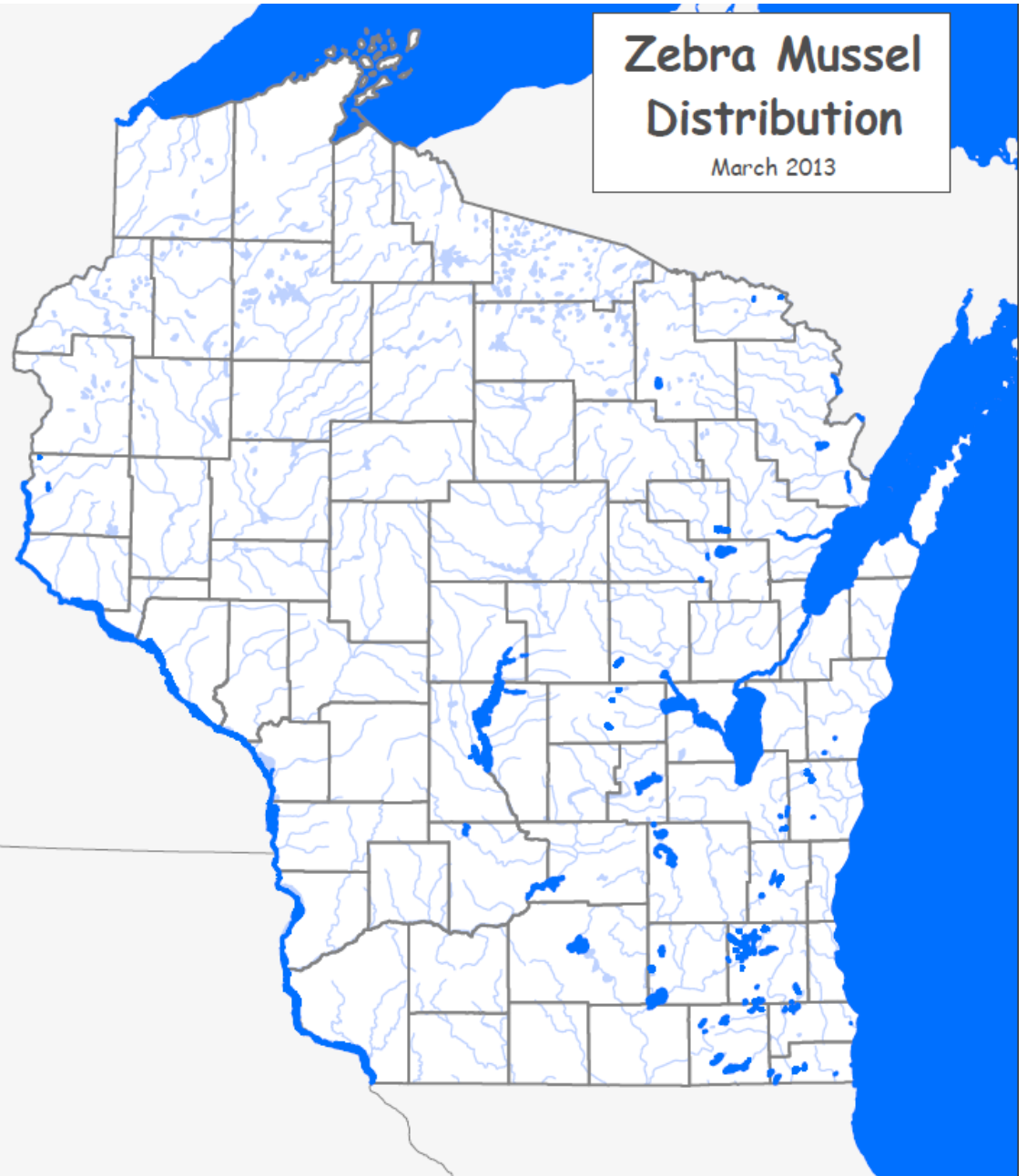


Zebra Mussels

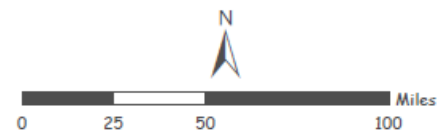


- Ballast water introduction to the Great Lakes in 1980's
- Present in 179 waterbodies (April 2014)
- Attach to any hard surface - may reach tens of thousands per square meter!
- Are microscopic in early life stages
- Female can produce 1 million eggs/season

Zebra Mussel Distribution



Legend
■ Zebra Mussels



Wisconsin Dept. of Natural Resources,
Division of Water,
Bureau of Water Quality,
Lakes and Rivers Section

Quagga Mussels



- Found in all Great Lakes but Superior
- Ballast water introduction
- Can survive wide range of temp. & oxygen levels
- Can live directly on mud and sand
- Commonly found at 100 feet and deeper

Quagga vs. Zebra Mussels

Zebra →



Quagga →



- More effective filter feeders
- Thrive at greater depth and cooler temps
- May out-compete ZM

- Quagga - rounder sides & convex underside →

- ZM - triangular shape & flat underside →

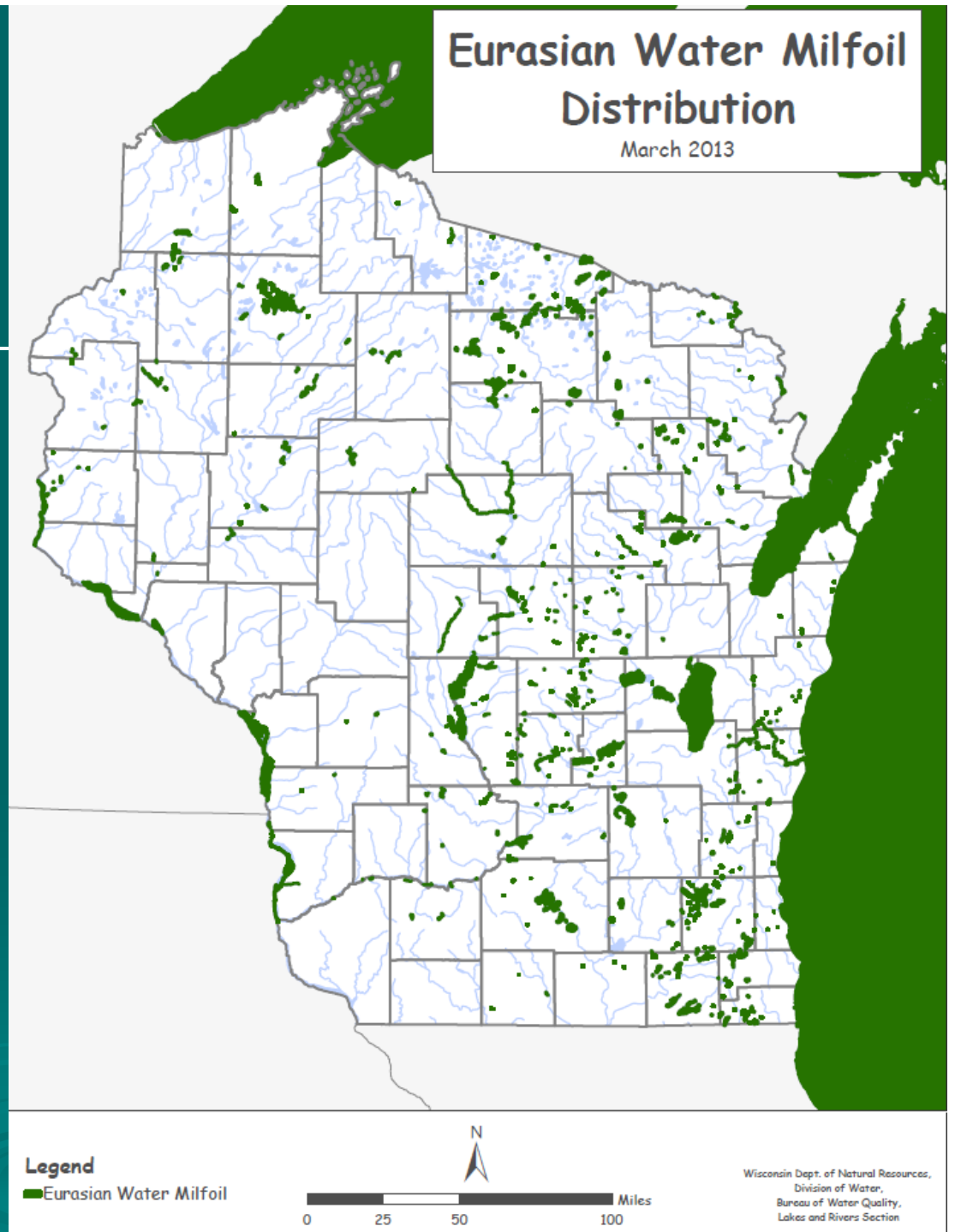


Eurasian Water-milfoil



- First found in WI in 1960s
- Currently found in 741 waterbodies (April 2014)
- Forms dense mats - interferes with water recreation
- Can spread from small fragments

Eurasian Water-milfoil Distribution



Purple Loosestrife

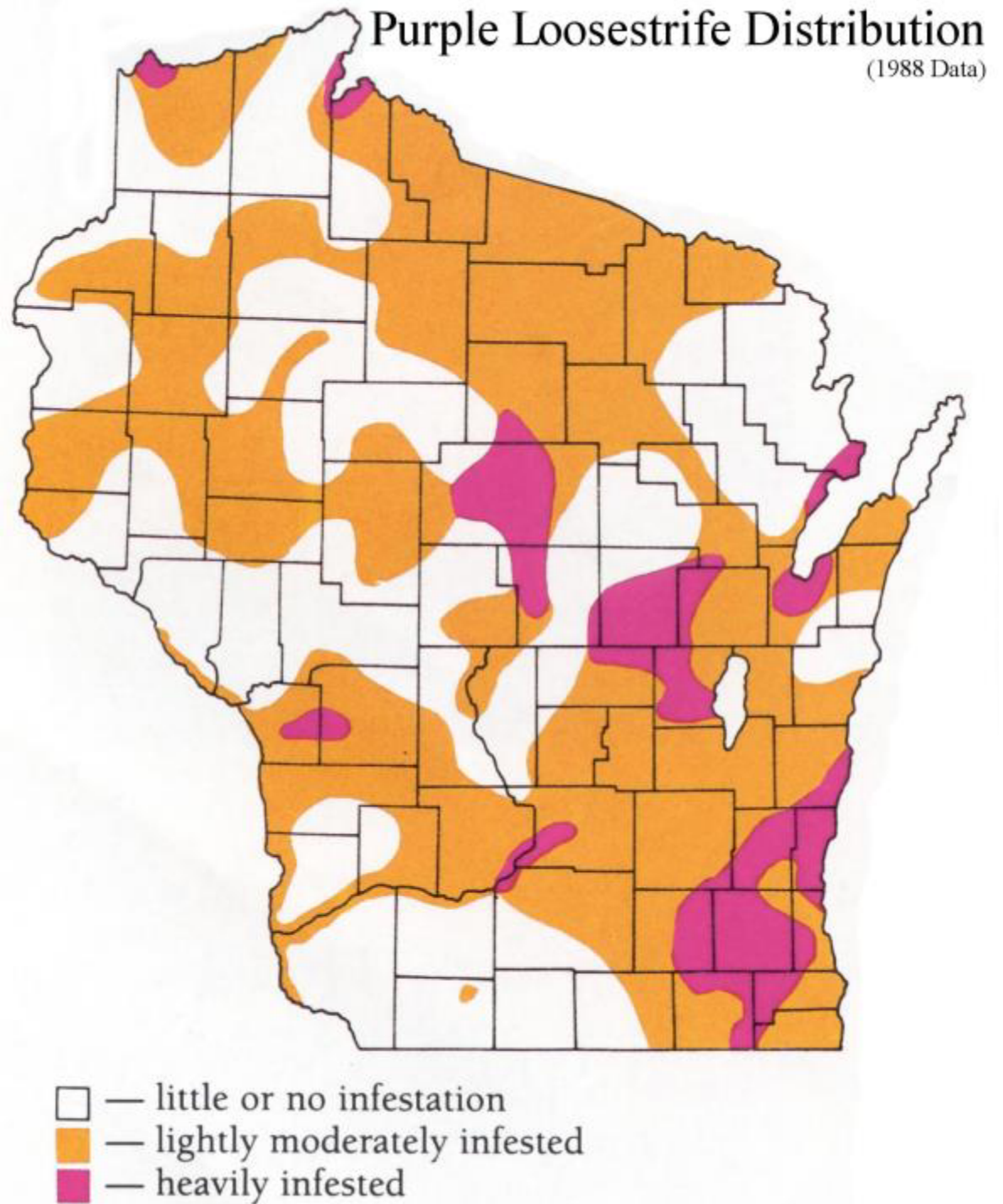


Linda Wilson, University of Idaho, Bugwood.org

- Imported from Europe for gardens (late 1800s), also seeds in ballast water
- Crowds out native wetland species
- Spreads rapidly: >1 million seeds annually, plus vegetative spread

Purple Loosestrife Distribution

Purple loosestrife is now found in every county in WI.



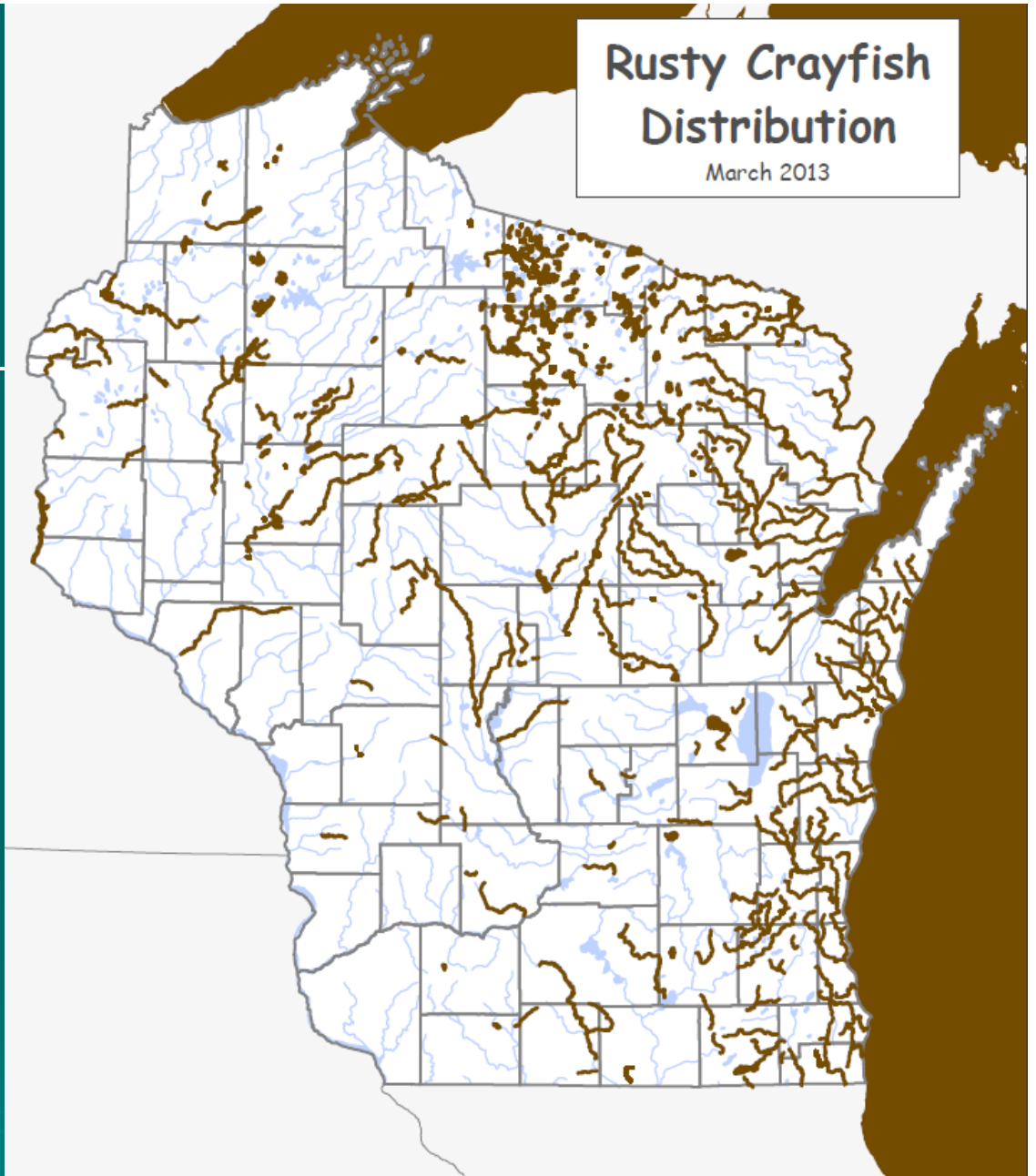
Rusty Crayfish



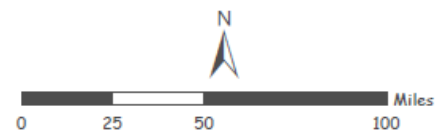
ID tip: Dark, rusty spot
on each side of carapace.

- Brought to WI as bait 1960's
- In 536 waterbodies (April 2014)
- Severely reduce aquatic vegetation, impacting spawning
- Aggressive; compete with native crayfish and fish for cover and food

Rusty Crayfish Distribution

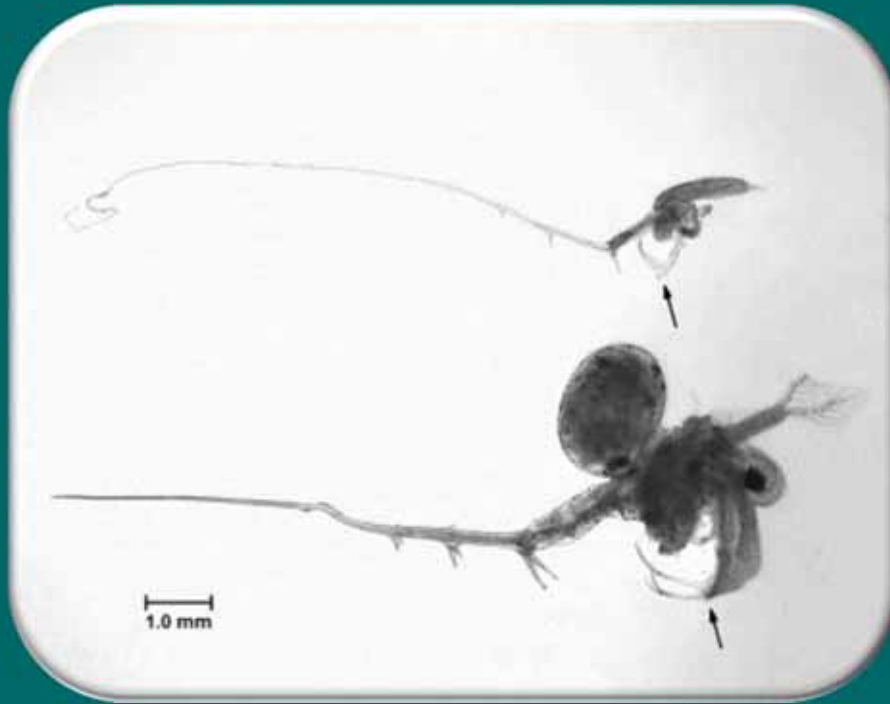


Legend
■ Rusty Crayfish



Wisconsin Dept. of Natural Resources,
Division of Water,
Bureau of Water Quality,
Lakes and Rivers Section

Spiny Waterfleas



- Ballast water introduction to Great Lakes in 1980s
- Found in 11 lakes & rivers
- Disrupt food chain & harm native fish
- Foul fishing gear—form gummy clumps

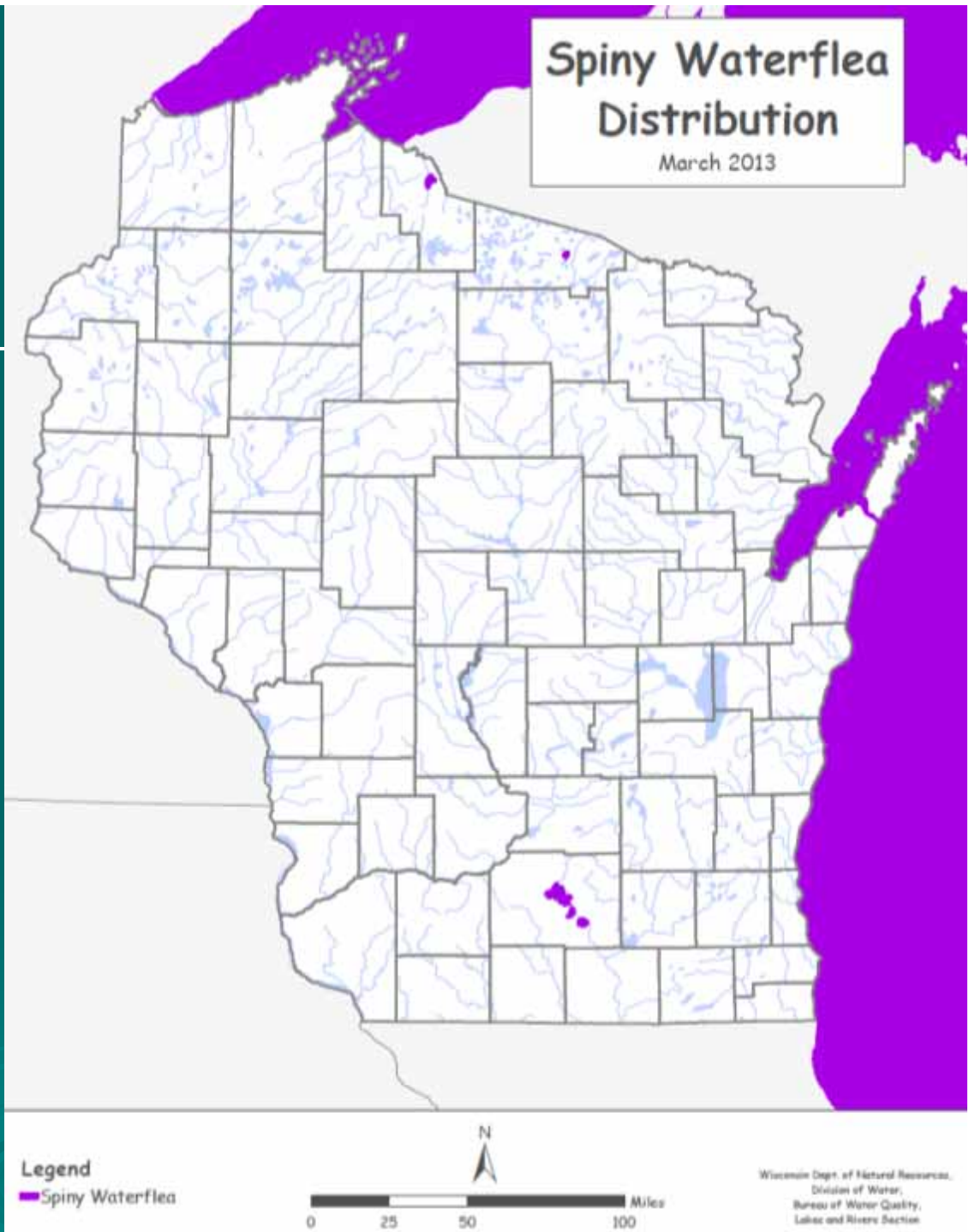
Spiny Waterflea Distribution

Lake Superior & Lake Michigan

Iron County
Gile Flowage

Vilas County
Stormy Lake

Dane County
Lake Medonta
Lake Monona
Lake Waubesa
Lake Kegonsa



Wisconsin's AIS Program

Prevent introduction and limit the spread of aquatic invasive species



Program Goals

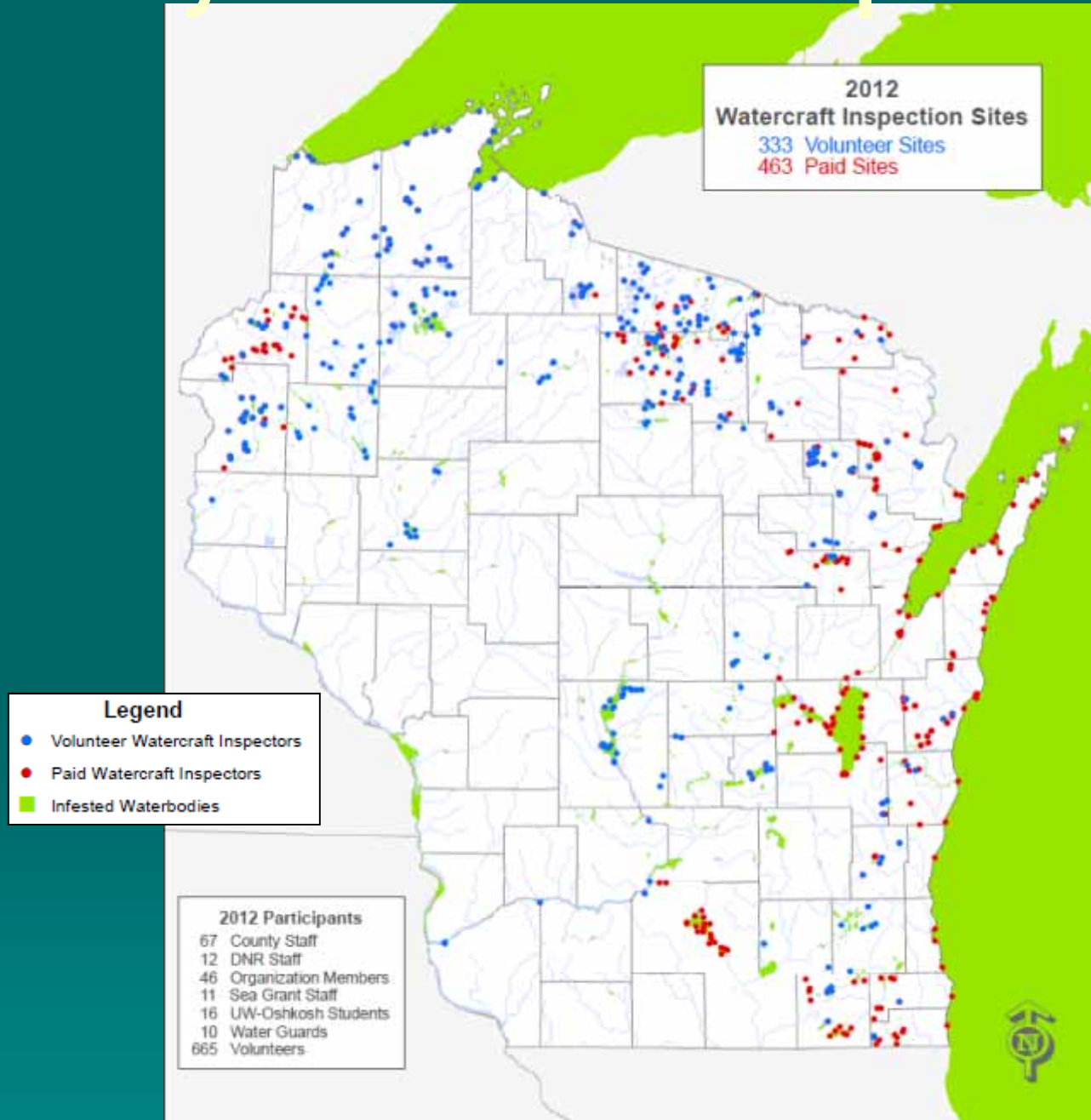
- Focus on containment
- Increase AIS awareness & responsible behaviors
- Strengthen partnerships



AIS Program Elements

- Education & Outreach
- Watercraft Inspection
- Citizen Lake Monitoring
- Purple Loosestrife Biological Control
- Aquatic Invasive Species Grants
- Research
- Rules to Prevent Spread

Why watercraft inspection?





same prevention methods



AIS Prevention Message

- **INSPECT** boats, trailers, and equipment.
- **REMOVE** all attached aquatic plants and animals.
- **DRAIN** all water from boats, vehicles, and equipment.
- **NEVER MOVE** plants or live fish away from a waterbody.
- **BUY** minnows from a WI bait dealer. Use leftover minnows only under certain conditions.

Current AIS Regulations

- **NR 40**
 - Classification of invasives into two categories: Prohibited or Restricted
 - Preventive measures required
 - INSPECT
 - REMOVE
 - DRAIN
 - NEVER MOVE

Current AIS Regulations (cont'd)

- **VHS regulations**
 - All water must be drained from boats and equipment – up to 2 gal may be used for minnows.
 - You may take leftover minnows away from any state water and use them again on that same water, or on other waters, but only if no lake or river water, or other fish were added to their container.
 - You may not transport any live fish or fish eggs away from any state waters.





**What you really need
to know about AIS...**



Inspectors DO make a difference!

How it all began...



Clean Boats, Clean Waters

- Trains volunteers, citizens, and staff to conduct boater education campaigns in their communities
- Over 2,500 people trained since 2004





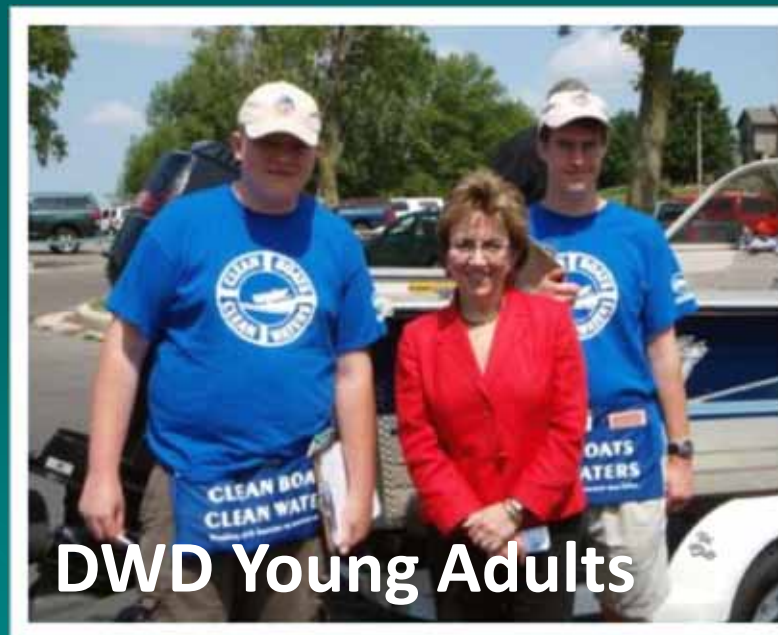
Citizen Volunteers



DNR Staff



Student Interns



DWD Young Adults

Recruiting Volunteers

- Commit volunteers with: newsletters, phone call, personal visits
- Develop a recruiting/training packet
- Appoint a coordinator to schedule and organize volunteer hours
- Select optimum days and high use landing sites



Manitowoc Co. Lakes Council

Retaining Volunteers

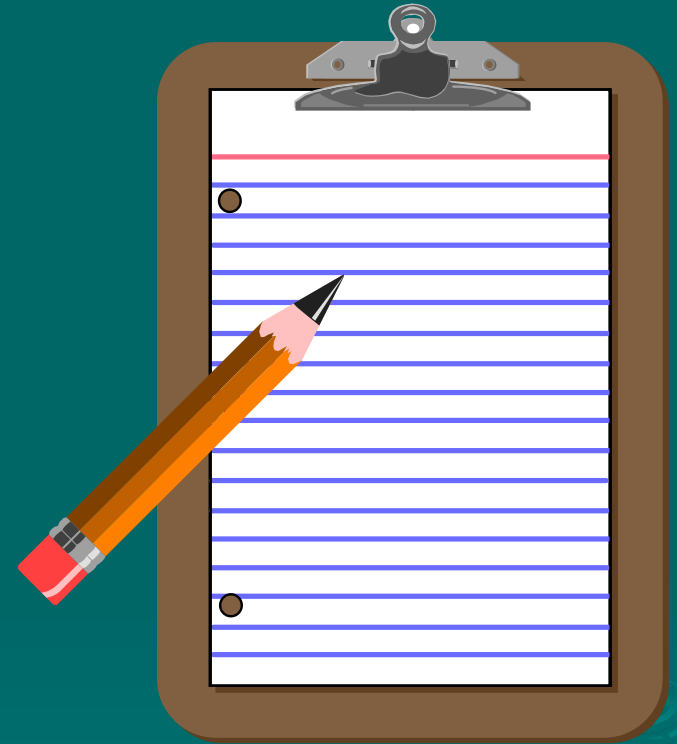
- Generous thank-you!
- Offer supplies
 - T-shirt & hat
 - Water
 - Sun tan lotion
 - Bug spray
- Publish volunteer names
- Advertise accomplishments
- Awards and certificates
- Celebrate!



Waupaca Chain Of Lakes

Materials Needed

- ✓ CBCW T-shirt or sticker
- ✓ Clipboard & pencil
- ✓ Boat landing script
- ✓ Watercraft Inspection form & Check Point List
- ✓ Tool kit
- ✓ List of lakes identified with AIS
- ✓ Plastic bags & marker
- ✓ Cell phone & local contacts
- ✓ Camera and Violation form



Getting Started: Inspector Duties

- Inform and educate boaters
- Perform watercraft inspections
- Collect and report watercraft data



Boat Landing Message

- Discuss prevention steps
 - **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 waterbody.

Boat Landing Message

- Discuss the AIS preventive actions (which are now law)
- Perform a watercraft check –
Involve boater!
- Offer a SAH sticker -
commitment and prompt





Notice: Information is collected under s. 33.02, Wis. Stats. Personally identifiable information, including names of volunteers, will be broadly distributed in conjunction with lakes data.

Inspector Name(s)	Date	Start Time <input type="radio"/> am <input type="radio"/> pm	End Time <input type="radio"/> am <input type="radio"/> pm	Total Hours Spent:	Paid: _____ Volunteer: _____
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Waterbody Name	County	Landing Location
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Boat Was...		Questions to Ask Boater						Was boat used during the past 5 days on a different waterbody?		If YES, where?		Discuss Following Prevention Steps with Boater		Number of People Contacted	I feel confident that boater understands the steps necessary to prevent the spread of AIS. (Check one)			
		Have you been contacted by a watercraft inspector this season?		Are you willing to answer a few questions?		Y									N		Don't know	
Entering	Leaving	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N					
												WI Law requires boaters to take the following steps when leaving a boat landing: Steps 1 & 2: Inspect boat, trailers and equipment and remove any attached plants/animals. » Have you heard of this before? (see prompt)						
												Step 3: Drain all water from boats, vehicles and equipment. » Do you have any questions? (see prompt)						
												If angler, state following steps: Step 4: Drain water from livewells and containers holding your catch. » This is a relatively new law. Were you aware that this is required? (see prompt)						
												Do you use live bait? (If YES, share message below.) Bait Message: If live bait comes in contact with lake/river water, it can only be used on that same waterbody or discarded in trash. (bait=minnows/leeches/worms)						
												» Do you have any questions on this law as it can be a little confusing? (If yes, see Prompt and offer bait sticker/brochure)						

TOTALS: Enter the totals & waterbody information into SWIMS at <http://dnr.wi.gov/lakes/cbcw-data>

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Comments:

New Prompts Handout

- Resource for inspector
 - Reminder of why steps important
 - Leads to discussion rather than just information
 - Local concerns addressed
- Diagram layout simple & easy to read
- Quick visual reminder for live bait

AIS Prevention Step Prompts to Assist Inspector

If boaters are not familiar with the prevention steps or have questions, help them understand the reasons for taking these actions. You can use the prompts below to assist you in your explanation and discussions at the boat landing. **Remember the goal is to make this as relevant as possible to the boater by localizing the issue through the conversation.**

Steps 1 & 2 – INSPECT AND REMOVE

Why this is important:

Plants and animals can easily attach to boat/equipment or become entangled in boat motors and fishing lines and then be moved to another lake. This is a concern in this area because- **(ADD LOCAL CONCERNS HERE)**

Step 3 – DRAIN BOAT AND EQUIPMENT

Why this is important:

Many organisms such as spiny water flea, juvenile zebra mussels, or plant fragments (use organisms that are of concern in your area) are microscopic and invisible to the naked eye and easily transported in water from one waterbody to the next. We know that many of the boaters that frequent our lake also spend time at- **(ADD LOCAL CONCERNS HERE)**

Step 4 – DRAIN LIVEWELLS & CONTAINERS HOLDING CATCH

LIVE BAIT MESSAGE

For Live Bait specific questions -

If bait comes in contact with water that contains AIS, the bait or water within the container can carry AIS and might be transported to another waterbody.

Types of Live Bait:



TRASH



CBCW 2014

Collecting Data



- Determine traveling patterns of recreational users
- Useful data for lake planning grants, local ordinance reviews

Efforts for 2013:

114,959 boat inspections

249,027 people contacted

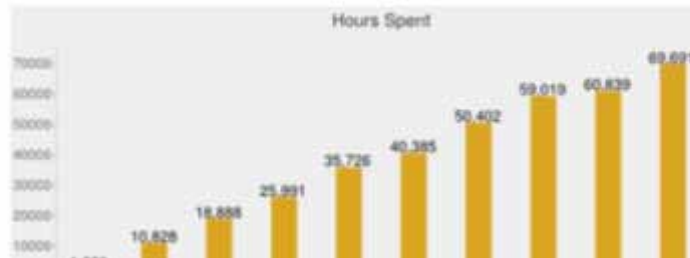
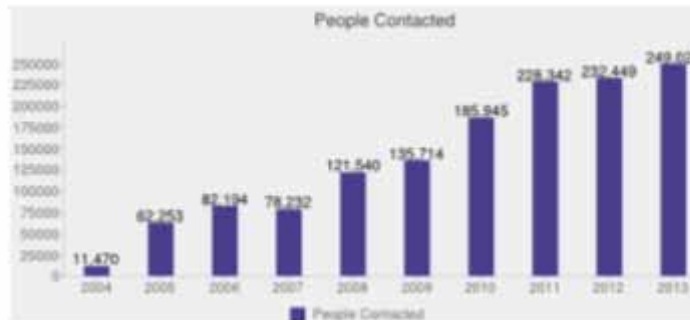
69,691 hours spent



Watercraft Inspection Results

Location:

Watercraft Inspection Efforts **Boater Statistics** **Projects** **Landings**



Aquatic Invasive Species

Contact Information

For information on Lakes in Wisconsin, contact:

[Wisconsin DNR Lakes](#)
Division of Water
Bureau of Watershed
Management

[Clean Boats, Clean Waters
Contacts](#)

Handling a Violation

Do your homework beforehand...



seppo.net

YOU OVERPOPULATE
THE LAND AND DESTROY
EVERYTHING!!!

SURE...

Seppo Kämönen 2011/seppo.net



How to Change Boater Behavior

- Educational materials
- Prompts (decals, stickers)
- Personal contacts
- Modeling behavior
- Social diffusion



Steps for an Effective Watercraft Inspection Program


- Determine boat landing ownership & have up-to-date AIS signage!
- Maintain effective inspection hours
- Develop a plan to recruit, train, and retain inspectors
- Wear Clean Boats, Clean Waters t-shirts or stickers
- Develop an accurate and concise message



Steps for an Effective Watercraft Inspection Program

- Know what educational materials are available and who to contact
- Keep and report watercraft inspection records
- Report any suspect specimens
- Encourage others!



An underwater photograph of a pond. The water is a deep, clear green. Large, round lily pads float on the surface, some showing signs of being eaten. Numerous green stems and roots of the lily pads are visible, crisscrossing the frame. The lighting is soft, creating a serene and natural atmosphere.

**The major influence on our attitudes
and behavior is not the media, but
rather our contact with other people.**

“Fostering Sustainable Behavior” Doug McKenzie-Mohr, William Smith

CBCW Resources & Gear

- **Resources**

- Watercraft Inspection Manual
- Tool kit
- DVDs
- Web site: www.uwsp.edu/cnr/uwexplakes/CBCW

- **Gear**

- T-shirts
- Aprons
- Hats
- Stickers



Please Contact Us!

- For more information contact:

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- To order t-shirts, kits, handbooks, aprons, or hats, contact Erin.
- To download materials & presentations, visit our web site:
www.uwsp.edu/cnr/uwexplakes/CBCW



Thank you!