



**For Immediate Release**

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## NEWS RELEASE

### Quagga Mussels Confirmed in Duluth – Superior Harbor by US EPA

**Contacts:**

**US EPA** – Melissa Anley-Mills, 202 564 5179, 202 664 7272 (mobile) or [anley-mills.melissa@epa.gov](mailto:anley-mills.melissa@epa.gov)

**Minnesota Department of Natural Resources - Division of Ecological Services** - Gary Montz, 651-2595121 or [gary.montz@dnr.state.mn.us](mailto:gary.montz@dnr.state.mn.us)

**Minnesota Sea Grant** - Marie Zhuikov, 218-726-7677 or [mzhuikov@d.umn.edu](mailto:mzhuikov@d.umn.edu)

**Wisconsin Department of Natural Resources** - Julia Solomon (608) 267-3531 or [julia.solomon@wisconsin.gov](mailto:julia.solomon@wisconsin.gov)

**Wisconsin Sea Grant** - Phil Moy, 920-683-4697 or [philip.moy@uwc.edu](mailto:philip.moy@uwc.edu)

(Washington, D.C. – Jan. 11, 2007) The quagga mussel, a cousin to the zebra mussel, has been confirmed for the first time in the Duluth-Superior Harbor. Using DNA analysis, EPA researchers confirmed the finding of one small fan-shaped quagga mussel. If allowed to thrive, these mussels, which are about the size of an adult's thumbnail, may pose a serious threat to the harbor and Lake Superior ecosystems. As filter feeders, both the quagga and zebra mussels accumulate pollutants that they pass up the food chain, damage the food chain by consuming food sources of native species, negatively impact fisheries and clog water intakes. Quagga mussels are widespread in the lower Great Lakes, especially Lake Michigan, Ontario and Erie, where they have out-competed zebra mussels in deep and shallow waters.

EPA researchers found the quagga mussel in samples collected while conducting a model monitoring and detection program for harbors and bays vulnerable to invasive species. Sifting through more than 100 samples and over 20,000 individual organisms, one mussel specimen was tentatively identified as a quagga mussel, but the young quagga mussel was difficult to distinguish visually from the many zebra mussels collected from the harbor. Comparing DNA sequences derived from the suspect mussel with other positively identified mussel specimens, including zebra mussels, EPA researchers were able to definitely classify the mussel as a quagga mussel (*Dreissena bugensis*) and confirm the initial identification. As a result, the quagga mussel became the 84th non-native species found in Lake Superior waters.

“EPA is responding to the priorities of the Great Lakes Regional Collaboration by developing a program for early detection of new invaders. Finding the quagga mussel is evidence that our early detection program works. By using DNA sequencing we were able to positively identify this new threat at the earliest stage of invasion” said George Gray, assistant administrator of EPA’s Office of Research and Development. “We have enabled our partners in Minnesota and Wisconsin to take the most appropriate action to minimize the effects of this troublesome invasive species.”

The presence of quagga mussels in Duluth-Superior Harbor is yet another reason for boaters to take precautions against moving these invasive species to inland waters. In Minnesota, both zebra mussels and quagga mussels are designated as prohibited invasive species and are illegal to possess, transport or introduce in to other waters. It is illegal to transport a boat and trailer with them attached. Gary Montz, Minnesota Department of Natural Resources (MN DNR) biologist, reminds boaters, anglers and others that they should not be concerned with differences in appearance between the two mussels since they are both prohibited invasive species. "They all need to be removed before transporting boats and equipment," says Montz. He points out that boaters and anglers should follow the guidelines of the Stop Aquatic Hitchhiker campaign:

- Remove vegetation, mud and animals from the boat, motor and trailer
- Drain water from live wells, bait wells, bilge and motor
- Rinse the boat and trailer with hot water OR let it dry for five days.

"This new quagga mussel finding highlights the importance of these simple prevention steps for all boaters," says Julia Solomon, Wisconsin Department of Natural Resources aquatic invasives education specialist. "We're lucky that we found this species before it became widespread. With the help of citizens and our partners, we hope to be able to limit the spread of quagga mussels from Lake Superior to the inland waters of Wisconsin."

Native to the Ukraine, over 4,000 miles away, quagga mussel were probably introduced to the Great Lakes from the ballast water discharges of transoceanic ships as were zebra mussels and dozens of other harmful invasive species. First seen in the Great Lakes in 1989, quagga mussels had not, until now, been found in the Duluth-Superior Harbor or elsewhere in Lake Superior. Quagga mussels are now widely distributed in Lakes Ontario, Michigan and Erie. Their recent rapid expansion in Lake Huron coincides with a large fisheries decline and other changes to the local food web.

Since 1989, zebra mussels have infested the Duluth-Superior Harbor but have not taken hold in Lake Superior. Contributing factors could include Lake Superior's low dissolved calcium content, which is needed in making shells, cold temperatures and low productivity or the amount of living material supported within them. However, quaggas are different from zebra mussels and this discovery is worrisome news. Of the two species, the quagga mussel has lower temperature tolerance and tends to colonize deeper waters of the lower lakes. Researchers will be watching closely to see if quaggas become established and cause impacts to the harbor and Lake Superior ecosystem.

For more on the quagga mussel visit:

- [http://cars.er.usgs.gov/Nonindigenous\\_Species/Zebra\\_mussel\\_FAQs/Dreissena\\_FAQs/dreissena\\_faqs.html](http://cars.er.usgs.gov/Nonindigenous_Species/Zebra_mussel_FAQs/Dreissena_FAQs/dreissena_faqs.html)
- [http://www.miseagrant.umich.edu/downloads/ais/fs\\_quagga\\_mussel.pdf](http://www.miseagrant.umich.edu/downloads/ais/fs_quagga_mussel.pdf)
- The Sea Grant Nonindigenous Species Site (SGNIS) <http://www.sgnis.org>

For more information on the Stop Aquatic Hitchhikers Campaign visit:

<http://www.protectyourwaters.net/>

For more information on the Great Lakes visit EPA's Great Lakes Web site:  
<http://www.epa.gov/grtlakes>

To learn more about the EPA Research and Development Labs involved in this project visit:

- ORD's Mid-Continent Ecology Division of the National Health and Environmental Effects Laboratory: <http://www.epa.gov/med/index.htm>
- ORD's National Exposures Research Laboratory: <http://www.epa.gov/nerl/>

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