Riffles

SPRING 2018 FIELD UPDATE

CLARK FORK COALITION

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A WATERSHED MOMENT

Chris Brick Reflects on Milltown

CFC staff Chris Brick, Stacy Rogge, Tracy Stone-Manning, and Karen Knudsen at the Milltown Dam removal in 2008.

Some of us were hoping for dynamite, but Milltown Dam didn't go out with a bang. Instead, on a cold, blustery March day ten years ago, an excavator slowly scooped an earthen plug from a channel dug through the footprint of the demolished powerhouse. Water began to trickle. Within a few minutes, the pull of gravity and easy erosion produced a gusher of turbid water that ripped through the former Milltown Dam and into history. For the first time in 100 years, the Clark Fork and Blackfoot rivers ran free at their confluence. It was, as they say, a watershed moment.

Dozens of us watched from the riverbank, and hundreds more watched from the bluff above. A helicopter hovered, politicians pontificated, and the Clark Fork Coalition's Dam Cam recorded the moment for posterity. I told a reporter that I felt like an eight-year old kid waiting for Christmas. I still remember that giddy feeling.

The breach was a culmination of two decades of Superfund process: studies, proposed plans, lobbying, campaigning, public input, and eventually a final plan to remove the ageing Milltown Dam and the copper and arsenic-laden sediment behind it. In retrospect, it seems like it should have been an easy decision to make. Who wouldn't want to remove a dam that threatened the river downstream with millions of tons of contaminated sediment, polluted groundwater, blocked trout migration, and produced too little power to pay for itself?

But it wasn't easy. There were political, social, economic, and environmental issues. Plenty of people thought it was a stupid idea. I thought it was a fascinating science problem.

I joined the Clark Fork Coalition as staff scientist in 2001, just as the Milltown issue was peaking. The Environmental Protection Agency was developing a new proposed plan. My colleagues were working a hugely successful campaign to

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GET YOUR FEET WET

Help make the new Milltown State Park look fabulous! Volunteer with us on the confluence of the Clark Fork during the Milltown State Park Grand Opening on Saturday, June 23rd. Contact **Katie@clarkfork.org** for more info.

Dam removal underway: powerhouse removed; spillway still in place. Blackfoot River enters from top right.

raise public awareness and support for dam removal. Yet from my perspective, much as I wanted the dam gone, and despite twenty years of investigation, there were unanswered questions about the environmental safety of removing it. Would dam removal in a Superfund site amid two major rivers create more problems than it solved? Yet it was clear that dam removal was the best long-term solution, and that risks could be mitigated.

Ten years later, we know it was the right call. We knew it when trout began migrating past the former dam site to spawn almost immediately after the breach. We knew it when groundwater in some polluted wells became clean enough to drink. We knew it when willows and cottonwoods sprouted in abundance after the flood in 2011.

It's true there was also some short-term pain: the floodplain and its habitat were denuded and rebuilt from scratch, aquatic life in the Clark Fork downstream suffered during the first post-breach year, the reconstructed Blackfoot bridge piers were too large and dangerous, and the Milltown sediment was too toxic to grow grass at the repository in Opportunity. There were other problems too, but thankfully, most issues are now resolved, or in the case of the bridge piers, about to be fixed. Also, in the good news department, the new Milltown State Park will be finished this year.

In many ways, the powerhouse breach in 2008 was only the beginning. It took four or five more years to remove the rest of the dam and the sediment, to reconstruct the river, to restore the floodplain. In all, I was involved in the project for over 10 years – many folks worked on it even longer. We all had our roles, and I think the project was ultimately successful because of so much community involvement, both for and against. I was privileged to be a part of a project that made a lasting contribution, and I was especially privileged to work on it with so many good people, from government people at all levels, to community groups, to citizens. We all made a difference.

Chris Brick served as science director of the Clark Fork Coalition from 2001-2017, leading CFC's work on Superfund cleanup throughout the basin, including Milltown Dam removal, and guiding its technical work on countless other initiatives.

HOLD THE DATE! Celebrate the work that's been done **June 23rd** at the **Milltown State Park grand opening:** new confluence access, walk-in boat ramp, picnic area, and more. Check it out!

MILLTOWN DEFIED THE ODDS. IT'S TIME TO DO IT AGAIN.

As Dr. Brick describes, Milltown Dam didn't just "come down," and the confluence wasn't just "restored." It took decades of work, careful study, and creative problem-solving.

More than that, it took dreaming big and imagining the impossible. Overcoming major odds, and defying what at the time was considered crazy talk. Sure, dams cause problems, but you don't just go around removing them. On top of social inertia, the process of dam removal itself was a relatively new engineering challenge. Complicating matters was that this one involved not one, but two large river systems, and its reservoir was piled deep with toxic contaminants.

But here we are. No dam. Contamination removed. A free-flowing confluence and recovering floodplain. A new state park. Odds defied. We'd set out to "Remove the dam" and "Restore the river," and by gosh, we did it.

Well, at least we did part of it. Dam removal? Check. River restoration? Turns out we've got some work to do.

The removal of Milltown Dam and restoration of the Blackfoot-Clark Fork confluence taught us what's possible when communities come together for the river.

For example, in spite of seasonal high runoff events, more than 900 miles of streams in the Clark Fork basin are chronically or periodically dewatered, which severely impacts native fish, exacerbates algae blooms, and hurts local economies. Heavy metals, mercury, and other toxics still plague too many parts of the watershed. Downstream from Missoula, cancer-causing chemicals from a shuttered pulp mill lurk in the soil, groundwater, and river sediments. Meanwhile, the Clark Fork is facing converging pressures from rapid riverside growth, new mining proposals, accelerating climate impacts, and unprecedented attacks on clean water protection laws.

These are big, complex issues with serious long-term implications. They're harder to see and grasp than Milltown was, and there's no singular fix, like removing a dam.

The good news is, fixing them is not out of reach. We have the tools and know-how (see next page), and we've made good progress. What's needed now is the same passion, vision, creativity, and willingness to dream big that took dam removal from a nice, but crazy, idea to a beautiful reality.

The Clark Fork needs us to step up again. Do more

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than just "love it, float it, and fish it." What does your commitment look like? Will you volunteer? Increase your financial support? Urge a friend to contribute? Educate yourself? Speak up for the river? Believe in the impossible?

Ten years on, with every willow that sprouts, every songbird that graces the wetlands, and every trout that migrates freely through a reunited confluence, we have reason to celebrate anew the improbable, audacious accomplishment that was removing Milltown Dam. It was a tremendous victory, and a new start for a hard-working river.

But the work is not done. And with that work comes the rare and unprecedented opportunity to heal, restore, and revive the river that sustains everything we care about in western Montana. It's now up to everyday river heroes – all of us – to convert that opportunity to reality. Ten years ago we did it when we defied the odds for the river we love. **It's time to do it again.**

MORE INFO: https://tinyurl.com/milltown-dam

MILLTOWN AND THE 2018 FLOODS

Missoula's record-breaking flood in 2018 had some wondering if the dam would have lessened its impacts.

As a "run of the river" reservoir, Milltown was not designed for flood control: the water entering it equaled the water leaving it. Even if it were drawn down to create capacity, extreme flows would fill the reservoir in a few hours or less. Further, the restored floodplain has more storage capacity than the reservoir did, and serves to dissipate floodwater energy. Most important, with the dam gone we have avoided the very real threat of an aging, patched-up structure undergoing catastrophic failure and sending a massive amount of sediments contaminated with arsenic and other toxics downstream.

Floods are hard on communities, but the Milltown Dam would have increased risks to Missoula, not mitigated them.

This spring, in one of the largest floods since dam removal, the restored confluence is working as designed, with water inundating the floodplain, spreading nutrients and native plant seeds beyond the banks.

WHAT'S NEEDED

Less pollution: Cleanup has stalled in the upper river and has yet to begin at the former pulp mill. We need to prevent backsliding and ensure cleanup is safe, timely, and effective.

More water: Despite good progress, too many tributaries remain de-watered. We need to deepen our investment in restoring flows and remove roadblocks to protecting it.

Better river care: Booming growth can have big impacts on rivers. We need active, informed clean water advocates and river-smart development that keeps waterways healthy.

Clean water protections: Environmental laws are under siege. We must resist any attempt to degrade our rivers, and demand robust and fully-enforced clean water protections.

We need your help. If you're not a member, please join and make this work possible. If you are a member, consider going the extra river mile with an additional gift this year. Volunteer. Sign up for our emails. Invite a friend to join. **We removed a dam: Let's restore the river.**

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