

Riffles

2020 FIELD REPORT



THE RIVER THAT CONNECTS US

In a time of challenge and change, the river brought us together

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Through the tumult of this challenging year, the river reminded us anew of its steady, reassuring presence in our lives, and how instinctually we turn to its beauty and power for renewal and healing. But the river was not alone in its giving. In the throes of this trying time, **you gave back**. Generously. Going above, beyond, and then some to keep streams cool and connected; to protect clean water; and to heal what has been harmed. We are deeply grateful, and want to share with you some highlights of what you made possible for the Clark Fork watershed this year – in spite of everything. **Thank you.**

A new day for beloved streams and native fisheries:



In early December, after weeks of rain, snow, mud, and ice delays, we coordinated installation of a **new corrugated fish screen on Lolo Ditch**. It's a major breakthrough for Lolo Creek, as it prevents the loss of more than *10,000 fish each year* in the ditch, and ends a 17-year wait on this high-priority project. We're hopeful, too, that the screen will help boost trout numbers in the currently fish-depleted lower Bitterroot River.



See that fish-stopping, boat-blocking diversion dam in the photo? We didn't think so. That's because in October we wrapped up a **new irrigation diversion upgrade and fish screen installation on the Alvi Beck Ditch** in the Upper Clark Fork. Wood structures now reinforce the new stream channel, volunteer-planted riparian vegetation is helping to heal the banks, and the river is flowing a bit freer and cleaner in this reach.



With its high-elevation headwaters, Mill Creek still sustains 100% pure strains of Westslope cutthroat trout, in its upper reaches. But access to the Clark Fork has long been blocked by a problematic diversion. This summer we completed a **fish screen and diversion upgrade** that restores the life-saving pathway to those cool mountain waters, puts more water in the creek, and prevents fish entrainment.

Healthier habitat, cleaner water, and more of it:



- This summer we led a project that **decommissioned 11 miles of forest roads and removed 29 fish-blocking culverts** in the Lee Creek and West Fork of Lolo Creek drainages. This will keep 7,000 tons of sediment out of these streams, restore connectivity in the system, and protect important native fish spawning habitat.

- We also completed instream flow restoration projects in the Deer Lodge and Bitterroot Valleys that **will add 512 million gallons of water per year** to chronically dewatered streams - a win-win for aquatic species and ranchers.

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Less pollution; more progress on cleanup:



We coordinated research and writing of a **Upper Clark Fork Slickens Assessment**, documenting erosion of toxic mine waste in the headwaters. This sparked emergency action by the state to build erosion control structures to protect the river from this fish-killing runoff until comprehensive cleanup can begin.

With your help through the **Clean Smurfit Now campaign**, we spurred EPA to improve transparency and information-sharing, move on long-stalled fish tissue analysis, and set a deadline to wrap up years of site studies at the highly-contaminated Smurfit-Stone pulp mill near Missoula. We're not done, but it's progress!

We monitored nutrient levels in the **Clark Fork**, which saw unusually early and high levels of Cladophera in 2020. Reasons for the spike are not yet clear and the river's algae issues are complex. But through cooperative nutrient reduction efforts, we're making headway on a very slippery problem.

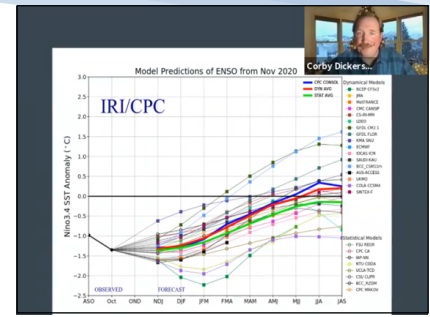
Connecting people and rivers:



In January and February, before Covid, 750 Missoula-area students participated in our **Snow & Tell program** (+340 via our *Snow on the Go* virtual learning platform) to learn about the relationship between snowpack and streamflows.



While we (reluctantly!) had to cancel our annual river cleanup, we organized or partnered on several Covid-adapted **volunteer planting days** at four sites in Missoula and the Upper Clark Fork, reaching 220+ river stewards from five counties.



With in-person events on hold, we pivoted to **online presentations**, engaging 100s of people through virtual field tours, trainings, and presentations on topics such as spring spawning, fish screens, snowpack predictions, and more.

Innovative solutions to watershed challenges:



• Beaver can help improve water quality and storage in the watershed. To increase their furry presence in the basin, we provided virtual and in-person trainings in beaver conflict resolution, and worked with a diversity of partners to install seven projects that help keep beaver working for water while reducing headaches for landowners.

• To address chronic dewatering problems in the Upper Clark Fork, we spearheaded the conceptual design of an innovative, large-scale **water leasing program** that we believe will help meet both the river's ecological needs as well as ranchers' irrigation needs. Look for this pilot project to roll out in 2021.

Thanks again for helping to protect and restore the Clark Fork River watershed!