



PACIFIC STATES MARINE FISHERIES COMMISSION

45 S.E. 82nd DRIVE, SUITE 100, GLADSTONE, OREGON 97027-2522
PHONE (503) 650-5400 FAX (503) 650-5426

What you should know about zebra mussels

What are zebra mussels?

The zebra mussel is a freshwater nuisance species native to the Caspian region of western Russia. It was first reported in the United States in 1988, most likely brought here in the ballast water of foreign cargo ships. Since then, it has rapidly spread and now infests waters in 20 states, creating numerous problems for water intake systems, boaters, and wildlife.

What do zebra mussels look like?

Zebra mussels look like small clams with a D-shaped shell. They usually have dark and light-colored stripes and are often found in groups. When they are very young, they look like pepper and feel like sandpaper on a smooth surface. Mature zebra mussels can grow to be up to two inches long, but most are under an inch – about the size of your fingernail.



What should people be concerned about zebra mussels?

The zebra mussel is one of the most economically damaging aquatic organisms to invade the United States. Its destructive power lies in its sheer numbers and its ability to attach itself to solid objects – water intake pipes, propellers, boat hulls, dock pilings, submerged rocks and even other aquatic animals. Zebra mussel populations can reach astonishing densities, up to 750,000 individuals per square meter in layers more than a foot thick.

- **Damage to water systems**

Zebra mussels are responsible for millions of dollars in economic losses to municipal and industrial water delivery systems and power plants. Colonies of zebra mussels clog filters, pipes, pumps, and power plant cooling systems. In the coming decade, they pose a multibillion-dollar threat to industrial and public drinking water supplies.

- **Threats to salmon**

If introduced into the Columbia River basin, zebra mussels could threaten the health and survival of native salmon and steelhead stocks, many of which are listed under the Endangered Species Act. Zebra mussels would likely attach themselves to fish ladders, fish diversion screens, and other pipes and conduits that sensitive salmon species use to make their way around dams. The result would not only include expensive maintenance, but physical damage to adult and juvenile salmon, which would ultimately reduce survival of these imperiled stocks.

- **Threats to natural areas and other wildlife**

Native mussels, fish and wildlife are also threatened. Zebra 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. The dead mussels create a foul smell.

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- **Problems for boats**

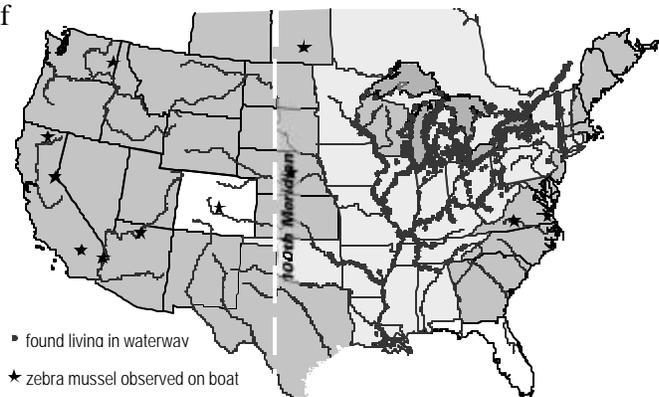
Zebra mussels can ruin boat engines by growing in the cooling system intakes and blocking water flow. They can also jam steering equipment.

How are they spread?

Zebra mussels are excellent hitchhikers. They hitch a ride from one water body to another primarily by sticking to boat hulls, trailers, or aquatic weeds that are caught on a trailer or propeller. Zebra mussels also live in live wells, bait buckets, and bilges. Depending on their age, zebra mussels can survive outside of the water for at least five days.

Why is there particular concern now about the zebra mussel threat?

So far, the zebra mussel has not spread to waters west of the 100th Meridian, which runs down the middle of the U.S. Without vigilant prevention, that could change next year as result of the Lewis and Clark Bicentennial. As part of the bicentennial celebration, thousands of recreational boaters are planning to re-trace the explorers' journey, much of which was on water. Because the number of boats coming from infested states to uninfested western waters is so large, the chances of zebra mussels spreading to the west are higher than in other years.



How can Westerners help keep zebra mussels out of the west?

Anyone who comes in contact with boats should be on the lookout for zebra mussels. If you see them, here are some things you can do:

- Call 1-800-437-2744. This is the Bonneville Power Administration and Bureau of Reclamation crime witness number, which also takes reports of zebra mussel sightings.
- If there is a park ranger, fish and game representative, or some other official nearby, let them know.
- Call your local state fish and wildlife agency and report the sighting. Oftentimes, an agency representative will come to the scene.
- Talk to the boat owner and encourage him/her to remove the zebra mussels

How can I get more information about zebra mussels?

To get more information, visit www.protectyourwaters.net or www.100thmeridian.org. The sites include information on zebra mussels and other aquatic nuisance species, along with advice on preventing their spread.