

# Preventing Aquatic Invasive Species



Photo by: Alison Fox, University of Florida, Bugwood.org



Photo by: Chris Evans, Illinois Wildlife Action Plan, Bugwood.org



**CROW WING**  
COUNTY  
MINNESOTA

Many drops make a bucket, many buckets make a pond, many ponds make a lake.  
...To protect one, we protect them all.



# The battle against Zebra Mussels

Zebra mussels are prolific invaders that cost the U.S. billions of dollars each year. These small mussels from Eurasia can clog water intakes and damage equipment by attaching to boat motors and hard surfaces. They can damage ecosystems by harming fisheries, smothering native mussels and crayfish, and littering beaches with their sharp shells.

Zebra mussels spread from Europe to the Great Lakes in contaminated ballast water discharged from ships. They expanded to the Mississippi River, and to inland lakes. Zebra mussels spread by attaching to boat hulls, lifts, docks and fishing equipment. Adult zebra mussels can survive out of water for days under certain conditions.

## What can be done?

- Learn to recognize zebra mussels.
- Inspect and remove aquatic plants, animals, and mud from boat, motor, and trailer.
- Drain water from boat, motor, livewell, bilge, and bait containers.
- Dispose of unwanted live bait and worms in the trash.
- Rinse boat and equipment with high-pressure and/or hot water (140° F)
- Dry boats and gear for at least 5 days, lifts and docks for at least 21 days.

## How to identify Zebra Mussels

Zebra mussels look like small clams with a yellowish or brownish "D"-shaped shell, usually with dark and light-colored stripes (hence the name "zebra").

They can be up to two inches long, but most are under one inch. Zebra mussels usually grow in clusters containing numerous individuals and are generally found in shallow, algae-rich water.



# The war on Eurasian Watermilfoil

Eurasian watermilfoil is a feathery submerged aquatic plant that can quickly form thick mats in shallow areas of lakes and rivers in North America. These mats can interfere with swimming and entangle propellers, which hinders boating, fishing, and waterfowl hunting. Matted milfoil can displace native aquatic plants, impacting fish and wildlife.

Eurasian watermilfoil has invaded nearly every U.S. state. Milfoil spreads when plant pieces break off and float on water currents. It can cross land to new waters by clinging to sailboats, personal watercraft, powerboats, motors, trailers, and fishing gear.

## What can be done?

- Learn to identify Eurasian watermilfoil.
- Inspect and remove aquatic plants, animals, and mud from boat, motor, and trailer.
- Drain water from boat, motor, livewell, bilge, and bait containers.
- Dispose of unwanted live bait and worms in the trash.
- Spray/Wash boat, trailer, and equipment with high-pressure hot water.
- Dry boats and gear for at least 5 days, lifts and docks for at least 21 days.

## How to identify Eurasian Watermilfoil

The plants are found in water less than 20 feet deep and may form mats in waters less than 15 feet deep.

A native look-alike, northern watermilfoil, has fewer leaflet pairs.



Photo by: Graves Lovell, Alabama Dept. of Conservation and Natural Resources, Bugwood.org

# Fighting Curlyleaf Pondweed

Curlyleaf pondweed is a rooted, submerged plant that quickly forms dense mats at the water surface of lakes and rivers in late spring and early summer. It sprouts in late fall and early winter, shading out later-growing native plants. Mats interfere with boating, fishing, waterfowl hunting, and swimming. Summer die-offs can form windrows of decaying plants on shore, sometimes followed by algal blooms. Curlyleaf pondweed displaces native plant communities and decay can deplete oxygen levels, leading to fish kills and impacts on other aquatic life.

Native to Eurasia, Africa and Australia, curlyleaf pondweed was first discovered in North America in the mid 1880s. It spreads by seeds, rhizomes, turions, and plant pieces that break off and float on water currents. It can spread overland to new waters by clinging to watercraft, trailers, and equipment.

## What can be done?

- Learn to recognize curlyleaf pondweed.
- Inspect and remove aquatic plants, animals, and mud from boat, motor, and trailer.
- Drain water from boat, motor, livewell, bilge, and bait containers.
- Dispose of unwanted live bait, worms, and fish parts in the trash.
- Rinse boat and equipment with high pressure, hot water.
- Dry boats and gear for at least 5 days, lifts and docks for at least 21 days.

## How to identify Curlyleaf Pondweed

Tolerant of low light, it grows throughout the winter. They are found in floating mats in more shallow areas in lakes, ponds, and moderately flowing rivers.

Can sometimes be confused with largeleaf pondweed or claspingleaf pondweed.



Photo by: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

# The micro battle... Spiny Waterfleas

Spiny waterfleas are small predacious crustaceans that threaten aquatic ecosystems and fishing by competing with native fish for food and fouling fishing gear. Spiny waterfleas were discovered in Lake Ontario first, and spread to all of the Great Lakes and some inland lakes.

Spiny waterfleas collect in masses on fishing lines and downrigger cables. These masses can clog the first eyelet of rods, damage a reel's drag system, and prevent fish from being landed. They can spread to inland waters when fishing gear is contaminated with egg-laden females. While females die out of water, under certain conditions they produce eggs that resist drying, remain viable, and can establish a new population.

## What can be done?

- Learn to recognize these waterfleas on fishing gear.
- Inspect and remove aquatic plants, animals, and mud from boat, motor, and trailer.
- Drain water from boat, motor, livewell, bilge, and bait containers.
- Dispose of unwanted live bait, worms, and fish parts in the trash.
- Rinse boat and equipment with high pressure, hot water.
- Dry boats and gear for at least 5 days, lifts and docks for at least 21 days.

## How to identify Spiny Waterfleas

Difficult to distinguish without magnification, 1/4 - 5/8 in (5-15mm) total length. Clumps look and feel like gelatin or cotton batting with tiny black spots.

They prefer deep lakes, but can establish in shallow waterbodies and rivers.

Abundant during summer (June-September) depending upon water temperatures.



# Decontamination stations

Both Crow Wing County and the DNR offer decontamination options.

Decontamination units are high pressure, high heat wash units that allow boaters to decontaminate watercraft at the public water access or at a designated location without allowing any of the wash water to run off back into the lake. Crow Wing County plans to provide decontamination stations strategically located throughout the County. They will be open daily during the boating season at no charge to the public.

- ▶ You can find the current Crow Wing County Decontamination Stations marked on the map on the next page with a small blue flag.

## What are Level 1 and level 2 inspectors?

Established by the DNR, Level 1 Watercraft Inspectors are trained to inspect watercraft. Level 2 Watercraft Inspectors are trained to inspect and decontaminate watercraft.

## When to decontaminate

- If AIS are discovered during an inspection.
- If watercraft or equipment has been in infested waters for more than 24 hours.
- If watercraft or equipment will be transported from one body of water to another within 24 hours.
- If there is water you cannot see, such as water in ballast tanks.
- If AIS cannot be removed by hand.
- If a licensed peace officer deems one necessary.



# Crow Wing County Lakes: Status Report

Data is current as of 2018.



## Think outside the prop!

It's important to remember there are other pathways for invasive species to spread than just by boats and trailers.

Other watercraft such as jet skis, canoes, kayaks and duck boats can carry invasives from one body of water to another.

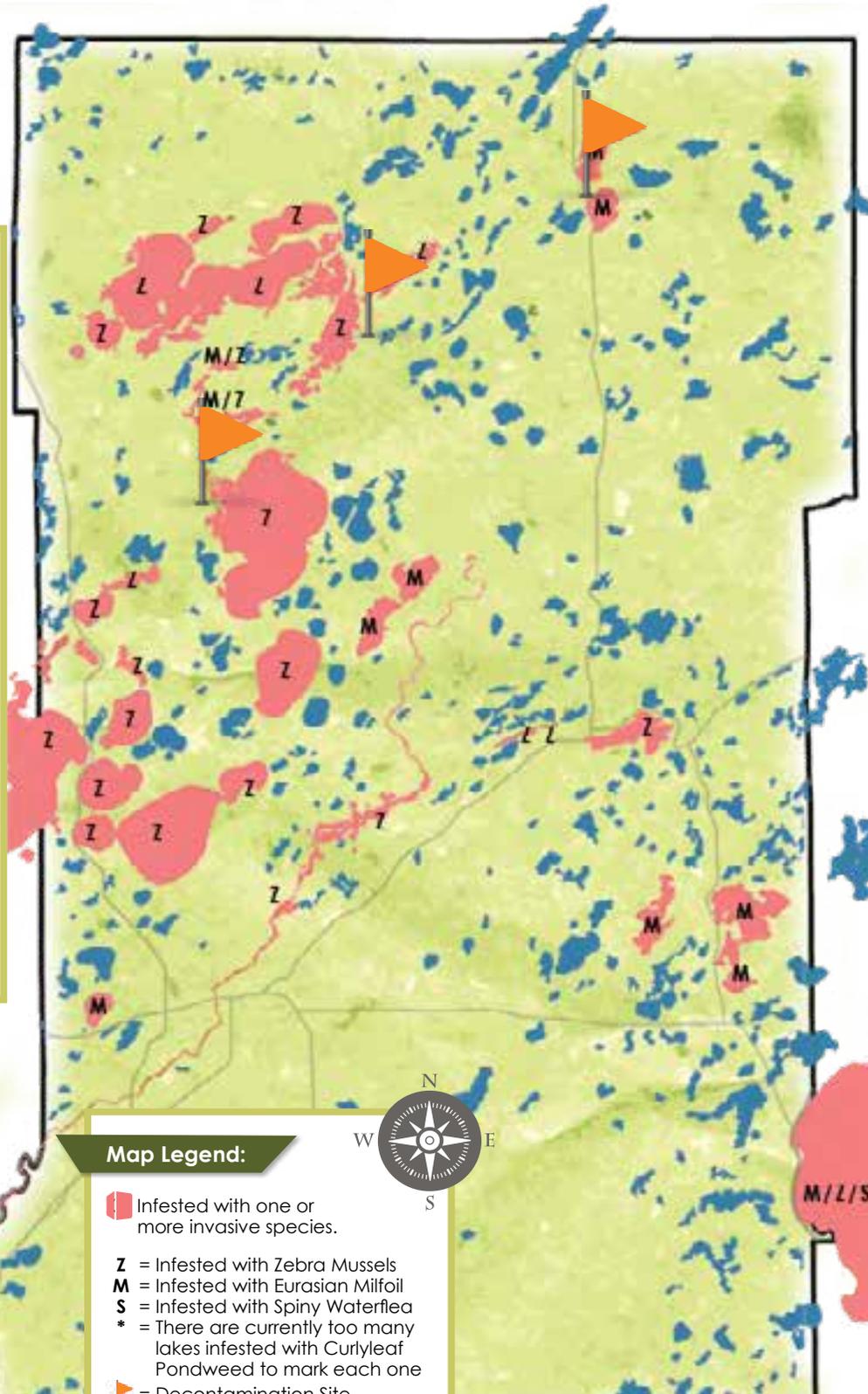
It is best to check all of your boating equipment to ensure there are no aquatic hitchhikers onboard. Even the ballast or livewells of your boat should be checked and cleaned.

Docks, buoys, and floatation decks should also be thoroughly inspected, cleaned and dried before moving them from one body of water to another.

Even hunters and hikers boots can carry some forms of invasive species, such as the New Zealand Mud Snail.



**Have Questions?  
Scan the QR code  
to get answers.**



# 4 things you can do...

There are many things you can do to help protect our lakes, the most important 4 steps are as follows:

1

## Leave the water at the lake

Drain water from boat, motor, live wells & bait buckets before leaving the lake.

2

## Clean up your rig

Remove plants, mud, and other debris from your boat and trailer.

3

## Dry it out

Do not remove boat lifts, docks, swim rafts, and other equipment from one water body to another until a minimum of 21 days of drying time has passed. For boats and gear, it's a good idea to dry for at least 5 days.

4

## Spread the word not the species

Unless it came from that body of water, don't put it in there. This includes anything from your aquarium.

# Other invasives to watch for

**Purple loosestrife** is an invasive aquatic plant infesting 77 Minnesota counties, including Crow Wing. It replaces cattails and other native plants in marshes, ditches, and along lakeshore. The **rusty crayfish** is a crustacean that grows up to five inches long. They harm native fish by eating their eggs and young, and also drive out or cross-breed with native crayfish.

## Starry Stonewort

Starry stonewort is found in neighboring counties and could easily spread. It begins as tiny, star-shaped "bulbils" taking root in lakes and river bottoms. Each bulbil sends out tendrils of grass-like algae that grow into large masses on the water's surface. The masses interfere with recreation, as well as affecting the habitat of fish, waterfowl, small swimming mammals, frogs, and turtles.



Photos by: Minnesota Department of Natural Resources

# **PROTECT OUR LAKES!**

**YOU CAN HELP**

Call 218-824-1010 to speak with one of our specialists.  
We're ready to help you.

[www.crowwing.us](http://www.crowwing.us)

Crow Wing County is committed to protecting, preserving & improving water resources in Crow Wing County by being proactive, efficient, customer focused, organized, and innovative while being good stewards of the County's resources.



Scan for more info

