

Zebra Mussels Information for Kahola

Important Information

→ Important Information

[Threat](#), [Prevention](#), [Video](#), [Photos](#)
[Download a .PDF file of this page \(703 Kb\)](#)

[How to check your watercraft for Zebra Mussels](#)
[Uniform Minimum Protocols and Standards for Watercraft Interception \(September 2009\)](#)

Important Information:

1. Zebra Mussel education for K.H.A members is of utmost importance, each person is the first line of defense in preventing contamination.
2. K.H.A Board continues to be gravely concerned about the threat of Zebra Mussels to Lake Kahola and has cancelled all non member boat permits (family members may still purchase non member permits with sponsorship of the family member). It is realized that this may be a problem for some of your friends, but the risk is too high. Additionally K.H.A. has established specific preventions found in K.H.A Rules. Recap of rules from Section VI Zebra Mussels and Section VII Fishing (see actual K.H.A Rules for details):
 - i) Prevention per Western United States guide [Uniform Minimum Protocols and Standards for Watercraft Interception \(September 2009\)](#)
 - ii) Banding of vessels to be used to enhance prevention efforts
 - iii) Vessel motor purge required (motor run by owner, out of the water, in presence of an inspector)
 - iv) Failed inspections (water, weeds or mud found) considered "high-risk" and requires quarantine.
 - v) Ballast tanks, live wells, or any other area of the vessel that cannot be confirmed as dry, will require quarantine, followed by owners purge of area (10:1 water to chlorine bleach solution, in presence of an inspector)
 - vi) A fine of \$1,000 is to be levied for non-compliance with K.H.A Zebra Mussel prevention rules.
 - vii) Non member shoreline was cancelled July 2010. Current K.H.A Rule "here shall be no nonmember common area shoreline fishing. Anyone fishing on common grounds must be a member or accompanied by a member. Anyone not accompanied by a member may be fined according to the Zebra Mussel's section of the rules"
3. The State of Kansas, Kansas Department of Wildlife and Parks issued the following IMPORTANT INFORMATION, Zebra mussels have been found in several Kansas waters. **Swimmers and waders** should wear protective clothing to prevent contact with the zebra mussel's razor-like shell.

The following was prepared by Ken Kreif, Lot 137A. Ken has followed this problem and has outlined in layman's terms, the problem and what to look for. Please read it and also click on the video link below to learn even more.

Zebra Mussels - Did You Know?

Basic info:

1. Zebra mussels usually about fingernail size but can grow to a maximum length of nearly 2 inches
2. Zebra mussels live 3 to 9 years
3. Female zebra mussel begins to reproduce at 2 years of age, and produces between 30,000 and 1 million eggs per year
4. Young zebra mussels are small and free swimming, and can be easily spread by water currents
5. Older zebra mussels attach themselves to hard surfaces by an external organ called a byssus, which consists of many threads
6. The mussels will attach to almost any hard surface, either natural or manmade; boats, pilings, docks, and other hard surfaces, as well as to crayfish, turtles, other zebra mussels, and native mollusks



7. Zebra mussels can attach themselves securely, they may also move, and can reattach themselves easily if dislodged by storms
8. Zebra mussels feed by filtering the water
9. Under cool, humid conditions, zebra mussels can stay alive for several days out of water
10. Once zebra mussels become established in a water body, they are **impossible to eradicate** with the technology currently available.

NOTE: Many chemicals kill zebra mussels, but these exotics are so tolerant and tough that **everything in the water would have to be poisoned** to destroy the mussel.

11. Zebra mussels do not have many natural predators in North America. But, it has been documented that several species of fish and diving ducks have been known to eat them
12. Spread by dispersal overland by individuals who trailer their boats from zebra mussels infested waters.
 - Under cool, humid conditions, zebra mussels can stay alive for several days out of water, and depending upon the amount of moisture, zebra mussels have survived for more than 30 days in/on a vessel
 - Lakes across our western United States to include Kansas, continue to be contaminated year after year with zebra mussels At least nineteen boats on trailers crossing into California had zebra mussels attached to their hulls or in motor compartments. They were found during inspections at agricultural inspection stations.

Threat to our lake:

1. **Upset ecosystems**
 - A zebra mussel filters up to a quart of water per day, millions of mussels means they can filter all the water in a lake or stream in a day, effect of filtering:
 - Animals and algae that are the food of zebra mussels are also the food for larval fish and other native species
 - Large zebra mussel population may cause a decline in other animals (native fish, mollusks, and birds)
2. **Threaten native wildlife**
 - Severely affect native mussels and clams by interfering with their feeding, growth, movement, respiration, and reproduction.
 - Can colonize a clamshell to such an extent that the clam cannot open its shell to eat
 - Some native mussels have been found with more than 10,000 zebra mussels attached to them.
 - Attach to slow-moving species such as crayfish and turtles
3. **Zebra mussels cause problems for people**
 - **Foul beaches**
 - Shells of zebra mussels foul beaches and near-shore swimming areas.
 - Bare feet are at risk from the razor sharp mussel shells
 - **Damage boats**
 - They may attach to the hull, motor, or any item immersed in the water
 - Large and small boats can be severely impacted by increased drag caused by thousands of mussels.
 - Small zebra mussels may get into engine cooling systems, causing overheating and other damage.
 - **Damage structures**
 - Zebra mussels pose a threat to navigational buoys, piers, docks, and other structures in the water.
 - Navigational buoys have been sunk under the weight of attached zebra mussels.
 - Wood, steel, and concrete are all damaged by prolonged attachment of the mussels.
 - **Fishing impact**
 - Fishing gear can be fouled if left in the water for long periods
 - Experimental evidence exists that zebra mussels can reduce the growth rate of fish through food web interactions
 - Due to changes in fish populations, zebra mussels also adversely impact recreational fishing.

Prevention:

Source of information being applied across the Western United States and adopted as a guide for Lake Kahola's Zebra Mussel prevention effort is [Uniform Minimum Protocols and Standards for Watercraft Interception \(September 2009\)](#). This guide is supplemented - see K.H.A Zebra Mussel prevention rules.

General Comments

- Water and environmental management primary emphasis is education so that boaters and fishermen do not inadvertently transfer mussel larvae from one water body to another.
- Encourage good boat hygiene when moving boats between lakes ensuring all water holding areas such as ballast tanks, live wells, etc. are drained of water (dry for an extended period of time - remember the mussel can live out of water for more than 30 days)
- Wash your boat off with warm, soapy water (see specifics below)
- Do not transport water from live wells and bait buckets from one water-body to another.
- On some rivers, boaters are prohibited from traveling upstream from infected areas in an attempt to keep the mussels from spreading.
- Millions of dollars are spent each year in attempting to control these small but numerous mollusks.
- Many chemicals kill zebra mussels, but these exotics are so tolerant and tough that everything in the water would have to be poisoned to destroy the mussel.
- Most commercial water users rely on chemicals such as chlorine, filters, or mechanical scraping to remove mussels

Prevention "How To":

- Always drain the bilge water, live wells and bait buckets.
- Inspect the boat and trailer immediately upon leaving the water.
- Scrape off any mussel found. Do not return them to the water.
- Dry the boat and trailer for at least a week before entering another waterway. Depending on the humidity and temperature drying time needed could be in excess of 30 days.

How to Inspect and Clean watercraft and Trailers:

Learn how to identify zebra mussels.

Remove all aquatic plants and animals from boat, motor, trailer, and equipment.

Drain water from ballast tanks, live wells, bilge, and motor.

Dispose of unwanted live minnows and worms in the trash.

Rinse boat and equipment with high pressure or hot water

- Wash boat parts and accessories that contact the water
 - Use hot water (at least 140 degrees Fahrenheit) or 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
 - Finish with a clean water rinse
- Dry everything for at least 7 days. Depending on the humidity and temperature drying time needed could be in excess of 30 days.

Never launch watercraft with a suspected infestation.

Report sightings on watercraft or our lake, to our Lake Kahola caretaker

