



Zebra Mussels

U.S. ARMY CORPS OF ENGINEERS

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What are they?

Zebra Mussels are small, thumbnail-size, d-shaped mussels, with a zebra-like pattern of stripes, that are native to the Caspian Sea region of Asia. Zebra Mussels were introduced into the Great Lakes, likely from ballast water from ocean-going vessels, in the mid 1980's. From there they have spread throughout the Great Lakes and down the Mississippi River, up the Arkansas River, and into Oklahoma via the McClellan-Kerr navigation System. Zebra Mussels were found inside the locks at Robert S. Kerr and Webbers Falls in 1993. They have since been found in Oologah Lake, Lynn Lane Lake, A.B. Jewell Lake, Kaw Lake, Keystone Lake, and most recently – Lake Texoma.



Why are they a nuisance?

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 such as water intake pipes, water control systems, boat hulls, propellers, trailers, submerged rocks and vegetation, and even other aquatic organisms. Zebra Mussels can smother native mussels and crayfish by accumulating on the shells. Numbers have been reported in excess of 75,000 per square foot. Zebra Mussels potentially pose a multibillion dollar threat to industrial and public water supplies. The ecological impacts of Zebra Mussels can be severe. Zebra Mussels feed by filtering water and removing nutrients. These nutrients are vital to the growth and survival of all other aquatic organisms.

Threat to Texas Waters:

In late July 2009, Texas Parks and Wildlife Department (TPWD) contacted the Corps and informed us that Zebra Mussels had been discovered in Lake Texoma upstream and downstream of the North Texas Municipal Water District (NTMWD) water intake structure. The water intake structure moves water from Lake Texoma to Lake Lavon via an outfall structure in West Fork Sister Grove Creek.



TPWD requested assistance in obtaining access to the outfall structure area to survey for Zebra Mussels. In early August TPWD and the Corps conducted a joint inspection of the site and discovered three individual Zebra Mussels. Two specimens were attached to rocks approximately 300 yards downstream from the outfall structure and another on a rock further downstream by a bridge. The West Fork Sister Grove Creek (in the area of the outfall) is an intermittent to perennial stream, on private property, with no public access. It is unlikely that the Zebra Mussels were introduced to the area in any method other than the inter-basin transfer of water from Lake Texoma to the West Fork Sister Grove Creek. NTMWD, as a matter of public

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safety, has delayed further pumping of water from Lake Texoma until they fully assess the situation. They will notify the Corps prior to resuming pumping operations. The Zebra Mussels most likely reached Oklahoma via barge traffic down the Mississippi and up the Arkansas River Navigation System. The spread to inland reservoirs was largely from recreation boaters moving from infested waters to uninfested waters without taking precautions to remove Zebra Mussels from their boat, motor, trailer, and other equipment. The longer a boat remains in Zebra Mussel infested waters, the more likely it is to be fouled by Zebra Mussels. Boats that are moored or docked for more than one day are more likely to be fouled by Zebra Mussels than boats launched and retrieved in a single day. It is vital that each boater takes responsibility to prevent the spread of Zebra Mussels.

Recommended precautions include:

- Run your boat at high speed for 10-15 minutes just prior to leaving the lake. *Zebra Mussels may be washed off at speeds exceeding 5 mph and larval Zebra Mussels will be flushed from the cooling system.*
- Remove any visible vegetation from boat, motor, trailer, and any equipment in contact with the water.
- Inspect equipment for presence of Zebra Mussels immediately upon leaving the lake. *If you find Zebra Mussels attached, wash with hot water (140°) or air dry for at least 5 days before returning to the water. If equipment feels gritty to the touch, young microscopic Zebra Mussels may be attached. Power sprayers will detach Zebra Mussels.*
- Drain all bilge water, live wells, engine water, and bait buckets before leaving the lake. *Empty bait buckets on land. Never release live bait in the water.*
- Flush engine cooling system, live wells, and bilge with hot water. *Water hotter than 110° will kill larvae and hotter than 140° will kill adults*
- Air-dry your boat and other equipment for 5 days before using in non-infested waters.
- Boaters and anglers can also help by reporting sightings of suspected zebra mussels to the Texas Parks and Wildlife Department at (800) 792-4263.

BOATERS' ADVISORY

ARE YOU CARRYING ZEBRA MUSSELS?



If you have had your boat in a lake that has Zebra Mussels in the past 7-10 days you may still be carrying live Zebra Mussels with you.

Zebra Mussels vary from 1/8 to 2 inches long and have a striped yellow-brown shell. This mussel is prolific and their eggs and larvae can live for days out of the water on wet surfaces of your boat or trailer.

TO PREVENT DAMAGE TO YOUR BOAT OR TRANSPORTATION TO NON-INFESTED WATER, PLEASE FOLLOW THESE GUIDELINES WHEN LEAVING INFESTED WATER.

- **Drain the bilge water, live wells, and bait buckets.**
- **Inspect the boat and trailer for attached Zebra Mussels.**
- **Scrape off any Zebra Mussels.**
- **Dry boat and trailer for at least 1 week before entering another waterway.**

▽ OR ▽

- **Wash boat parts and trailer with 140°F water, a 10% chlorine and water solution, a hot saltwater solution, or a high-pressure sprayer. Most commercial carwash facilities will suffice. Do not wash your boat and trailer at the boat ramp.**

IF YOU FIND ZEBRA MUSSELS IN LAVON LAKE, OR WOULD LIKE FURTHER INFORMATION CONTACT:

U.S. Army Corps of Engineers:

- **LAVON LAKE Project Office**
- **Ft. Worth District Office**

**972-442-3141
817-886-1310/1577**

North Texas Municipal Water District:

972-442-5405

Texas Parks and Wildlife Department

972-226-9966