Northwest **Power** and **Conservation** Council

October 7, 2025

MEMORANDUM

TO: **Council Members**

FROM: **Windy Schoby**

SUBJECT: **Update on the Response to the Detection of Quagga Mussels in the Snake River, Idaho**

BACKGROUND:

Presenter: Chanel Tewalt, Director, Idaho State Department of Agriculture

Summary: For almost 20 years, the cumulative efforts of Columbia River Basin states and provinces have prevented the introduction and establishment of invasive freshwater quagga and zebra mussels. Routine early detection monitoring performed by the Idaho State Department of Agriculture (ISDA) in fall 2023, detected free-floating quagga mussel larvae, triggering notification by Idaho Governor Brad Little and implementation of the Columbia River Basin invasive mussel rapid response plan.

In 2023 and 2024, ISDA treated the Snake River's infested area with chelated copper, both treatments reduced the quagga mussel population. Potholes (ephemeral ponds) outside the river were also treated with potassium chloride (Potash) in early 2025. The 2025 treatment will utilize the chelated copper product, Natrix, and is set to begin September 30 and conclusion is estimated by October 10. A representative of the state will provide an update on the efficacy of the previous treatments and the commitment to the on-going response.

Relevance: The Council's 2014 Columbia River Basin Fish and Wildlife Program calls the introduction of zebra or quagga mussels "the greatest known threat in the Columbia River Basin from aquatic invasive species."(P. 46) Zebra and quagga mussels multiply rapidly, clogging pipes and intake structures. The potential economic, hydropower and ecological impacts from invasive quagga mussels should not be underestimated. Critical infrastructure including the hydropower system and associated fish passage, hatcheries, irrigation, fish screens, navigation, municipal water, recreational facilities including boat ramps and golf courses, and data center cooling systems could all be affected.

Harmful ecological impacts result from zebra and quagga mussel introductions. Potential serious threats to food webs can negatively transform ecosystem productivity and undermine species mitigation and conservation efforts. Tribal trust and treaty obligations will be harder to meet with a diminished capacity to restore and conserve ecosystem value.

The states of Idaho, Montana, Oregon, and Washington have watercraft inspection stations in place to prevent aquatic invasive species from unintentional transport into Columbia River Basin waters. All four states continue to encounter boats transported with attached invasive mussels. Rapid Response Plans exist in each state so that effective and organized action can respond to possible detections. Each state has continued to advocate and work to secure additional funding to address and further prepare for quagga mussel prevention actions. In some cases, new laws have been adopted.

Workplan: The Council's 2020 Addendum to the 2014 Columbia River Basin Fish and Wildlife Program calls for a coordinated regional approach to establish a defensive perimeter to prevent the introduction of invasive zebra and quagga mussels into the Columbia River Basin. The Council tracks regional inspection and decontamination efforts, including the number of watercraft inspected and the ratio of positive detections to total inspections.

If invasive mussels become established in the Basin, the Program directs BPA, federal agencies, and FERC-licensed utilities to support rapid-response actions. The Council also supports the work of the Pacific States Marine Fisheries Commission's 100th Meridian Initiative–Columbia Basin Team, which coordinates regional prevention, monitoring, and containment efforts. In addition, the Council assists legislative efforts to prevent and control invasive species and promotes collaboration among federal, state, tribal, and regional partners to share data and strengthen prevention, containment, and outreach initiatives.

Background: The Columbia Basin is the only basin 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:

Snake River Quagga Overview — Invasive Species of Idaho

ISDA reports 51 percent decrease in quagga mussel impacted area of Snake River | Idaho State Department of Agriculture

Invasive Mussels Update

Economic Risk of Zebra and Quagga Mussels in the Columbia River Basin
Independent Economic Analysis Board, September 3, 2013
Document IEAB 2013-2

Economic Risk Associated with the Potential Establishment of Zebra and Quagga Mussels in the Columbia River Basin
Independent Economic Analysis Board, July 14, 2010
Document IEAB 2010-1

Snake River Quagga Mussel Update

Director Chanel Tewalt

Idaho State Department of Agriculture

IDAHO STATE DEPARTMENT OF AGRICULTURE | INVASIVE SPECIES OF IDAHO

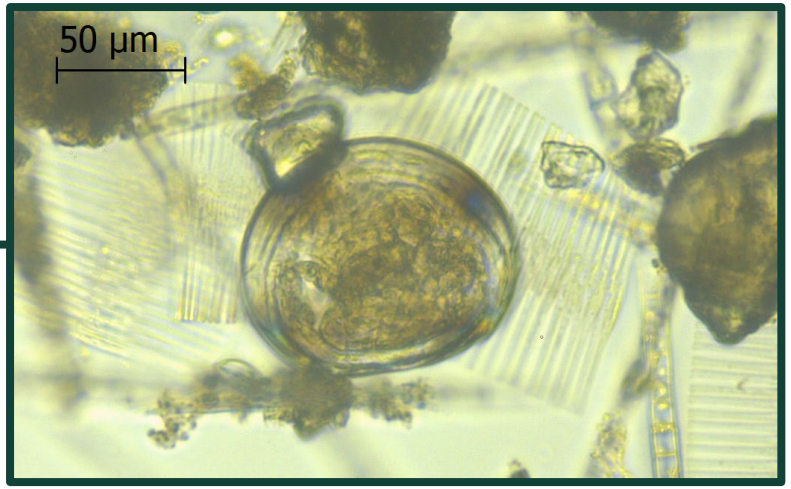
2023 and 2024

2023

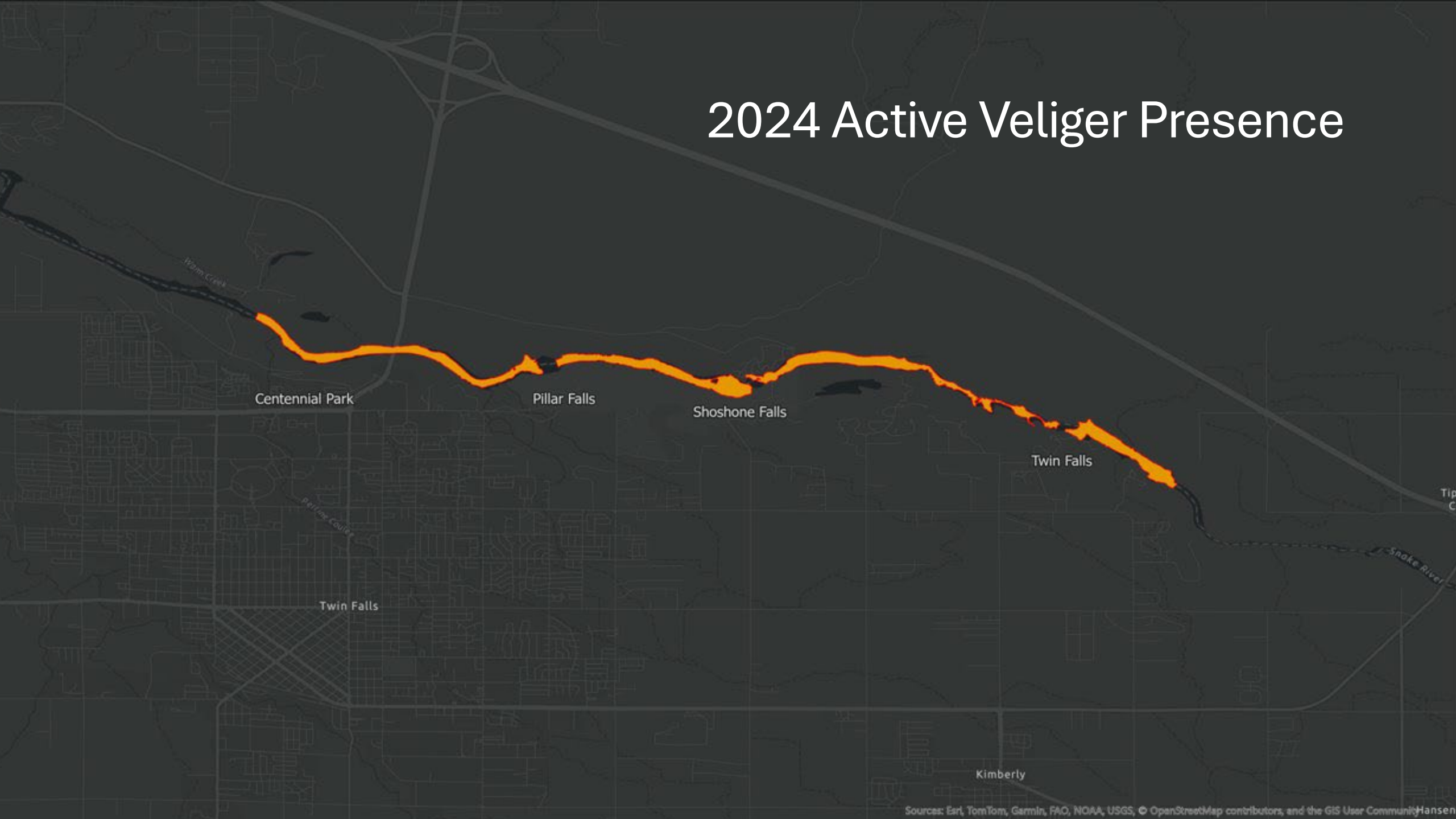
- Detection: Sept. 18 — first live quagga mussel detection in the **Columbia River Basin** after 15 years of sampling
- Immediate quarantine and delimiting initiated; notifications issued
- Treatment conducted Oct. 3–13 using **chelated copper (Natrix)**
- First treatment of this type and scale ever attempted in **North America**

2024

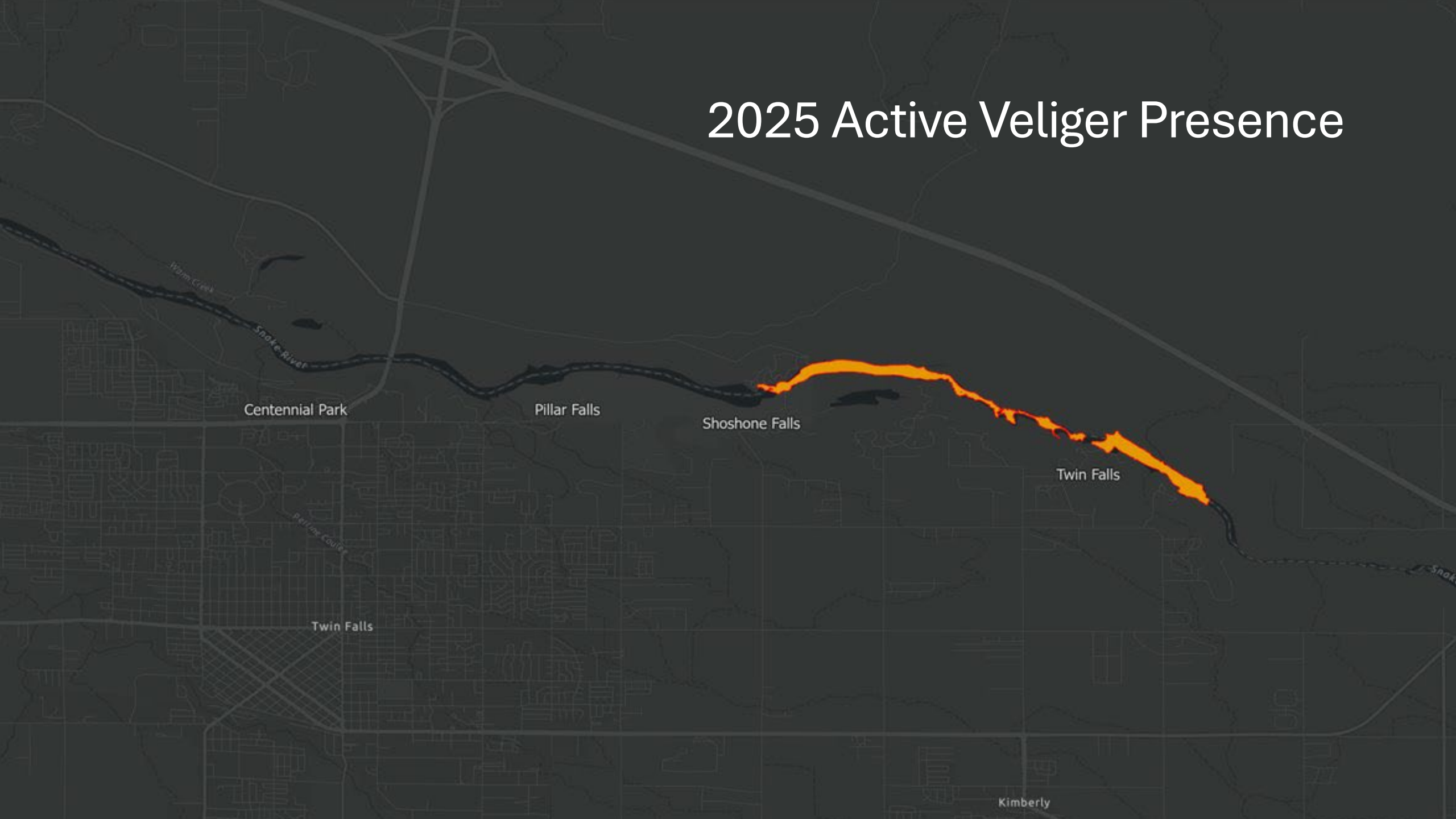
- Legislature approved **$6.5 million** to expand invasive species efforts
  - Sampling, station hours, partnerships, outreach, etc.
- **Statewide monitoring doubled** — over 3,000 samples
- Detection: Sept. 24 — Shoshone Falls pool, Pillar Falls, and Twin Falls Reservoir
- Treatment utilized **chelated copper followed by potassium chloride**



2024 Active Veliger Presence



2025 Active Veliger Presence

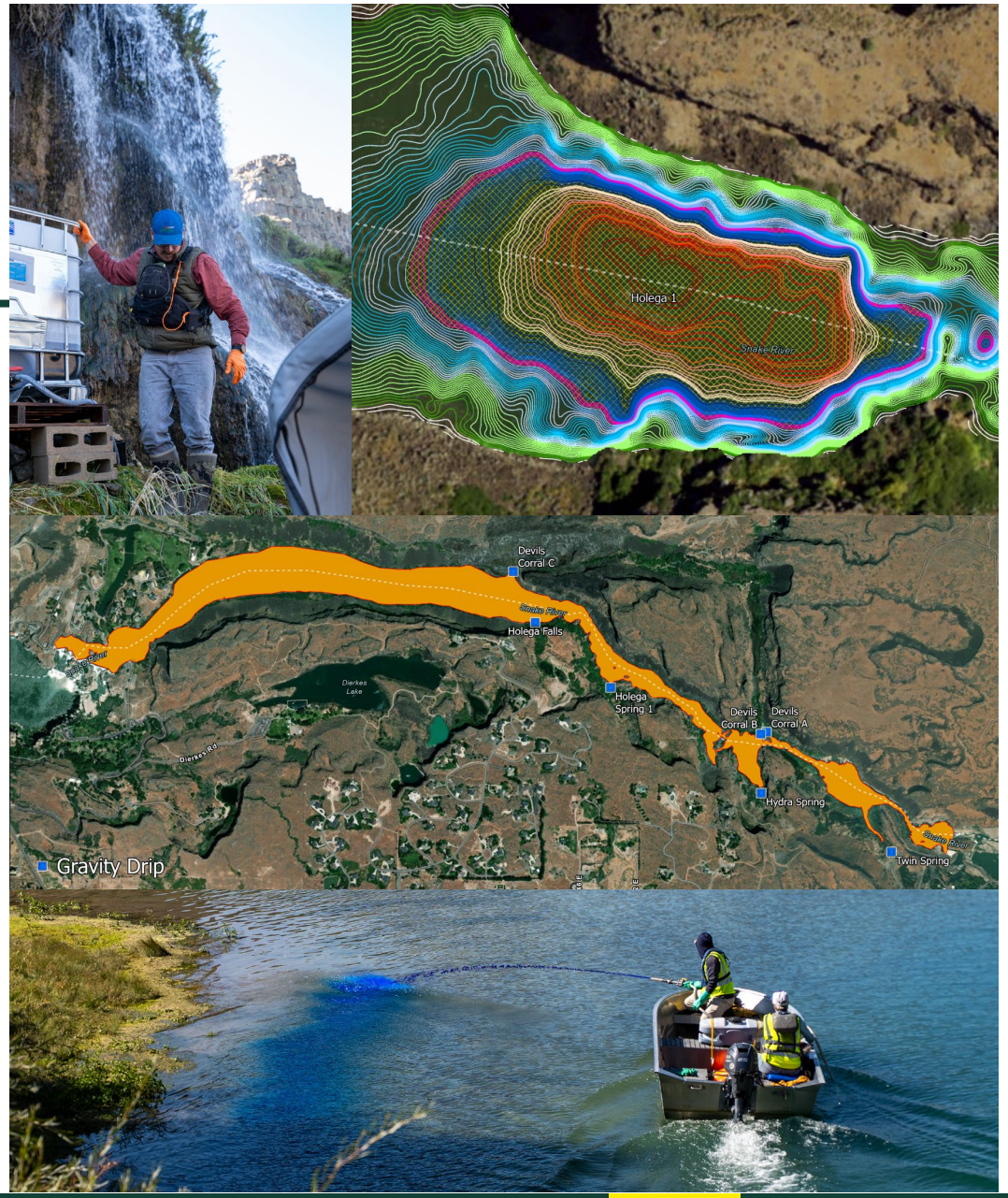


2025 Response

- Detection: Sept. 12 — 3.5 river miles of quagga mussel infested water
  - 51% reduction in quagga mussel impacted area
- Immediate quarantine and delimiting initiated; notifications issued
- Treatment conducted Sept. 30 – Oct. 14 using **chelated copper (Natrix)**

2025 Additions

- Deep hole treatments
- Shoreline treatments
- Tote placement
- Laboratory capabilities



Snake River Outreach

- 2023 Townhall In-Person – 600 viewers online
- Water-Right and Resident Notifications
- Media Coordination
- Collaborative Comms
  - Local, State, Federal, Idaho Power, Canal Companies
- Email Updates
- Radio, TV, Signage, etc.

Addressing It All

- Fish Mortality
- Visible Aquatic Application
- Threat of Quagga Mussels

Director Chanel Tewalt

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View the full treatment plan at: Idaho.Gov/Quagga

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