



SNAKE RIVER HEADWATERS 2021: THE YEAR IN REVIEW

It is early December, and the sun is shining in Jackson Hole, with temperatures expected to hit 50 degrees – reinforcing to me that 2021 will be remembered as a year of extreme drought and unseasonably warm weather. Hatches and runoff arrived a month ahead of schedule, and predictably gave way to warm water, hoot owl recommendations, and smoky skies. Reservoirs were drawn down to historically low levels, and flows from mountain tributaries dwindled. Against this backdrop, the importance of TU's conservation strategy in the Snake River Headwaters became even more clear.

Our Snake River Headwaters Initiative projects ensure ecosystem resiliency in low water years for native cutthroat trout by providing connectivity to headwaters streams, and access to quality habitat. In 2021, we had a very successful year advancing two large-scale, collaborative projects – both many years in the making, each with an over \$1 million budget. We completed a mile-long restoration project to increase spawning and rearing habitat on Swift Creek in the Salt River watershed, and kicked off the second and final phase of our work to restore and protect fish passage in Spread Creek.

Another defining characteristic of 2021 was the incredible amount of volunteers that were engaged with our work - 1,290 volunteer hours over 22 volunteer days. Volunteers helped rescue fish stranded in irrigation ditches, document the impacts of the rapid drawdown of the Snake River, monitor fish populations, teach 7th graders in the Jackson Adopt-a-Trout program, build riparian fence, and cut and plant willows and shrubs for restoration projects. We were especially grateful to see so many fishing guides take time after a busy guiding season to give back to the resource.

Looking ahead to 2022, we have an exciting slate of 10 active projects, and will also be expanding our capacity in the Salt River watershed and prioritizing our efforts through TU's new strategic plan. We remain committed as ever to the future of this incredible native cutthroat trout stronghold, and grateful to all those that have supported the Initiative to make this work possible. Wishing you all a wonderful, holiday season ahead. Like you, we'll be praying for snow.



All the best,

Leslie Steen

NW Wyoming Program Director

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Thank you to all of the partners, supporters, and volunteers that helped to make 2021 a success!



2021 PROJECT HIGHLIGHTS



SPREAD CREEK'S FINAL PHASE TAKES SHAPE

This fall, we began work on the second, final phase of our Spread Creek project - the long-awaited follow-up to the removal of a channel-spanning dam by TU, Grand Teton National Park and many other partners in 2010. Work completed this November has made much-needed improvements to stabilize the diversion structure, banks, and channel within the project area, which had been damaged by high water and underlying instability. In spring 2022, we plan to install a fish screen on the Spread Creek irrigation system to prevent future losses of migratory native trout. The project represents the collective efforts of over 20 partners and over \$1M in funding to ensure a win-win-win for trout, irrigators, and the public in this important cold water tributary to the Snake.

Diversion, bank, and channel work will improve habitat, protect infrastructure, and reduce erosion.

SWIFT CREEK PROJECT CROSSES THE FINISH LINE

This October, we wrapped up a mile-long restoration project on Swift Creek, a Salt River tributary outside of Afton, WY, after having completed most of the instream work last winter. In 2021, we focused on an ambitious revegetation effort through which we planted 2,000 willow poles and 1,775 containerized shrubs in the floodplain over 7 volunteer days. In addition, after runoff, we connected the new, bioengineered channel to the creek and reclaimed the old, badly-eroded channel. The project has stabilized the creek for the benefit of spawning and rearing habitat for trout, downstream water quality, and land management. It has also inspired partners to pursue more collaborative projects in the Salt and establish a new TU-led watershed group.



Bioengineered toewood treatments installed on Swift Creek provide bank stability and trout habitat.

VOLUNTEERS PITCH IN



Stranded fish in a side channel of the Snake River observed during this year's rapid drawdown.

DOCUMENTING THE DRAWDOWN OF THE SNAKE

Each fall, the Snake River between Jackson Lake and Palisades Reservoir is drawn down by the Bureau of Reclamation to winter base flows. When this year's drawdown schedule was finalized, TU, agency partners, and many community members became concerned about its relatively short time frame, with flows dropping by 90% over the course of 5.5 days. TU, agency and nonprofit partners, volunteers, and local students sprang into action to document the impacts of this year's rapid drawdown through repeat photo points, time lapse cameras, GPS-tagged locations of stranded fish, fish rescues, and repeat drone imagery of the river. We plan to share our findings with the BOR and public with an eye towards better management and communication in the future.

GUIDES AND VOLUNTEERS GIVE BACK

This year, in addition to a dedicated core group of TU volunteers (ranging in age from 5 to 85), guides and staff from Fish the Fly, Grand Fishing Adventures, Grand Teton Fly Fishing, Guided Connections, Jackson Hole Fly Fishing School, JD High Country Outfitters, Orvis JH, and Wyoming Angling Company answered the call of duty to help with a number of fish and stream restoration activities - in-kind labor valued at \$37,000. Guides were especially eager to help with the 4 fall fish rescues which collectively saved 7,588 native fish from irrigation ditches and side channels of the Snake River. Volunteers also played an important role in revegetation and riparian fencing work on the Swift Creek, Spread Creek and River Bend Ranch projects, and in doing so, helped TU stay within our budgets. Thank you, volunteers!



Guides from JH Fly Fishing School and Orvis shop employees rescue fish from irrigation ditches near Teton Village.

EXPANDING CAPACITY IN THE SALT RIVER WATERSHED



The Salt River watershed in Star Valley is a blue ribbon fishery that experiences its own unique challenges.

The Salt River is a blue-ribbon fishery for native Snake River cutthroat trout and wild brown trout. However, the health of the river has been compromised by degraded and fragmented fish habitat, rapid development in riparian areas, impaired water quality, and dewatering. Thanks to a recently-awarded \$100,000 Cooperative Watershed Management Planning grant from the Bureau of Reclamation as well as the support of private donors, we will be hiring a new staff person in 2022 to address these challenges. Our goal will be to increase the pace and scale of our conservation work in this part of the Snake River Headwaters by engaging key stakeholders in science-based, watershed-wide solutions.

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We would like to thank the following supporters for their commitment to the Snake River Headwaters Initiative with a major gift in the past 18 months:

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