Baby, Kerr, Kid, Lost, Man & McKeown Lakes Association

May 9, 2020

Dear Friends,

As you all know Aquatic Invasive Species (AIS) represents a threat to our treasured lakes. Our board is asking for your help in AIS prevention. **Prevention is the key** - always **CLEAN, DRAIN, and DRY** any watercraft, dock or lift before launching in any of our 6 lakes. AIS is all around us and we are working hard to prevent an AIS and have partnered with Cass County and the MN DNR on prevention strategies. Please be sure to read the full article in our Spring 2020 Newsletter.

Attached are some educational materials highlighting the 4 aquatic invasive species of special risk, that each one of us should keep an eye out for. We've attached some photo ID and other helpful identification info for you to use.

A quick summary of the 4 most prevalent and risky AIS are:

1. Eurasian water milfoil - it was found recently in the Girl Lake launch area, and is well established in Leech and in other lakes near us.
2. Zebra mussels - recently discovered in Ten Mile Lake
3. Starry stonewort - established in Winnie and Cass Lakes
4. Spiny water flea - a nasty invader, moving west from the St. Louis River area

If you see or suspect you see any of these, just follow the instructions in the Spring 2020 Lakes Association newsletter and report the suspected presence to the DNR at 888-MINN-DNR or Nicole Kovar at the DNR's Northwest office 218-616-8102. They will come out to examine and verify.

For the most current list of AIS infested waters and other important prevention information, please check the MN DNR: https://www.dnr.state.mn.us/invasives/ais/infested.html.

if you want to become active in AIS prevention and detection, we're asking for volunteers. Contact Dick Bottorff, AIS Team Leader by text or call Dick at 612-590-7654.

Best regards,

Dick Bottorff, AIS Team Lead
Laura Palmer-Turnacliff, President
Baby, Kerr, Kid, Lost, Man & McKeown Lakes Association

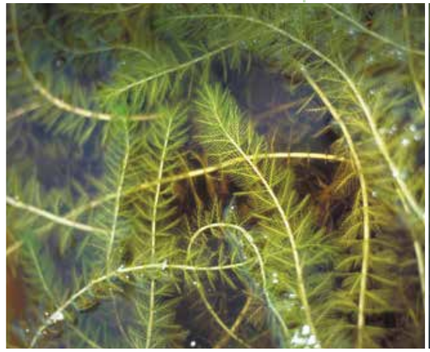
UNDERSTAND THE THREAT

Aquatic invasive species such as zebra mussels, spiny waterfleas, Eurasian watermilfoil, faucet snails, and viral hemorrahagic septicemia (VHS) now inhabit a small percent of waters throughout the state. Other harmful species, such as hydrilla and northern snakehead, may be on the way and will create new problems if they are introduced in Minnesota.

Zebra mussels attach to native mussels, plants, and watercraft. They cut the feet of swimmers and dogs, clog water intakes, and damage ecosystems by reducing food for young fish. Their microscopic larvae can be moved in bait buckets, livewells, and other boat areas if not drained.

Eurasian watermilfoil causes problems in lakes by displacing native plants and producing extensive mats on the surface, especially in clear waters less than 15 feet deep. It is spread from one lake to another when plant fragments attach to boat trailers and other water-related equipment.

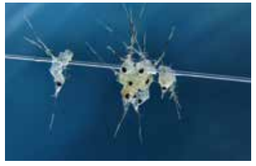
Silver (pictured) and bighead carp from Asia are threats to aquatic ecosystems and water recreation. Silver carp can jump out of the water, injuring boaters and waterskiers. Because young silver carp look similar to native minnows, they could accidentally be spread if live bait is released into the water.



Round gobies are aggressive bottom-dwelling fish from Europe. They drive out native species, attack bait, and eat the eggs of other fish, such as smallmouth bass. This behavior contributes to the decline of valuable sport fish.

Curly-leaf pondweed can form dense mats that interfere with boating and other water recreation. It also can displace native aquatic plants.

Faucet snails carry parasites that infect waterfowl. When snails are consumed, a waterfowl's internal organs are attacked by the parasites, eventually causing death.



Spiny waterfleas can be a problem for anglers because they form gelatinous globs on fishing lines, lures, and downrigger cables. It is important to remove spiny waterfleas from all equipment because their eggs can live out of water for more than 12 hours under typical summer conditions. To make sure these eggs are dead, thoroughly dry all equipment for 24 hours *before* reuse.

COMMITMENT

Make a commitment

Boaters, anglers, lake associations, and local governments have worked for more than two decades to fight invasive species and to Stop Aquatic Hitchhikers! It's time for you to join the nationwide effort to stop the spread of AIS.

To help protect Minnesota's lakes, rivers, and wetlands, I will:

- ✓ Clean and Drain my boat and equipment *before* I leave a water access
- ✓ Dispose of all unwanted bait, worms, and fish parts in the trash
- ✓ Learn to recognize aquatic invasive species
- ✓ Follow Minnesota's AIS laws and regulations
- ✓ Share this brochure with others who spend time fishing, boating, or recreating in Minnesota

Report new infestations

If you suspect a new infestation of an aquatic invasive plant or animal, note the exact location, take a photo or keep the specimen, and call a DNR AIS Specialist at 651 259 5100, or contact a local DNR office or University of Minnesota Sea Grant office.

Every person who uses Minnesota's lakes and rivers for outdoor recreation has a responsibility to help prevent and curb the spread of AIS…because it is preventable. Make a pledge to do your part.

CONTACT US

Report a Violation

To report a violation, contact a local peace officer or a DNR conservation officer. To locate a conservation officer in your area, scan the QR code for the CO Locator page or visit mndnr.gov/officerpatrolareas.

Learn More

For more information about aquatic invasive species, contact one of the following resources:

Minnesota Department of Natural Resources

Aquatic Invasive Species Program
651-259-5100

For current AIS regulations, a list of infested waters, species information, and local DNR contacts, visit www.mndnr.gov/ais.

Report Invasive Carp:
If you have captured an invasive carp or fish that you think may be an invasive carp, you must report it to the DNR immediately. Call 888-646-6367 or email invasivecarp.dnr@state.mn.us.

Please take a photo and transport the carp to the nearest fisheries office or make arrangements for it to be picked up by a DNR official.

University of Minnesota Sea Grant Program

Aquatic Invasive Species Information Center
218-726-8712

For field guides, species profiles, articles, and AIS resources for educators, visit www.seagrant.umn.edu.

STOP AQUA

www .

Silver carp photo courtesy of *The Columbus Dispatch*
Eurasian watermifoil close-up courtesy of Alison Fox, University of Florida

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Help Protect Minnesota Waters

Learn how to protect Minnesota waters from zebra mussels and other AIS

Boating, fishing, hunting, and wildlife watching are traditions we enjoy and want to preserve for our children and grandchildren. Today, these traditions are at risk because of aggressive aquatic invasive species (AIS) that wreak havoc with our natural resources.

The good news is that the vast majority of lakes and rivers in Minnesota are not yet infested – and by understanding the threat, taking responsibility, and working together we can keep it that way.

PREVENTION

LAWS

You can prevent the transport of AIS

Aquatic invasive species (AIS) are nonnative animals and plants that do not naturally occur in our waters and cause ecological or economic harm. Once introduced into an ecosystem where they have few natural predators, they can do irreparable damage to lakes, streams, and wetlands – and their native inhabitants. They harm our environment, outdoor recreation, and Minnesota's economy, which all depend upon healthy water resources.

How they spread

The main way aquatic invaders spread is by "hitching" rides on watercraft and equipment used by anglers, boaters, and others. They are often extremely small and easily overlooked at the water access.

How they harm Minnesota waters

Once aquatic invaders move in, it's nearly impossible to get them out. They spread uncontrollably, displace native species, harm fish populations, damage habitats, impair water quality and water recreation, and can cost millions of dollars to manage – and millions more in lost revenue for business and recreation.

What you can do

- Learn to recognize aquatic invasive species, how they spread, and the harm they can cause;
- Follow the laws and take precautions to make sure you are not transporting AIS to a new location; and
- Work with watercraft inspectors and share the CLEAN DRAIN DISPOSE message with everyone you know that spends time enjoying Minnesota's lakes and rivers.

STOP AQUA

Take these decontamination actions required by law:

✓ CLEAN

Clean visible aquatic plants, zebra mussels, and other prohibited invasive species off all watercraft, trailers, and water-related equipment *before* leaving a water access or shoreland property. It is illegal to transport aquatic plants, zebra mussels, or other prohibited species whether dead or alive.

✓ DRAIN

Drain water-related equipment (boat, ballast tanks, portable bait containers, motor) and drain bilge, livewell, and baitwell by removing drain plugs *before* leaving a water access or shoreland property. Keep drain plugs out and waterdraining devices open while transporting watercraft. It is illegal to transport a watercraft or water-related equipment without draining water.

✓ DISPOSE

Dispose of unwanted bait, including minnows, leeches, worms, and fish parts in the trash. If you want to keep live bait, drain bait containers and refill with bottled or purified tap water. It is illegal to release bait into the water or to release worms on the ground.

You can help prevent the introduction and spread of AIS by following both the required and recommended actions listed below.

Additional recommendations:

You can take additional steps to reduce the risk of spreading invasive species, especially if your boat has been in the water for more than 24 hours – or if you have recently been in zebra mussel or spiny waterflea infested waters. Take one or more of the following actions to clean your watercraft and equipment *before* visiting another lake or river.

- Spray with high-pressure water
- Rinse with very hot water. To kill zebra mussels and some other AIS, rinse with 120˚F water for at least 2 minutes, or 140˚F water at least 10 seconds.
- Dry for at least 5 days
- Run motor and personal watercraft for a few seconds to discharge water *before* leaving a water access.
- Transport fish on ice — be prepared, bring a cooler.

Know the Law.

You may not ... transport watercraft without removing the drain plug • arrive at a lake access with drain plug in place • transport aquatic plants, zebra mussels, or other **prohibited invasive species** such as faucet snails, ruffe, and round goby • launch a watercraft with prohibited species attached • transport water from Minnesota lakes or rivers; or release bait into water.

There are also many **regulated invasive species** – such as spiny waterfleas, rusty crayfish, and mystery snails – that may not be placed into another waterbody. Docks and boatlifts must be dried for 21 days *before* placing in another waterbody. Violating these regulations may result in fines up to $1,000.

EXTRA PRECAUTIONS

Clean In, Clean Out.

In addition to the required and recommended actions listed in this brochure, take these specific steps when engaging in the activities below:

Sailing

- Clean aquatic plants and animals from hull, centerboard or bilgeboard well, rudderpost, trailer, and other equipment *before* leaving water access.

Personal watercraft

- Avoid areas with aquatic plants *before* trailering personal watercraft.
- Run engine for 5-10 seconds on the trailer to blow out excess water and vegetation from internal drive, and then turn engine off.
- Clean aquatic plants and animals from hull, trailer, water intake grate, and steering nozzle, *before* leaving water access.

Shore and fly-fishing

- Clean any visible aquatic plants, animals, and mud from waders and hip boots.
- Scrub any visible material off footwear with a stiff brush.
- Use non-felt-soled boots instead of felt-soled footwear, to further reduce the risk of spreading AIS.
- Dispose of unwanted bait, worms, and fish parts in the trash. When keeping live bait, drain bait container and replace with bottled or purified tap water.

Waterfowl hunting

- Clean aquatic plants, animals, and mud from boat, motor, trailer, waders or hip boots, decoy lines, hunting dog, anchors (elliptical and bulb-shaped anchors can help reduce snagging aquatic plants), pushpoles, and ATVs.
- Cut cattails or other plants above the waterline for blinds or camouflage in accordance with regulations

Scuba diving

- Clean aquatic plants, animals, and mud from all equipment *before* leaving water access.
- Drain water from buoyancy compensator, regulator, cylinder, boot, and any water-containing devices.
- Rinse inside and outside of gear with hot water.

NEW: Affirmation

Beginning in 2016, you'll need to affirm, with your signature, that you understand AIS regulations to get a new boat license or non-resident fishing license.

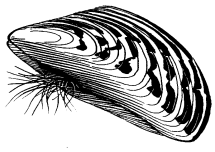
Learn more at trailers.mndnr.gov.

Aquatic Invasive Species — Zebra mussel

(*Dreissena polymorpha)*

What are zebra mussels?

Zebra mussels are small freshwater mussels that are not native to Minnesota. Adults range from ¼ to 1 ½ inches long and have yellow and brown striped shells. Unlike native mussels, they can attach themselves to hard surfaces in the water.



Zebra mussel (*Dreissena polymorpha*)

Where did zebra mussels come from?

Zebra mussels are native to Eastern Europe and Western Russia. They have spread throughout much of Europe and Asia over the past 200 years. They were likely brought to North America in the ballast water of ships and were discovered in Lake Erie in 1988.

What problems can they cause?

Zebra mussels can:

- clog irrigation intakes and other pipes,
- attach to boat motors and boat hulls, reducing performance and efficiency,
- attach to rocks, swim rafts and ladders where swimmers can cut their feet on the mussel shells,
- attach to and smother native mussels, and
- eat tiny food particles that they filter out of the water, which can reduce available food for larval fish and other animals, and cause more aquatic vegetation to grow as a result of increased water clarity.

Zebra mussels in Minnesota

Zebra mussels were discovered in the Duluth harbor in 1989. As of 2014, the DNR had documented zebra mussels in fewer than 100 water bodies in Minnesota. The DNR has listed a total of 213 water bodies as “infested” with zebra mussels, a regulatory classification which includes some water bodies that are connected to water bodies where zebra mussels have been found.

How do they spread?

Zebra mussels can attach to boats or aquatic vegetation and be carried to a different lake or upstream in a river. The microscopic larvae (called “veligers”) may be carried in bait buckets, live wells, or other water.

Zebra mussels attached to a native mussel

What should you do to prevent their spread?

Before you leave any water access, clean weeds and debris from your boat, remove drain plugs and keep them out while traveling, and dispose of unused bait in the trash. For additional recommendations see mndnr.gov/AIS.

Regulatory classification

Zebra mussels and quagga mussels (a related species) are both classified as *prohibited invasive species* in Minnesota. It is illegal to import, possess, buy, sell, transport, or introduce them into state waters.

Aquatic Invasive Species *Best Management Practices*

Zebra mussel

(*Dreissena polymorpha*)

What can be done to control zebra mussels?

In the U.S. and Canada, facility managers use pesticides to control zebra mussels in closed systems, such as water-cooling systems of power plants, in order to maintain functioning infrastructure. Many of the pesticides used in closed systems are not allowed for use in open water. In open systems such as natural lakes, attempts to control zebra mussels are uncommon and considered experimental at this time.

To date, we have documentation of less than ten attempts to control zebra mussels by treatment with pesticides in North America outside Minnesota.

Attempts to control zebra mussels in Minnesota

In Minnesota, we have documentation of five lakes where people attempted to eradicate zebra mussels using pesticide treatments. In addition, one Minnesota lake was drawn down in an attempt to reduce zebra mussels.

Pesticides and zebra mussels

The pesticides that have been used for zebra mussel control in Minnesota are: Zequanox®; copper products such as copper sulfate; and potassium chloride (also known as potash; use in open water requires review and approval from the U.S. Environmental Protection Agency).

What might be achieved by controlling zebra mussels?

Because pesticides have rarely been used to control zebra mussels in open water, pilot projects in Minnesota will help answer this question. In situations where zebra mussels are found in an isolated area or in a small water body, it may be possible to kill all the target zebra mussels using pesticides. Even if the mussels are killed, their shells will persist and can remain attached to surfaces even after the animals are dead.

What control of zebra mussels will the DNR permit?

Most lakes that are currently infested with zebra mussels are not good candidates for these pilot projects and permits. Pilot projects would be more likely to be permitted in situations where:

- the water body has been surveyed, and the survey finds zebra mussel populations are limited in size and localized, not scattered throughout the water body (the DNR may require third-party verification of zebra mussel distribution); and
- there are sufficient resources or partners (e.g., watershed districts, local units of government, lake groups) available to fulfill monitoring requirements.

We will assess all proposed projects on a case-by-case basis.

Permits and technical assistance

If you would like more information on management of zebra mussels or other aquatic invasive species, contact your local invasive species specialist:

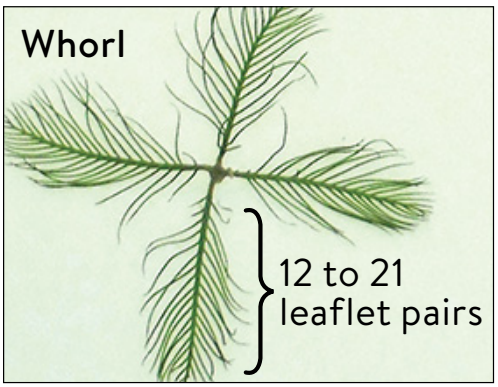
Park Rapids	218-699-7293
Fergus Falls	218-739-7576 ext. 254
Grand Rapids	218-999-7805
Brainerd	218-203-4354
Saint Cloud	320-223-7847
Saint Paul	651-259-5828
Hutchinson	320-234-2550 ext. 238
Waterville	507-362-8786

Minnesota Department of Natural Resources
500 Lafayette Road, Box 25
St. Paul, Minnesota 55155
1-888-646-6367 or 651-259-5121
www.mndnr.gov/AIS

Prepared by the Invasive Species Program,
Minnesota Department of Natural Resources
May 2015

INVASIVE SPECIES

Eurasian Watermilfoil *(Myriophyllum spicatum)*



Characteristics:

- Submerged, limp aquatic plant
- Whorls (circles) of four delicate feather-like leaves around stem
- Usually 12 to 21 leaflet pairs per leaf

To report invasive species:

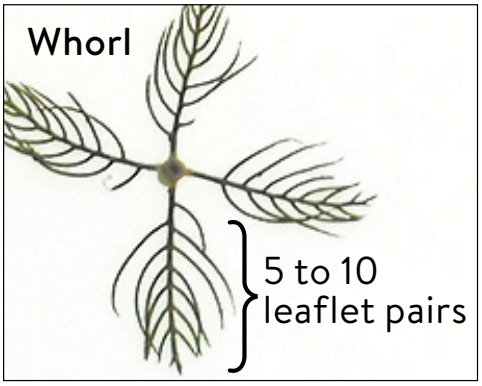
Wrap plant in wet paper towel, place in sealed plastic bag, chill or refrigerate, and contact the Minnesota DNR at www.mndnr.gov/ais or 651-259-5100.

DEPARTMENT OF NATURAL RESOURCES

NATIVE SPECIES

Beneficial to the environment

Northern Watermilfoil *(Myriophyllum sibiricum)*



Northern Watermilfoil Characteristics:

- Submerged, stiff aquatic plant
- Whorls (circles) of four rigid feather-like leaves around stem
- Usually 5 to 10 leaflet pairs per leaf

Prevent the spread of invasives:

CLEAN IN™ CLEAN OUT

- ✓ **Clean** aquatic plants and invasive species from watercraft.
- ✓ **Drain** lake/river water from all equipment. Keep drain plugs out during transport.
- ✓ **Dispose** of unwanted bait in the trash.

INVASIVE SPECIES

Starry Stonewort *(Nitellopsis obtusa)*

Top photo credit: Paul Skawinski, UW-Extension Lakes

Characteristics:

- Macro-alga
- Bright green branchlets can be highly variable in length and are arranged in whorls around stem
- Star-shaped bulbils attached to clear root-like filaments (pictured with penny)

To report invasive species:

CLEAN IN™ CLEAN OUT

Wrap plant in wet paper towel, place in sealed plastic bag, chill or refrigerate, and contact the Minnesota DNR at www.mndnr.gov/ais or 651-259-5100.

DEPARTMENT OF NATURAL RESOURCES

NATIVE SPECIES

Beneficial to the environment

Three Common Macro-Algae

Characteristics (compared to invasive starry stonewort):

- Smaller in diameter, due to shorter branchlets
- No bulbils
- Share similar habitats, often found together

Photo credits: Paul Skawinski, UW-Extension Lakes

Prevent the spread of invasives:

✓ Clean aquatic plants and invasive species from watercraft.

✓ Drain lake/river water from all equipment. Keep drain plugs out during transport.

✓ Dispose of unwanted bait in the trash.

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