

Currents

CLARK FORK COALITION | WINTER 2016



Thirty years ago we shared a vision.

A big, bold, ambitious dream of a clean, healthy, and whole Clark Fork River.

Thanks to you, today that dream is coming true.





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Design and layout by Luke Duran, Element L Design

Thirty years ago, a group of citizens, sportsmen, businesses, and scientists launched a big experiment. They formed a new group—the Clark Fork Coalition—that would consist of diverse interests united behind the cause for a clean, healthy, and whole Clark Fork River basin.

It was a bold act—both in approach and end goal. It would require an unusual cooperation from a wide range of perspectives, as well as the intelligence, optimism, and commitment to work through the inevitable clash of ideas. It would require big-picture thinking to address the many threats to Montana’s largest river, its tributaries, and its 180-square-mile terminus of a lake, Idaho’s Lake Pend Oreille. But it made sense because it embraced the lesson of the river itself: that the hard-working Clark Fork is the thread that ties us together.

During the last three decades, we’ve seen this approach start to pay off in a big way. The Milltown Dam has been removed; large-scale removal of toxic pollution is underway; innovative water management is helping to keep streams wet and connected; partners are coming together to rehabilitate streams; and a restoration economy is hitting stride. With major projects underway to heal the watershed and the seeds of teamwork taking hold, we are seeing more and more openings for revitalization on a scale that matters and in a way that endures.

There’s no doubt: restoring health to this large river system and protecting it for the long term is a big job. And that’s why we remain a group that is supported by people from throughout the region. We also remain a group that passionately embraces science-driven and community-based approaches to fixing past missteps and tackling new and emerging threats to our waterways.

The next decade offers extraordinary op-



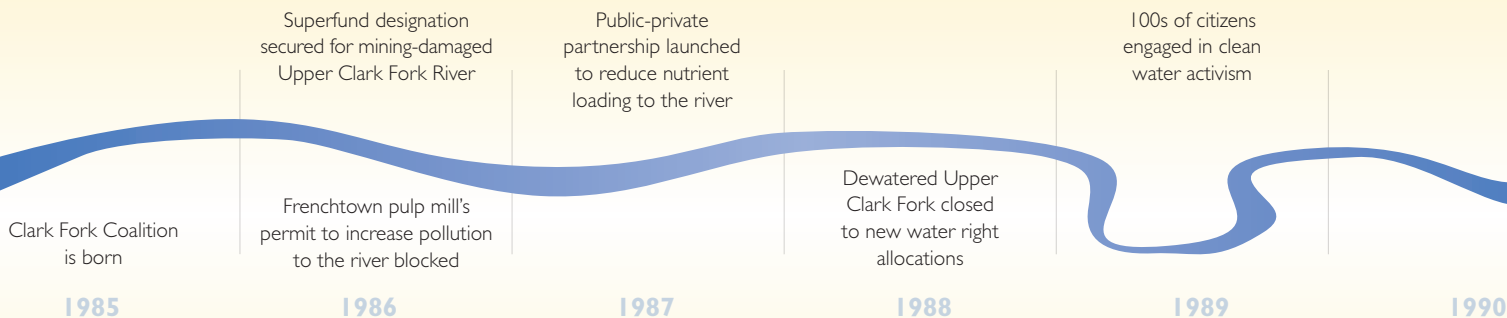
portunities for improving conditions in the Clark Fork watershed, and the Coalition is uniquely poised to seize them. As always, we are grateful to you—our members, partners, volunteers, and boosters—for helping us advance the cause for a healthy watershed. Because of you, waters that were over-worked for 150+ years are on the rebound, and those big dreams of 30 years ago are coming true. We look forward to the next 30 years improving the health and resiliency of the Clark Fork River basin and hope that you’ll be with us every step of the way.

For the river,

Sarah Bates, Board President, and Karen Knudsen, Executive Director

While term limits on the Clark Fork Coalition board of directors ensure a healthy resupply of fresh insights and energy, they also mean some bittersweet “goodbyes” to stellar board members. This winter, we say goodbye to outgoing board members, **Beth Schenk** and **Tim Polich**. We will miss Beth’s deep optimism and Tim’s thoughtful guidance and would like to formally thank them for giving so generously of their time and talents to the cause of a healthy watershed. We enjoyed six years with Tim and Beth on the board and are proud to have their continued support.

30 years for the river





Build it and they will come

Modesty Creek joins the Clark Fork for the first time in more than 100 years.

Quiet and unassuming, Modesty Creek is aptly named. But this little creek has a big job, and now it's making headlines as another success story in the historic restoration and re-building of the headwaters of the Clark Fork watershed.

Like other small feeder creeks in the Upper Clark Fork, Modesty has been a hard-working stream over time. It drained the southern flanks of the Flint Creek Mountain Range for centuries, carrying cold, clean water, transporting erosional debris, and providing fish and wildlife habitat on its journey to the river.

That is, until around 1900. At that point, the creek was diverted into a large irrigation canal, the terminus of which was suspended two feet above the Clark Fork. This reconfiguration severed Modesty's connection with the river, and eliminated it as cold-water habitat for wild trout.

Thanks to help from the Natural Resource Damage Program and support from irrigators and Clark Fork Coalition supporters, Modesty Creek is now out of the canal and moving through a newly constructed channel that flows directly into the river. It's reconnected and back in play. Why is this important? From



a fisheries perspective, it's simple:

"Fish aren't fussy—they're naturally resilient—but they need to be able to move throughout a river system and adapt to changing conditions," says Will McDowell, CFC's stream restoration director. When the river gets hot, fish need to get into these cooler feeder creeks to survive. The cooler tributaries are also where they go to spawn. And it's where juvenile fish head to escape predation.

We're already seeing the pay-off: big time.

Aquifer protection ordinances implemented

Water-sensitive transportation plans for the Lower Clark Fork adopted

Wetlands bank established

Basin-wide nutrient management plan goes into effect

Blackfoot named *Most Endangered River* because of proposed gold mine

Montanans' right to a clean and healthful environment upheld at Supreme Court

1990

1991

1992

1993

1994

1995



Why fish need access to tributaries:

- Safety from predators
- Somewhere to spawn
- Safe rearing habitat for young fish
- Refuge from temperature extremes
- Connected habitat to move and adapt



The Case for More Flow:

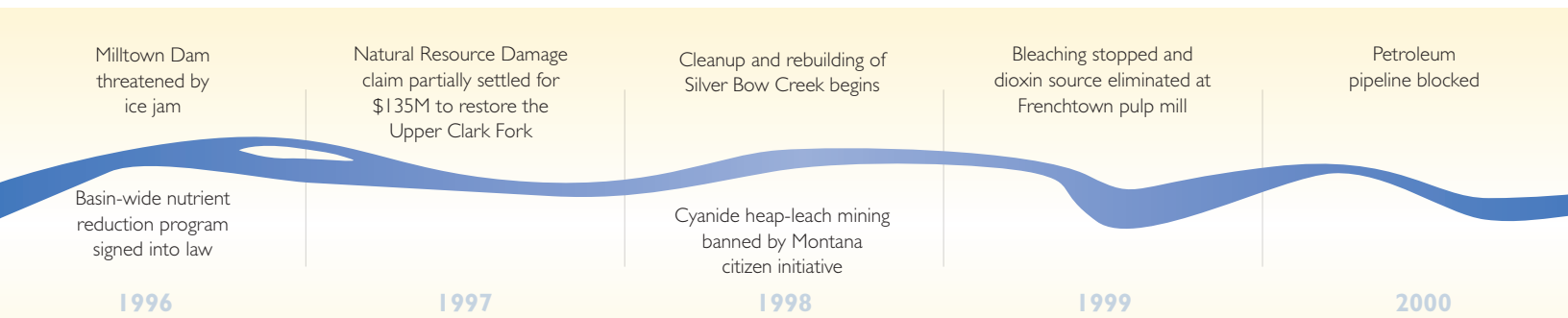
<p>Connects dewatered tributaries to main stems for a whole and healthy river system</p> 		 <p>Provides water to help fish move over and around fish barriers, aiding migration and spawning</p>	 <p>Reconnects tributaries that help smaller fish escape predators</p>
	 <p>Creates more "wet" habitat and bug food for fish and birds</p>	 <p>Improves water quality by diluting existing pollution</p>	 <p>Results in higher dissolved oxygen levels for fish</p>
 <p>Prevents nuisance algae growth</p>	 <p>Increases local economy via angling and improved aesthetics</p>		 <p>Keeps water at fish-friendly temperatures, preventing die-offs</p>

Less than 48 hours after it was reconnected to the river, at least three different species of fish were using the new stream channel. Within six weeks, brown trout began using the stream to spawn. It's a remarkable testament to the resiliency of our watershed when it gets the help it needs.

These early results from the Modesty Creek project show that if you build quality habitat, the fish will return. Here's what it took on Modesty:

- ▶ Constructing a new stream channel that's long and sinuous and creates additional in-stream and riparian habitat.
- ▶ Designing prime aquatic habitat into the creek with a combination of riffles, runs, and deep pools that are ideal for fish.
- ▶ Building new streambanks using sod salvaged from the old channel, soil lifts made of coconut fiber-wrapped soil, and native plants that together will stabilize the streambanks, absorb flood energy, filter pollutants, shade the creek, and generate lush riparian habitat for wildlife.
- ▶ Turning the abandoned channel into a wetland that filters water and provides high-quality waterfowl habitat year-round.

Learn more about this project and other stream fixes at clarkfork.org.



Halfway to healing

Notes from the monumental Upper Clark Fork cleanup at Dry Cottonwood Creek Ranch.

Big yellow backhoes. Haul trucks barreling down makeshift roads. Raw dirt, gravel piles, and heaps of mine tailings. It's not what ordinarily springs to mind when conjuring up images of a bucolic western Montana river valley. But that's been the scene on our Dry Cottonwood Creek Ranch as the exciting and monumental cleanup of the Upper Clark Fork River kicks into high gear.

Our ranch sits in the Deer Lodge Valley in the heart of the largest Superfund site in the country, and it's the first private property undergoing the ambitious project to clean up legacy mining contamination. We bought the ranch with the help of two conservation partners in 2005 to share with other ranchers what the cleanup process entails, tease out the challenges and rough patches, and help ensure the effort reaches its full ecological potential. Yes, there have been bumps in the road and plenty of lessons learned. But we're pleased to report that our ranch has remained a thriving cattle operation and that an amazing transformation is underway.

State agencies launched this large-scale cleanup in 2013 along 56 miles of the Upper

Clark Fork River, and it will continue for at least another ten years. This watershed-wide project will ultimately heal the river, make ranchlands more productive, restore fish and wildlife habitat, and benefit the many people and ranching communities that depend on the Clark Fork.

We realized that this Superfund cleanup was different from others that have taken place in the Upper Clark Fork—e.g., Milltown Dam and Reservoir and Silver Bow Creek—because most of the cleanup is occurring on private ranchlands. We also knew that if the cleanup doesn't work for the people who live, work, and raise families here, it won't work, period. Not a risk we wanted to take, with only one shot to restore the river to full health. We decided that securing buy-in from the riverside ranchers would be more likely if a "guinea pig" first demonstrated how cleanup could co-exist with a working cattle operation.

So, when the opportunity arose a decade ago, we became that guinea pig. Today, we're making good headway meeting our goals of ensuring a top-notch cleanup of the river while figuring out how to make the cleanup work for landowners, too.



Last summer, heavy machinery broke ground on our ranch to remove 530 million cubic yards of metals-contaminated soils from a five-mile stretch of the river and 160 acres of floodplain. It's a big project. And although we had eagerly anticipated the arrival of clanking machinery for years, it was still terrifying to see our verdant floodplain bulldozed. "It'll look like a bomb went off," warned Brian Bartkowiak, the project manager for MT Dept. of Environmental Quality (DEQ). He was right.

Here at the halfway point on our ranch,

20,000 citizens engage in dam removal campaigns: Milltown, Mike Horse, and Bonner

Tiffany & Co. publicly opposes Rock Creek Mine

Rock Creek Mine permits sent back to drawing board by Court order

Beal Mountain Mine listed as a Superfund site

Initiative to repeal Montana cyanide ban defeated

Demonstration ranch in heart of Upper Clark Fork Superfund complex purchased by CFC

Clark Fork River Market in Missoula created

Gov. Judy Martz supports Milltown Dam removal

State of the Clark Fork report released, showing connection between river health and community health

Decision to remove Milltown Dam signed

Thompson Falls coal-fired power plant shut down

2001

2002

2003

2004

2005



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with willow sticks protruding from raw riverbanks and 12,000 new plants starting to take hold in the soil, we take comfort from the success we've seen at other large-scale river restoration sites. We've learned that when contamination is removed, the floodplain contoured just right, and vegetation planted carefully, the river can heal quickly and start supporting lush and healthy vegetation again in just a couple of years. As the saying goes: The first year new plants sleep, then they creep, then they leap!

Meanwhile, we've been transparent in sharing our experiences—both the good and the bad—with our neighbors as well as DEQ, which we hope will benefit other landowners as cleanup begins on their ranches.

Our ranch is just the beginning of a multi-year, multi-ranch, multi-million-dollar cleanup

of the entire Upper Clark Fork watershed. Thanks for coming along for the ride and helping this amazing story come to life. Stay tuned for updates as the story unfolds, and we watch the river and the land come back to life.

Read more about the Superfund cleanup of the river and ranchlands at clarkfork.org.

Rock Creek Mine water quality permits voided

Milltown Dam removed, Clark Fork and Blackfoot rivers flow free, first tagged fish swims through

3.6M cubic yards of contaminants cleaned up and land purchased for public park at Milltown

Low Flows, Hot Trout climate impact report released

320-mile headwaters-to-terminus awareness-raising float held on the Clark Fork

Decision released to clean up Mike Horse Mine Tailings Dam on the Blackfoot

\$200M won for restoring mining-damaged Upper Clark Fork

Water Weeds public education program launched

CFC acquires Montana Water Trust, stream restoration program launched

2006

2007

2008

2009

2010



Playing in the dirt

High school students get up close and personal with a river transformation that will change their backyards forever.

“This is the best, playing in the dirt,” calls out a student from inside a shallow pit on a ranch near Deer Lodge. “I love it so much!”

Agreed. There’s nothing like playing in the dirt—especially when it puts science into action and brings to life the story of a watershed we all call home. That’s why we give high school students the chance to get their hands dirty each year and watch as the seeds of river stewardship take hold.

In October 2015, the Clark Fork Coalition’s fifth annual *Hands on the Ranch* curriculum focused on investigating the soils that sustain the agricultural communities and the ecosystem in the Upper Clark Fork, and where river restoration and water conservation fit in the picture. Along the way, the entire freshman class of Powell County High School also got a glimpse of how they can make a career out of soil science.

The *Hands on the Ranch* program combines classroom and field curricula to show students

how damaged areas near their home are getting repaired as part of Superfund cleanup on the Upper Clark Fork River corridor. The program also delivers:

- ▶ Tangible, ground-level understanding of what cleanup means for their community and their future
- ▶ Real-world experience that gives scientific concepts staying power and community context
- ▶ Useable data for a locally-owned family ranch that is next in line for Superfund cleanup
- ▶ More people engaged in keeping our waters and our lands clean, healthy, and whole

During the 2015 course we conducted soil sampling on a cattle ranch owned by our neighbors, Hans and Angel Lampert. The fact that their youngest son participated in the program with his earth science class created an

even deeper connection to the scientific process for all of the students.

We also paired groups of freshmen with a professional STEM (Science, Technology, Engineering, Math) role model during the field trip. The students brought bucket-loads of enthusiasm and plenty of appreciation for being outdoors, and the three science experts brought a lifetime of knowledge to share. These mentors helped students examine the soil, collect samples from several test pits, and hypothesize about how the mining contamination is affecting agricultural operations as well as the ecosystem, and how cleanup will help. Later, Coalition staff led the students through soil analysis back in the classroom lab.

By giving her students tangible, hands-on science experience, the participating teacher, Jessica Anderson (2015 Montana Teacher of the Year), says she’s hopeful it will inspire them to pursue careers in science, technology, engineering, math, and conservation.

We’re already looking forward to next year’s *Hands on the Ranch*, where we plan to get even more students knee-deep in soils and streams to see how their watershed is faring.

Contact our education coordinator, Lily Haines, to bring the river to your classroom!

Creeks in the Classroom

The Coalition’s watershed youth education programs cultivate tomorrow’s river stewards, using the Clark Fork River as a placed-based teaching tool. These programs:

- pair science inquiry with unique service-learning opportunities
- engage youth in fun, hands-on education
- develop students’ understanding of watershed systems and ecology

The Clark Fork Coalition is committed to training future river stewards through free, high-quality learning opportunities for students of all ages. Our *Creeks in the Classroom* program offers dynamic, standards-based lessons tailored to fit young learners. Visit clarkfork.org to learn more.

Mountain Water sold, CFC and City sign agreement to protect water resources

CFC releases Aquatic Restoration Strategy for 8 priority streams in the UCF

2011

Silver Bow Creek cleaned up and rebuilt

Motorized use of the Middle Clark Fork restricted

2012

Cleanup of toxic mining waste on Dry Cottonwood Creek Ranch begins

Loophole threatening senior water rights and streamflows closed

Volunteer River Corps created

2013

Watershed education and community engagement program launched

New state water plan approved—tighter water quality standards passed

2014

Former Frenchtown pulp mill starts down path to cleanup

Clark Fork Coalition turns 30!

2015

On the front line

What we're doing about lingering messes and looming threats to our rivers and streams.

▶ **Tackling Flint Creek Mercury:**

Mercury from historic mining in this watershed has made its way into the food chain, resulting in fish consumption advisories and osprey chicks with mercury in their blood.

What we're doing: tracking DEQ's clean up of one of the major mining areas in the headwaters, collecting data on impacts to agricultural and riparian lands, serving as a technical advisor to the local watershed group, and finding money to clean up private property downstream.

▶ **Cleaning up Smurfit-Stone:**

The former Smurfit-Stone mill site is a remarkable property. Located just upstream of Frenchtown, it spans four miles of the Clark Fork in a river corridor with cottonwood gallery forests and diverse fish and wildlife species, including bull trout, bald eagles, moose, and elk. The site has 1,750 acres of restorable floodplain and holds tremendous ecological, cultural, recreational, and economic potential. The trouble is, it's contaminated with cancer-causing industrial byproducts that are barely separated from the river by an uncertified, old, earthen berm. It's an accident waiting to happen and an unrealized restoration opportunity.

What we're doing: partnering with county and community officials and the Confederated Salish & Kootenai Tribes (CSKT) to jumpstart cleanup action and create a restoration vision for this site.

We have also teamed up with the Missoula County Water Quality District and the CSKT to challenge the Montana Department of Environmental Quality's transfer of a wastewater discharge permit that would allow high levels of pollution for a hypothetical facility at the site.

▶ **Monitoring Beal Mountain Cleanup:**

This summer, the U.S. Forest Service took more stopgap measures to address the perpetual contamination leaking out of this abandoned cyanide gold mine.

What we're doing: serving on the technical team monitoring the defunct mine and advocating for funding to fully clean up this massive mine and protect the streams it's putting at risk in the Upper Clark Fork.

▶ **Keeping an eye on proposed Lower Clark Fork Mines:**

Plans and permitting continue for two proposed mines that would tunnel underneath the Cabinet Mountain Wilderness near Noxon

(Rock Creek Mine) and Libby (Montanore Mine). Both have the potential to drain pristine headwater streams and wilderness lakes. Exploration also continues at the proposed Kennecott Mine in the Blackfoot.

What we're doing: monitoring developments and providing scientific and legal input on decision documents.

▶ **Tracking Mike Horse Mine Cleanup:**

In September, cleanup crews removed the last of the toxic mine tailings from the earthen dam that has threatened the Blackfoot River for decades. Crews reconstructed the original channel for Beartrap Creek at the Blackfoot's headwaters, and moved it from a ditch in the side of a mountain into its valley bottom home.

What we're doing: tracking construction and cleanup of mine waste on nearby non-federal lands over the next two years.

▶ **Ensuring the exempt well loophole stays closed:**

The Montana Well Drillers Association and the Montana Association of Realtors appealed our victory at state district court, which closed the loophole that encourages developers to make an end-run around processes that protect people's water rights, prevent over-pumping of groundwater, and ensure healthy flows for streams.

What we're doing: defending the ruling at the MT Supreme Court and ensuring no backsliding at subsequent legislative sessions.

▶ **Supporting local ownership of Mountain Water Co.:**

Last summer, a Missoula District Court judge found that the City of Missoula met the "public necessity" tests of acquiring through condemnation the city's water system from the Carlyle Group, a multinational investment firm. Carlyle appealed the ruling to the MT Supreme Court. In Nov., an independent commission determined that the water utility has an \$88.6M value. Pending the MT Supreme Court's ruling, the City will move forward to take possession of the system for that \$88.6M price tag. In the meantime, Carlyle closed on a deal to sell Mountain Water to Canadian-owned Liberty Utilities, sidestepping review by Montana's Public Service Commission. Is it legal? That question is now being debated.

What we're doing: tracking the various legal proceedings and public processes at State District Court, the Supreme Court, and the Public Service Commission.





A day on the water

“There’s more power in the river than its current.”

Each year, the Clark Fork Coalition sponsors two extra-special river events that foster valuable connections between people: a summer whitewater float through the Alberton Gorge for under-privileged youth and the spring Clark Fork Cleanup in downtown Missoula.

It’s a pleasure for us to bring people of all ages to the river, encourage teamwork, and show the importance of caring for the waters that sustain us. Plus, it’s just plain fun, too!

Thanks to all of you who made these events possible!

“You guys provide awesome trips for us every year, but it is often much more than that for the kids in our care. You offer youth profound opportunities that they otherwise would not have. There is much more power in the river than its current.”

—Alec McNeill, program director for the Dennis Radtke Home for Boys, which participated in this year’s Clark Fork Kids Float



Many thanks to our 2015 River Cleanup Sponsors!

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OFF ROUTE PHOTOGRAPHY

Please contact Holly Biehl, holly@clarkfork.org, for more information about our sponsorship opportunities.



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and help out the watershed

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for the Clark Fork!**

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or by call us at 406.542.0539





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stopping at 30...
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COALITION