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November 7, 2023

MEMORANDUM

TO: Council Members

FROM: Windy Schoby, Idaho Fish and Wildlife Policy Analyst

SUBJECT: Quagga Mussel Detection and Response in the Snake River, Idaho

BACKGROUND:

Presenter: Nic Zurfluh, Invasive Species Bureau Chief, Idaho State Department of Agriculture

Summary: Quagga mussel larvae was first detected in the Snake River near Twin Falls, Idaho on September 18, 2023, during routine early detection monitoring conducted by the Idaho State Department of Agriculture.

Since the discovery of quagga mussel larvae in the Snake River, ISDA has been dedicated to an aggressive approach for treatment to protect waters from these mussels. The ten-day treatment began October 3 and concluded October 13, using a comprehensive treatment plan. The copper-based treatment (Natrix) was applied at a rate that will eradicate mussels but is below the drinking water standard for humans. The treatment application occurred across a sixteen-mile section of the Snake River and is intended to eradicate quagga mussels at all life stages.

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.

Relevance: The Council's Fish and Wildlife Program encourages a regional approach to establishing a defensive perimeter to keep invasive mussels out of Columbia River Basin waters. The program specifically identifies measures for inspection, monitoring, prevention and control of aquatic invasive species, including supporting regional efforts on early detection and rapid response. The Council has been actively engaged in supporting federal-cost share funding for preventing quagga and zebra mussel invasion into the Columbia River Basin. We will hear an update on how the efforts on quagga mussel detection and rapid response were utilized in the Snake River.

Workplan: In the 2014 Fish and Wildlife Program the Non-native and Invasive Species strategy states: "Prevent the introduction of non-native and invasive species in the Columbia River Basin and suppress or eradicate non-native and invasive species". The strategy notes that, "currently, the greatest known threat in the Columbia River Basin from aquatic invasive species is introduction into the basin of zebra or quagga mussels". The Program encourages a regional approach to establishing a defensive perimeter to keep invasive mussels out of Columbia River Basin waters and supports monitoring and rapid response efforts. The program also identifies the need to share data and information among all entities working on efforts to prevent invasive mussels and to coordinate on education and outreach efforts.

Background:

The Columbia Basin is the only major basin in the U.S. without an infestation of zebra and quagga 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. Each of the Northwest states has 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.

In 2014, 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 Council worked closely with regional partners in advancing the legislation and supporting continuing funding for this program. The cost-share program is coordinated through Pacific States Marine Fisheries Commission. The funding has allowed the four Northwestern states to increase the number of watercraft inspection stations and their days and hours of operation. It has also supported ongoing monitoring and rapid response efforts.

More Info:

Idaho State Department of Agriculture Snake River Quagga Treatment Plan
<https://agri.idaho.gov/main/wp-content/uploads/2023/10/ISDA-Quagga-Mussel-Treatment.pdf>

Update on Zebra and Quagga mussel prevention efforts: Stephen Phillips, Pacific States Marine Fisheries Commission
<https://www.psmfc.org/program/prog-4?pid=17>
<https://vimeo.com/866171023#t=0m33s>

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Snake River Quagga Mussel Response



ISDA's Rapid Response Plan

Notify impacted entities.

Implement containment measures.

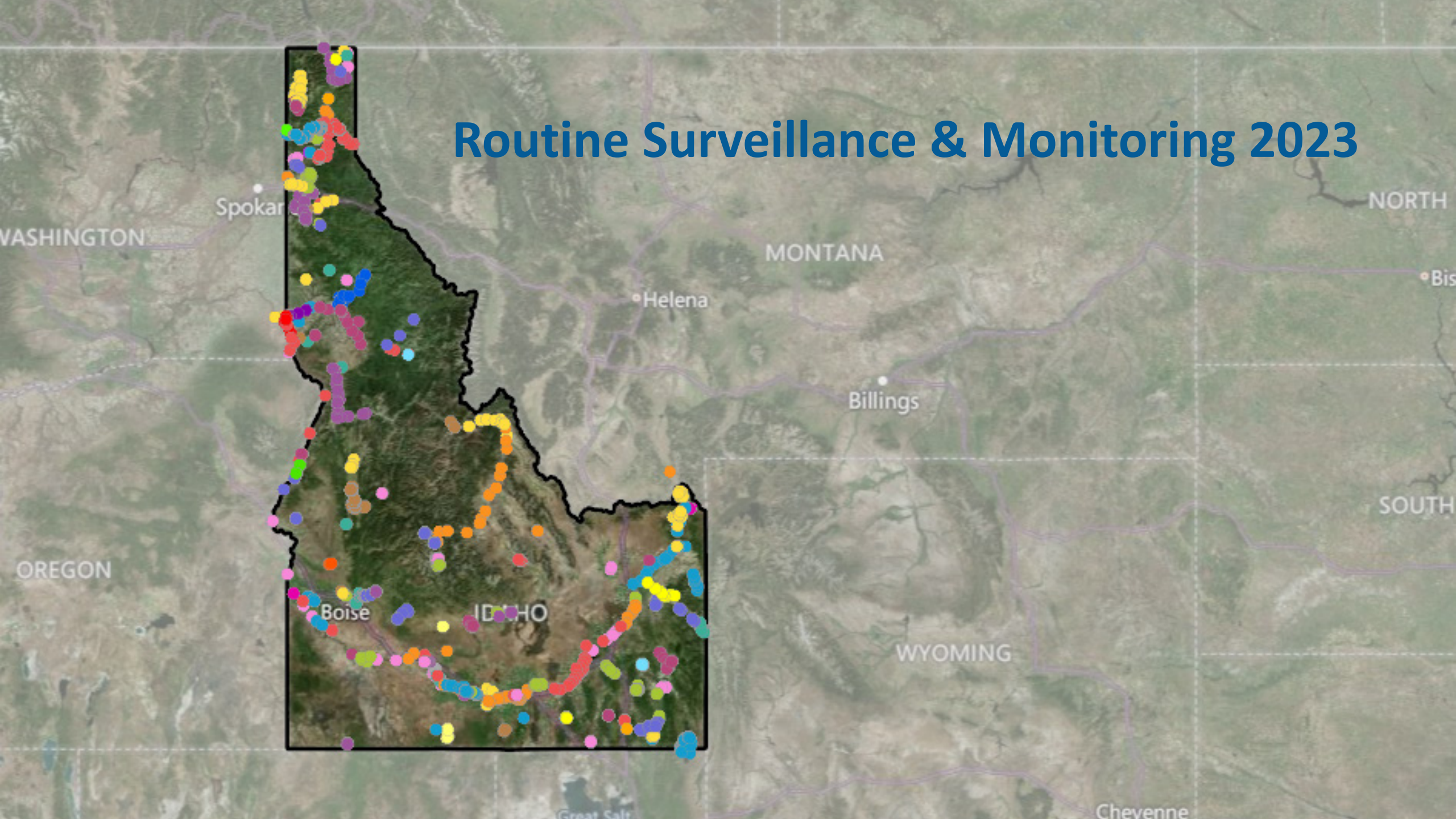
Conduct delimiting surveys.

Explore treatment options.





Routine Surveillance & Monitoring 2023





Quagga Mussel Veliger presence September 27, 2023



Centennial Park

Pillar Falls

Shoshone Falls

Twin Falls

Legend
Number of Veligers





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