

# EPA approves treatment for zebra, quagga mussels; boats bound for Tahoe stopped

By Kathryn Reed

The EPA on July 8 approved a treatment to combat invasive zebra and quagga mussels in lakes, rivers, recreation areas and other open bodies of water.

Zequanox was created by Davis-based Marrone Bio Innovations. The chemical was first approved by the EPA in 2012 to be used in enclosed systems, which includes intake pipes for dams, manufacturers and golf courses.

These invasive species have crippled the Great Lakes region as well as Lake Mead in Southern Nevada, Lake Powell in Utah, and rivers in Mississippi, Arkansas, Tennessee and Colorado. While they have not reached Lake Tahoe, they are a threat. These mussels are some of species that the decontamination stations are looking for before boaters are able to launch at Tahoe.

On July 9 a boat coming from Lake Mead was inspected at the Spooner Summit station. Inspectors found quagga mussels and an unidentified snail species hiding in the anchor locker.

During the Fourth of July weekend, more than 725 boats were screened for invasive species at four inspection stations surrounding the Tahoe, which is a 17 percent increase from 2013.

Since May, inspectors have intercepted 24 boats containing invasive species bound for the waters of Lake Tahoe. Eight of these boats contained invasive mussels and another four boats were carrying several different snail species.

The mussels disrupt the ecosystem and cause proliferation of

toxic blue-green algae. They decrease game fish populations, which can have a serious effect on the economy. Swimmers run the risk of injury from the invasive mussels' sharp shells, and water intakes from infested lakes and rivers used for irrigation, fire suppression and drinking water can suffer impeded or blocked flow and damage to infrastructure and equipment.

Zequanox is composed of dead cells derived from a naturally occurring soil microbe, and it controls mussels in all life stages. Unlike toxic treatments, such as potash and copper-based solutions, Zequanox is biodegradable, noncorrosive and nonvolatile. In addition, Zequanox is highly selective to control only the invasive zebra and quagga mussels, is effective in a broad range of water conditions and according to the EPA, its active ingredient has "low toxicity and presents little risk to non-target organisms."

"The product is not damaging to aquatic life, humans or infrastructure," Jessi DeMartini, research center coordinator with the Forest Preserve District of DuPage County, Ill., said in a statement. "Zequanox produced high mortality of the zebra mussels – reaching 97 percent at the peak of application – while native fish exposed to the product remained unharmed. After further testing we concluded there were no lasting impacts to water quality."

DeMartini was part of two collaborative open water studies at the Deep Quarry Lake in DuPage County in 2012 and 2013.

Zequanox is applied directly into a lake or river using standard injection equipment. Treatments can occur during any time of the day while people and pets are present, and can be completed within hours.

Tahoe's goal is to prevent the mussels from ever reaching the lake.