



Quagga Mussel Questions & Answers

For more information, call toll-free 1 (866) 440-9530

What are Quagga mussels?

Dreissena bugensis is an invasive aquatic species that grows to about an inch in diameter. Sometimes they are larger, sometimes they are microscopic. The small, freshwater bivalve mollusk is triangular with a ridge between the side and bottom. It has black, cream, or white bands, and often features dark rings on its shell almost like stripes.

Why should we be concerned about their arrival in California?

They reproduce quickly and in large numbers. Once established, there is virtually no chance of eradication from a waterway. Their establishment in California waters could result in an environmental and economic disaster.

What is the environmental impact of the Quagga?

The Quagga will upset the food chain by consuming phytoplankton that other species need to survive. They are filter feeders that consume large portions of the microscopic plants and animals that form the base of the food web. Their consumption of significant amounts of phytoplankton from the water decreases zooplankton and can cause a shift in native species and a disruption of the ecological balance of entire bodies of water.

What is the economic impact of the Quagga?

Their ability to rapidly colonize on soft and hard surfaces causes serious economic problems. In addition to the hulls, engines and steering components of boats, plants and sediment, Quagga mussels attach to submerged surfaces such as piers, pilings, water intakes, and fish screens. In doing this they can clog water intake structures hampering the flow of water. They frequently settle in massive colonies that can block water intake and threaten municipal water supply, agricultural

irrigation and power plant operations. In the U.S., Congressional researchers estimated that an infestation of the closely-related zebra mussel in the Great Lakes area cost the power industry \$3.1 billion in the 1993-1999 period, with an economic impact on industries, businesses, and communities of more than \$5 billion. California could spend hundreds of millions of dollars protecting the state water system from a Quagga infestation.

How did the Quagga mussels get to California?

The Quagga primarily moves from one place to another through human-related activities. They attach to hard surfaces and can survive out of water for up to a week.. The microscopic larvae also can be transported in bilges, ballast water, live wells, or other equipment that holds water.

Authorities discovered Quagga mussels living in the Colorado River at Lake Mead and Lake Mohave and Lake Havasu along the Arizona-Nevada borders in January. It is likely they were transported on the hull of a recreational boat.

Where did the Quagga mussels come from?

They are native to the Ukraine and Russia and were first discovered in the Great Lakes in 1989, one year after the discovery of the zebra mussels in the same region. It is believed they arrived in America via ballast water discharge

Are Quagga mussels similar to Zebra mussels?

The Quagga is a close relative of the Zebra mussel and is very similar in appearance and in environmental impact. Since the 1980s Zebra mussels have spread throughout much of the eastern United States. Quaggas differ from Zebra mussels in that they are heartier and can live at greater depths and in colder temperatures. Quagga mussels have actually displaced Zebra mussel population in some infested areas.

Do Quagga mussels have predators?

Quagga mussels have few natural predators in North America. But it has been documented that several species of fish and diving ducks have been known to eat them.

How can we get rid of them?

It may be possible to eradicate Quagga mussels if they are in small masses and low density. However, preventing their spread is the best course of action. Since their larvae are free drifting, preventing their spread downstream from known infestations may not be possible.

What is being done in response to the spread of Quagga mussels?

State and federal agencies are mounting a unified response using the Incident Command System. The principal involved agencies include Fish and Game, Water Resources, Food and Agriculture, Boating and Waterways, Parks and Recreation, U.S. Fish and Wildlife, and the Metropolitan Water District. Actions include:

- Increased inspections at California Department of Food and Agriculture border stations
- Dive surveys of the Lower Colorado River to determine the extent of infestation
- Training and deployment of survey teams to inspect other California water bodies
- Public information and education efforts are underway, especially for boaters

Why are Quagga mussels bad for boaters?

- Ruin your engine by blocking the cooling system - causing overheating.
- Increase drag on the bottom of your boat, reducing speed and wasting fuel.
- Jam steering equipment on boats.
- Require scraping and repainting of boat bottoms.
- Colonize all underwater substrates such as boat ramps, docks, lines and other underwater surfaces requiring constant cleaning.
- Reduce fish populations.