



SNAKE RIVER HEADWATERS 2023: THE YEAR IN REVIEW

Winter is here in Jackson Hole – quiet for now, with snow finally building in the mountains and dwindling daylight inspiring reflection on the year behind us and the year ahead. If I had to assign a phrase to remember 2023, it would without a doubt be “never a dull moment” (followed closely by “shortest summer ever...”).

We started out the year strong, building our capacity with the addition of a new Jackson-based project manager, Sawyer Finley. In the spring, as we were launching the design of the new Snake River Headwaters Watershed Group, the Jackson Lake Dam flow crisis required us to think on our feet and rally the community to protect the very lifeblood of the Snake River. Summer was filled with field work as part of a new effort to inventory and prioritize all the fish passage barriers on the Bridger-Teton National Forest, as well as project planning for the fall construction season, and time spent out on the water sharing our work with supporters.

The fall was a whirlwind of activity. I became TU’s first Wyoming state director. We rescued thousands of fish out of irrigation ditches, held our first official watershed group meeting, and educated over 225 middle school students in the field and classroom. We raced to complete 5 projects totaling over \$2.5M in the Little Greys, Gros Ventre, Snake, Hoback, and Salt Rivers, again thinking on our feet and pivoting as sources of materials shifted or increased in cost, and weather windows threatened to stall our progress. Through it all, our partners, volunteers, supporters, and contractors rallied to provide timely assistance in the form of hundreds of hours of hard labor (over 40,000 willow stakes cut!) and gap funding to get projects across the finish line.

Thankfully, we had water. After two years of drought, I welcomed the rain and cool temperatures, even though it seemed like I went fishing in a rain jacket more often than not. And looking back now, I am especially thankful for a year lacking in dull moments, because it means that the conservation work of the Snake River Headwaters Initiative is thriving, and we have the vision, team, and support we need to continue this momentum into the new year (we have 8 active projects and counting!). Like the ecosystem, our goal will be to stay resilient, healthy, and vibrant – and we wish you the same for the holiday season and year ahead.



All the best,

Leslie Steen

Wyoming State Director

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DAM DIPLOMACY

In spring 2023, when flows from Jackson Lake Dam into the Snake River were nearly reduced to 50 cubic feet per second (cfs) by the Bureau of Reclamation (BOR) - well below the 280 cfs minimum flow required to maintain the native cutthroat fishery below the dam and water in Grand Teton National Park’s Oxbow Bend - we sprang into action. We worked across all levels of our organization, from local TU members, to state staff, to President and CEO Chris Wood, to elevate the issue to the highest levels of the Department of Interior, BOR, and members of the Wyoming Delegation. Thanks to this coordinated response, and the State of Wyoming and BOR’s willingness to negotiate, the crisis was averted - but it highlighted the vulnerability of the watershed to climate and water supply-related stressors, and the work ahead of us to ensure flows are maintained into the future.



Key staff from TU, Grand Teton National Park and Senator Barrasso’s office visit the Jackson Lake dam in spring 2023.

2023 PROJECTS



LOWER SNAKE RIVER RANCH

Located along the “Wilson to South Park” river section at the southern end of the Jackson levee system, this partnership project has created riparian buffers planted with cottonwoods and willows to enhance fish habitat and stabilize eroding banks, while ensuring the working cattle ranch can continue to thrive. Completed in November, the project used innovative bioengineering techniques and wildlife-friendly fencing to encourage new and mature riparian vegetation growth. In addition, large wood habitat structures that function like natural logjams were installed to maintain pools, create hydraulic complexity, and provide cover for native trout. These restoration strategies mimic natural processes, resulting in increased climate change and high-flow resiliency for years to come, while also preventing further land loss at the lower Snake River Ranch.

A 100-foot riparian buffer will reduce land loss and erosion of ranch lands while providing habitat diversity for trout.

GROS VENTRE CRYSTAL CREEK

The Gros Ventre area around Crystal Creek campground on the Bridger-Teton National Forest is a popular fishing spot and access point to the upper Gros Ventre drainage. Flooding during spring runoff in 2017 and subsequent seasons has eroded banks along the Gros Ventre River and Crystal Creek in the project area, and resulted in the loss of portions of roads, infrastructure, and campsites. A microburst wind event in June 2022 further compromised the campground by blowing over many trees and exposing full root wads. The Forest Service reached out to TU and partners for emergency assistance to fund and manage a project that would protect the Gros Ventre road in the long-term, while addressing concerns about bank stability and access in a manner compatible with the Gros Ventre’s Wild and Scenic river designation. This project was completed in October and showcases river and fish-friendly techniques for streambank stabilization.



Bioengineered bank treatments protect public access up the Gros Ventre road while also improving trout habitat.

2023 PROJECTS



RIVER BEND RANCH 2

This October and November, we restored a 2.5-mile corridor of some of the most degraded fish habitat found in the upper Hoback River. The project's second phase, located on a mix of working ranch lands and Bridger-Teton National Forest lands outside of Bondurant, is a follow-up to fish passage improvements completed by TU and partners in 2019. The innovative project seeks to reestablish a thriving riparian zone over time and install bioengineered bank stabilization treatments throughout the floodplain to improve habitat for native trout, promote bank and channel stability, and reduce erosion and land loss. Techniques included installation of "brush bank" structures that utilize a mosaic of brush, logs, and trees with rootwads to provide stability at the margins of the river, and riparian fencing "pods" that allow cottonwoods and willows to grow and provide habitat.

Thousands of pieces of willows, brush, and trees with rootwads were sourced to stabilize banks in the Upper Hoback.

RICO DIVERSION & STEER CREEK

The Rico diversion in Star Valley has long been recognized as an impediment to fish passage, requiring annual river disturbance for maintenance and posing a hazard to boaters navigating the area. Spring runoff washed out the diversion and accelerated the threat to existing infrastructure due to unstable riverbanks and high flows. In response to these challenges, we worked with partners and landowners on an ambitious project completed in December that demonstrates how private landowners along the Salt River can simultaneously address land loss, instability, and irrigation infrastructure repairs while improving fish habitat, passage, and watershed health.

In addition, this September, we completed a new beaver dam analogue or "BDA" project on Steer Creek, a spring creek in the Little Greys River watershed on Bridger-Teton National Forest lands that has experienced stark declines in its spawning cutthroat trout numbers. The project seeks to reduce siltation of spawning redds and improve floodplain connectivity for improved water quality.



The Salt River washed out the Rico diversion and came dangerously close to homes and an irrigation ditch this spring.

WATERSHED GROUP BRINGS DIVERSE INTERESTS TOGETHER



Over 80 stakeholders participated in the design of the new watershed group this spring.

In response to the growing complexity of issues facing the watershed - Jackson Lake flows, climate change impacts, drought, degraded fish habitat and water quality - we spearheaded the launch of the new Snake River Headwaters Watershed Group this year. The new group's mission is "to bring a broad coalition of partners together to ensure a resilient and healthy Snake River Headwaters ecosystem with clean and ample water to meet the needs of current and future generations". After 3 design phase sessions in the spring to map out the goals and structure of the group, we held the first kickoff meeting in October 2023. Four working groups have been formed to tackle issues collaboratively: Water Management & Flows, Data & Monitoring, Ecosystems, and Outreach & Community Engagement. We look forward to seeing what this group will accomplish together in the future.

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We apologize for any errors or omissions.