

Polk County Response to Early Detection Aquatic Invasive Species

The primary purpose of this document is to outline the Polk County Land and Water Resources Department (LWRD) response to the early detection of aquatic invasive species discovered in Polk County. Although this document is useful for new detections of all aquatic invasive species, the LWRD response will differ based on the species discovered. Aquatic invasive species which do not already exist in Polk County will elicit a more detailed response. If species new to Wisconsin are found in Polk County, LWRD will primary rely on direction from the Wisconsin Department of Natural Resources.

Polk County Response to Early Detection Aquatic Invasive Species

Early detection, reporting, and verification

1. If the species was found by a volunteer, gather relevant information to complete the WDNR Aquatic Invasive Incident Report ¹ (Appendix A)
2. Complete the WDNR Aquatic Invasive Incident Report
3. Photograph the specimen
4. Preserve and transport the specimen to the Regional AIS Coordinator
5. Conduct a site visit to verify the location and population size

Communication

1. Alert partners if new ² AIS is confirmed
 - a. Volunteer reporting the AIS
 - b. Lake or river organization board
 - c. Lake service providers
 - d. Polk County Association of Lakes and Rivers: Karen Engelbretson and Larry Bresina
 - e. St. Croix River Association: Angelique Dahlberg
 - f. National Park Service: Byron Karns
 - g. St. Croix Chippewa Indians of Wisconsin Environmental Services: Jeremy Bloomquist
 - h. U.S. Fish and Wildlife Service: Dave Wedan
 - i. Wisconsin Department of Natural Resources: Alex Smith, Jeremy Bates, Maureen Ferry
 - j. Minnesota partners including Minnesota Department of Natural Resources, St. Croix Basin counties and watershed districts ³
2. Consider developing information to provide to residents, with assistance from lake/river group
3. Consider developing a press release for local papers, with assistance from lake/river group
4. Consider the need for a public informational meeting
5. Assess the need to develop a task force

¹ [3200-125 Aquatic Invasive Plant Incident Report](#) or [3200-126 Aquatic Invasive Animal Incident Report](#)

² New populations of AIS common in Polk County (curly leaf pondweed, purple loosestrife, Chinese and banded mystery snails, rusty crayfish) will only be reported to the volunteer reporting the AIS, the relevant lake organization board, and the Wisconsin Department of Natural Resources

³ Minnesota partners will be notified of species found for the first time in the St. Croix Basin

Task Force Formation as a Response to Early Detection Aquatic Invasive Species

If a task force is deemed necessary, LWRD will provide a facilitation and/or leadership role ⁴

The primary goals of a task force will include:

Coordination

1. Identify task force members and partners
2. Identify task force coordinator
3. Identify lead coordinators for monitoring, outreach, control, and implementation

Monitoring

1. Identify an ideal monitoring plan for the waterbody and for surrounding waterbodies
 - a. Designate partners willing to complete the monitoring plan
 - b. Determine gaps in monitoring that can't be completed by partners and determine how to address gaps
 - c. Develop a plan for sharing monitoring results, including data entry into SWIMS

Outreach

1. Identify outreach methods and messages
 - a. Determine the targeted audience for each method and message
 - b. Determine the lead organization to accomplish each method and message
 - c. Identify outreach materials that need to be developed
 - d. Implement an outreach plan

Control

1. Identify available control methods
2. Identify an ideal control plan
3. Research and implement a control plan

Implementation

1. Determine if grant funding is required to accomplish gaps in monitoring, outreach, and control
 - a. Identify grant applicant and partners
 - b. Identify grant deliverables
 - c. Work collaboratively to apply for funding
2. Determine the need for continued task force meetings
3. Annually review and document implementation progress
 - a. Document actions completed, in progress, or not completed within the timeline
 - b. Determine remedial steps to move towards completing goals as forecasted
 - c. Identify current and future barriers to implementation

⁴ Example task force notes for Deer Lake (zebra mussels) can be found in Appendix B

Waterbody Specific Activities to Increase the Likelihood of Early Detection of AIS

1. Form a committee to undertake AIS education, prevention, and planning activities
2. Develop an active base of educated Clean Boats, Clean Water volunteers
 - a. Participate in statewide Landing Blitz
 - b. Participate in statewide Drain Campaign
3. Develop a volunteer monitoring program: AIS Citizen Lake Monitoring Network, zebra mussel plate samplers, Project RED, and/or AIS Bridge Snapshot Day
4. Conduct professional level AIS monitoring at public boat landings and other likely areas of AIS introduction either through a volunteer program or a consultant
5. Hire a consultant to conduct a professional level whole lake point intercept plant surveys
6. Provide lake residents and visitors with tools ⁵ to identify AIS and steps for reporting AIS
7. Maintain a contingency fund for rapid response
8. Develop a list of partner contact information (template on page 1, communication)
9. Develop a species specific rapid response plan for AIS of particular concern ⁶

Citizen Steps to Report a New Aquatic Invasive Species

1. Ensure that the species hasn't already been previously found on the waterbody ⁷
2. Take a close up digital photo of the plant or animal, including in the setting where it was found
 - a. Use a coin, key, hand, or ruler for scale
 - b. Use a contrasting background
 - c. To avoid shadows, ensure the light source is behind you rather than the specimen
3. Collect 5-10 specimens
 - a. For plants: Place the entire plant (root system, leaves, seed heads, and flowers) in a plastic bag with no water, place on ice and transport to the refrigerator
 - b. For animals other than fish ⁸ : Place animals in a jar with water, place on ice, and transport to the refrigerator
4. Complete WDNR Aquatic Invasive Incident report ⁹ (Appendix A)
5. Contact your local AIS Coordinator and arrange to deliver the specimens and photos
 - a. Lake/river district or association president or designated waterbody AIS contact
 - b. Polk County Land and Water Resources Department
 - i. Katelin Anderson, Balsam Lake, 715-485-8637, katelin.anderson@co.polk.wi.us
 - ii. Jeremy Williamson, Balsam Lake, 715-485-8639, jeremyw@co.polk.wi.us
 - c. Wisconsin Department of Natural Resources
 - i. Alex Smith, Spooner, 715-635-4124, alex.smith@wisconsin.gov
 - ii. Jeremy Bates, Superior, 715-392-0807, jeremy.bates@wisconsin.gov

⁵ Tools might include signs at public boat landings, webpages, social media, handouts, lake maps with AIS information, billboards, attendance at community events, etc.

⁶ Examples for Pipe Lakes (Eurasian water milfoil and curly leaf pondweed), Bone Lake (Eurasian water milfoil), and Church Pine, Round, and Big Lakes (Eurasian water milfoil and other invasive species) can be found in Appendix C

⁷ <http://dnr.wi.gov/lakes/invasives/AISByWaterbody.aspx>

⁸ Contact local fish biologist: Aaron Cole, Barron, 715-637-6864, aaron.cole@wisconsin.gov

⁹ [3200-125 Aquatic Invasive Plant Incident Report](#) or [3200-126 Aquatic Invasive Animal Incident Report](#)

Appendix A

Aquatic Invasive Plant Incident Report

Aquatic Invasive Animal Incident Report

The purpose of this form is to notify DNR of a new species of AIS in a waterbody. Only use if you found an aquatic invasive plant on a lake where it hasn't been found previously.

To find where aquatic invasives have already been found, visit: <http://dnr.wi.gov/lakes/ais>.

Notice: Information on this voluntary form is collected under ss. 33.02 and 281.11, Wis. Stats. Personally identifiable information collected on this form will be incorporated into the DNR Surface Water Integrated Monitoring System (SWIMS) Database. It is not intended to be used for any other purposes, but may be made available to requesters under Wisconsin's Open Records laws, ss. 19.32 - 19.39, Wis. Stats.

Primary Data Collector

Name	Phone Number	Email
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Monitoring Location

Waterbody Name	Township Name	County
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Boat Landing (if you only monitor at a boat landing)

Date and Time of Monitoring or Discovery

Monitoring Date	Start Time	End Time
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Information on the Aquatic Invasive Plant Found (Fill out one form for each species found.)

Which aquatic invasive plant did you find?:
 Curly-leaf Pondweed Eurasian Water-milfoil Purple Loosestrife
 Brittle Naiad Hydrilla Brazilian Waterweed Yellow Floating Heart

Where did you find the invasive plant?

Latitude: _____ Longitude: _____

Approximately how large an area do the plants occupy?
 A Few Plants One or a few beds Many beds A Whole Bay or Portion of Lake
 Widespread, covering most shallow areas of lake Don't know (e.g. didn't check the whole lake)

Was the plant floating or rooted?
 Floating Rooted

Estimated percent cover in the area where the invasive was found (optional)

Substrate cobble, %	Substrate muck, %	Substrate boulders, %	Substrate sand, %	Bottom covered with plants, %
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Voucher Sample

Did you collect a sample of the plant (a voucher specimen) and bring it to your local DNR office? If so, which office?

Rhinelander Spooner Green Bay Oshkosh Did not take plant sample to a DNR office
 Fitchburg Waukesha Eau Claire Superior Other Office _____

Please collect up to 5-10 intact specimens. Try to get the root system, all leaves as well as seed heads and flowers when present. Place in ziplock bag with no water. Place on ice and transport to refrigerator. Bring samples, a copy of this form, along with a map showing where you found the suspect plants to your regional AIS or Citizen Lake Monitoring Coordinator at the DNR.

For DNR AIS Coordinator to fill out

AIS Coordinator(s) or qualified field staff who verified the occurrence: _____

Statewide taxonomic expert who verified the occurrence: _____
 (for list see <http://dnr.wi.gov/invasives/aquatic/whattodo/staff/AisVerificationExperts.pdf>)

Was the specimen confirmed as the species indicated above? Yes No If no, what was it? _____

Herbarium where specimen is housed: _____ Herbarium Specimen ID: _____

Have you entered the results of the voucher in SWIMS? Yes No

AIS Coordinator: Please enter the incident report in SWIMS under the Incident Report project for the county the AIS was found in. Then, keep the paper copy for your records.

The purpose of this form is to notify DNR of a new species of AIS in a waterbody. Only use if you found an aquatic invasive species on a lake where it hasn't been found previously.

To find where aquatic invasives have already been found, visit: <http://dnr.wi.gov/lakes/ais>.

Notice: Information on this voluntary form is collected under ss. 33.02 and 281.11, Wis. Stats. Personally identifiable information collected on this form will be incorporated into the DNR Surface Water Integrated Monitoring System (SWIMS) Database. It is not intended to be used for any other purposes, but may be made available to requesters under Wisconsin's Open Records laws, ss. 19.32 - 19.39, Wis. Stats.

Primary Data Collector				
Name		Phone Number		Email
Monitoring Location				
Waterbody Name		Township Name	County	Boat Landing (if you only monitor at a boat landing)
Date and Time of Monitoring or Discovery				
Monitoring Date	Start Time	End Time		
Information on the Aquatic Invasive Animal Found (Fill out one form for each species found.)				
Which aquatic invasive did you find? <input type="checkbox"/> Zebra Mussel <input type="checkbox"/> Quagga Mussel <input type="checkbox"/> Spiny Waterflea <input type="checkbox"/> Freshwater Jellyfish <input type="checkbox"/> New Zealand Mud Snail <input type="checkbox"/> Banded Mystery Snail <input type="checkbox"/> Chinese Mystery Snail <input type="checkbox"/> Rusty Crayfish <input type="checkbox"/> Red Swamp Crayfish				
Where did you find the invasive animal?				
Latitude:			Longitude:	
Measurements from where the invasive was found (optional)				
Water Temperature Degrees F / Degrees C (circle one)			Dissolved Oxygen (mg/l)	
Estimated percent cover in the area where the invasive was found (optional)				
Substrate cobble, %	Substrate muck, %	Substrate boulders, %	Substrate sand, %	Bottom covered with plants, %
If you found Zebra Mussel(s)				
Water depth where Zebra Mussels were found _____ Feet / Meters (circle one)			Total Number of Zebra Mussels Found _____	
What were the Zebra Mussels attached to? <input type="checkbox"/> Dock/pier <input type="checkbox"/> Dam <input type="checkbox"/> Rocks <input type="checkbox"/> Plants <input type="checkbox"/> Boats or Gear <input type="checkbox"/> Plate Sampler(s) <input type="checkbox"/> Logs, acorns, pine cones or other woody structure <input type="checkbox"/> Other: _____				
Size of Largest Zebra Mussel Found		Size of Smallest Zebra Mussel Found (individual measurements on back of page)		
Voucher Sample				
Did you collect a sample (voucher specimen) and bring it to your local DNR office? If so, which office? <input type="checkbox"/> Rhinelander <input type="checkbox"/> Spooner <input type="checkbox"/> Green Bay <input type="checkbox"/> Oshkosh <input type="checkbox"/> Did not take sample to a DNR office <input type="checkbox"/> Fitchburg <input type="checkbox"/> Waukesha <input type="checkbox"/> Eau Claire <input type="checkbox"/> Superior <input type="checkbox"/> Other Office: _____				

Please collect up to five specimens and bring a copy of this form, along with the sample and a map showing where you found the suspect invasive species to your regional AIS or Citizen Lake Monitoring Coordinator at the DNR.

While field collecting, specimens can easily be kept alive in a bucket or other container with just about 1/2 inch of water in the bottom. Freeze specimens at the end of the day in a ziploc bag without water. If freezing is not possible for a long period of time preservation in rubbing alcohol (except for Jellyfish - leave fully in water) is sufficient.

For DNR AIS Coordinator to fill out		
AIS Coordinator or qualified field staff who verified the occurrence: _____		
Statewide taxonomic expert who verified the occurrence: _____ (for list see http://dnr.wi.gov/invasives/aquatic/whattodo/staff/AisVerificationExperts.pdf)		
Was the specimen confirmed as the species indicated above? <input type="checkbox"/> Yes <input type="checkbox"/> No		If no, what was it?
Museum where specimen is housed: _____		Museum Specimen ID:
Have you entered the results of the voucher in SWIMS? <input type="checkbox"/> Yes <input type="checkbox"/> No		
AIS Coordinator: Please enter the incident report in SWIMS under the Incident Report project for the county the AIS was found in. Then, keep the paper copy for your records.		

Aquatic Invasive Animal Incident Report

Form 3200-126 (R 02/10)

Page 2 of 2

Length of Zebra or Quagga Mussels from Sample (if applicable)

If more than 20 zebra or quagga mussels are found, measure 20 mussels chosen randomly from the sample. If less than 20 mussels are found, measure all mussels.

Number	Length (mm)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Note: All initial discoveries should be placed in rubbing alcohol until verification by an expert is obtained.

Appendix B

Example task force notes for Deer Lake (zebra mussels)

Polk County Zebra Mussel Task Force
1/20/17
St. Croix River Association Mtg. Room

ATTENDEES

Katelin Anderson, Polk County LWRD
Jeremy Williamson, Polk County LWRD
Joan Leedy, Deer Lake Improvement Association
Pat Cororan, Deer Lake Improvement Association
Tom McBride, Deer Lake Improvement Association
Dave Wedan, US Fish and Wildlife Service
Bob Boyd, Bone Lake Management District
Angelique Dahlberg, St. Croix River Association
Alex Smith, Wisconsin Department of Natural Resources
Mark Sundeen, Wisconsin Department of Natural Resources
Byron Karns, US National Park Service
Cheryl Clemens, Harmony Environmental, facilitator

MEETING NOTES

Current Status

Deer Lake

A single zebra mussel adult was found by a lake homeowner's guest on the NE shore of Deer Lake on 9/02/16. The substrate was rocky. Later that same week Katelin Anderson and Jeremy Williamson (Polk County), Jim Miller (Deer Lake resident), and Dave Wedan (USFWS) searched shallow water in the vicinity and the public access on the NE side of the Deer Lake.

The Deer Lake Improvement Association (DLIA) sent out email notices to about 75% of lake residents and mailed a notice to all lake residents by October 1. The notice let residents know a zebra mussel was found, provided a description, and encouraged them to check docks and boats as they were pulled out of the water for the season.

The DLIA also informed dock service providers about the zebra mussel discovery and requested that they check any docks or equipment pulled out of Deer Lake. John Wright coordinated this effort. On October 20, 2016 Jim Miller and Cheryl Clemens checked docks and lifts pulled out of the water.

Jeremy Williamson reviewed suspect mussels brought in for identification. No additional zebra mussels were found in the lake.

A veliger tow taken by Byron Karns (USNPS) in July 2016 was negative.

Plate samplers installed at the boat landing by Dave Wedan (USFWS) were negative.

Big McKenzie

Zebra mussels (4-5) were found on a dock removed from Big McKenzie Lake in Burnett County in late October 2016. About the same amount were found about ½ mile away in a follow up shoreline survey. Tows were conducted, but it was likely too late in the season to detect veligers. Pamela Toshner (WDNR) is coordinating follow-up monitoring.

St. Croix River

Zebra mussels are found at the northern city limits of Stillwater to the confluence with the Mississippi (lower 21 miles).

Bass Lake (St. Croix County)

Discovered in the lake in 2010.

Minnesota

Zebra mussels are found in many lakes in the Twin Cities metro area. Angelique is working with a zebra mussel task force for several MN counties.

Monitoring Methods (Matrix created from input from project participants)

Method	Description	Cost	Comments	Evaluation
Cinder blocks/bricks	Encase with wire mesh, attach to dock or float		Wire mesh to keep carp, blue gills from eating ZMs	Works great. Place under dock for shade.
PVC Plate Sampler	Vertical series of PVC plates, mark with float	\$40-\$50/each Plans also available (Dave W.)		Worth doing but may not attract as many ZMs as the blocks.
SCUBA Divers	Examine and collect substrate	Expensive to hire divers		Not as effective as blocks.
Net Tows for Veligers	Collect water samples at various spots on the lake (combine samples)	Net: \$600 Sample analysis \$75-\$95/each	Best time is early July	Negative result does not mean adults not present
Shoreline Search	Turn rocks over and examine substrate and plants for ZMs		Can complete with volunteers or staff	
Smart Prevention	Combination of meander survey – rake collection of aquatic plants, veliger tows, boat landing survey		Polk County LWRD completes for priority sites	

Considerations for all Monitoring

- ZMs prefer shade, rocky substrate
- Will also attach to aquatic plants
- Target boat launch sites

Genetic analysis of adult zebra mussels is used to detect the source of the infestation (University of MN). It is not a monitoring method.

Deer Lake Monitoring Plan for 2017 (Tentative)

Method	Responsible Party	Cost	Comments	Needs
Cinder blocks/bricks	DLIA		Encourage lake residents to place blocks beneath docks and monitor regularly	Cinder block kits (distribute at annual meeting) Cinder block guidance: Pictures and description, ID contacts, monitoring log
PVC Plate Sampler	USFWS To be installed at boat landing Checks 2X/month	\$40-\$50/each Plans also available (Dave W.)	Install at additional locations (DLIA)? Plate from Dave W. left with LWRD for site where ZM found in 2016	
SCUBA Divers	Examine substrate looking for adult ZM	If volunteers are available, target rocky shorelines		ZM ID
Net Tows for Veligers	DLIA USNPS (1X)	Net: \$600 Sample analysis \$75-\$95/each	Best time is early July. Collect samples 2X/week from mid-June to mid-July	
Shoreline Search	DLIA	Printed guidance Email announcements	Encourage lake residents to perform shoreline search	Provide guidance: Pictures and description, ID contacts, monitoring log, target rocky shorelines
Smart Prevention (Meander, veliger tow, boat landing check)	Polk LWRD		Polk County LWRD will complete for Deer Lake	

Other Polk County Lakes and Rivers

USNPS monitoring (since mid-90s) focuses on water bodies with likely threat to the St. Croix River in Polk County. Veliger tows conducted at Bone Lake, Balsam Lake, and Deer Lake.

USFWS plate sample monitoring considers destination lakes and MN sources. Current list of monitored lakes in Polk County: Cedar, Big, Wapogasset, Deer, Long, Loveless, Balsam, Half Moon, Bone, Big Round, Big Butternut.

BASIC Zebra Mussel Monitoring plan for lakes (no detected ZMs)				
Method	Responsible Party	Cost	Comments	Needs
Cinder blocks/bricks	Lake Organizations PCALR (Coordinate outreach?)		Encourage lake residents to place blocks beneath docks and monitor regularly	Cinder block kits (distribute at annual meetings) Cinder block guidance: Pictures and description, ID contacts, monitoring log
Additional Monitoring Recommended for Priority/Destination Lakes				
PVC Plate Sampler	USFWS To be installed at boat landings Checked 2X/month	\$40-\$50/each Plans also available (Dave W.)		
Net Tows for Veligers	USNPS (?)	Net: \$600 Sample analysis \$75-\$95/each	Single sample early July	
Smart Prevention (Meander, veliger tow, boat landing check)	Polk LWRD		Lakes selected by Polk LWRD	

Develop criteria/process for identifying and explaining destination or priority lakes. Offer additional services here (?).

COUNTYWIDE ZM MONITORING AND PREVENTION OUTREACH

Method and Messages	Target Audience	Lead Organization	Funding/ Cost
<u>Presenters and Canned Presentation:</u> All topics below	Lake Organizations at annual meetings	Polk County LWRD (?) PCALR (?)	Rapid Response Grant (?)
<u>Handout:</u> ZM ID, methods for monitoring, emphasize cinder blocks – build your own, shoreline surveys	Lake Organizations to Lake Residents	Polk County LWRD (?) PCALR (?)	Rapid Response Grant (?)
<u>Example Newsletter Articles:</u> All topics (could follow presentation, or break up into several articles)	Lake Organizations to Lake Residents		
<u>Press Release, handout:</u> List ZM waters, explain decontamination procedures, don't have carpeting on boats, waiting times/temps. after removing boats and equipment from these lakes. (MN protocol for guidance)	General Public Dock Service Providers		Rapid Response Grant (?)
<u>Clean Boats, Clean Waters Contacts:</u> Provide information about ZM lakes (map/list), emphasize draining and checking if boaters came from these lakes	Boaters at CBCW Landings CBCW staff receiving training	Polk County LWRD to Lake Organizations w/ CBCW	Rapid Response Grant (?)
<u>Coordination with tournament organizers ??:</u> Drain live wells, drop motors; don't bring your boat here if you've been these (ZM waters) without decontamination; decontamination procedures	June Jam: Muskies, Inc.; Indianhead Musky Tournament; anglers participating in fishing tournaments (If <20 participants no permits, otherwise on WNDR web site)		Rapid Response Grant (?)
<u>Public Meeting with Press Release:</u> Recent ZM discoveries, monitoring, all prevention topics			Rapid Response Grant (?)
<u>Presentations and Curriculum</u>	Schools	LWRD, other agencies, lake organizations	

ADDITIONAL NOTES

Clean Boats, Clean Waters data provides where boat came from most recently, number of launches

Landing cameras provide number of launches

Rapid response grant should be applied for before March or after July

INFO TO GATHER

Pine County Risk Assessment (Angelique)

Example Monitoring Plan (Byron)

Develop baseline of lakes (use CLMN data, add calcium samples (?)) – Byron says no)

NEXT MEETING

Thursday, February 9

1-3 p.m.

St. Croix River Association, 230 S. Washington Street, St. Croix Falls, WI

Meeting Topics

ZM Control Options (Who can present this information?)

Polk County Monitoring and Prevention Strategy (who takes lead?)

- Coordinate with Polk County AIS Strategic Plan / PCALR Review and Update in 2017
- Coordinate St. Croix River Watershed AIS Strategic Plan

Example Zebra Mussel Monitoring Strategy (Byron)

Identifying Priority Lakes for Monitoring and Outreach

Minnesota ZM Strategy Report (Angelique)

POLK COUNTY ZEBRA MUSSEL TASK FORCE

Thursday, February 9

1-3 p.m.

St. Croix River Association, 230 S. Washington Street, St. Croix Falls, WI

ATTENDEES

Katelin Anderson, Polk County LWRD

Jeremy Williamson, Polk County LWRD

Pat Cororan, Deer Lake Improvement Association

Tom McBride, Deer Lake Improvement Association

Dave Wedan, US Fish and Wildlife Service

Bob Boyd, Bone Lake Management District

Angelique Dahlberg, St. Croix River Association

Byron Karns, US National Park Service

Cheryl Clemens, Harmony Environmental

Updates

- ZM Workshop scheduled for April 24 (will include monitoring, control, decontamination)
- Polk County AIS Strategic Plan <http://www.co.polk.wi.us/landwaterreports>
PCALR Review and Update in 2017 (most likely June meeting)
- St. Croix River Watershed AIS Strategic Plan <https://www.stcroixriverassociation.org/invasive-species/ais-strategic-plan>
- Minnesota ZM Strategy Report (Angelique)

Example Zebra Mussel Monitoring Worksheet (Byron provided)

- Handout available
- 3-tiered approach suggested
- Different than matrix from meeting 1
- Either/both can be used as a starting point for further discussion of overall strategy

Rapid Response Grant Application(s)

- Money available after July
- Expenses retroactive for up to 6 months
- No application at this time, DLIA might pursue

Outreach Matrix

- Reviewed , updated, and assigned tasks
- Will develop list of available resources (Katelin is point person), send links and examples to Katelin, then re-evaluate need to create unique handouts
- We will share whatever we develop with each other

COUNTYWIDE ZM MONITORING AND PREVENTION OUTREACH¹

Method and Messages	Target Audience	Lead Organization
<u>Presenters and Canned Presentation:</u> All topics below	Lake Organizations at annual meetings	Polk County LWRD
<u>Handout:</u> ZM ID, methods for monitoring, emphasize cinder blocks – build your own, shoreline surveys	Lake Organizations to Lake Residents	Polk County LWRD (?) PCALR (?) DLIA
<u>Cinder Block guidance:</u> Pictures and description, ID contacts, monitoring log	Lake Residents	DLIA
<u>Example Newsletter Articles:</u> All topics (could follow presentation, or break up into several articles)	Lake Organizations to Lake Residents	Polk County LWRD
<u>Press Release, handout:</u> List ZM waters, explain decontamination procedures, don't have carpeting on boats, waiting times/temps. after removing boats and equipment from these lakes. (MN protocol for guidance)	General Public Dock Service Providers	Polk County LWRD
<u>Clean Boats, Clean Waters Contacts:</u> Provide information about ZM lakes (map/list), emphasize draining and checking if boaters came from or leaving these lakes	Boaters at CBCW Landings CBCW staff receiving training	Polk County LWRD to Lake Organizations w/ CBCW
<u>Coordination with tournament organizers:</u> Drain live wells, drop motors; don't bring your boat here if you've been these (ZM waters) without decontamination; decontamination procedures	June Jam: Muskies, Inc.; Indianhead Musky Tournament; anglers participating in fishing tournaments (If <20 participants no permits, otherwise on WNDR web site)	DLIA Bone Lake MD (Friday night Indianhead mtg.)
<u>Public Meeting with Press Release:</u> Recent ZM discoveries, monitoring, all prevention topics		
<u>Presentations and Curriculum</u>	Schools SCF 5 th grad camp (DLIA)	LWRD, other agencies, lake organizations
<u>Signs</u>	Post where ZM have been discovered – e.g. Deer Lake	DLIA

¹ Existing AIS grants or new Rapid Response grants might fund these activities

Appendix C

Pipe Lakes (Eurasian water milfoil and curly leaf pondweed)

Bone Lake (Eurasian water milfoil)

Church Pine, Round, and Big Lakes (Eurasian water milfoil and other invasive species)

Eurasian Water Milfoil (EWM) and
Curly Leaf Pondweed (CLP)
Rapid Response Plan

Pipe Lakes Protection and
Rehabilitation District
“The District”
2013

WDNR Early Detection and Response Project – Rapid Response Plan Introduction

From:

Aquatic Invasive Species Control Grant Program – Guidelines and Application

Wisconsin Department of Natural Resources

PUB-CF-020 2012 Rev. 5-12

Early Projects:

“Identification and removal by approved methods, of small pioneer populations of aquatic invasive species in the early stages of colonization, or re-colonization. For rooted aquatic plants like Eurasian Watermilfoil, a pioneer infestation is defined as a localized bed that has been present less than 5 years, and is less than 5 acres in size or less than 5% of lake area which ever is greater. Control of a recolonization following the completion of an established population control project is also eligible.

Application Deadlines:

Offered continuously on a first-come first served basis and funded in order of approval.

Funding Possibilities:

Maximum amount of the State share is 75% of the project cost of up to \$20,000.”

Suspected EWM and/or CLP Identified

Notify Dick Hollar, Rapid Response Coordinator at 715-822-5317
And if not available contact: Tom O'Hern at 651-428-5532
Whoever is available will coordinate rapid response efforts
-Accurately identify location(s)

Process Sample

- collect entire specimen including roots & stem
- Place in sealable bag
- Ice or refrigerate
- label with date, collector's name, lake name, town and county
- attach lake map with location marked & GPS coordinates recorded
- Submit sample to WDNR Spooner Lakes Team within 3 days

Notify WDR Spooner Lakes Team
WDNR decides need for lake visit

Notify The District Commissioners of suspected sample

Notify District if appropriate

WDNR Spooner Lakes Team
Pam Toshner or Alex Smith
715-635-4073 715-635-4121
PLPRD Rapid Response Coordinator
Dick Hollar
715-822-5317
The District Commissions Chair
Greg Warner
(507) 202-5233

WDNR Analyzes Sample

Confirmed as EWM or CPL

-notify The District Commissioners

-if EWM/CPL does NOT hinder riparian access or boat traffic then place buoys on the infestation's perimeter. If it does hinder access, obtain riparian's permission and signature on Form 8700-058 then place buoys.

http://dnr.wi.gov/topic/waterways/permit_apps/waterway_marker_application_permit_form_8700-058.pdf

-notify warden of infestation and buoy placement. Place notice & map in Public Landing Display Board

-submit marker application & permit (form 8700-058), lake map with location marked and buoy photo to Township representative

-if location blocks lake access obtain direction from WDNR Spooner Lakes Team before buoy placement

-complete rapid response grant application (form 8700-307) , submit to WDNR Spooner Lakes Team
<http://dnr.wi.gov/files/pdf/forms/8700/8700-307.pdf>

Sample is **NOT** EWM or CPL

-return to monthly monitoring

-notify The District Commissioners

Positive Sample

WDNR Determines Management Strategy

Infestation is a localized Pioneer Colony

(less than 5 acres or 5% of surface area)

- Conduct sampling to define perimeter and density of colony
- Identify “at risk” areas (boat launch, creek culvert, etc.)
- WDNR approves grant and assigns start date. A rapid response grant project may begin before receiving grant paperwork
- Notify property owners
- Place notice in Public Landing Display Board
- Contact appropriate treatment operator. PLPRD Commission agrees to contract and cost
- Initiate EWM and/or CPL treatment

Infestation is an Established Population

(greater than 5 acres or 5% of surface area)

- Place notice in Public Landing Display Board and notify property owners of infestations
- Hire consultant to prepare and conduct a point-intercept aquatic plant management plan (APMP) to establish a baseline
- Submit APMR to WDNR 60 days prior to applying for a control grant
- WDNR approves APMP and recommends a treatment plan for the following spring
- Apply for control grant
- Contact appropriate treatment operator, agree to contract and cost terms
- Initiate plant baseline survey

Post Treatment Follow-Up

Localized Pioneer Colony

(less than 5 acres or 5% of surface area)

- Perform rake sampling of treated area monthly for at least one season year after EWM/CPL is no longer detected
- Keep buoys and landing signage in place until treated area is free of EWM/CPL for two seasons
- Continue monthly lake monitoring, education and inspection programs
- Develop an aquatic plant management plan

Infestation is an Established Population

(greater than 5 acres or 5% of surface area)

- Consultant conducts a post treatment plant survey in mid-July to mid-August
- Compare results with pre-treatment survey
- WDNR assesses effectiveness of treatment and recommends next steps
- Continue monthly lake monitoring, education and inspection programs

Aquatic Plant Control Services

Lake Management, Inc
10400 18th St North
Marine on the St. Croix

Phone: 651-443-3283
Fax; 651-433-5316
Email: info@lakemanagementinc.com

Aquatic Engineering, Inc
P.O. Box 3634
LaCrosse, WI 54602

Phone: 866-781-8770
Fax: 608-781-8771
Email: info@aquaticengineering.org

Lake Restoration, Inc.
12425 Ironwood Circle
Rogers, MN 55374

Phone: 763-428-9777
Fax: 763-428-1543
Email: lrmal@lakeresoration.com

Midwest Aqua Care
10001 Great Plains Blvd
Chaska, MN 55318

Phone: 877-430-0143
Email: support@midwestaquacare.com

Northern Aquatic Services, Inc
1061 240th St
Dresser, WI 54009

Phone: 715-755-3507

Aquatic Plant Management Plan Consultants*

Northern Environmental
330 South 4th Avenue
Park Falls, WI 54552

Phone: 800-498-3913
Website: www.northernenvironmental.com
Email: rwatkins@northernenvironmental.com

Onterra, LLC
135 S Broadway, Suite C
DePere, WI 54115

Phone: 920-338-8860
Website: www.onterra-eco.com
Email: thoyman@onterra-eco.com

Aquatic Engineering
LaCrosse, WI 54602

Phone: 866-781-8770
Website: www.aquaticengineering.org
Email: info@aquaticengineering.org

Harmony Environmental
516 Keller Ave. S
Amery, WI 54001

Phone: 715-268-9992
Website:
Email: harmonyenv@amerytel.net

***The APMP consultant should not be the same company that is providing the control (treatment) service**

Contacts

WDNR Spooner Lakes Team

Alex Smith, Lake Management Coordinator

Phone: 715-635-4124

Pamela Toshner, Lake Coordinator

Phone: 715-635-4073

Rapid Response Coordinator: Dick Hollar 715-822-5317

The District Commissioners:

- Chair: Gerg Warner gregpnpl@gmail.com 507-202-5233
- Treasurer: Tom O'Hern tohern@gmail.com 651-428-5532
- Secretary: Jan Breyer jbreyer@cp-limited.com 612-669-5212
- Communications: Stephanie Boysen stephanie.boysen@cummins.com 763-614-9865
- Special Events: Tim Schmuck tdschmuck@gmail.com 612-247-4206
- County Rep: William Johnson william.johnson@co.polk.wi.us 715-485-9237
- Township Rep: Joe Zaspel joerz@centurytel.net 715-822-2356

Appendix D

Rapid Response for Early Detection of Eurasian Water Milfoil¹

1. The Bone Lake Management District Board (BLMD) has ultimate responsibility for implementing this protocol. The Aquatic Invasive Species Network of the BLMD has responsibility for day-to-day implementation.
2. Bone Lake residents and other users of Bone Lake will be informed of who to contact if they see a plant in the lake they suspect might be Eurasian water milfoil (EWM). Signs at public and resort landings will direct anyone who identifies suspected EWM to contact the Monitoring Coordinator. The following are the steps that will be taken if EWM is suspected in Bone Lake.
3. If the suspected plant appears to be EWM, the Monitoring Coordinator will inform the Chair of the BLMD, the Polk County Land & Water Resources Department (PC LWRD), the APM Consultants, and the Wisconsin Department of Natural Resources (WDNR) of suspected EWM in Bone Lake.
4. Mark the location of suspected EWM and confirm whether it is EWM.

Within 48 hours of a credible report of EWM in Bone Lake, the location of the suspected EWM will be marked with a uniquely identified small float, and a GPS waypoint will be entered for the float.

Within 72 hours of a credible report of EWM in Bone Lake, the PC LWRD or the WDNR will examine the plant(s) suspected of being EWM to confirm identification. If there is any question about whether the plant(s) are EWM, appropriate resources at and WDNR or UW Herbarium will be consulted.

Two entire intact rooted adult specimens of the suspect plants will be collected and bagged and delivered to the WDNR. One of these specimens will be mounted and forwarded to the herbarium at the University of Wisconsin – Stevens Point or the University of Wisconsin – Madison.

If the suspect plants are determined to be EWM, the location of EWM will be marked with a large EWM buoy.

¹ The attached Exhibit A is a contact list for various persons involved in implementing this protocol. This list will be kept current.

5. Communicate results of the examination of the suspect plants.

Positive identification will be shared with the BLMD, PC LWRD, WDNR, APM consultants, and herbicide application.

The person(s) reporting the suspected EWM will be contacted and informed whether the presence of EWM in Bone Lake has or has not been confirmed.

If the presence of EWM in Bone Lake is confirmed, a letter will be sent within 48 hours of confirmation to all Bone Lake residents informing them of the presence of EWM in Bone Lake. In addition, notice of the EWM will be immediately posted on the BLMD web site, notices will be posted at all public and resort landings, and notice will be published in the next BLMD newsletter. The letter and the notices will inform all lake users of the approximate location of the EWM and direct them to stay away from the area marked by the EWM buoy.

The AIS Network Coordinator will coordinate these activities.

6. Determine the extent of the EWM.

As soon as possible, the extent of the EWM will be determined. For this purpose, the BLMD will engage a diver who will, to the extent feasible, remove the EWM at the same time the diver is confirming the extent of the EWM.

The Lake Monitoring Coordinator or, if not available, the AIS Network Coordinator will coordinate these activities and draw on the resources of the BLMD, PC LWRD, and WDNR

7. Select a control plan for the EWM.

The BLMD, in consultation with the APM Consultant, WDNR, and PC LWCD, will determine the most effective way to control the EWM.

The goal of the control plan will be eradication of the EWM to the maximum extent possible.

Control methods may include hand pulling, use of divers to manually or mechanically remove the EWM from the lake bottom, application of herbicides, and/or other efficacious and approved control methods.

The selection of the control method will be guided by what is the best way to assure immediate maximum control of the EWM and will not be guided by a desire to incrementally manage the EWM.

If the control plan involves the use of herbicides or other chemicals, application of the herbicides or other chemicals shall not take place until permits have been granted by the WDNR.

8. Implement the selected control plan.

Regardless of the control plan selected, it will be implemented by persons who are qualified and experienced in the technique(s) selected.

BLMD AIS contingency reserve funds may be used to pay for any reasonable expense incurred in implementing the selected control plan, and implementation will not be delayed by waiting for WDNR to approve or fund a grant application.

The BLMD Treasurer will work with the WDNR to confirm, as soon as possible, a start date for an Early Detection and Rapid Response AIS Control Grant. Thereafter, the BLMD shall formally apply for such a grant.

BLMD shall have the authority to accept donations or borrow money for the purpose of paying for control of EWM.

9. Follow up.

Frequently inspect the area of the EWM to determine the efficacy of the control measures and whether additional control is necessary.

Visually survey the entirety of Bone Lake to determine whether EWM has spread to any other parts of the lake. This survey may be carried out by Monitoring volunteers.

The BLMD, acting through the AIS Network, will commission or conduct a study to determine the cause of the EWM, evaluate the response of the BLMD to the EWM, and recommend modifications to this protocol that will improve the BLMD's ability to detect, confirm, and control EWM in Bone Lake.

EXHIBIT A

BONE LAKE MANAGEMENT DISTRICT

Chair	Bob Murphy, 715-857-5194, 612-822-5187
AIS Network Coordinator	Bob Boyd, 715-857-5495
Monitoring Coordinator	Bob Boyd

POLK COUNTY LAND and WATER RESOURCES

Jeremy Williamson, 715-485-8639

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Grants	Alex Smith, 715-635-4124
Permits and EWM Notice	Mark Sundeen, 715-635-4074

CHEMICAL APPLICATION RETAINED BY BONE LAKE MANAGEMENT DISTRICT

Lake Restoration 763-428-1543

LAKE MANAGEMENT CONSULTANT

Harmony Environmental	Cheryl Clemens, 715-268-9992
Ecological Integrity Service	Steve Schieffer, 715-554-1168

DIVERS

Ecological Integrity Service	Steve Schieffer,	715-554-1168
Polk County Land and		
Water Resources	Jeremy Williamson,	715-485-8639
Blue Water Science	Steve McComas,	651-690-9602

Appendix D. Rapid Response for Early Detection of Aquatic Invasive Species

Definition: Aquatic Invasive Species (AIS) are non-native plant species that can out-compete and overtake native plant species damaging native lake habitat and sometimes creating nuisance conditions. AIS currently in the Church Pine, Round, and Big Lake system include curly leaf pondweed (CLP), purple loosestrife (PL), narrow leaf cattail, and giant and Japanese knotweed. Additional AIS threaten the lakes and will be monitored by professional monitors or volunteers when species are added to the training program.

1. Maintain a contingency fund for rapid response to EWM or other invasive species (Lake District Board).
2. Conduct volunteer (Clean Boats, Clean Waters Crew) and professional monitoring (APM Monitor) at designated public boat landings and other likely areas of AIS introduction. If a suspected plant is found, contact the AIS ID Volunteers.
3. Direct lake residents and visitors to contact the AIS ID Volunteers if they see a plant in the lakes they suspect might be an aquatic invasive species such as Eurasian water milfoil (EWM). Signs at the public boat landings, web pages, and handouts at annual meeting will provide plant photos and descriptions, contact information, and instructions.

If plant is likely AIS, AIS ID Volunteers will confirm identification with Polk County LWCD and the WDNR and inform the rest of the Lake District Board.

- a. Take a digital photo of the plant in the setting where it was found (if possible). Then collect 5 to 10 intact specimens. Try to get the root system, and all leaves as well as seed heads and flowers when present. Place in a zip lock bag with no water. Place on ice and transport to refrigerator.
 - b. Fill out plant incident form <http://dnr.wi.gov/lakes/forms/3200-125-plantincident.pdf>
 - c. Contact WDNR staff, then deliver collected plants to the WDNR (810 West Maple Street, Spooner, WI 54801) as soon as possible to the location they specify. WDNR may confirm identification with the herbarium at the University of Wisconsin – Stevens Point or the University of Wisconsin – Madison.
4. Mark the location of suspected AIS (AIS ID Volunteers). Use GPS points (in decimal degrees and WGS 84 datum), if available, or mark the location with a small float.
 5. If identification is positive:¹

¹ **If it is an animal other than a fish**

- Be sure the suspected [invasive species](#) has not been [previously found on the waterbody](#)
- Take a digital photo of the animal in the setting where it was found (if possible). Then collect up to five specimens. Place in a jar with water; put on ice and transport to refrigerator. Transfer specimen to a jar filled with rubbing alcohol (except for Jellyfish – leave in water).
- Fill out form [3200-126 – Aquatic Invasive Animal Incident Report](#)

- a. Inform the person who reported the AIS and the board (AIS ID Volunteers), who will then inform Polk County LWRD, herbicide contractor, and lake management consultant.
 - b. Mark the location of AIS with a more permanent marker. Special EWM buoys are available. (AIS ID Volunteers).
 - c. Post a notice at the public landing (DNR has these signs available) and include a notice on the website. Notices will inform residents and visitors of the approximate location of AIS and provide appropriate means to avoid its spread (Lake District Board).
6. Hire a consultant to determine the extent of the AIS introduction (Lake District Board). A diver may be used. If small amounts of AIS are found during this assessment, the consultant will be directed to identify locations with GPS points and hand pull plants found. All plant fragments will be removed from the lake when hand pulling.
 7. Select a control plan in cooperation with the WDNR (Lake District Board). The goal of the rapid response control plan will be eradication of the AIS. Additional guidance regarding EWM treatment is found in DNR's *Response for Early Detection of Eurasian Water Milfoil Field Protocol*.

Control methods may include hand pulling, use of divers to manually or mechanically remove the EWM from the lake bottom, application of herbicides, and/or other effective and approved control methods.

8. Implement the selected control plan including applying for the necessary permits. Regardless of the control plan selected, it will be implemented by persons who are qualified and experienced in the technique(s) selected.
9. Lake District funds may be used to pay for any reasonable expense incurred during the implementation of the selected control plan, and implementation will not be delayed by waiting for WDNR to approve or fund a grant application.
10. The Lake District Board will work with the WDNR to confirm, as soon as possible, a start date for an Early Detection and Rapid Response AIS Control Grant. Thereafter, the Lake District shall formally apply for the grant.
11. Frequently inspect the area of the AIS to determine the effectiveness of the treatment and whether additional treatment is necessary (Lake District Board, APM Monitor).
12. Review the procedures and responsibilities of this rapid response plan on an annual basis. Changes may be made with approval of the Lake District Board.

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- Contact DNR staff

EXHIBIT A²

CHURCH PINE, ROUND, AND BIG LAKE PROTECTION AND REHABILITATION DISTRICT

EWM ID Volunteers and Board Contacts	Gary Ovick: 715-294-3988 (home) Mike Reiter: 715-294-3950 (home)	715-417-1770 (mobile)
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POLK COUNTY LAND AND WATER RESOURCES DEPARTMENT

AIS Coordinator Director	Jeremy Williamson: 715-485-8639 Tim Ritten: 715-485-8631
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WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Grants and EWM Notice Permits EWM Identification and Notice	Alex Smith: 715-635-4124 Mark Sundeen: 715-635-4074 Spooner Lakes Team: 715-635-4124
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HERBICIDE APPLICATOR

Bid each December

APM MONITOR

Ecological Integrity Services	Steve Schieffer: 715-554-1168
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DIVERS

Ecological Integrity Services	Steve Schieffer: 715-554-1168
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² This list will be reviewed and updated each year.