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### **Elk Lake Most Unwanted**

**Description**-Zebra Mussels (*Dreissena polymorpha*) are small clam shells (1/2 - 2 inches), which attach to any solid object with tufts of fiber called "byssal threads." They are native to the Caspian Sea region of Asia, and were introduced into North America in the mid 1980's. Tolerant of a wide range of environmental conditions, zebra mussels have extended their range to parts of all the Great Lakes and the much of the Mississippi River, and are beginning to infest inland lakes as well. They are capable of reproducing 1 million offspring a year.

**Crime**-Zebra mussels can cause irreversible changes to lake ecology by filtering as much as 1 liter of water per day through their gills. They remove phytoplankton, small zooplankton and bacteria amongst other things. As a result of this activity, the food web of their new habitat is changed. Studies have shown that this leads to reductions in populations of fish, and they compete with and destroy native populations of mussels. Zebra mussels can have a serious economic effect at facilities that depend on water intake by blocking pipes, like our dry hydrants for fire protection. They will attach to any hard surface in the waters in which they occur, quickly spreading and covering the surface. Preferred surfaces include stone, wood, concrete, iron/steel, aluminum, plastics and fiberglass. As a result, our boats and motors can be damaged by blockages and overheating. The small shells are also sharp and cut skin and fishing lines.

By the year 2000, the mussel was infesting most stretches of the Mississippi, Illinois, Ohio, Mohawk, Hudson, St. Lawrence, Cumberland, Tennessee, and Arkansas Rivers and had begun colonizing tributaries like the Missouri, Allegheny, Monongahela, Wabash and St. Croix Rivers. Zebra mussels also had colonized New York's Finger Lakes, Lake Champlain, Wisconsin's Lake Winnebago, Kentucky Lake, and nearly 100 smaller inland lakes in seven of the eight states bordering the Great Lakes. Zebra mussels pose a major threat to the lakes and rivers of Kentucky. Scientists predict that the zebra mussel will continue spreading passively, by ship, and by pleasure craft to more rivers and lakes in North America. Trailered boat traffic is the most likely vector for invasion into the North American Lakes. This spread is preventable if boaters would take time to thoroughly

clean and dry their boats and associated equipment before transporting these to new water bodies. Since no North American predator or combination of predators has been shown to significantly reduce zebra mussel numbers, such spread would most likely result in permanent establishment of zebra mussels in many North American waterways. Most scientists believe that zebra mussels cannot be eradicated, so the goal now is to learn to control their spread. Adult mussels may attach to hard surfaces, and the young larval form of the zebra mussel, called veligers, may be transported in water. Veligers, about the size of the period at the end of this sentence, may be able to survive in any residual water. This is why preventing the transport of water in the bilge or live-well of boats is critical to stopping the spread of zebra mussels.

Here are some steps we can employ to stop them in Elk Lake. Boats new to Elk Lake or that have been used in other waterways should;

- Always drain the bilge water, live wells and bait buckets. Clean and dry all water contact areas and equipment.
- Inspect the boat and trailer immediately upon leaving the water, remove mud and plant or foreign material.
- Scrape off any mussel found. DO NOT return them to the water.
- If possible, dry the boat and trailer for at least a week before entering another waterway. (If conditions are right, mussels can live for up to seven days on a boat hull outside the water.)
- Wash boat parts and accessories that contact the water using hot water (at least 140 degrees Fahrenheit), a ten percent solution of household chlorine bleach, or hot saltwater solution. Do not wash the boat at the ramp where these solutions could pollute the water. Always finish with a clean water rinse.