

Riffles

FALL 2018 FIELD UPDATE



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CLEANUP AT SMURFIT-STONE: IT'S TIME.

Four miles. That's the length of Clark Fork River that the former Smurfit-Stone pulp and paper mill site spans, 11 miles downstream of Missoula. Its upstream neighbor is Council Grove State Park – a place of towering ponderosa pines and cottonwood gallery forests. Downstream is the steadily-growing community of Frenchtown. Then, it's all wild and free-flowing river for 120 miles to Thompson Falls.

And that's just the short list of the unique assets of this 3,200-acre site. Add in the 1,700 acres of restorable floodplain, and another 1,500 acres of developable land, much of it farmable, and the end result is a property that has massive potential – for people, local economies, and the environment.

But nearly ten long years since the mill shut its doors, a lot still stands in the way of that vision becoming reality. Some 140 acres



A big cleanup need; a rare restoration opportunity. It's time to transform the vast Smurfit-Stone site from a toxic hazard to a healthy floodplain and flourishing riverside resource.

of dumps and sludge ponds are still filled with industrial refuse and highly hazardous waste, including boiler fly ash and asbestos. Closer to the river, and sprawled across the curled etchings and bends of the historic floodplain, a 900-acre patchwork of unlined ponds continues to leach hazardous chemicals. And all that separates those ponds from the river are miles of non-engineered berms peppered with hundreds of rodent holes and weak spots. Today,

unmaintained, aging piles of gravel are all that keep the next inevitable, major flood from delivering a highly-contaminated cocktail to the communities, fisheries, and habitats downstream.

Enough is enough: **Clean up the dumps. Remove the berms. Restore the floodplain.**

This spring Missoula and Frenchtown held their breath when debris-filled floodwaters tore through town and pounded those

continued..



Photo: Jessica Vuckovich

GET YOUR FEET WET!

Deep snow in the mountains means healthy rivers in the valleys. We can't control how much snow we get, but we can educate our youth river stewards about why it's important. And this winter we're looking for volunteers to help us teach these snowy science lessons. If you like digging in the snow and working with kids, come to our **Volunteer Orientation on Tuesday, December 18 from 5:30-6:30pm**, or contact katie@clarkfork.org or (406) 542-0539 ext. 212 for more info.



The Clark Fork flooding at the former Smurfit-Stone mill site in Spring 2018.

porous berms. In May, “mini volcanoes” bubbled up in one waste pond, setting off alarm bells of a possible breach. An emergency dump of dirt and gravel stopped the bubbling. But then a suspicious plume of dark water emerged on the river side of the berm a few days later. That plume tested positive for arsenic at a level exceeding human health standards. It also had a heavy metals fingerprint matching water in the adjacent waste pond. We dodged a bullet, but the wake-up call was loud and clear.

On the plus side, that scare attracted the attention of county, tribal, state, federal, and local leaders and triggered a new berm stability study. Unfortunately, that study relied on hydraulic modeling from the late 1970s, meaning it ignores 40-plus years of additional data that would reflect significant hydrological changes, such as the removal of Milltown Dam, climate-related influences on the timing and frequency of floods, impacts of over four decades of riverside development, and data from high-flow events, as in 2011 and 2018.

While this new analysis did shed light on the deteriorating condition of the berms (including notation of extensive evidence of holes from animal burrowing), it concluded that there was no risk of overtopping from flooding. That’s mildly reassuring. But it ignores the greatest risk: shear forces and constant pressure from high water that could collapse the berm and release hazardous wastes into the river.



Hazardous wastes from a former paper mill near Missoula sit in storage ponds built directly in the Clark Fork floodplain. High water in 2018 caused leaks – a reminder that the site’s sub-standard berms are one catastrophic flood away from failure.

Do we need a new study? Perhaps not. There is already ample evidence that those leaky, flimsy, unmaintained berms would not withstand a catastrophic flood. We know they are permeable, and that they allow heavy metals to reach the river. New studies will not change those realities. Waiting longer will not improve the situation. Why not get to work?

Clean up the dumps. Remove the berms. Restore the floodplain.

So we already know enough about the berms to justify their removal. But what about the rest of the site? Before we can start cleanup, do we first need to know the full extent of the contamination, including

where it is, what risks it poses, exactly what toxic substances are involved, and if it's impacting the river and fish?

Those are important questions. Currently, the EPA is still completing its site characterization to study risks to both humans and the environment. In addition, Montana Fish, Wildlife, and Parks has conducted two fish tissue studies: one in 2013 that resulted in FWP issuing a "do not eat" advisory for northern pike and limited consumption of rainbow trout for 105 miles downstream from the site; and a more comprehensive study completed this summer (results pending).

But the EPA's site characterization process has been frustratingly slow and too selective. CFC, Missoula County, the Confederated Salish and Kootenai Tribes, the Natural Resource Damage Program, and the Smurfit-Stone Citizen Advisory Group have pressed EPA for more comprehensive sampling and greater transparency. As for the fish tissue studies, because fish can move hundreds of miles throughout a watershed and can pick up contaminants elsewhere, it may be quite a while before those studies provide clear guidance.

The upshot?

We do need more information to properly clean up the site. But that doesn't preclude action now. We know that the berms weren't constructed for flood control. They're certainly not up to the job of keeping pollution out of the river. We also know that industrial toxins are sitting in an active floodplain, and contaminants are coming into contact with groundwater. And where does the groundwater flow? To the river, where the pollution it carries works its way into the food chain, impacting fish and aquatic life.

The Smurfit site presents a rare opportunity to protect and improve water quality, fish and wildlife habitat, and flood storage of the Clark Fork River over a big expanse of land. So let's get started.

**Clean up the dumps. Remove the berms.
Restore the floodplain.**

It's time.



NOT JUST CLEAN: RESTORED

The Smurfit site was at one time considered for the Superfund National Priorities List. But the Potentially Responsible Parties (PRPs) instead agreed to pursue cleanup under a voluntary agreement allowed by Superfund law called an Administrative Order on Consent. (The primary PRPs include M2Green Redevelopment LLC, International Paper, and WestRock CP, LLC.) Either way, the focus and goal is cleanup – not restoration.

For that, Superfund law grants certain entities "trusteeship" over, and responsibility for, potentially-harmed natural resources. At Smurfit those Trustees include the US Dept. of the Interior, US Dept. of Agriculture, Confederated Salish and Kootenai Tribes, the Kalispel Tribe, and the State of Montana, represented by the Montana Natural Resource Damage Program. In a June 2018 letter the Trustees notified the Smurfit PRPs that they will conduct a Natural Resource Damage Assessment, the legal process for determining injury to natural resources, any need for restoration, and/or compensation to the public for their loss.

The Trustees based their action on a Preassessment Screen completed in April 2018 that found that natural resources at the site have, in fact, been "adversely affected by elevated concentrations" of hazardous substances, including dioxins/furans, metals and metalloids, and PCBs. The Trustees invited the PRPs to participate in the development and performance of the assessment, though the PRPs agreed only to an initial meeting.

It takes more than cleanup to heal a river and floodplain from industrial-scale harm. It was true at Milltown, true for the 120 miles of river above it, and it's true at Smurfit. Full restoration is no quick and easy journey – but we applaud the Trustees for getting the Clark Fork further along the road to recovery.

Photo: Florie Consolati



WHO YOU GONNA CALL? CITIZEN SCIENTISTS TO THE RESCUE

When the smart folks at Lolo National Forest (LNF) needed a cost-cutting way to help hundreds of degraded streams, they wondered if beavers might be the answer. After all, they're amazing environmental engineers who bring big benefits to small streams by storing water, creating wetlands, increasing biodiversity, and more. Plus: they don't need big expensive machinery, and they're a super-eager, 24/7 workforce.

Interesting idea – but lots of questions. Which streams in the vast, 2.2-million-acre LNF are appropriate? Where are beaver already present? Where do conditions favor beaver colonization? How might beaver impact fisheries? GIS modeling and a limited follow-up study provided some answers. But what forest managers needed most was micro-level habitat data from the field.

Who you gonna call? Citizen scientists.

This summer, CFC partnered with LNF, National Wildlife Federation, and MT Conservation Corps (MCC) to survey the Lolo Creek watershed to get that valuable data. CFC trained MCC crew leaders and taught them data-collection protocols; they then led their intrepid youth crews in the field. For five weeks,

local middle-schoolers waded 134 reaches (33.3 miles!) of Lolo Creek and its tributaries – battling bugs, heat, and more – and collected a whopping 402 data points. CFC staff tagged along for additional in-field training and quality control.

MCC and CFC are now compiling and crunching that data and will create a report and map for LNF to show where beaver are, where they could be, and where beaver dam analogs (BDAs) may be appropriate. (BDAs are temporary, human-made structures that mimic beaver dams and improve stream conditions to make them more attractive to beavers.) Another plus to this work is that it complemented our flow restoration and sediment reduction projects in this high-priority watershed for bull trout and native cutthroat.

This summer's beaver assessment didn't immediately solve LNF's stream restoration challenges. But it was a big step forward, and a needed one, as more natural resource managers consider beaver as a tool to improve floodplain dynamics, water storage, and stream health. Many thanks to National Wildlife Federation, MCC, and LNF for making this project possible!

HOLD THE DATES!

You're going to want to dive into this year's online auction. Did you know you can get great deals, once-in-a-lifetime trips, awesome gear, and amazing gifts that help restore our rivers?

Our Online Auction offers all this and more. Bidding begins online on **Friday, December 7** at 9am and ends **Monday, December 17** at 11pm MST.

Also, don't miss our holiday party, **Friday, December 7**, from 5-9pm MST.

Please help our rivers this holiday season by joining in the fun!

Design by Ferry Morse

