

Aquatic Invasive Species Rapid Response Plan

Upper Turtle Lake, Barron County, Wisconsin

Modified and updated from 2017 Aquatic Plant Management Plan prepared by Lake Education and Planning Services, LLC, updated in 2019, and 2021.

Introduction to Upper Turtle Lake Aquatic Invasive Species Plan

In 2012 the Wisconsin Department of Natural Resources developed a draft framework to help Wisconsin's lake leaders and lake management consultants develop rapid responses to the management of newly discovered aquatic invasive species. Early detection is essential and response is most effective if a new introduction is managed in the "pioneering stage" when it is small and not well established. This framework is not specific to any individual species because responses must be guided by case-specific facts. How a species invades, their numbers, density and distribution, proximity to other known invasions, time of year and water use are among the many variable that impact an appropriate response. With this in mind there are 8 essential steps in the process:

- ✓ Early Detection and Reporting-the most critical step in addressing a new invasive species is to know that it exists!
- ✓ Verification by plant experts
- ✓ Notification of relevant resource managers including the Wisconsin DNR
- ✓ Rapid Assessment
- ✓ Planning
- ✓ Rapid Response-a series of actions to contain and control the invaders
- ✓ Monitoring and evaluation-to assess effectiveness of the actions taken
- ✓ Restoration of disturbed areas to their natural ecological function

This plan might more appropriately be called the "First Steps" that we, as Upper Turtle Lake constituents, need to do to get the ball rolling and manage the process.

Aquatic Invasive Species in Upper Turtle Lake

Upper Turtle is currently the home of one troublesome Aquatic Invasive Species (AIS), Curly Leaf Pondweed (CLPW). We are actively treating this infestation. Once the population is under control, active monitoring will be continued indefinitely.

This Upper Turtle Lake Aquatic Invasive Species Rapid Response Plan will focus on the most likely new culprits-Eurasian Watermilfoil, Zebra Mussels and Purple Loosestrife. These invasive species are in nearby lakes and wetlands. We know from our Clean Boats Clean Waters experience that it is common for fishermen in our area to fish multiple lakes and rivers, making the transfer of Aquatic Invasive Species (AIS) not only possible but probable over time.

Managing this risk is two-fold:

- ✓ Prevent it from happening by educating fishermen and boaters about:
 - 1) Removal of all water from boats to prevent transfer from lake to lake.
 - 2) The prohibition of using live bait in multiple lakes.
 - 3) Inspecting their boats and removing all weed fragments and mud.

- ✓ Recognizing an invasion as early as possible through:
 - 1) Routine monitoring
 - 2) Confirming suspected invasive species with aquatic plant experts
 - 3) Implementing a management plan as soon as possible.

The most likely places to find new populations are near the boat landing and in shallow and protected bay areas.

Monthly or bimonthly invasive species monitoring utilizing the Citizens Lake Monitoring Network protocol. <https://www.uwsp.edu/cnrap/UWEXLakes/Pages/programs/clmn/AIS.aspx>

Wisconsin Aquatic Invasive Species: Early Detector Handbook lays out the detection and monitoring protocol.

Confirmed Invasive Species in Barron and Polk County Lakes

Eurasian Watermilfoil--Horseshoe, Echo, Beaver Dam, Cedar Lake, Duck Lake, Kidney Lake, Lower Lake Vermillion, Long Trade Lake, Trade Lake, Sand Lake, Shallow Lake, South Twin Lake.

Purple Loosestrife—Apple River, Balsam lake, Big Butternut Lake, Butternut Lake, Bear Lake, Big Lake, Bone Lake, North Twin, Lotus Lake, Red Cedar, Sylvan Lake, Sand Creek, White Ash Lake.

Rusty Cray Fish—Apple River, Beaver Dam Lake, Bone Lake, Black Brook Flowage, Brill River, Hemlock Lake, Half Moon Lake, Red Cedar Lake and River, Sand Lake, Willow River, Wood River.

Zebra Mussels—Deer Lake.

Curly Leaf Pondweed-Upper Turtle Lake, Lower Turtle Lake and most other area lakes.

Complete Wisconsin Confirmed Invasive Species Listing:

<https://dnr.wi.gov/lakes/invasives/AISByWaterbody.aspx?location=ANY>

The Watermilfoil Siblings

The Bad Guy and how it dif



Eurasian Watermilfoil

- ✓ Non-Native
- ✓ 12-20 pair of leaflets
- ✓ Leaflets are limp out of water
- ✓ Red tips



5

Northern Watermilfoil

- ✓ Native
- ✓ Less than 10 pair of leaflets



- ✓ Leaflets remain stiff out of water

What do I do if I find a plant(s) I suspect could be Eurasian Watermilfoil?

Contact:

- ✓ Upper Turtle Lake District (UTLD) Rapid Response Coordinator Sherry Warrick at 651-261-0205 or s.warrick@comcast.net Sherry will notify all UTLD Commissioners of the potential problem.
- ✓ Alex Smith, Alex.smith@wisconsin.gov or Kris Larson, kris.larson@wisconsin.gov.
- ✓ David Blumer, Lake Management Consultant at 715-642-0635 dblumerleaps@gmail.com

Please note the exact location of suspected specimens, with GPS coordinates if possible. Cell phone photos can be used as the first screening step. Try to capture details, leaflets, stem arrangements, any flowers etc. and photograph next to a coin or pencil so the size can be judged. If possible, also collect 5-10 intact specimens, place in a plastic Ziplock bag with a damp paper towel. Store in refrigerator. If the screening is inconclusive a physical specimen may be required. Our County AIS specialist and lake management consultant will advise us about the next steps including necessary reporting.

What will we do if the suspect is not Eurasian Watermilfoil?

- ✓ Notify UTLD Commissioners, Rapid Response Coordinator and Lake Management Consultant. Continue to monitor as before.

What will we do if the suspect is Eurasian Watermilfoil?

- ✓ Notify UTLD Commissioners, Rapid Response Coordinator and Lake Management consultant.
- ✓ Notify all UTLD constituents.
- ✓ Place notification at boat landing.
- ✓ Complete and submit an online early detection and online rapid response grant application. See permits and grant applications Appendix C.
- ✓ Complete a whole lake littoral zone plant survey of the lake to determine the size of the Eurasian Watermilfoil population. This work would likely be done by a plant survey specialist.

Determining Management Strategy

**Options if less than 5 acres or 5% of surface area is affected
(Pioneer Colony):**

- ✓ Physical removal by hand or rake.
- ✓ Physical removal by hand through snorkel or scuba diving.
- ✓ Diver Aided Suction Harvest (DASH).
- ✓ Small-scale application of an aquatic herbicide (2,4-D, liquid diquat, granular endothall, Triclopr, or Procella COR).
- ✓ Complete and submit an online Chemical Application or Mechanical Harvesting Permit depending on the selected treatment strategy (Appendix C).
- ✓ UTLD Commissioners to agree on the cost and contract with a treatment operator (Appendix B).
- ✓ Conduct treatment.
- ✓ Seek expense reimbursement through grant. Please note that no work done in advance of state grant approval (other than permit application fee) is reimbursable.

If Eurasian Watermilfoil is more than 5 acres or 5% surface area (well established population) options:

- ✓ Diver Aided Suction Harvest (Dash).

- ✓ Small-scale application of an aquatic herbicide (granular 2,4-D, Liquid diquat, granular endothall, Triclopr or Procella COR).
- ✓ Large-scale application of an aquatic herbicide (liquid 2,4-D, liquid endothall, Procella COR, or Triclopr).
- ✓ Complete and submit an online Chemical Application and/or Mechanical Harvesting Permit (Appendix C).
- ✓ UTLD Commissioners to agree on the cost and contract with treatment operator (Appendix B).
- ✓ Conduct treatment
- ✓ Seek expense reimbursement through grant. Please note that no work done in advance of state grant approval (other than permit application fee) is reimbursable.

Post Treatment

Pioneer Colony-less than 5 acres or 5% of surface area

- ✓ Rake sample the treated area at least monthly.
- ✓ Complete follow-up monitoring of treated area.
- ✓ Keep buoys in place, assuming you put in place initially.
- ✓ Continue monthly whole lake monitoring.

- ✓ Revise existing Aquatic Plant Management Plan (APMP) to include Eurasian Watermilfoil and resulting management actions.

Well Established Population-more than 5 acres or 5% of surface area

- ✓ Conduct post treatment plant survey and compare results to pre-treatment survey.
- ✓ Complete follow-up monitoring of treated area.
- ✓ Keep buoys in place, assuming you put in place initially.
- ✓ Continue monthly whole lake monitoring.
- ✓ Revise existing APMP to include Eurasian Watermilfoil management actions.



Zebra Mussels and Purple Loosestrife



Zebra Mussels



Upper Turtle Lake is listed as “suitable” for the support of zebra mussels by the UW-Wisconsin Center for Limnology. In addition, several nearby lakes have reported their presence. They are one of the worst aquatic invaders because

they attached to almost anything and can enter undetected as small larvae. Once present they are very difficult to control so prevention is the key strategy. Here's what you can do:

- ✓ If you are using your boat on other lakes please decontaminate at home with a mild bleach solution paying special attention to areas from which water does not drain completely.
- ✓ When removing boats and docks inspect for any signs of zebra mussels. If you detect anything suspicious scrape into a plastic bag and notify the following for further instructions:
 - Upper Turtle Lake Invasive Species Coordinator Sherry Warrick at 651-261-0205 or s.warrick@comcast.net
 - Alex Smith, Alex.smith@wisconsin.gov or Kris Larson, kris.larson@wisconsin.gov.
 - David Blumer, Lake Management Consultant 715-642 0635
dblumerleaps@gmail.com

Purple Loosestrife

Although you may think this is a pretty plant, which it is, it is also an invasive perennial that spreads rapidly in wetland and shallow lakeshore areas. It crowds out native plants and reduces shelter areas for wildlife.

It is not a confirmed invader in Upper Turtle but can be found in roadside ditches along Highway 8 and wetland areas nearby. It is sometimes confused with native relatives that are

not a problem. If it is found it is typically controlled with hand pulling of the plants, taking care to get as much root as possible. If you think you see this plant near or on Upper, please carefully remove a plant, photograph it (cell phones work fine) including the roots and notify the following for further instructions:

- ✓ Upper Turtle Lake Invasive Species Coordinator Sherry Warrick at 651-261-0205 or at s.warrick@comcast.net.
- ✓ Alex.smith@wisconsin.gov or Kris Larson, kris.larson@wisconsin.gov.
- ✓ David Blumer, Lake Management consultant at 715-642-0635 dblumerleaps@gmail.com

Other Common Aquatic Invasive Species in Wisconsin

Rusty Crayfish (confirmed in Upper Turtle Lake)

Rusty crayfish (*Orconectes rusticus*) are invasive crustaceans spreading to lakes, rivers, and streams in several areas of North America. They are more aggressive than other native crayfish, better able to avoid fish predation, and can harm native fish populations by eating their eggs and young. They can displace native crayfish, hybridize with them, and graze on and eliminate aquatic plants.



Chinese Mystery Snails (confirmed in Upper Turtle Lake)



The Chinese mystery snail (*Cipangopaludina chinensis malleata*) is also called the Japanese mystery snail and the Oriental mystery snail. Chinese mystery snails are native to East Asia and were brought into the U.S. in the late 19th century as a possible food source. They appeared in New York a few decades later. They are called “mystery” snails because in spring, they give birth to young, fully developed snails that suddenly and mysteriously appear.

Other Common Aquatic Invasive Species in Wisconsin

Yellow Iris

Yellow flag iris is a showy perennial plant that can grow in a range of conditions from drier upland sites, to wetlands, to floating aquatic mats. A native plant of Eurasia, it can be an invasive garden escapee in Wisconsin's natural environments.

Yellow flag iris can produce many seeds that can float from the parent plant or plants can spread via rhizome fragments. Once established it can alter wildlife habitat and species diversity.



Thank you for your care of the lake some of us call home, the lake where we love to fish, boat and relax and the lake we share with our family and friends.

Appendix A: Aquatic Plant Survey Specialists

Endangered Resource Sciences, LLC

St. Croix Falls, WI

715-338-7502

saintcroixdfly@gmail.com

Services: Aquatic plant survey, physical removal with rake or scuba diving

Aquatic Plant and Habitat Services, LLC

Taylor, WI

715-299-4604

sarahatleli97@gmail.com

Services: Aquatic plant survey

Ecological Integrity Service, LLC

Amery, WI

715-554-1168

ecointegservice@gmail.com

Services: Aquatic plant survey, watershed management

Cason &
Associates

PO Box 230

Berlin, WI 54923

(877) 309-8408

Services: Aquatic plant survey

Appendix B: Aquatic Plant Management Specialists - Treatment Operators

TSB lakefront Restoration and Diving

Chippewa Falls, WI

715-828-5530

tsblakefrontrestorationanddiving@yahoo.com

Services: Dash removal, hand harvesting,

Small-scale mechanical harvesting

Northern Aquatic Services, Inc

Dresser, WI 715-495-5252

NorthernAquaticServices@gmail.com

Services: Herbicide application

Lake Management, Inc

Marine on St Croix, MN

651-433-3283

info@lakemanagementinc.com

Services: Herbicide applications

Lake Restoration, Inc

Rogers, MN 763-428-9777

chad@lakerestoration.com

Services: Herbicide application

Midwest Aqua Care

Chaska, MN 952-403-6879

sales@midwestaquacare.com

Services: Herbicide application

Appendix C: WDNR Permits and Grant Applications

- WDNR Permits and Grant Applications are all completed online at dnr.wisconsin.gov/permits/water or dnr.wisconsin.gov/grantapplication. Use your WAMS database user name and password, if you have one. If you don't have one, create a user name and password.

