

Prevent the Spread of Zebra Mussels

CLEAN, DRAIN, DRY

- You cannot see microscopic zebra mussel larvae (veligers). You must thoroughly decontaminate.
- **Inspect and clean your boat** after removing it from the water and away from the launch ramp.
- **Thoroughly inspect all exposed surfaces on your vessel and trailer.** If you find any mussels, scrape them off and kill them by crushing them. Dispose of remains in the trash.
- **Remove all plants and mud from your boat, trailer and all equipment.** Dispose of all material in the trash.
- **Empty and dry all buckets and dispose of all bait in trash receptacles before you leave.** Do not take bait home, or dump in a waterway.
- **Carefully feel your boat's hull for any rough or gritty spots,** which may be young mussels that have settled on your vessel and cannot be seen. Microscopic Quagga/Zebra mussels will feel like sandpaper.
- Away from all waterways and stormdrains, **drain all water from your boat (pull all plugs) and dry all areas,** including the motor, motor cooling system, live wells, ballast tanks, bladders, bilges, and lower outboard units.
- **Inspect, clean and dry** all life jackets, water skis or other items that have been in the water, including anchors, ropes, etc.
- **Clean and dry personal belongings,** clothing, and footwear that have come in contact with the water.
- **Wash, dry and brush pets** that have been in the water.
- **Divers** - thoroughly clean all regulators, BCDs, wetsuits and dive gear, making sure to clean both the inside and outside of the BCD. Use a commercially available dive equipment cleaning compound that contains ammonia, vinegar, or chlorine. Allow gear, suit and other equipment to dry before diving in different waters (veligers can survive on a wetsuit if left damp).



**STOP AQUATIC
HITCHHIKERS!**

Keep your watercraft and recreational equipment dry for at least 1 week during hot, dry weather and up to 4 weeks during cool, wet weather, before launching into a freshwater lake or pond OR thoroughly clean boats, fishing and recreational equipment according to the table below.

Cleaning Solutions

Disinfectant	Concentration	Contact Time
Vinegar	100%	20 minutes
Chlorine/Bleach	1/2 oz. per gallon water	10 minutes
Power wash with hot wash	>104°F	20 minutes
Steam/Scalding hot wash	140°F	3 minutes
Freeze	<32°F	24 hours
Salt Bath	Saturated: 1/8 cup per gallon	24 hours
Ethanol	50%	10 minutes
Lysol	As sold or follow label	10 minutes

To report a Zebra Mussel sighting or for more information, contact Massachusetts DCR Lakes and Ponds Program at 617-626-1250 or www.mass.gov/lakesandponds

The DCR oversees 450,000 acres of parks, forests, beaches, bike trails, watersheds and dams. Its mission is to protect, promote, and enhance the wide variety of natural, cultural, and recreational resources within the Massachusetts state park system. To learn more about DCR and to discover other parks and recreational opportunities within the Massachusetts state park system visit www.mass.gov/dcr or call 617-626-1250 or write DCR, 251 Causeway Street, Suite 900, Boston, MA, 02114.

Deval L. Patrick, Governor
Timothy P. Murray, Lt. Governor
Ian A. Bowles, Secretary, EOEEA
Richard K. Sullivan, Jr., Commissioner, DCR

Cover Photo:
Tom Flannery

♻️ Printed 2009



Lakes and Ponds Program



Stop the spread of Zebra Mussels

Dreissena polymorpha
An Invasive Mussel

ATTENTION BOATERS!

What are Zebra Mussels?

Massachusetts lakes, ponds, and streams are a valuable resource for boating, swimming, fishing, and numerous other types of recreation. These water bodies also provide a valuable habitat for a variety of wildlife, including a number of popular sportfish species. Unfortunately, the looming invasion of our waters by exotic mussels and other invasive species threatens to damage these resources.



Zebra Mussel: Photo Credit: USGS

The zebra mussel (*Dreissena polymorpha*) has extended its range in the Northeast in recent years and is now found in Laurel Lake, Lee/Lenox, Massachusetts; Twin Lakes in Salisbury, Connecticut; the Hudson River and Lake George in New York; and several lakes in Vermont, including Lake Champlain.



Photo Credit: USGS

The similar but more aggressive quagga mussel (*D. bugensis*) is rapidly expanding its range and has been found as close as the Mohawk-Hudson River confluence in New York.

Boaters should use caution before launching their boat in Massachusetts water bodies. If you have been boating in western Massachusetts, New York, Vermont or Connecticut, it is especially important that you thoroughly inspect and wash your boat and other equipment following the guidelines in this brochure. Veligers hitchhike undetected and are the main way mussels spread from one lake to another.



Photo Credit: Minnesota DNR

Current Invasive Mussel Distribution in New England / New York August, 2009*

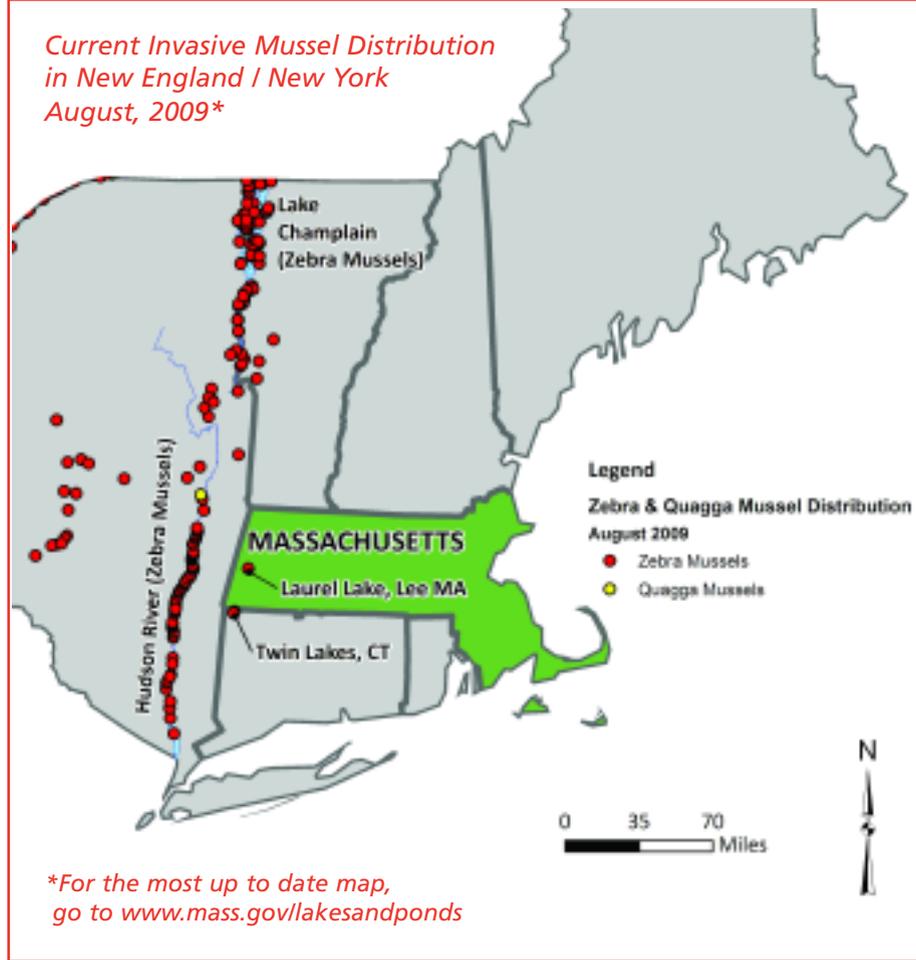


Photo Credit: Minnesota DNR



Photo Credit: Michigan Sea Grant Archives



Photo Credit: Ontario Ministry of Natural Resources

Why should you be concerned about Zebra Mussels?

Zebra and quagga mussels are some of the most ecologically and economically damaging aquatic organisms to invade the United States. Their destructive power lies in their sheer numbers and ability to attach to solid objects – water intake pipes, propellers, boat hulls, dock pilings, submerged rocks and even other aquatic animals.

- Native mussels, fish and wildlife are threatened. Zebra and quagga mussels consume available food and alter the ecology of infested waters. They are a direct threat to native mussels, accumulating on their shells in sufficient numbers to smother their hosts. In infested waters, they can wash up on beaches, covering them with thousands of broken sharp shells.
- Boat engines can be ruined by zebra and quagga mussels growing in the cooling system intakes and blocking water flow. They can also jam steering equipment.

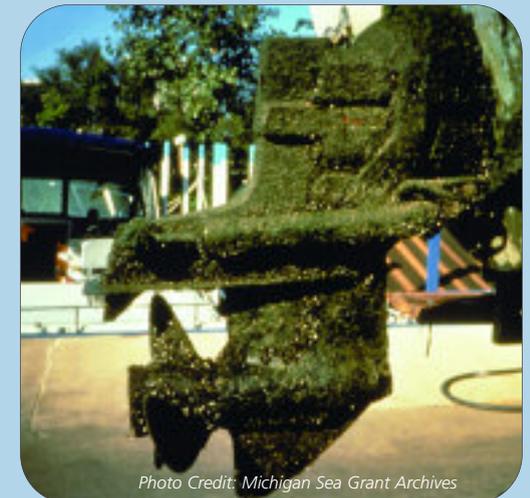


Photo Credit: Michigan Sea Grant Archives