

Threats of Freshwater Invasive Mussels to Oregon's Waterways



Oregon Department
of Fish and Wildlife



Picture Credit: Mussel, Golden - Alberta Invasive Species Council



Freshwater Invasive Mussels

- Species of greatest concern:
Quagga, Zebra & Golden Mussel
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- Highly Prolific Reproduction.
 - 1 million eggs/year
 - Microscopic free-floating offspring
 - Easily transported in any water.
 - Adult Biofouling
 - Attachment via byssal threads
 - Encrusting of underwater structures and habitat
 - Densities reach hundreds of thousands per square meter
 - Filter Feeders

Oregon Program Overview

Oregon Department of Fish and Wildlife

- Oversee Watercraft Inspection Stations
- Both Aquatic and Terrestrial Responsibilities

Oregon State Marine Board

- AISPP Financial and Contract Management
- Outreach and Education Materials

Portland State University

- Early detection sampling for Quagga and Zebra Mussels

Oregon Department of Environmental Quality

- Ballast Water Program

Enforcement

- Contracted with Oregon State Police and Malheur County Police

Oregon Invasive Species Council

- Coordination and State Government Relationship for All Taxa



Photo Credit: W. Baldwin (WesternAIS.org)

Zebra and Quagga Mussel Sightings Distribution

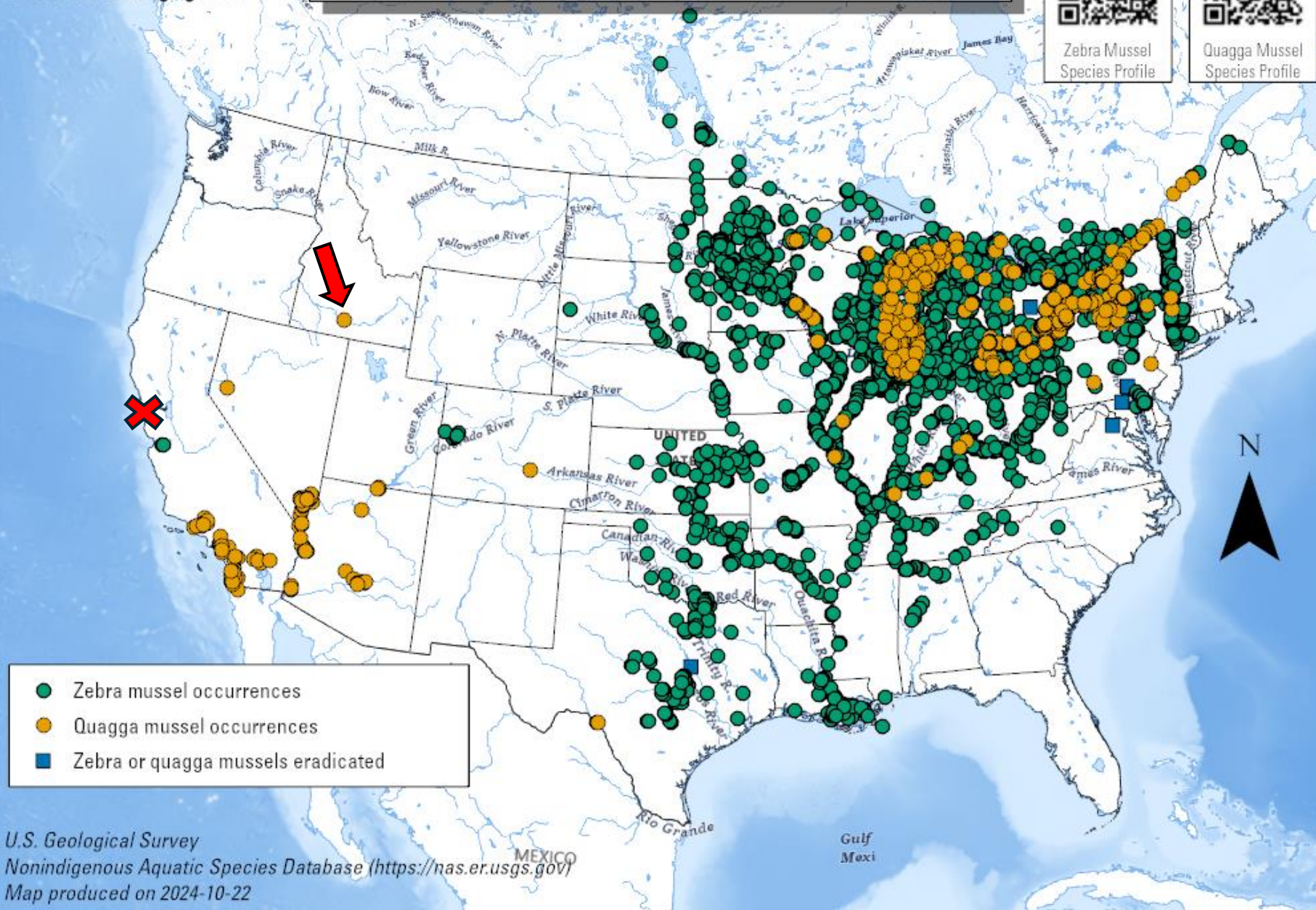
Dreissena polymorpha and *Dreissena bugensis*



Zebra Mussel
Species Profile



Quagga Mussel
Species Profile

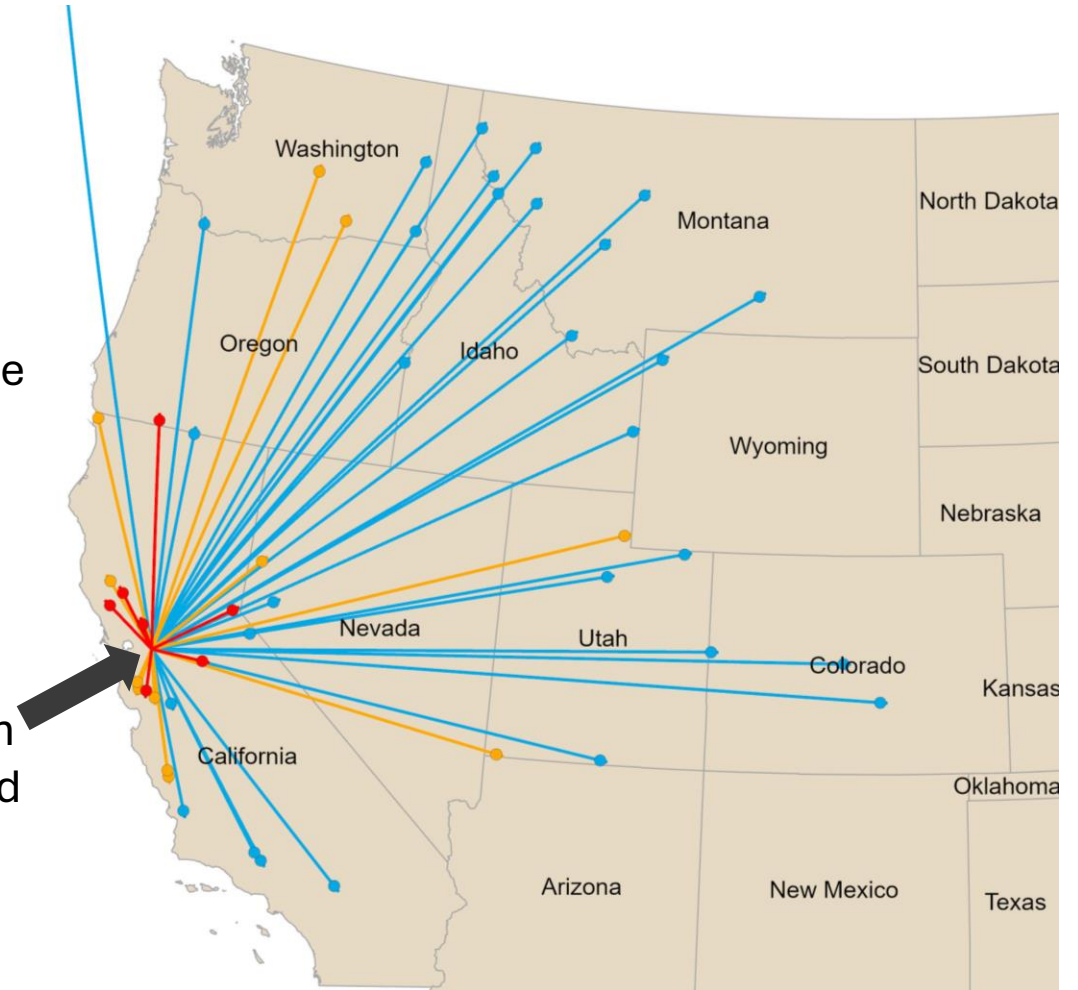


Golden Mussels New Discovery- On Our Doorstep!

~132

Watercraft originating from the area of infestation stopped at Oregon check station.
(Summer 2024)

Infestation discovered



Top 5 Invasive Mussel High Risk Waterbodies

- Prineville Reservoir
- Owyhee Reservoir
- Paulina Lake
- East Lake
- Snake River/Brownlee Reservoir



Potential Impacts

- Biological
- Recreational
- Infrastructure



Significant financial impacts:

- Estimate **\$500 million** to Columbia River Basin dams yearly. (PNWER 2023 Report)
- **\$1 Billion** yearly to Great Lakes and Mississippi biofouled infrastructure (Pimentel 2005)



What can be done?

- BE READY! This is something we see coming.
- Prevention is cheaper than mitigation.
- Prevention and Preparedness are #1!

What this looks like:

- Watercraft Inspections
- Early Detection Monitoring
- Focus on Education and Outreach
- Updated Oregon Rapid Response Plan
- Finalize Outcomes from Bi-State Working Group with Washington

