



TROUT LINE

Newsletter from the Montana Council of Trout Unlimited



Sunrise on the Blackfoot River at Russell Gates
FAS, 5 degrees below zero. PC: B.Pfeiffer

WINTER 2022

THIS ISSUE:

- Infrastructure Win for Trout pg. 3
- The Hidden River pg. 4
- Giving in Honor of Others pg. 6
- Red Rock Restoration Project, Chapter News, and more!



WINTER/22

MONTANA TU'S MISSION

is to conserve, protect and restore Montana's world-class coldwater fisheries and their watersheds.

Founded in 1964, Montana Trout Unlimited is a statewide grassroots organization comprised of 13 chapters and approximately 4,000 TU members.

www.montanatu.org

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FROM THE CHAIRMAN: Brian Neilsen

In 1974, Montana made the controversial decision to cease the stocking of rivers and streams capable of supporting wild reproducing trout populations. Biologists and fishery managers trusted the science and the results have made the rivers and streams of Montana some of the top trout fishing destinations in the world. Wild trout management in Montana has gone from a highly contested experiment backed by sound science to a remarkable success providing strong and healthy wild trout and adding to Montana's rich heritage. Trusting the science has benefitted conservation efforts, devoted anglers, the state's tourism, jobs, art, education in the classroom and more. It's also served as a model for wild fish recovery programs around the world.

MTU is here to help protect this heritage of trusting and pursuing scientific management of Montana's fisheries. It's reflected in the everyday work of the organization with some fine examples in this edition of the newsletter. The work MTU did to help pass the federal Infrastructure spending bill was based on the scientific understanding that improving habitat is key to healthy fisheries and this bill will enable more of that good work (See next page). When healthy habitat is protected and restored, wild fish flourish. The emerging science of the hyporheic zone (see The Hidden River, pg. 4), shows that wild fish depend on stable streams and healthy stream chemistry, which in turn depend



MTU State Council Chairman Brian Neilsen

on the interactions of the rivers we fish and the water coursing beneath them that we never see but must protect and enhance. Science has long-since shown that improving habitat is often the key to giving wild fish a chance to survive, from better access to spawning areas to improving water quality, which is why MTU works on projects like the one saving grayling on the Red Rock River (See pg.5).

These are just a few examples of how science drives MTU work. And it's why our organization will continue to impress on Montana's management agencies, Fish & Wildlife Commission, decision-makers and the public the need to abide the best available science when it comes to taking care of Montana's streams and rivers, setting fishing regulations, and making sure we pass our wild trout heritage to future generations.

WINTER RIVERFEST

CELEBRATING THE MISSOURI AND SUN RIVERS



ART & ADVENTURE AUCTION
2022 FLYFISHING FILM TOUR
LIVE MUSIC FROM **50WATT SUN** RAFFLES FOOD DRINKS



SATURDAY, FEBRUARY 19, 2022

AT THE NEWBERRY

Congress Invests in Trout Habitat with Landmark Legislation by Clayton Elliott



TU's Rock Creek Project Coordinator Tess Scanlon takes a look at a fish passage-friendly open culvert. The IJA provides funding for projects like these. PC: B. Pfeiffer.

After decades of talk, Congress has finally put the money where its mouth is with the passage of the Infrastructure Investment and Jobs Act (IIJA). Congress passed and President Biden signed the landmark legislation late in 2021, but with the new year these investments are now set to kick in across the landscape at an unprecedented scale. This truly bipartisan infrastructure legislation makes major investments in our coldwater fisheries and habitat, including abandoned mine restoration, removal of obsolete dams, forest and watershed restoration, replacement of old culverts and fish passage barriers, and increased efficiency of water management and transport systems. In short, it is a big deal for MTU and our chapters' work on the ground. The scope and scale of this legislation is monumental, but here are some highlights of what the law will mean for our work:

- The IIJA includes commonsense solutions for climate and drought impacts to our fish and wildlife. For instance, it funds the Legacy Roads and Trails program. This program provides millions in dedicated funding for

repairing, upgrading, and sometimes removing 375,000 miles of roads, 12,000 bridges, and 143,000 miles of trails managed by the U.S. Forest Service, in the service of reducing sediment or fish barriers in our public waters.

- The agreement recognizes the critical role of water infrastructure and watershed health in improving water security as climate change makes conditions hotter and drier. It invests \$400 million in the WaterSMART program, \$100 million of which is dedicated for watershed restoration projects, and dedicates another \$250 million for aquatic ecosystem restoration and protection projects. Another \$100 million supports local action through funding watershed groups' planning and project development, to help ensure the funding makes possible the best, multi-benefit projects for improving watershed health, fish and wildlife habitat, and clean drinking water.

- Congress tackled addressing the abandoned messes left behind from hard rock mining across the West. First, the IIJA reauthorized the successful Abandoned Mine Lands clean-up program, increased its funding, and

created a new fund specifically for addressing recently abandoned hard rock mines that currently pollute hundreds of watersheds in western Montana.

- The IIJA also makes good on long held, often broken promises to our first nations by funding elements of the ratified Indian water rights settlements, including with the Crow, Blackfeet, and Confederated Salish and Kootenai tribes. Further, it includes \$100 million for the entire Milk River water delivery system, including replacement of the failing diversion structure that has entrained endangered bull trout for decades. Both are a win for coldwater fish habitats and native trout, and they are a win for the tribal nations, communities, and irrigators who rely on that water.

With the ink now dry, focus in 2022 will go to implementation of the new law. MTU and partners are already working with state and federal agencies to make sure these investments live up to the promises made by Congress.



The Hidden River by David Brooks

Montana winters hide much of what we, as anglers, tend to see as trout streams. Shelf ice covers bankside flow and habitat; anchor ice encapsulates spawning gravels; slush and ice floes obscure pools and runs. Bug life is as quiet as most of our reels. Yet, there's a deeper, hidden river that winter, along with a healthy floodplain, helps to regenerate.

Winter stores water in snow and ice that spring unleashes into streams and floods rivers. Some of that stored water also seeps down, out of view, and enters a river's hyporheic zone. The hyporheic zone is a layer of porous sediment beneath any stream, through which water from the stream above and groundwater below mixes and flows. This liminal body of flowing water helps carry nutrients from underground sediment to the stream above, feeding aquatic organisms, including fish. The hyporheic zone is also where most of a river's chemical changes take place. As it swirls through this zone, dissolved oxygen regulates pollutants, cycles carbon and nitrogen, and transforms nutrients into forms available for organisms.

Lots of the 'work' that the hyporheic zone does to enrich flowing surface waters happens in spots where streams transition - such as in pool-drop or pool-riffle sequences, where woody debris alters

flow, or at the mouths of tributaries. As anglers we recognize, seek and target these spots because trout do the same, seeking the oxygenated, nutrient-rich, chemically-



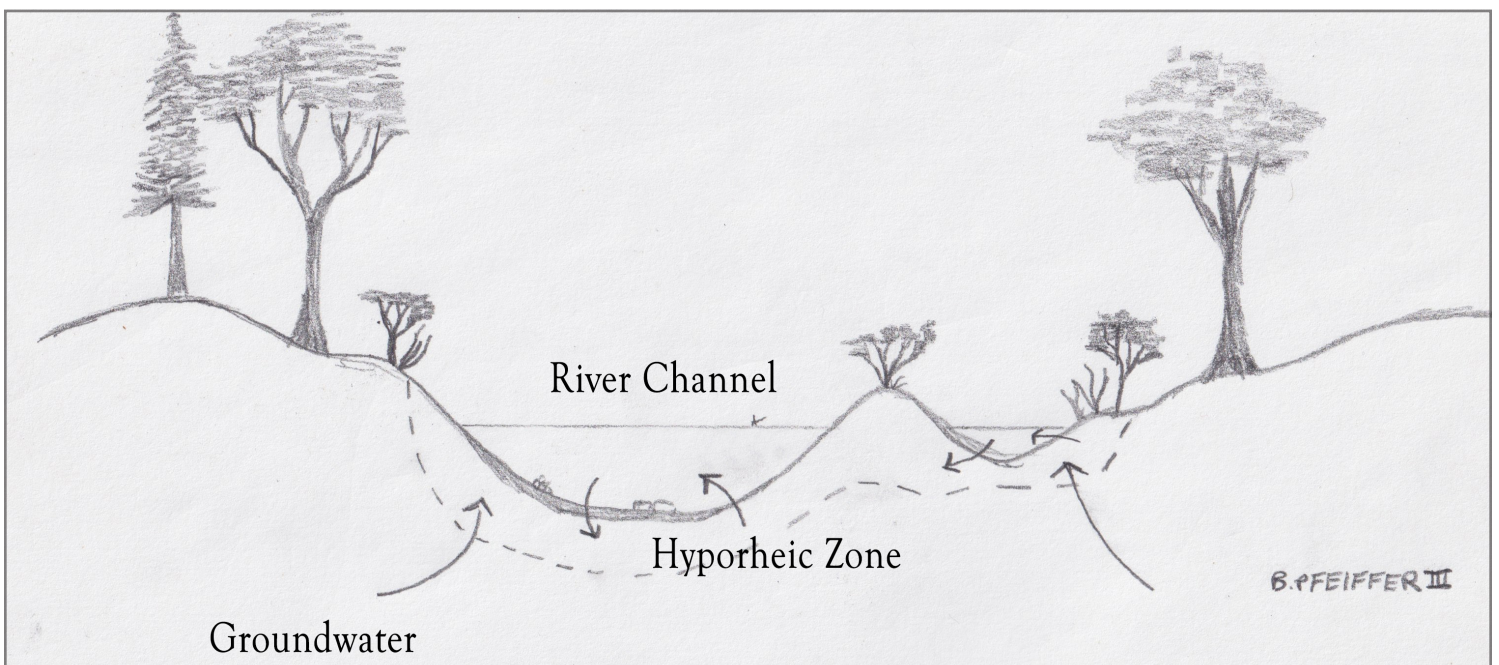
A school of fish fry take winter refuge in a spring water seep on the Bitterroot River. PC: B.Pfeiffer

clean water entering the stream from the hyporheic zone.

When stream channel transitions are eliminated, streams are straightened, wood removed, or tributaries disconnected, the stream loses those visible elements AND

the beneficial influence of the hyporheic water exchange that those elements make possible. Conversely, when nature or restoration work creates fish-friendly habitat and transitions in a stream, hyporheic exchange increases. When we, as coldwater conservationists, invest in recreating stream meanders, pools, riffles, or tributary reconnections, we are doing double duty for trout. We are rebuilding above-ground, visible habitat, as well as creating connections between the waters we fish with a hidden river that quietly does much of the chemical work to keep trout water clean and rich.

Reflecting on January, the great outdoors, river and angling writer Roderick Haig-Brown wrote that "It is easy to forget about the river in winter." As the opening line to *A River Never Sleeps*, Haig-Brown was thinking about all the ways that rivers and fish thrive and change, even when an angler might view them as dormant. Although that book was published 25 years before the last half century's worth of research into the hyporheic zone's relationship with and influence on surface water, its title reflects the critical influence winter snowpack, healthy floodplains and, often, good restoration work have on not just the river we fish and can see but the hidden river, too.



Red Rock River - Saving Montana's Native Grayling by Chris Edgington



A gorgeous arctic grayling from a nameless high mountain Montana lake. PC: Richard Magill

A brisk April wind stung my cheeks as I paused to take a break from tromping through the snowdrifts to contemplate my next fly choice. I gazed towards the source of the Missouri River, the eastern flank of the snowcapped Mount Jefferson in the Centennial Range. The mountain range is geologically unique due to its east-west configuration. Similarly, the Centennial Valley is home to Montana's most distinctive salmonid, the Arctic grayling (*Thymallus arcticus*), with its Seussian, sail-like dorsal fin and iridescent hues. The Arctic grayling is a rare endemic species found in the contiguous United States, primarily confined to the upper reaches of the Missouri River Basin in Southwest Montana. Today, grayling exist in ~4% of their native range.

For the past decade, biologists from Fish, Wildlife, & Parks (FWP), and the US Fish and Wildlife Service (USFWS) have

been doing their due diligence to solve the complex population dynamics of the Upper Red Rock Lake grayling population. Biologists designed and implemented an Adaptive Management Plan (AMP) to research and model three hypothesized environmental factors affecting the population - overwinter habitat, spawning habitat, and competition from non-native Yellowstone Cutthroat trout.

From 2013-17, the first AMP experiment reduced Yellowstone Cutthroat trout. Fishing regulations were liberalized to 20 Cutthroat per day, excluding a stream closure from May 15 - June 14, to protect spawning grayling on Red Rock Creek. The second management experiment explored the relationship between spawning habitat and grayling recruitment. Efforts to increase suitable spawning habitat began by ensuring fish passage at beaver dams combined with a large-scale

restoration on Elk Springs Creek. The restoration reconnected the creek to Upper Red Rock Lake in 2016, which was altered by duck hunters in 1908. In 2016 and 2021, spawning habitat improvements were completed on Elk Springs Creek, a project the Chuck Robbins TU Chapter in Dillon invested in.

The first two experiments have not contributed to a rebound in the grayling population. The continuing downward trend of the population, and modeling, points to the third environmental factor, overwintering habitat, as the likely cause of the decline. Overwinter habitat has been estimated by USFWS researchers collecting dissolved oxygen readings through the ice. Suitable habitat has been varying from year-to-year, based on winter conditions. Biologists have determined

(Continued on next page)

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Philanthropy Spotlight

Giving in Honor of Another

“There are two ways of spreading light: to be the candle or the mirror that reflects it.” -Edith Wharton



This holiday season we invited people to give gifts in honor or memory of friends and family and we were blown away by the response. We asked - what is your loved one's favorite river? From the Swan to the Smith to Beartooth Alpine lakes, the answers were as diverse as the anglers. We were humbled by the generosity and reminded that the endless variety of fly fishing and fly fishers is part of what makes the sport so beautiful. No pitch here, as many just made gifts. However, if there is a birthday, anniversary, or other special day in 2022 that you'd like to celebrate with a gift in someone's name, please enclose this slip and we'll let them know you did. Cheers and thanks!



Yes! I want make a gift in honor of:

_____ (name)

Their favorite river is:

_____ Please send notification (amount not disclosed) gift to:

_____ (address, city, state, zip)

OR

email: _____

Please return via remit envelope (with payment) and MTU will send a card or email to the honoree.

Questions - 406.543.0054 Thank you!

The Kindness of Strangers

Thank you to the generous donors behind a recent, significant gift to Montana Trout Unlimited. Knowing that you believe in MTU and directed a foundation gift to us with no expectation of thanks or recognition just motivates us to work even harder. We are grateful for your unexpected kindness and will continue to pay it forward as an investment in the trout and waters that make Montana so special.

CONSERVE. PROTECT. RESTORE.

Arctic Grayling from page 5

that 25 acres or more of winter habitat are necessary to overwinter grayling populations greater than the 1,000 fish management objective. Due to drought conditions lowering the lake level and localized severe winter conditions, the suitable overwinter habitat has hovered around 50% of what is necessary to sustain the Upper Red Rock Lake grayling population.

There is hope for this imperiled grayling population. Biologists from FWP and USFWS have devised and vetted a plan to supply oxygen-rich water to Upper

Red Rock Lake. In 2020, MTU secured a \$200,000 grant that will help make this plan a reality. The plan calls for oxygenated water to be diverted from Shambow Pond, a man-made pond, to deeper portions of the lake. This project is expected to increase overwinter habitat to more than 25-acres, providing relief from hypoxic conditions. We want to ensure future generations of anglers have an opportunity to cast a fly for this remarkable fish in the uppermost tendrils of the mighty Missouri. Stay tuned as we move this project and the fate of the grayling forward.



Chapter News

Bitterroot Chapter

We successfully expanded our Trout in the Classroom to four high schools in the Bitterroot Valley this year. We now are working with the schools in Hamilton, Corvallis, Florence, and Darby. Last years' experience enabled us to avoid many of the problems we encountered the first year! We are now preparing for this year's Buggers program. This is an educational program we have been doing for many years. We have a series of membership meeting coming up on a variety of topics of interest. Due to Covid we will be doing these via Zoom for the time being

George Grant Chapter

We have begun preparations for the Annual GGTU Banquet which will be held on Friday March 4th at the Copper King in Butte. We will have numerous raffles, games, silent auction, and live auctions with great prizes and items for sale to help fund habitat improvement projects in Southwest Montana. Four hundred attendees are expected and the banquet will sell out early. For more information, go to GGTU.org or contact Mark Thompson, the Banquet Chair, or the executive committee at president@ggtu.org. In November and December, the Chapter helped fund the Lower Ruby River Tributary Monitoring Project as well as an irrigation fish screen on Browns Gulch.

Madison-Gallatin Chapter

Madison Gallatin Trout Unlimited's 50th Annual TroutFest Banquet will be held on Saturday, February 26th, 2022 at the Best Western GranTree Inn in Bozeman.

50th Annual
TROUTFEST
Banquet & Fundraiser



TICKETS ON SALE NOW!

As we re-enter the event world, this year's banquet will see a limited number of tickets available to provide more space for attendees. As always, we will be using

a mobile bidding platform so folks can participate from near and far. This is MGTU's one and only fundraiser and all proceeds from the banquet go towards MGTU's mission statement to conserve, protect, and restore SW Montana's cold water fisheries and their watersheds. For all tickets and mobile bidding information, please go to our website at www.mgtu.org.

We also have a hiring Update! MGTU and MTU is excited to announce that Ashely Brubaker was hired for the position of Upper Yellowstone-Shields Project Manager. This significantly expands the capacity of TU to implement restoration projects in the region. Ashley has just recently begun her work and you can expect to hear more about what she is working on in the coming months.

Missouri River Fly Fishers Chapter

In lieu of our annual banquet, MRF is joining with the Sun River Watershed Group to present Winter RiverFest: An event celebrating the Missouri and Sun Rivers. Winter RiverFest will be held February 19, 2022, at The Newberry, Great Falls' newest venue. Tickets are on sale now at www.thenewberrymt.com or at the box office at 420 Central Ave in Great Falls. WRF will include the 2022 Fly Fishing Film Tour (F3T), an art and fishing trip auction, bucket raffles, appetizers, and the evening will end with a live performance by 50 Watt Sun. Of course, we'll still have our hat raffle and bottomless beer mugs – which will feature our new MRFTU logo as Trout Unlimited Chapter #406! For those coming to RiverFest from out of town, book your room at the O'Haire Motor Inn, home of the Sip 'n Dip mermaid lounge. Book by Feb. 1 and mention RiverFest to get a special room rate of \$65. (406) 454-2141.

Westslope Trout Unlimited

The Westslope chapter welcomes new leadership in 2022 with the recent election of Brandon Dwyer as chapter president, succeeding Mark Kuipers, who steered the chapter to a lot of success over the past 6 years, including, Trout Unlimited's Silver Trout Award. Mark will continue on the board and we are thankful for all of his service. Welcome to Brandon in his new role! With the ongoing pandemic, we will be moving our annual fundraiser to a virtual format, with a likely date in April. Stay tuned!

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TROUT LINE WINTER 2022

UPCOMING EVENTS

www.montanatu.org

2/9/22

WestSlope Chapter Meeting-7pm

Missoula, MT - available via Livestream at westslope-trout.org

2/19/22

Winter River Fest - MRFF and SRWG

The Newberry, Great Falls, MT

2/26/22

Madison-Gallatin Chapter Banquet

GranTree, Bozeman, MT

3/4/22

George Grant Chapter TU Banquet

Copper King, Butte, MT

3/12/22

MTU State Council Meeting

Missoula, MT - Microsoft Teams Virtual Meeting

WANT 4,000 MONTANA TU MEMBERS TO HEAR ABOUT YOUR EVENT?

Please contact the Missoula office at 406-543-0054 or info@montanatu.org to get the word out through Montana TU.



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