



**New Mexico and Other Western States on High Alert for the
Invasive Zebra and Quagga Mussels**

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On May 8th and 9th, the interagency Aquatic Nuisance Species (ANS) Task force held a public meeting in South Lake Tahoe, California to discuss, among other things, the severity of invasive mussel populations in the West, updates on new species occurrences throughout the United States, and invasive species control projects within Lake Tahoe. This meeting highlights the severity of the problem of aquatic invasive species, zebra and quagga mussels in particular, and the urgent need to continue to develop and implement programs to prevent their introduction and further dispersal in Western waters.

The zebra mussel (*Dreissena polymorpha*), and the closely related quagga mussel (*Dreissena rostriformis bugensis*), collectively referred to as Dreissenids, are among the most devastating aquatic nuisance species to invade North American fresh waters. According to researchers, once these mussels become established, they are almost impossible to eradicate. Zebra mussels were first discovered in Lake St. Clair (located between Canada and the U.S.) in 1988. They spread to the Great Lakes by 1989, throughout the East and as far west as the Mississippi by the early 2000s. Quagga mussels showed up in the Great Lakes in the 1990s and followed a similar path of expansion. In 2007 they were first discovered in the West in Lake Mead, Nevada, and have since been found in the Colorado river in Lake Mojave, Lake Havasu, and in various locations in California. Their rapid dispersal throughout the Great Lakes and major river systems was due to their ability to attach to boat hulls, motors, and engine cooling intake lines or pipes, as well as surviving as larvae in water holding areas of boats. Zebra and quagga mussels originate in Eurasia in the Caspian, Ural, and Baltic seas and spread to the United States in ballast water from freighters.

The economic damage caused so far by the zebra and quagga mussels has been devastating. In the Great Lake regions, they have caused more than \$1 billion in damage by clogging or covering everything from fish ladders and spillway grates, to irrigation and municipal water intakes, to dock pilings and outboard motors. In so doing, they have covered, smothered and destroyed native mussel colonies and small crustaceans. These invasive mussels can have highly destructive effects on entire ecosystems. Large colonies filter enormous quantities of water on a daily basis, consuming algae and plankton, clearing the water column and disrupting the native food chain. They can be highly detrimental to native and endemic species, including native fisheries.

And if you think that the presence of Dreissenids in our waters would not affect you, think again. The maintenance and operation of water supply and delivery facilities, water recreation, and other industries and economies that depend on water are dramatically more expensive in mussel infested waters. Every resident of New Mexico is a stakeholder when it comes to invasive species. Recreational boaters, ecologists, municipalities, irrigation farmers, operators of water treatment plants and dam turbines, and native fisheries could be all affected if zebra or quagga mussels gained a foothold in our waters.

Efforts to prevent the further spread and introduction of ANS in the West do exist; however, they vary widely across state, tribal, federal and local jurisdictions. Most states within the West have limited ANS programs. Five of the 19 States (California, Colorado, Idaho, Utah and Washington) in the region have well developed and funded programs, but even these five programs have limitations and challenges. The Quagga-Zebra Mussel Action Plan for Western U.S. Waters summarizes current strategies to address invasion of Dreissenid mussels in the West, identifies actions needed to prevent the further spread of these mussels, respond to new infestations, and manage existing infestations.

The top priorities listed are:

- Increasing capacity to address invasive mussels
- Prevention
- Early detection monitoring
- Rapid response (create and maintain a rapid response fund)
- Containment and control of existing populations
- Outreach and education

Zebra/Quagga mussels have not yet been detected in New Mexico, although they have been found in neighboring states of Colorado, Texas, and Utah. To help combat the invasion and spread of Dreissenid mussels

and other aquatic invasive species (AIS), the New Mexico Department of Game and Fish has adopted new boating rules: These include mandatory watercraft inspection, and decontamination if necessary, advanced notification of intent to transport watercraft 26 ft. or longer into New Mexico, and mandatory draining of boats being transported in New Mexico. For more details on these boating rules, refer to the following website: <http://www.wildlife.state.nm.us/fishing/fishing-regulations/aquatic-invasive-species/>.

The best way to avoid problems associated with AIS is to never let them establish in the first place. Prevention is much less expensive and easier than remediation once an invading species has become established. The following are simple steps that can be taken to help prevent the spread of Zebra and Quagga mussels within New Mexico and elsewhere:

- Before leaving a lake or other water body drain all water from the bilge, live wells and any other water-holding device of your watercraft.
- Remove any visible mud, plant, fish, or animals before transporting equipment.
- Rinse out the boat, bilge, live wells, trailer and equipment with fresh water and, if possible, allow all the equipment to dry for 2 to 3 days before using it at another water body. Clothing and pets that came in contact with water should also be cleaned and dried.
- Never move water, live animals or plants from one water body to another, as you may transplant undesirable AIS.

To learn more about Zebra and Quagga mussels, the coordinated interagency efforts underway to prevent their further expansion into Western waters, and what we can all do to help prevent invasive mussels from invading our waters, see references listed below:

References

Aquatic Invasive Species <http://www.wildlife.state.nm.us/fishing/fishing-regulations/aquatic-invasive-species/>

Current USGS Zebra and Quagga mussels sightings distribution map
https://nas.er.usgs.gov/UserImages/current_zm_quag_map.pdf

Non Indigenous Aquatic Species (NAS) <https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5>

Quagga Zebra Action Plan for Western US Waters

https://www.anstaskforce.gov/QZAP/QZAP_FINAL_Feb2010.pdf

Safeguarding the West from Invasive Species: Actions to strengthen Federal, State, and Tribal Coordination to Address Invasive Mussels

https://www.doi.gov/sites/doi.gov/files/uploads/safeguarding_the_west_from_invasive_species.pdf

Stop Aquatic Hitchhikers! <http://stopaquatichitchhikers.org/>

USGS Dreissena Frequently asked questions

https://nas.er.usgs.gov/taxgroup/mollusks/zebramussel/Dreissena_faqs.pdf

USGS Zebra mussel frequently asked questions

https://nas.er.usgs.gov/taxgroup/mollusks/zebramussel/zebra_mussel_faqs.pdf

UPCOMING EVENT

New Mexico Youth Ranch Management Camp

June 9th – June 14th

CS Ranch Cimmaron, NM

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