



# IDAHO DETAILS SUCCESSFUL ERADICATION TREATMENT OF INVASIVE, DESTRUCTIVE QUAGGA MUSSELS IN SNAKE RIVER, FIRST SIGHTING IN COLUMBIA RIVER BASIN

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Idaho completed a 10-day treatment to rid a sixteen-mile section of the mid-Snake River near Twin Falls of quagga mussel larvae (veligers) and at least two adult mussels. The state says the treatment was largely successful, although it and other partners will continue to test for at least the next five years.

This is the first siting of invasive mussels in the Columbia River basin and Idaho has taken an aggressive approach to the mussels' immediate eradication. On Sept. 18, Idaho discovered the mussel larvae in the section of Snake river from Centennial Park downstream through Pillar and Shoshone falls to the Twin Falls hydroelectric facility and immediately set in motion the state's rapid response plan.

The in-water treatment using a copper-based treatment (Natrix) began Oct. 3 and was completed Oct. 13, according to Nic Zurfluh, Invasive Species Bureau Chief at the Idaho State Department of Agriculture. Zurfluh spoke to the Northwest Power and Conservation Council at its meeting in Portland this week. He said the treatment dose of one part per million was enough to rid the

river of mussels, but not so much that it would impact human health through drinking water.

“With invasive species, it’s a time clock,” Zurfluh told the Council. “We have a rapid response that is very similar to our wildfire response. Within 24 hours we had biologists on the water.”

He described the response as four-pronged and, in this case, the urgency of the situation demanded that all prongs had to be implemented at once. The plan includes notifying impacted entities and communicating with the public, implementing containment measures, conducting delimiting surveys and evaluating for potential treatment options.

Until the mussels were found in the middle Snake River, the Columbia River basin had been the only major river basin in the U.S. free of invasive quagga and zebra mussels.

“Invasive mussels from other infested areas of the U.S. pose a direct threat to the regional hydropower system, affecting both native fish and wildlife and human uses of the system,” said a [Nov. 7 Council Memorandum](#) .

Oregon, Washington, Montana and Idaho have established Watercraft Inspection and Decontamination stations throughout the region to prevent the introduction and establishment of invasive mussels in the waters of the Columbia River Basin.

Funding for the inspections has been made available since 2014 when Congress passed new authorization for the U.S. Army Corps of Engineers that included a provision giving the Corps legal authority to enter into cost-sharing agreements with the four Northwest states to establish and operate Watercraft Inspection and Decontamination stations, the memo says.

The ISDA quagga mussel treatment plan was developed with the review and assistance of many state, federal, and local entities. The plan includes both rapid response and longer-term monitoring and treatment strategies. “The scope and complexity of the treatment is unprecedented in the basin and will serve as a learning tool for future responses,” the Council memo says.

The Idaho State Department of Agriculture Snake River Quagga Treatment Plan is [here](#).

Containment included keeping people and boats off the contaminated section of river and calling all water craft and even decoys that had been in the river section over the previous 30 days to decontamination stations where they were rinsed and cleaned with 140-degree water.

At the same time, ISDA began conducting surveys to find the limits of the contamination. Those surveys were completed within a day. They needed to verify that what they found was quagga verligers, so they sent samples to a lab for verification and DNA identification.

“All that was done overnight,” Zurfluh said. “We needed to do that because once you ring the bell (to the public) it’s difficult to back out of it.”

ISDA didn’t do all of this alone, but had the help of other partners, such as the Idaho Department of Fish and Wildlife, tribe and power company biologists. In addition, the routine monitoring of Idaho streams that found the quagga mussels in the first place would not have happened without the additional funding Idaho and other Northwest states had been receiving from the Corps.

“The Corps dollars essentially doubled the monitoring in the state,” Zurfluh said. “Once we knew the extent of the infestation, then we could target the treatment.

“It saves a lot of time if we can do it all at once,” Zurfluh said. “Mother Nature was about to kick us out,” referring to the impending winter.

At that point, all the treatment options were on the table, he said. ISDA held an on-the-water workshop with partners to determine the best treatment. They also had an impromptu community town hall in Twin Falls, and settled on the copper-based Natrix, mixed at one part per million. That took 159 totes of the poison, he said. Each tote is 275 gallons.

On Oct. 3 they began the first 96-hour water treatment, took a 48-hour break, and finished with another 96-hour treatment on Oct. 13. During that time, they continuously monitored the copper level in the water to ensure it was no higher than one part per million.

“We achieved mortality of adult mussels within 48 hours,” Zurfluh said. “But it can take up to five years of no mussels or verligers before we can take that water body off the watch list.”

He said the cost of the entire response could be as high as \$3 million.

For backgrounds, see:

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— CBB, July 18, 2019, MONTANA DETAILS ITS HIGH-LEVEL EFFORT TO KEEP ZEBRA, QUAGGA MUSSELS OUT OF BASIN; FUNDING FOR MORE INSPECTION STATIONS WOULD HELP, <https://cbbulletin.com/montana-details-its-high-level-effort-to-keep-zebra-quagga-mussels-out-of-basin-funding-for-more-inspection-stations-would-help/>

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