



TROUT LINE

Newsletter from the Montana Council of Trout Unlimited



Planting vegetation to stabilize streambanks at an ongoing restoration project at Ninemile Creek, Western Montana
PC: Bill Pfeiffer

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Also, Middle Fork of the Judith Update, Stewardship Spotlight & Chapter news



SUMMER 2020

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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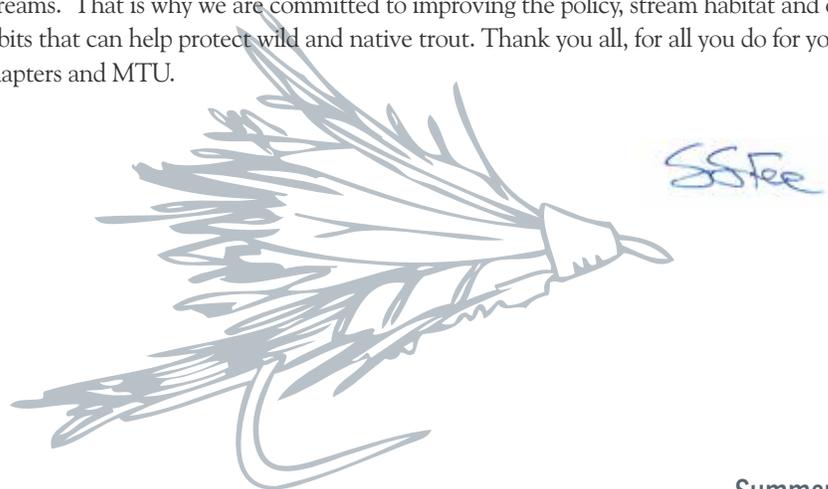
Hello Everyone, summer brings the long days and warm temperatures that beckon many of us to spend time on the water. We enjoy the refreshing effects of being on or near cold streams and rivers when the thermometer is nudging up towards triple digits, as it has recently. Many of us do so with rods in hand. Cool water is, of course, relative. What's refreshing to us can be stressful or even deadly to the trout that we love and work to care for. Last year at this time, MTU's newsletter included an article on the ins and outs of Hoot Owl restrictions in Montana and why restrictions on fishing during the hottest part of the day are critical to safeguarding trout.



Sharon Sweeny Fee

As you will read in this edition of Trout Line, we as an organization and as grassroots members work hard to keep trout streams cold by doing things like restoring willows in riparian areas, so that trout remain as healthy as possible throughout summer heatwaves allowing us to avoid Hoot Owl restrictions. We also advocate for the dollars that help to restore and reconnect intact watersheds, helping to get the Great American Outdoor Act passed (see article herein). But when water temperatures exceed the state's triggers - 73 degrees for three days running - the decision to implement Hoot Owl angling restrictions should be easy and swift. Again, this summer, we're seeing concern that this isn't the case. Daily river temperatures in the upper forks of the Missouri and parts of the Clark Fork basin have exceeded the 73 degree mark for consecutive days at times this summer but there have been delays in Hoot Owl taking effect.

MTU absolutely trusts FWP to prioritize fishery health, but we are still concerned that the process for implementing Hoot Owl is not working as promptly as it should. Thus, MTU staff are talking with the state's fisheries staff about how to improve the process and bring the best science to bear in protecting trout from being stressed to the point of death by angling when water temperatures are high. As conservation-minded anglers, we can, of course, self-regulate our angling so that we're off the water by mid-day, or hone our skills casting at wary carp "Rocky Mountain bonefish" or other non-salmonids. So, please, get up early, fish when it's cool, carry a thermometer to ensure you're not angling when it's riskiest to trout (anything higher than 65 degrees increases trout stress), and teach others about these things, especially your fellow chapter members. Thank a landowner or irrigator who puts water back in your local river to help keep it cool when summer temperatures are high. Show them that we, as anglers are also willing to make sacrifices for the health of the river and fishery. We also know that climate change will bring longer, hotter summers and warmer water temperatures in many trout streams. That is why we are committed to improving the policy, stream habitat and our own habits that can help protect wild and native trout. Thank you all, for all you do for your local chapters and MTU.



Big Win in Congress for Fish Habitat and Stream Access by Clayton Elliott

This summer, the U.S. Congress passed landmark conservation legislation that will secure more public access in Montana and invest millions of dollars into the restoration of coldwater fisheries on our public lands under the bipartisan Great American Outdoors Act (GAOA), S. 3422/H.R. 7902. The bill will (finally) fully and permanently fund the Land and Water Conservation Fund (LWCF), as well as create a new fund that will provide up to \$9.5 billion to address significant maintenance backlogs on federal public lands, including the National Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service, Bureau of Land Management (BLM), and others.

Montana has regularly reaped the benefits of LWCF projects, receiving \$597 million in LWCF dollars to fund everything from half of the state's fishing access sites, to key public land acquisitions, such as the recent BLM acquisition of over 7,000 acres east of Missoula that will help protect Gold

Creek and Belmont Creek, both spawning tributaries to the famed Blackfoot River that are home to wild and native populations of Westslope cutthroat trout and bull trout. LWCF monies were also essential in acquiring property along Tenderfoot Creek in the Smith River Drainage that preserves and enhances public access and protects spawning habitat for wild fish. Furthermore, more than half of the state's fishing access sites have benefited from LWCF funding.

While most of the national and state press reports highlight the win for LWCF and our National Parks under the bill, the often-forgotten investment in the maintenance backlog on our public lands, like the Forest Service and BLM, component stands to have some of the most direct benefit to coldwater fish and their habitat in Montana. From reclaiming abandoned roads to fixing fish barriers like antiquated culverts, these dollars will mean better habitat for wild and native fish.

MTU has actively pushed for the legislation for years, including working directly with all three members of our Congressional delegation and pushing for inclusion of the public land maintenance backlog fund. All three voted yes on the bill, and Senators Tester and Daines were lead Senate co-sponsors. Countless MTU members wrote notes, made calls, and submitted letters to the editor to highlight the importance of this legislation to our coldwater fishery legacy. Those efforts made this win possible.

President Trump signed the legislation into law on August 4, finalizing this significant victory.

Big conservation wins like this don't happen that often in Congress, and they do not happen by accident. Thanks to you for making your voice heard! Crack open a cold one on the river this summer and raise a toast to the Great American Outdoors Act!

Native Trout and Wildfire: Adapting to Adversity by David Brooks

Fire season. At its most severe, that can mean access to rivers and forest streams gets closed. More commonly it means temperatures are hot, so we adjust our angling schedules to the cool margins of the day. Almost always, being on or near cool water provides respite from the heat and smoke of fire season. Water is the solution.

Rarely do we think of fire as a solution, a fix, or a benefit for water, but where trout are concerned it can be just that. This is one reason MTU engages in efforts to manage our public lands, especially when it comes to practices that can help trout water, like managing or even promoting fire.

Wildfires first kill and then enable regeneration. The severity of the killing and the regeneration are, of course, connected.

Large, severe fires can devastate streams and water. Fire can rapidly raise water temperatures - known as a thermal spike - and by reducing or eliminating shade, those water temperatures often remain higher than normal for the season and for years to come (persistent warming). By scorching groundcover, desiccating soils and depositing lots of ash, fire creates large, readily available sources of sediment that often flush into streams, clogging trout spawning and rearing habitat. Fine sediment and ash can also clog trout gills, causing immediate fish kills in the vicinity of and below severe wildfire. With different degrees of rapidity, severe wildfires cause shifts in wood structure, channel morphology, and water quality changes like big swings in acidity and dissolved oxygen levels. All of these or some com-

binations of them wipe out sections of or even whole trout streams. The effects can last for years if not decades depending on the size and severity of the fire, but even these severe fires, which we aim to avoid through good forest management are not, ultimately, all bad for trout.

Studies related to severe burns in the Bitterroot Valley show that, in general, "post-fire abundance in native fishes was positively related to burn severity." The bigger the burn, the better the native fish did compared to nonnative fish. West-slope cutthroat populations survived or rebounded fairly quickly. Regardless of species, the bigger the fire, the longer the rebound.

(continued on next page)

Trout and Wildfire from page 3

Conversely, low-severity fires that are more common in areas that regularly experience wildfire (and little or no fire suppression) do not seem to have the same mid- to long-term negative impacts on water temperature. A natural, regular fire regime also contributes more varied sediment, nutrients and wood to streams that, rather than being harmful to aquatic organisms, make for complex, healthy habitat. Research in the Northwest demonstrates that lower-intensity wildfires or managed fires can be useful restoration tools for aquatic habitat and native trout or salmonids. Naturally occurring wildfires or periodic fire management have been called a “reset” for healthy mountain streams. For example, they promote fire-weakened trees to fall into streams and create deep, cold pools that trout seek for rest, food and shelter. These are often the juicy places we cast a fly, and for good reason.

The reset or rebound of native trout where modest-severity wildfire has burned is

quick, often happening within the same year as the burn. As our understanding of the benefits of some fire in trout landscapes increases, we are increasingly advocating for using fire as a cold-water restoration tool. For example, we support the experimental use of selective low- and mixed-severity fire in riparian areas of the Swan River system (part of Flathead National Forest’s “Mid-Swan Landscape Restoration & Wildland Urban Interface Fuels Project”) to increase trout growth and production. Fire exclusion in that area has choked streams with riparian vegetation so thick that they get very little sunlight. Water temperatures are unnaturally cold, limiting aquatic plant growth, macroinvertebrate development and, hence, fish size. Opening that canopy with the kinds of fires that historically burned there, while also contributing healthy amounts of new wood and sediment into the streams, will likely make for more trout-friendly habitat and water.

As a member of the Montana Forest Col-

laborative Network, MTU regularly participates in conversations about statewide forest planning that includes discussion of noncommercial thinning and fire as management options. We continue to combine those efforts with our attention to riparian health and restoration associated with healthy forestry efforts.

We’ve all sat around a campfire poking, prodding and playing with the wood and flames. As we continue to learn more about the pros and cons of fire for fish, MTU intends to turn our primal curiosity about fire into land- and water-wise management. When smoke-filled summer skies compromise or curtail our fishing plans, we should at least find comfort in the knowledge that they may signal better fishing to come.



Middle Fork of the Judith River Project Update by Chris Edgington

Slipping and sliding down the last pitch of the Middle Fork Judith jeep trail #825, I could hear the river coursing over riffles and into the emerald pools beneath gorgeous limestone cliffs. All of the pictures I’d seen of the area did not prepare me for the rugged beauty of this river’s landscape. As we hiked to the first river crossing, a Suburban came grinding up the same hill we’d just had difficulty hiking down. Its driver informed us that a second Suburban had blown its transmission further along the same rugged route. And if that wasn’t enough motivation to reroute the jeep trail, reviving this once great wild trout fishery is. That is exactly what we will be starting this fall.

In our winter 2020 Trout Line, I detailed the efforts of MTU, the Forest Service, Montana Fish, Wildlife and Parks (FWP), and others to begin an ambitious trail reroute followed by riparian trail demolition and stream restoration. Since then we have signed a project agreement with Helena-Lewis and Clark National Forest to manage the project and secured fund-

ing for partial implementation of phase 1. Additionally, the Montana Department of Environmental Quality has prioritized a study to collect baseline stream (sediment, temperature, morphology) and invertebrate data that will help us quantify improvements in water quality and bug-life over time. This four-phase project

will have a positive impact on 80 miles of habitat in the Judith drainage according to FWP biologist Clint Smith, and provide a safer route to Forest in-holdings. One day in the not-so-distant future, we will celebrate the rejuvenation of the Middle Fork Judith as an incredible hike-in wild trout fishery.



Middle Fork of the Judith River
Photo courtesy of Stonefly Studios

Stewardship Spotlight: Dr. Irv Weissman

Montana Trout Unlimited is humbled to count world renowned scientist, Dr. Irv Weissman as one of our first Stewardship Directors and most generous and engaged supporters. His career in public health and award-winning stem cell research at one of the nation's top academic programs has taken him all over the world, but Irv's passion for the outdoors and conservation reach back to his Montana upbringing.

Growing up in Great Falls, he had regular access to the outdoors. His father's family fur trading business meant young Irv often rode along on visits to many wild places around the state. They had fishing rods and tackle in tow to seek trout in small streams feeding both sides of the Continental Divide in Montana, as well as iconic rivers like the Missouri, Blackfoot, Yellowstone, and Smith. By the time he was in high school, Irv committed himself to fly fishing. He'd also paired his keen interest in rivers, fish and the outdoors with equally strong skill and passion for studying science.

When Irv visited his mother's side of the family in Butte, he saw the toll their life in the mining industry had taken on the surrounding environment and its people. This made him appreciate the value of clean, healthy places and water, as well as the need to ensure they persist.

After earning a pre-med degree from Montana State College, Irv followed with a masters in medicine at Stanford University, where he has subsequently spent decades on faculty, including his position as the school's Institute of Stem Cell Biology and Regenerative Medicine director. Even with the time and energy he's devoted to things like curing cancer, he's maintained strong ties to his home state. Much of his family still lives in Montana. He and his wife Ann owned a home and property on the beloved Smith River, which they bought because they couldn't stand knowing that it was slated to be subdivided and developed.

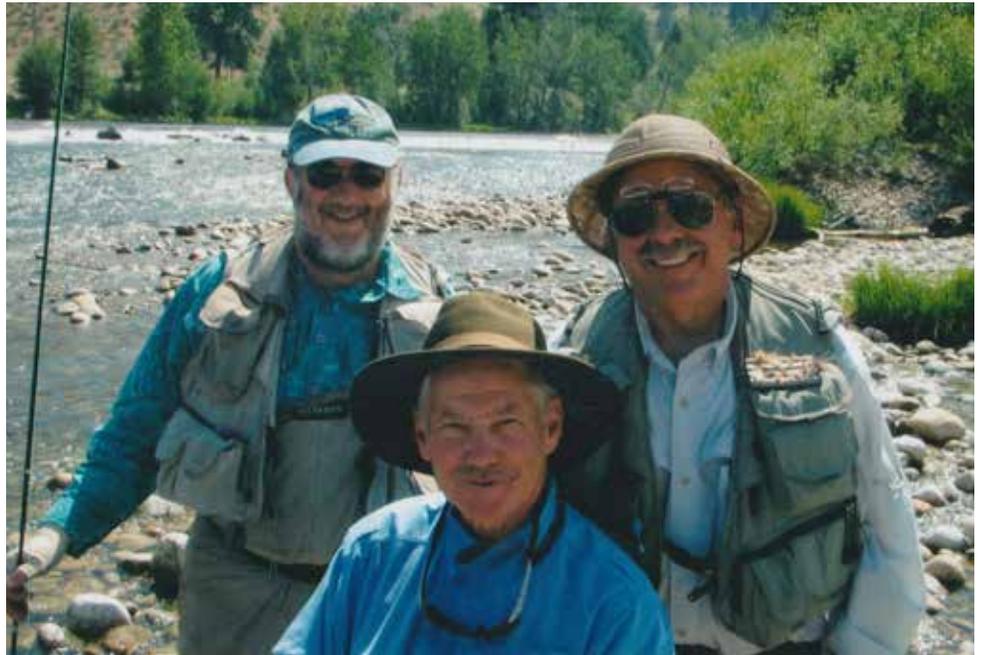
Many years ago, MTU Stewardship Director Marshall Bloom invited Dr. Weissman to give a talk at the Rocky Mountain Lab in Hamilton, MT. Afterwards they went fishing on the Bitterroot River. The fishing was so good, Dr. Weissman told Dr. Bloom

to "sign me up as a Bitterrooter and MTU supporter." Since he had recently been chased out of one of his beloved Bob Marshall Wilderness fishing spots by a grizzly bear, his wife strongly supported the idea of turning their attention to the Bitterroot, where they quickly bought property and built a house with views of the mountains and the river.

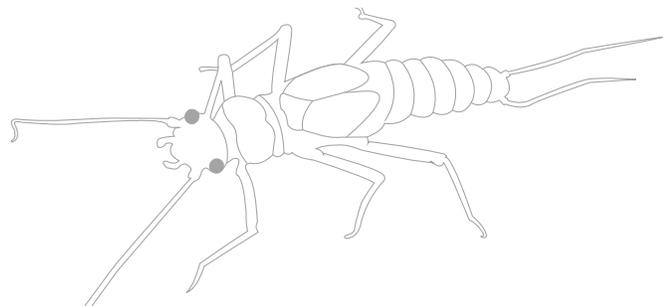
While spending summers in the Bitterroot, Dr. Weissman invested time in MTU council meetings, researching whirling disease, protecting places like the Smith River, and supporting statewide policy to conserve clean, cold trout water, as well as being a regular, generous donor to the organization and chapter. For Irv, taking care of Montana's trout waters is, like his career, as much about taking care of people as it is the resource. It's also about making sure that future generations have the chance to experience the kind of days on the water that first enticed him to the Bitterroot. Thank you, Irv!

ACTION ALERT

Covid-19 has impacted some industries harder than others and the fly fishing guide and outfitting community in Montana has taken a big hit. Between travel restrictions and quarantines, 2020 is proving to be a very challenging season. As you make plans to fish this season or in the future, Montana Trout Unlimited invites you to first consider the guides, outfitters, and businesses that supported us in the past and care about conservation. Please don't hesitate to call us (406.543.0054) or visit our website at www.montanatu.org for suggestions. We hope you patronize the guides, outfitters, and business donors who have made a difference to us and the future of coldwater fisheries in Montana. They are counting on us!



Pictured (left to right) are three of Montana TU's original stewardship directors, Dr. Irv Weissman, the late Stanley Falkow, and Dr. Marshall Bloom, enjoying a day of fishing on the Bitterroot River circa 1990. Photograph by outfitter and BRTU board member Jack Mauer.



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CONSERVE. PROTECT. RESTORE

The role of willows and the importance of TU grassroots by Chris Edgington

On a warm sunny day in late-April, a few hardy souls in need of some fresh air and manual labor gathered along the raw banks of Jack Creek, a tributary to the Madison River, which gathers its waters and shares its name with the picturesque range to the east. Jack Creek is the site of a multi-phase restoration project headed by TU's Upper Missouri Watershed Project Manager, Jeff Dunn. When Jack Creek was straightened to accommodate a road, the classic technique lining banks with old car bodies was employed to minimize erosion. Restoration of the reach began three years ago, and is now nearing completion. Jeff invited me over for the day to plant willows, a task suited to social distancing. As a member of MTU, maybe you've received emails calling for volunteers to either harvest or plant this important native riparian flora. It's probably the most common, hands-on restoration work we do with volunteers. But why is your help planting willows so important for stream restoration?

In Montana, over 20 species of willows (*Salix* spp.) serve a multitude of functions that benefit our rushing rivers and wild trout. Healthy riparian areas consist of wide swaths of willows that anchor banks and disperse the energy of floodwaters. During runoff, willows trap sediment, especially on the less swift inside corners of bends. This nutrient rich sediment becomes the nursery for important riparian species, such as sedges and cottonwoods. This cycle of life contributes to the river morphology of riffles, pools, glides, and tail outs. Each of these river features play an important role in a trout's life. Without the aid of willows, high flows can downcut a river's streambed, causing the stream to become incised (more like a deep narrow trench than a natural, varied stream), leaving the floodplain high and dry. Conversely, willows help maintain an active floodplain that soaks up water during high flows, like a sponge, and slowly



TU's Upper Missouri Project Manager, Jeff Dunn and volunteers finishing a bank stabilization project on Jack Creek. PC: Chris Edgington

releases that cold, clean water throughout the summer.

Willows are also a major food and building supply for beaver homes and ponds, another ecologically important habitat for trout. Willows create a buffer that catches hillslope erosion, and too often, litter from entering the streams. This vegetative filter helps keep our trout streams clean and clear. An important function that is not as well known is that willows can take up and store heavy metals and breakdown excessive nutrients, a process known as phytoextraction. Bioaccumulation of excess toxins slows down the release into the aquatic ecosystem, which may otherwise harm aquatic insects and fish, such as last fall's fish kill in an unremediated section of the upper Clark Fork River (see Fall 2019 Trout Line).

And, if you're a trout, one of the essential, daily benefits of willows is the shade from
(continued on next page)



Results of a recently completed bank stabilization project on Ninemile Creek near Alberton, MT. PC: B. Pfeiffer

Willows from page 6

the summer sun they cast over slow holding water, keeping stream temperatures in check where they line the banks of your favorite stretch of river. As anglers we know trout congregate in the deep pools created by the interaction between high-velocity stream flows and willow-lined banks. If you have an opportunity to help TU this coming spring by planting or later this fall by harvesting willows, please join us if you can. It's a great chance to connect with other fishy folks and help the rivers we are restoring.



Chapter News

Pat Barnes Chapter

On July 28, PBTU incoming President Shalon Hastings, and outgoing President Will Trimboth helped MTU staff paint a "Clean.Drain.Dry" message at Canyon Ferry Shannon Boat Launch. Look for more coming soon at your local boat ramps! Additionally, tickets are still available at the Blackfoot River Brewing Co. and area fly shops for a 14' AIRE Tributary raft/trailer package. 1/\$20 or 3/\$50. The drawing will occur on August 28, 2020, with a tentative event planned at Ten Mile Creek Brewery. Get 'em before they're gone!

Madison Gallatin Chapter

Please join us for our Annual Lower Madison River Clean Up. We are confident we can pull this event off in a safe, socially distant way! This a collaborative effort to spruce up one of our beloved home water stretches. All interested volunteers should meet at the Warm Springs Access at 9AM for a brief safety talk, clean up directions, and float details. We will finish up and meet at the Trapper Springs Pavilion at 1PM for sack lunches and to give out some prizes! Boats welcome, but if you don't have one, we will find a spot for you. If you would like to volunteer or need more information, contact us at (406) 219-7691 or mgtroutunlimited@gmail.com.

Bitterroot Chapter

Trout in the Classroom is now a reality in the Bitterroot! BRTU was recently awarded

two grants, including one from the local Rapp Family Foundation, to implement TIC in two classrooms for the 2020 and 2021 school years. Vanessa Haflich and Jeff Kaiser, teachers with Hamilton and Corvallis High School respectively, will initiate TIC in their classrooms beginning a new era in environmental and conservation opportunities in the Bitterroot.

Flathead Valley Chapter and Kootenai Valley Chapter

For many years, large coal mines in British Columbia have been polluting Lake Koochanusa and the Kootenai River downstream of the US-Canada border. The Flathead Valley Chapter and the Kootenai Valley Chapter were both recently awarded \$3,000 each by the Western Mining Action Network (WMAN) to help fund outreach and education on the issue of selenium pollution in the Kootenai. Selenium is a naturally occurring trace element that is concentrated and released during the mining process. Once it enters the aquatic environment, it can rapidly bioaccumulate and reach toxic levels for fish, wildlife, and people. This transboundary pollution has affected Montana waters for years. The WMAN grant awards the chapters received will help to raise public awareness and are part of MTU's continuing work to bring the Canadian government to the table with federal and state officials to find a solution to this issue. Congratulations to both chapters on moving forward with this important work.

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TROUT LINE SUMMER 2020

UPCOMING EVENTS

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8/29/20 **Madison-Gallatin Chapter
Annual Lower Madison River Clean Up**
Bozeman, MT

9/26/20 **MTU State Council Meeting**
Kalispell, MT

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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