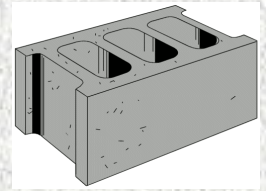




“Two Buck Block” Early Detection



Zebra Mussel Monitoring Project!

[Zebra mussels](#) are spreading to lakes and rivers in Minnesota. These small invasive mussels attach to hard surfaces in lakes and rivers killing native mussels, limiting recreational activities, clogging water supply pipes, and competing with larval fish for food. You can provide important help tracking their distribution in Minnesota by spending a few minutes monitoring the lake or river where you live without any specialized equipment. Early detection for zebra mussels is important in protecting your property and Minnesota's water resources.

Make your own monitoring device. Hang a PVC pipe, brick or cinder block in 3– 8 feet of water under a shady spot of your dock (zebra mussels tend to avoid direct sunlight) and away from high traffic areas in the summer to monitor for zebra mussels. Suspend the object as deep as possible and tie to dock. Adult Zebra mussels have the ability to crawl to seek out places to attach so some portion of monitoring device should have contact with the lake or stream bottom to allow for adults who may be seeking a place to attach.



Monitoring un-infested lakes for Zebra mussels allows for early detection. If a lake becomes infested, early detection can prevent spread to other water bodies. There are two types of monitoring for early detection of Zebra mussels in lakes: veliger monitoring and adult/juvenile monitoring. When zebra mussels first establish in a lake, they can be at very low densities, so it is not always possible to detect them right away. A monitoring device placed by local lake property owners, can help with early detection and rapid response management planning.

Join in the [Volunteer Zebra Mussel Monitoring Program](#) and report your efforts each year. Examine the monitoring object, and add these observations to the Volunteer Monitor Report Form.

General Characteristics

- 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 (6-30 feet), algae-rich water
- Zebra mussels are the only freshwater mollusk that can firmly attach itself to solid objects – submerged rocks, dock pilings, boat hulls, water intake pipes, etc.
- On smooth surfaces, young zebra mussels feel like fine sandpaper.
- Juveniles are about the size of peppercorns.

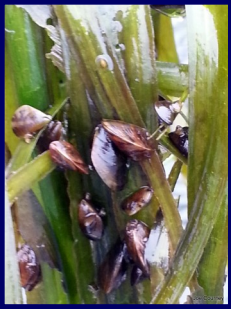


Means of spread: Mussels attach to boats, nets, docks, swim platforms, boat lifts, and can be moved on any of these objects. They also can attach to aquatic plants, making it critical to remove all aquatic vegetation before leaving a lake. Microscopic larvae may be carried in water contained in bait buckets, bilges or any other water moved from an infested lake or river.

Where to look: Examine boat hulls, swimming platforms, docks, aquatic plants, wood, rocks and other objects in the water along shorelines of lakes and rivers.



Join in the [Volunteer Zebra Mussel Monitoring Program](#) and report your efforts each year.



Impacts: Zebra mussels can cause problems for lakeshore residents and recreationists. Homeowners that take lake water to water lawns can have their intakes clogged. Mussels may attach to motors and possibly clog cooling water areas. Shells can cause cuts and scrapes if they grow large enough on rocks, swim rafts and ladders. Anglers may lose tackle as the shells can cut fishing line. Zebra mussels can also attach to native mussels, killing them. Zebra mussels filter plankton from the surrounding water. This filtering can increase water clarity, which might cause more aquatic vegetation to grow at deeper depths and more dense stands. If a lake has high numbers of mussels over large areas, this filter feeding could impact the food chain, reducing food for larval fish.

What You Can Do?

- **Learn** to recognize zebra mussels.
- **Inspect** and **remove** aquatic plants, animals, and mud from boat, motor, and trailer.
- **Drain** water from boat, motor, live well, 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 (minimum 120° F for 2 minutes or 140°F for 10 seconds), especially if moored for over a day, **OR**
- **Dry** everything for at least 5 days.
- **Never** introduce fish, plants, crayfish, snails or clams from one body of water to another.
- **Report** new sightings - note exact location; place specimens in a sealed plastic bag or store in rubbing (isopropyl) alcohol; if in Minnesota, call the MN DNR NW Region (218) 739-7575 ext. 254 Minnesota Sea Grant Program in Duluth, (218) 726-8712; the Minnesota DNR in St. Paul, 1-888-MINNDNR, or (651) 259-5100; or a local DNR fishery office.



**Information Courtesy of MN DNR Zebra Mussel Monitoring Program.*

http://dnr.state.mn.us/volunteering/zebramussel_monitoring/index.html

