TROUT UNLIMITED SNAKE RIVER HEADWATERS INITIATIVE

Building a Resilient Future for Native Cutthroat Trout

RESILIENCY. CONSERVATION. CONNECTION.

Dear friends.

Some of the most special moments of my time leading the Snake River Headwaters Initiative have been when I've had the chance to spend time with the wonderful people that have enabled us to make a positive, tangible impact on our local streams and rivers, and that share our vision for cold, clean, interconnected streams where Snake River cutthroat trout can thrive.

So when filming for our Spread Creek project film filled up three days of my calendar right in the midst of the frenetic pace of summer, I embraced the moment. It allowed me to spend time on the water with our close partners and friends on the project, hearing their thoughts on the importance of our incredible Snake River cutthroat trout fishery, and their experience working with TU. This opening quote of the film by John Turner of the Triangle X Ranch particularly resonated with me, because it not only describes my own experience of being deeply connected to the mountains and rivers of Jackson Hole, but salutes a truly unique and great fish that I have been fortunate to dedicate time, energy, and passion towards conserving:

"I like the saying of some old timers that these spectacular mountains brought them to Jackson Hole, but it's the rivers that have sustained them and kept them here. The rivers and streams of this valley, and of course the real endemic old timer of that water system - the Snake River cutthroat, our indigenous trout. Anything we can do to sustain that population, to protect and restore spawning streams and historic corridors for this great fish, is important to all of us." - John Turner

It gives me great optimism for the future to know that there are many people in our community and beyond that are committed to doing all we can to conserve, protect and restore this watershed as one of the last, best places for cutthroat trout. We hope that you will enjoy learning more about TU's impact on and vision for the Snake River Headwaters in this publication - and that you will join us in support of the exciting, watershed-scale projects and collaborative efforts around the next bend.

Perli

LESLIE STEEN NW Wyoming Program Director leslie.steen@tu.org | 307-699-1022





28+ MILES RECONNECTED

8 MILES RESTORED

7 GROUND PROJECTS COMPLETED

1,275 STUDENTS EDUCATED

65+ CONSERVATION PARTNERS

\$5,374,000 FUNDING INVESTED

STREAM RECONNECTION PROJECTS

A river ecosystem is healthiest when it is integrated and whole, with mainstem, tributaries and floodplain connected, offering diverse habitat that serves a range of fish needs. Simply put, a river is greater than the sum of its parts - especially for our native Snake River cutthroat trout, which undertake underwater migrations to get to the habitat they need to complete their life cycles. However, instream obstacles and bottlenecks, such as irrigation dams (ranging from aging concrete structures to "push-up" dams constructed each year from stream cobble and debris) and perched and undersized culverts, can block trout from reaching stretches that might provide better shelter, food, or spawning opportunities. That's why reconnecting streams and improving fish passage is such an important part of TU's conservation work in the Snake River Headwaters. It also provides real bang for the conservation buck: a single removed barrier can deliver impressive benefits, improving fish passage for miles upstream and downstream and making the watershed more resilient to flooding and wildfire for the benefit of fish and people alike.

Since 2016, TU and partners have reconnected over 28 miles of stream. We've pulled out and reclaimed historic irrigation infrastructure that was no longer in use in the Upper Gros Ventre, replaced an undersized culvert at the outlet of Bar BC Spring Creek into the Gros Ventre River, and replaced four undersized culverts with three larger culverts and a bridge in the Tribasin Divide area of the Greys River. Together, these projects have opened up access to habitat for native trout to spawn and rear, and increased coldwater inputs to tributaries.

Excavators at work replacing a perched, undersized culvert with a bridge in the Tribasin Divide area o the upper Greys River. (Photo: Josh Dublechian)



"Without Trout Unlimited, none of this would be possible. They give us the capacity to do these large infrastructure projects that would take us decades and decades to fund, if ever."

- PATRICK BARRY, BRIDGER-TETON NATIONAL FOREST

HIGHLIGHT: THE FISH RESPOND

High in the headwaters of the Gros Ventre, a labyrinthine network of abandoned irrigation infrastructure spanning four tributaries left TU and partners with a mystery - amidst all the ditches, where was the stream? By removing old headgates and pipes, plugging ditches that were no longer in use, and recreating stream channels where they had disappeared, we turned back the clock and let the water do the rest. Less than a year after the project was completed, we documented

An iconic spawning run in Bar BC Spring Creek that has been studied by the Wyoming Game and Fish Department (WGFD) since the 1950s took a noticeable dive after a culvert under the Gros Ventre levee at its confluence was lengthened in 2018, making it more impassable to trout.TU, partners, and a concerned private landowner leapt into action to come up with a fix – a large arch pipe culvert that allowed for lower velocities and restoration of the stream channel immediately upstream. Post-project monitoring by WGFD and the University of



juvenile cutthroat trout taking refuge in these small streams and spawning cutthroat in their lower reaches.



Wyoming documented the rebound of spawning cutthroat from a low of 117 in 2019, to 157 in 2020, to 374 in 2021 – above the long-term average of 284.

HABITAT RESTORATION PROJECTS

"Our partnership with Trout Unlimited is a true example of synergy. Together, we are able to accomplish much more than we could do on our own. We frequently find places where our missions overlap and we are able to leverage our individual strengths to achieve real and long-lasting conservation wins.

TU works with partners across the upper Snake River watershed to restore degraded trout habitat and improve stream health on both public and private land. We partner and collaborate with state and federal agencies, landowners, local communities, and volunteers on restoration projects that improve habitat for all life stages of native Snake River cutthroat trout and other native aquatic species - creating slow, protected areas for juvenile trout, shading the stream and providing refuge areas for adult trout, and ensuring there are clean gravels where trout like to spawn. Sometimes, this includes relatively simple or lower-cost fixes, like working with ranchers to keep livestock out of stream corridors through riparian fencing, replanting streamside vegetation like willows and cottonwoods, or mimicking beaver activity to repair downcut channels and reduce sedimentation from erosion. Other times, restoration treatments are more involved, requiring heavy construction equipment and robust materials like boulders and whole trees with rootwads to transform degraded streams into high-functioning habitat once again.

Since 2016, TU and partners have restored over eight miles of stream habitat. We've reestablished floodplain connectivity and riparian vegetation on Tincup Creek (Salt River), enhanced habitat in a gin-clear spring creek tributary to Fish Creek, removed instream disturbance associated with building gravel "push-up" dams each year in the Upper Hoback River, and rebuilt and reconfigured the entire stream channel in Lower Swift Creek (Salt River). Together, these projects have increased native fish habitat (and associated fishing opportunities), improved downstream water quality, reduced land loss, and made rivers and streams more resilient to floods and wildfire.

Reconnecting the floodplain on Tincup Creek has resulted in more seasonal inundation, leading to higher productivity and diversity of habitat. (Photo: Lee Mabey)

- PAUL DEY, AQUATIC HABITAT PROGRAM MANAGER, WYOMING GAME AND FISH DEPARTMENT



HIGHLIGHT: ECOSYSTEM BENEFITS

When streams are healthy, the ecosystem benefits they provide ripple outward to include not only trout but other aquatic species, wildlife, and communities. Our four years of steady work to restore five miles of Tincup Creek, a Salt River tributary, increased habitat quantity and quality for cutthroat trout and a unique group of native aquatic species - including longnose and speckled dace, sculpin, redside shiners, mountain suckers, the rare northern leatherside chub, native pilose crayfish, western pearlshell mussel, and boreal toads.

With a more connected floodplain, the stream system is now "messier" and more often inundated, creating a diverse mosaic of pocket habitats that have resulted in a net gain in productivity and increased use by waterfowl and beaver. In addition, during spring runoff, the water leaving the restoration area is now markedly cleaner than the water entering it.



U.S. Forest Service fish biologist, Lee Mabey, monitors fish populations in Tincup Creek.

2016-2021 **COMPLETED PROJECTS**

Since 2016, we have worked with a host of partners to complete a robust suite of high-priority projects throughout the watershed. We've worked with public and private landowners alike to upsize undersized culverts, create new and improved stream channels, consolidate and retool irrigation diversions, reconnect streams to their floodplains, dismantle abandoned irrigation infrastructure, and re-establish riparian vegetation.

Together, they have made a lasting impact on the health of this iconic watershed and the future of its coldwater fisheries. We are grateful to all those that have contributed time, effort, expertise, funding, and labor to these seven TU-led projects, three Wyoming Game and Fish Department-led projects, and the Jackson Adopt-a-Trout Program.

The upper Grevs River near the Tribasin project site. (Photo: Josh Duplechian)

BAR BC SPRING

An undersized culvert under the Gros Ventre levee was replaced and the habitat immediately upstream restored to protect a renowned spawning run. This project ensured fish passage for native Snake River cutthroat trout and improved instream habitat quality.

TEAL TRACE

We restored stream function and increased habitat for all life stages of cutthroat trout on a half mile of Spring Creek 2 that runs through a conserved open space in the Fish Creek watershed and is located behind the Snake River levee system.

UPPER GROS VENTRE

We reversed the effects of a long-abandoned irrigation system on a historic ranching homestead, so that after 100 years, over five miles of spawning and rearing habitat in four tributary streams would once again be connected to the Gros Ventre River.

 STREAM RECONNECTION HABITAT RESTORATION

LOWER SWIFT CREEK

This collaborative project in the Salt River watershed involving over 20 partners restored one stream mile and prevented the loss of 800 feet of valuable trout spawning habitat, as well as served as a demonstration project for future work in the area.



HABITAT RESTORATION

RIVER BEND RANCH

Two gravel push-up dams were replaced by a single, consolidated fish passagefriendly rock diversion and headgate structure at a stable location, accompanied by on-field improvements to the irrigation system, restoring one mile of the upper Hoback River.





TINCUP CREEK

Over five miles of stream were treated with restoration techniques that reconnected the stream to its floodplain, increased habitat diversity and quality, and reduced erosion and sedimentation, for the benefit of cutthroat trout and a full assemblage of other native aquatic species.



HABITAT RESTORATION

TRIBASIN DIVIDE

Four undersized culverts in the upper Greys River watershed that were acting as barriers to fish migration were replaced with a bridge and three upsized culverts. Over 21 miles of spawning and rearing habitat were opened up by this project.



STREAM RECONNECTION



STREAM RECONNECTION

WY GAME AND FISH **DEPT-LED PROJECTS**

TU provided funding and volunteer support to three Wyoming Game and Fish Department-led projects on Game Creek, Horse Creek, and South Flat Creek that reconnected 13 miles and restored 0.6 miles of habitat for native trout.



 STREAM RECONNECTION HABITAT RESTORATION

JACKSON ADOPT-A-TROUT PROGRAM

The program educated 200-225 lackson Hole middle school students each year about their local watersheds and fisheries through field and classroombased curriculum as well as involvement in a local research study of trout movement.



YOUTH EDUCATION

OUR PARTNERS

We are grateful to the over 65 agency, landowner, nonprofit, foundation, chapter, research, and educational partners that provide technical expertise, funding support, and collaboration for our projects and programs.

> Agency partners and volunteers pitch in to rescue fish out of the Spread Creek irrigation system and return them back to the creek. (Photo: David Stubbs

Bear Lakes Grazing Bridger-Teton National Forest Bureau of Reclamation Caribou County Caribou-Targhee National Forest Community Foundation of Jackson Hole Desert Fish Habitat Partnership Grand Teton National Park Idaho Department of Environmental Quality Idaho Department of Fish & Game Idaho Transportation Department Itafos Conda Phosphate Operations Jackson Hole Clean Water Coalition Jackson Hole One Fly lackson Hole Trout Unlimited lackson Hole Land Trust Jackson Hole Public Art

Knobloch Foundation Lake Creek Ranches HOA Lockhart Cattle Company Marine Ventures Foundation Meg and Bert Raynes Wildlife Fund Moose Head Ranch National Fish and Wildlife Foundation National Forest Foundation Natural Resources Conservation Service Orvis Patagonia Pinto Ranch Private Businesses (via Jackson Hole Trout Unlimited) Private Landowners Project Our Waters |H **Ricketts Conservation Foundation/** Jackson Fork Ranch

River Bend Ranch Rocky Mountain Elk Foundation Snake River Cutthroats Trout Unlimited Snake River Fund Snake River Ranch Southeast Idaho Wildlife Mitigation Fund Star Valley Conservation District Star Valley Trout Unlimited Sublette County Conservation District Teal Trace Homeowners' Association Teton Conservation District Teton County Road and Levee Teton County Weed & Pest District Teton County School District The Nature Conservancy Triangle X Ranch Trout and Salmon Foundation Trust for Public Land

TU-Orvis Embrace A Stream Challenge University of Wyoming US Army Corps of Engineers US Fish and Wildlife Service United States Geological Survey Vail Resorts Epic Promise Water for Wildlife Foundation Western Native Trout Initiative Wildlife Tourism for Tomorrow/ The WYIdlife Fund WorldCast Anglers Wyoming Department of Agriculture Wyoming Department of Environmental Quality Wyoming Game and Fish Department Wyoming Landscape Conservation Initiative Wyoming Water Development Commission Wyoming Wildlife and Natural Resources Trust

From 2016-2021, we have invested over \$5.4 million into the health of the Snake River Headwaters and its native cutthroat trout fishery, thanks to funding support from federal and state agencies, conservation districts, foundations, nonprofits, private landowners, TU chapters, and private donors. We've also received in-kind support from partners in the form of staff time and materials. Each project is unique in terms of the composition of partners and stakeholders involved and the number of grants they require to implement. Private philanthropy from donors to the Snake River Headwaters Initiative has been leveraged by other sources of funding at an impressive ratio of 1:9, with our annual budget primarily composed of on-the-ground project expenses vs. staff capacity-related program expenses.

"The One Fly values the hard work of the Jackson Hole TU staff as well as the community volunteers TU has rallied to assist in these worthy conservation projects. TU does a wonderful job working on government lands with agency scientists and on agricultural lands with the landowners to improve stewardship with the goal of improving trout habitat."

JACKSON HOLE ONE FLY FOUNDATION



OUR INVESTMENT

- BOB WILLIAMSON, CHAIRMAN OF THE STREAM COMMITTEE.

SOURCES OF FUNDING, 2016-2021, \$5.4M



FEDERAL

Total Raised: \$5,374,000 Private Funds: \$613,000 Leverage of Private Fundraising: 1:9



Program Expenses: 12% Project Expenses: 88%



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The headwaters of the Snake River are a dynamic place, carved by glaciers and snowmelt coursing through the jagged peaks and valleys of the Teton and Gros Ventre Ranges, in the heart of the Greater Yellowstone Ecosystem – the largest intact functioning ecosystem in the United States outside of Alaska.

The underwater network formed by the mainstem Snake River, freestone tributaries, and spring creeks, is largely intact, providing cold, clean water and a diversity of connected habitats for native Snake River cutthroat trout – the only remaining subspecies of cutthroat trout in the West that still dominates in its home range – as well as other native aquatic species. This unique Snake River cutthroat trout population is one of the reasons why TU believes this watershed is so important to conserve, protect, and restore.

Our vision for the Snake River Headwaters is to continue to do all we can to foster resiliency and provide access to highquality habitat for our Snake River cutthroat trout. We believe that if we can counter the impacts of human development, land and water management practices, and climate change across the watershed, the fish will be able to take care of themselves, and we may be able to hang onto this area as one of the last, best places for cutthroat trout in the West. We know that we cannot reach this goal alone. But, we *can* carry out this vision with the support of a robust community of donors, partners, researchers, local businesses, guides, volunteers, and chapter members to implement a portfolio of stream reconnection and habitat restoration projects and lead new collaborative efforts to respond to emerging issues in the watershed.

A Snake River cutthroat trout in its home waters. (Photo: Scott Smith)

"It's not just about giving fish the opportunity to come up and spawn. It's about accessing different habitat and allowing different life histories. And by having different life histories – of resident fish that just hang out in resident streams, or migratory fish that go to the Snake, and everything in between – that diversity is what we're trying to conserve. That is what we're all after. That's what we have in the Snake, and that's what makes it so special."

- ROBERT AL-CHOKHACHY, US GEOLOGICAL SURVEY

CALL TO ACTION

The cover story of the Summer 2020 issue of Jackson Hole Magazine, "Cutthroat Paradise," was at once an affirmation of our conservation focus in the Snake River Headwaters and a call to action. We recommend it as a resource for learning more about the importance of this watershed for cutthroat trout in the West, and why TU and partners think it's

worth fighting for. In their words: "The Upper Snake watershed is the last, best, and largest watershed dominated by cutthroat trout remaining in the West, but the continuance of this status isn't a given."

PRIORITY WATERS

Recently, TU's new five-year Strategic Plan charged a team of staff and grassroots leaders in Wyoming to identify a network of Priority Waters for native and wild trout, and a plan to care for and recover them – together with local communities, chapters, and partners. Backed by a combination of scientific datasets and on-the-

ground knowledge, it advises us to focus our conservation work on native trout populations that are found in strongholds of intact habitat, likely to be climateresilient, and represent a range of ecological, life history, and genetic diversity. These are the populations that have the highest probability of persistence into the future, and are therefore the best investment for our collaborative efforts and dollars. Sound familiar? The entire upper Snake River watershed rose to the top as Priority Waters, out of recognition of this area as a high-elevation native trout stronghold of high conservation significance.

ANATOMY OF A PROJECT

When TU signs on as project manager on a stream reconnection or habitat restoration project, we essentially "quarterback" the project from concept to stewardship while working with a team of partners, funders, landowners, water users, contractors, and volunteers along the way. This "anatomy of a project" timeline provides an overview of what goes into each distinct phase of a project's lifecycle - and demonstrates how, with your support, TU acts as a catalyst to advance projects to completion and ensure their success.

- Site visits & meetings with private landowners and/or land managers
- Bringing partners on board
- Defining goals & objectives
- Establishing roles & responsibilities
- Developing an alternative analysis and/or conceptual design (typically with consultants)

PLANNING & DESIGN I-2 years

- More site visits
- Contracting a qualified consultant for detailed survey and 30% and 60% design plans (sometimes requires an RFP process)
- Working with stakeholders to refine goals and objectives
- Obtaining construction cost estimates
- Mapping out a funding plan

FUNDRAISING & PERMITTING 2+ years

- Working with a consultant for final construction-ready design plans
- Writing numerous grants to federal, state, local, foundation, and NGO partners
- More site visits
- Private fundraising as needed
- Applying for permits
- Completing pre-project monitoring
- Sourcing materials (rock, trees)

I + years

- More site visits

CONSTRUCTION IMPLEMENTATION

- Selecting a qualified stream restoration contractor through an **RFP/competitive bid process**
- Administering contracts, insurance, and bonding for construction and oversight work
- Volunteer days
- Invoicing and accounting
- Publicity and outreach

REPORTING, MONITORING & MAINTENANCE 3 years

- Post-construction surveys
- Grant reports for all funders
- Three years of post-construction monitoring
- Maintenance and follow-up as needed

LEADING A **MULTI-STEP** PROJECT LIFECYCLE

- TU-led projects typically take a minimum of 5 years from start to finish (including post-project monitoring).
- This is a much faster time frame than if led by our agency partners.
- TU's investment in capacity allows projects to initiate and move forward.
- Private philanthropy is essential throughout, and most impactful during the initial development and planning and design stages.

UPCOMING PROJECTS

Successful projects spawn new projects. As we look out at the horizon for the next three to five years, TU will implement nine or more stream reconnection and habitat restoration projects throughout the watershed that have been identified as priorities by TU and partners. Our project pipeline is a direct result of TU's strong partner relationships and trusted reputation in the community. These projects and their benefits to fish, streams, and the community will no doubt lead to additional project opportunities that TU is poised to respond to.

PROJECT CALENDAR

2022 • North Fork Tincup Phase I • Spread Creek 2 Three Channel Spring Creek

• Salt River Watershed Group

2023 Lower Snake River Ranch River Bend Ranch 2 Steer Creek

2024

 Blackrock Creek Lava Creek

2025+ New projects as opportunities arise Habitat in upper Spread Creek reconnected by our 10+ years of fish passage project work in the watershed. (Photo: David Stubbs)

A "riprapped" or leveed bank near the Blackrock Ranger Station will be rehabilitated to showcase a bioengineering approach that incorporates natural materials and vegetation on 0.2 miles. It will enhance fish habitat and cover while also reducing stress on the banks.

NORTH FORK TINCUP CREEK

Inspired by our previous work on Tincup Creek, up to 5.4 miles of the North Fork Tincup Creek deep in a roadless area will be restored using processbased restoration techniques that mimic beaver activity and reconnect the stream to its floodplain.

SPREAD CREEK 2

Over a decade in the making, the second phase of this highprofile project will install a fish screen that allows migratory trout and other native fish to continue their migrations towards the Snake River five miles downstream and will stabilize the diversion, banks, and channel in the project

LAVA CREEK

We will address two concrete irrigation diversions on Lava Creek, a freestone spawning tributary of the Buffalo Fork, that are currently acting as barriers to fish passage.When complete, the project will reconnect nine miles of habitat on Bridger-Teton National Forest (BTNF) lands.

LOWER SNAKE **RIVER RANCH**

Project partners are seeking to address 0.5 miles of heavily eroding bank along the Snake River and one of its side channels. It will increase habitat complexity, diversity, and quality by creating riparian buffers, and will showcase natural alternatives to riprap.

HABITAT RESTORATION

HABITAT RESTORATION

RIVER BEND RANCH 2

The project's second phase will address channel and bank instability on 2.5 miles of the Upper Hoback using floodplain restoration, bioengineering, and riparian fencing techniques, and has engaged additional landowners including the Jackson Fork Ranch and BTNF.

HABITAT RESTORATION

SALT RIVER WATERSHED GROUP

TU is focusing on the Salt River watershed as a priority for added staff capacity. Thanks to a recently-awarded \$100,000 grant from the Bureau of Reclamation and private donations, we will be establishing a new watershed group and advancing a number of new projects.

 STREAM RECONNECTION HABITAT RESTORATION

STREAM RECONNECTION

STEER CREEK BDA

Steer Creek is a spring-fed spawning tributary of the Little Grevs River that has been impacted by cattle grazing and other land uses, with a documented decline in spawning redds (nests). The use of "Beaver Dam Analogs" on two miles of stream is being explored to address redds being choked by sediment.

HABITAT RESTORATION

THREE CHANNEL SPRING CREEK

This project will use Natural Channel Design principles to restore spawning and juvenile rearing habitat on 0.6 miles of a highly-productive spawning spring creek of the Snake River that has been studied for decades by WGFD biologists and landowners.

HABITAT RESTORATION

TU has had a presence in the upper Snake River watershed since the Jackson Hole TU chapter was formed in 1983 and the Wyoming Water Project (now the Wyoming Water and Habitat Program) was founded in 2007. However, it wasn't until 2016. when we launched the Snake River Headwaters Initiative, that our impact and presence in the community began to grow exponentially. Today, our reputation as a trusted, leading organization working on fisheries and water-related issues in the

watershed allows us to respond to timely needs and complex issues facing our community, like water quality, prolonged drought, and associated research and monitoring efforts. With your support, we will be able to bring TU's expertise at the local, state, and national level and the resources and expertise of our partners to the table to help carry out our shared vision of communityled, collaborative, science-supported solutions to complex issues that affect people and fish alike.

YOUTH EDUCATION INSPIRES THE NEXT GENERATION

We are excited to continue leading our Adopta-Trout (AaT) youth education program which educates the entire Jackson Hole Middle School 7th grade class about their local watershed and fisheries while also providing important data to resource managers. Through the AaT Program, students participate in a study of fish movement by "adopting" and following radio-tagged or PIT-tagged fish throughout the school year. The program helps cultivate the next generation of watershed stewards.

"Many hours of work go into coordinating efforts and studies that benefit the health and responsible management of the watershed. Many groups contribute their time and resources to these efforts, Trout Unlimited and Leslie Steen being notable for their leadership role."

BUREAU OF RECLAMATION WATERSHED PLANNING

The collaboration arising from the community response to the 2021 ramp down has highlighted the need for the creation of a new formal watershed group for the Snake River Headwaters, which TU has stepped up to coordinate with the pending support of a \$200,000 Bureau of Reclamation Cooperative Watershed Management Planning grant. This funding source has also enabled us to launch a new watershed group and create a new full-time staff position in the Salt River.

Each fall, the Snake River between Jackson Lake and Palisades Reservoir is drawn down by the Bureau of Reclamation to winter base flows. In fall of 2021, 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, partners, volunteers, and local students sprang into action to document the impacts of the rapid ramp down, with an an eye towards better management and communication in the future, and a public meeting was co-hosted to present results.

RESEARCH AND MONITORING FOR THE FUTURE

Each year, TU and agency partners keep tabs on the number of fish being lost to irrigation ditches through several methods. Entrainment studies utilize nets and tagging to estimate the number of fish that are swept into ditches. Fish rescues return thousands of fish back to streams and provide a snapshot of the magnitude of fish loss. Together, these methods help to inform future fish passage project work to reduce fish loss from entrainment.

TU is also ramping up our involvement with new research efforts to help inform our conservation strategy for the future. We are supporting a range-wide study of Yellowstone cutthroat trout conservation genetics by the University of Wyoming to better understand the state of our Snake River cutthroat trout populations. We are seeking to scale up efforts to conduct culvert and barrier inventories to systematically identify and prioritize new project opportunities as assisted by the Wyoming Fish Passage Prioritization Tool. Once identified, they will be on deck to be funded by national-level fish passage funding recently made available by the federal Bipartisan Infrastructure Law.

ONGOING COLLABORATION AND COORDINATION WITH PARTNERS

We continue to be actively engaged as a founding member of the Jackson Hole Clean Water Coalition (jhcleanwater.org), a collaborative group of 10 agencies and nonprofits working together to measurably reduce nonpoint source pollution in Jackson Hole's surface and groundwater from anthropogenic sources. The Trout Friendly Lawns Program, one of the Coalition's key programs, continues to grow and expand to engage the landscaping and business community and other communities.

Since 2018, TU has led an Upper Snake/Salt Multiagency Project Coordination Meeting attended by 14 agency and nonprofit partners. This annual meeting's purpose has been to encourage collaboration and communication among agency partners, with an emphasis on fisheries and aquatic projects, as well as research and monitoring related to projects. We also attend the biannual Snake River Agencies coordination meeting organized by the Wyoming State Engineer's office and the Greater Yellowstone Coordinating Committee Fisheries Meeting.

JOIN US

We are grateful to everyone who has made a philanthropic investment into restoring these treasured headwaters. It is your generosity and commitment that has made our success possible, and we hope that the compelling vision of the Snake River Headwaters Initiative inspires many more to join us in support of these efforts. This Initiative continues to be a model for "One TU" across the nation – a strong collaboration between TU's national organization and the Jackson Hole TU Chapter, which supports nearly 50% of its annual operating costs each year and is then matched by donors in the community. Private philanthropy is leveraged at an impressive ratio to other conservation dollars, enabling us to work quickly and effectively to lead high-priority conservation projects and address complex water and fisheries issues facing our community. Your support makes it possible for TU to continue to have a leadership role in the future of coldwater fisheries in the upper Snake River watershed, and by joining us, you become a part of a wonderful, dedicated group of anglers and conservationists working together for a better future.

In my years of supporting and donating to the efforts of Trout Unlimited, I have seen the profound impact that TU is making on the headwaters of

the Snake River — a place that my family and I care deeply about. This valley is incredibly fortunate to have someone like Leslie Steen leading the efforts to ensure this area is a haven for clean, cold water and native cutthroat trout.

- PHOEBE MUZZY, SNAKE RIVER HEADWATERS ADVISORY BOARD MEMBER AND TROUT UNLIMITED TRUSTEE

HOW TO GIVE:

TU Unlimited

Send a check to: Trout Unlimited 1777 N. Kent Street, Ste. 100 Arlington, VA, 22209 Memo: Snake River Headwaters

Jackson Hole TU Chapter Give through Old Bill's Fun Run: Search for Trout Unlimited – Jackson Hole

WHERE DOES YOUR DONATION GO?

As a donor, there are two ways to make a gift to the Snake River Headwaters Initiative: (1) through a direct gift to Trout Unlimited or (2) through a gift to the Jackson Hole TU chapter (via Old Bill's, the Tie One On banquet, or other method). Direct gifts to Trout Unlimited are easier for us to track and manage, but either method is welcome, and in both cases, the gift will be spent locally on staff capacity, project, and research expenses.

Supporting TU's work is a smart investment that can be leveraged many times over to strategically advance the Snake River Headwaters Initiative and TU's landscape-scale conservation priorities. Our track record from 2016-2021 demonstrates a 9:1 or better ratio of leveraging private funds to help secure millions of dollars in grants and conservation dollars from a variety of sources to implement priority projects.

PHILANTHROPY LEVERAGES SIGNIFICANT PROJECT FUNDING

As illustrated in the "Anatomy of a Project" section, philanthropic support provides critical funding that enables our staff to lead conservation projects with the tools needed to maximize results. It allows us to support fisheries and water-related research and monitoring efforts in the watershed, which in turn lead to new projects and opportunities. It can also provide important and timely contingency funds needed to take projects across the finish line.

SNAKE RIVER HEADWATERS ADVISORY BOARD

Bill Egan, Chair Alex Maher Clay Moorhead Phoebe Muzzy Ed Opler **Bob Paulson Bob Strawbridge Tote Turner Bill Waterman** Missy Whelan **Rick Will** Kirk Wortman

JACKSON HOLE TROUT UNLIMITED CHAPTER BOARD

Tote Turner, President lay Buchner, Emeritus Howard Cole Abby Paffrath Czesnakowicz Kathleen Belk Doffermyre Mark Heineken Maggie Heumann Diana Sweet Miller Ir. Rodriguez **Jimbo Rooks** Scott Weaver Rick Will

CUTTHROAT CLUB MEMBERS

We are grateful to our Snake River Headwaters Cutthroat Club, a group of anglers and conservationists in the community that have committed three or more years of support to the Snake River Headwaters Initiative and have provided us with a sustainable funding base to carry out our vision and mission.*

Anonymous Fred and Helen Arbuckle Mike and Dede Brooks Kit and Louise Davenport Bill Egan Gary and Beth Fazzio Larry Finch Ron and Lydia Harrington Tony and Anna Hass Loyd and Ward Hutchins George and Karen James John and Jacque Jarve Cy and Betsy King Randy Luskey Alex and Macye Maher Rod and Alice Moorhead Clay and Jillian Moorhead

Phoebe and Gray Muzzy Mike and Trina Overlock Bob and Robin Paulson Pete and Coleen Regan Kolja and Roxanne Rockov Steve and Ann Ryan Hanley Sayers Steve and Sonja Sharkey Tom and Maggie Simms Mark and Teri Snell Bob Strawbridge Ken and Caroline Taylor Mark Vallely Bill and Teresa Waterman Kirk Wortman *Please contact us for more information on joining the Cutthroat Club

Join us in making streams healthier, water cleaner, and fishing better, now and for future generations, in one of the last, best places for cutthroat trout.

TROUT UNLIMITED'S MISSION

Our mission is to bring together diverse interests to care for and recover rivers and streams so our children can experience the joy of wild and native trout and salmon.

CONNECT WITH US

185 Center Street, Suite B PO Box 5002 | Jackson, WY 83001 www.tu.org/snakeheadwaters