

AQUATIC INVASIVE SPECIES

Preventing the spread of invasive species requires due diligence

Jim Roenelt | Compliance Officer

One of the feature attractions of Arrowhead Lake are the lakes themselves. How many times have you drove along Lakeshore Drive and noticed the calmness of the fog hovering over the lake on a warm summer morning, or the snow blowing across the ice that forms in the dead of winter and thought to yourself how beautiful it is? The lakes provide us with many outdoor activities like swimming, boating, fishing, and are a big part of the wildlife we share our woods with. Now imagine if through neglect different strains of algae and vegetation would take over, leaving the lakes useless. A little extreme, maybe, but it can, and did happen in other parts of the country. Lakes are complex and fragile ecosystems that take much care to maintain good water quality. Thus, there is no quick and easy fix to lakes that have become unhealthy. But there are many things that the people who live in areas where there are lakes, rivers and streams can do to improve their health and water quality.



Zebra & Quagga Mussels

The biggest threat to any lake is the potential for introduction of exotic and invasive species of plants and animals. Zebra mussels (*Dreissena polymorpha*) and their close relatives Quagga mussels (*Dreissena bugensis*) can grow on docks, boats or cover the bottom of the lake with razor-sharp shells. Quagga mussels have already been reported in nearby lakes. Such introductions are generally **not reversible**. This is why they are considered the greatest threat to lakes.



Because they are filter feeders, zebra and quagga mussels can build up contaminants such as PCBs, heavy metals, and toxins in their tissues. These chemical contaminants can then be passed up the food chain into larger fish and birds.

Photos courtesy of Sea Grant Pennsylvania

Eurasian Watermilfoil

Deceptively fragile in appearance, the invasive Eurasian watermilfoil forms thick mats in shallow areas of a lake, killing off native aquatic plants that fish and other underwater species rely on for food and shelter. Excessive growth can also reduce dissolved oxygen levels during the summer, causing fish kills.

This non-native, invasive species could significantly hinder kayaking and boating in areas of the lake if it were ever to be introduced to Arrowhead's lakes.



Eurasian Watermilfoil. Courtesy photo from the Minnesota Aquatic Invasive Species Research Center.

Stop Aquatic Hitchhikers

- **Never release unused bait into the waters you are fishing.** Even if the bait species are not themselves invasive, bait buckets often carry other exotic invaders. Dump unused bait into the trash.
- **Never release any aquarium plants, fish, and amphibians, in or near any lake.** These plants and creatures could turn into monsters that take over our lake. For example, goldfish are carp, undesirable fish that feed on sediment and thus recycle nutrients and cause algae blooms.
- **Carefully inspect and clean** all boats, canoes, trailers, fishing gear and equipment after each use. Remove and leave behind plants, mud and aquatic debris. Many aquatic invasive species can't be seen and are microscopic. It's important to clean your gear even if it doesn't appear to have anything on it. Spray equipment with a high-pressure washer. **If hot water is not available, a commercial hot water car wash also makes an ideal location to wash your boat, motor and trailer.**

STOP AQUATIC HITCHHIKERS!™

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REPORT AIS SIGHTINGS ONLINE

THESE ARE SOME OF THE AQUATIC INVASIVE SPECIES IN PENNSYLVANIA.



photo provided by USGS

Rusty Crayfish



photo provided by USGS

Quagga Mussel



photo provided by USGS

Round Goby



photo-PFBC archives

New Zealand Mudsnailed