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Zebra Mussel Relative Found in Lake Mead *Pacific Northwest on High Alert*

The discovery of invasive quagga mussels in Lake Mead on January 6, 2007 elevates the threat these species pose to the Pacific Northwest's natural resources and economy. A team of aquatic invasive species experts met last week in Vancouver, Washington to discuss this new concern and opportunities to enhance ongoing prevention, detection, and response planning efforts.

Like its better known cousin the zebra mussel, the freshwater quagga mussel can grow on many surfaces and form dense colonies that clog water pipes, foul irrigation screens and fish ladders, restrict water recreation, harm native aquatic life, and result in costly maintenance. They consume large amounts of microscopic plants and animals that salmon and trout rely on for food, adding further stress to native species already in peril and affecting recreational and commercial fisheries. In the event of a quagga or zebra mussel invasion, estimated maintenance and control costs to the Federal Columbia River Power System could run into the hundreds of millions of dollars, which would pass down to Pacific Northwest consumers.

Quagga and zebra mussels are native to Eastern Europe/Western Asia, and they invaded the Great Lakes region in the 1980's. Both species have since spread by attaching to boat hulls, engines and trailers, closing their shells, and then hitching a ride to a new water body. Boaters also can transport the mussels' microscopic larvae in live wells, engine cooling systems, and other sources of standing water. Cross-country transport on a recreational boat is the likely route that recently brought quagga mussels to Lake Mead. Although boats with live zebra mussels have been intercepted in the West coming from the eastern United States, boats traveling from the Colorado River now represent a much closer threat to Pacific Northwest waters. Past surveys demonstrate that some boaters regularly tow their boats between the two regions. Regional natural resource managers are also concerned about the potential movement of quagga mussels by fish stocking operations. After the initial discovery of quagga mussels in Lake Mead, biologists found the invasive shellfish growing in the Nevada Department of Wildlife's Lake Mead Fish Hatchery. Although that hatchery normally releases fish within the Lake Mead region, it did transport fish into Northeast Nevada's Wild Horse Reservoir in April and May 2006. Wild Horse Reservoir drains into the Owhyee River, which flows into the Snake River. Although it's unclear if that fish transfer was also contaminated by quagga mussels, plans are underway to survey Wild Horse Reservoir.

"Invasion by quagga mussels would be a terrible blow to the Pacific Northwest," said Ren Lohofener, director of the Service's Pacific Region. "We are working hard to continue prevention programs, monitor for their presence, and move forward with preparations to respond if they do arrive."

Under the national 100th Meridian Initiative, a partnership of organizations has been cooperating for years to prevent zebra and quagga mussels from entering the West across the line that bisects the United States (the 100th Meridian). The program's Columbia River Basin team includes state natural resource agencies, federal government, tribes, ports, universities, nonprofit groups, and other organizations. This team collaborates to teach boaters how to recognize and

prevent “hitchhiking” mussels; trains enforcement officers to detect infested watercraft; and surveys high risk water bodies for mussel adults and larvae. Most recently, this team has developed a zebra/quagga mussel rapid response plan, which was discussed at their February 28 meeting. The plan is in its final stages and includes a predetermined response management system that expedites decision-making, information sharing, and seeks to avoid duplication of effort. An interagency response task force will guide the execution of the plan in the event of an invasion. A current version of the plan is available at <http://100thmeridian.org/ColumbiaRT.asp>.

Call to Action

“Stopping the quagga mussel from entering the waters of Columbia River Basin will require the cooperation and vigilance of the general public,” says Randy Fisher of the Pacific States Marine Fisheries Commission. “We need everyone who might come in contact with boats to be our eyes and ears. Anglers, people at gas stations, and people using lakes, marinas, and beaches can all help by being lookouts for this invasive mussel.” Boaters who have had their watercraft in Lake Mead or other Colorado River reservoirs in the last three years are strongly encouraged to inspect their watercraft for signs of quagga mussels and to contact their state boating or fish and wildlife management agency if they have questions or concerns.

It is illegal to possess and transport quagga and zebra mussels, and boat owners are responsible to remove mussels attached to their watercraft. Below is a list of actions boaters (including personal watercraft, canoe, and kayak users) and anglers can do to ensure that their boats, vehicles, trailers and other equipment do not become the means of infecting other waters:

- Drain the water from your motor, live well, and bilge on land *before* leaving the immediate area of the lake.
- Wash the hull, live well, equipment, and any other exposed surface, and flush the motor and bilges, using hot (over 140 degrees F) soapy water or use a solution of 1 part household bleach to 19 parts water.
- Completely inspect your vessel and trailer, removing any visible mussels, but also feel for any rough or gritty spots on the hull. These may be young mussels that can be hard to see.
- Clean and wash your trailer, truck or any other equipment that comes in contact with water. Mussels can live in small pockets anywhere water collects.
- Air-dry the boat and other equipment for at least five days before launching in any other waterway.
- Dispose of unwanted bait in the trash, and do not use bait that has been exposed to infested waters.

Quagga mussels and zebra mussels are similar in appearance. Adults look like a small clam with a D-shaped shell, usually with alternating dark and light stripes and about the size of your fingernail. Small juvenile mussels that have just recently attached to a surface look like black pepper and feel like sandpaper. If you think you have spotted quagga or zebra mussels call **1-877-STOPANS or 1-877-786-7267**.

The 100th Meridian Initiative is a cooperative effort between state, provincial, and federal agencies to prevent the westward spread of zebra mussels and other aquatic nuisance species in North America. The goals of this Initiative are to 1) prevent the spread of zebra mussels and other aquatic nuisance species in the 100th meridian jurisdictions and west and 2) monitor and control

zebra mussels and other aquatic nuisance species if detected in these areas. Additional information can be found at www.protectyourwaters.net and www.100thMeridian.org.