Methow Beaver Project

Partnering with beavers to adapt to climate change and it's predicted impacts.

Greetings Beaver Believers,

This spring, the MBP team has begun in-stream work on our WA Dept of Ecology Streamflow Restoration in Wildfire Impacted Streams project. This project has been in the planning and permitting phase for two years and now the real restoration work is ON. Wooohoooo! We are targeting 7 (of the far too many) streams impacted by the 2014 Carlton Complex Fires and 2015 Okanogan Complex Fires, in hopes that this low-tech, low-cost woody structure and beaver reintroduction restoration approach will be more widely adopted and applied to many more degraded streams in our area and in our sister watersheds of the Upper Columbia River.

Loup Loup Creek Streamflow Restoration

In April, we jumped into a reach of Loup Loup Creek and began placing wildfire-killed wood into the stream to add structural and hydrological complexity back to the system. This large reach of Loup Loup Creek, a tributary of the Okanogan River, is being restored in partnership with a private landowner and WA Dept. of Natural Resources owned land. Replacing woody structure in the wildfire impacted stream slows water down, spreads it out, allows it to sink into the ground, stores it longer as groundwater, and slowly releases it with gravity through our dry late summer and early fall to increase late season base flows. We observed positive results right away! The woody structure immediately began to slow stream flow and forced a change of flow direction in new and complex pathways connecting water to dry parts of the channel and long abandoned floodplain.

Reintroducing structural complexity into a simplified and degraded stream channel jumpstarts natural stream evolution cycle to move towards greater complexity- what we might call “messiness”. Mother nature thrives on messiness, which actually builds resilience in a natural system. (Maybe this will help us all not feel so bad about putting off the spring cleaning in our messy homes, we are just making them more resilient. Right? Might have to work on that analogy).

We expect woody structure additions in degraded streams like Loup Loup Creek to help reconnect streams with their floodplains; by putting natural small wood structure in the way of water, we can capture sediment to raise the elevation of our degraded stream beds, push more water onto floodplains, and start restoring essential but long absent habitat functions. These seasonal functions include extended water storage of spring high flows for the benefit of local ecosystems throughout summer and fall, as well as to downstream biological communities, including us humans, year-round.

So far, we’ve implemented over a ½ mile of streamflow restoration treatment on Loup Loup Creek. As the habitat continues to improve, we will reintroduce beavers into this historically beaver occupied stream reach to improve and expand our woody structure restoration efforts. See the photos below for a before and after small wood structure addition comparison in one small reach of Loup Loup Creek.

And a HUGE thanks to Aaron Boley's crew at Three Rivers Arbor Care for providing expert saw work and tree climbing services for this effort!

Loup Loup Creek Before

Loup Loup Creek After

Aaron's team and MBP staff

Texas Creek Small Wood Structure Restoration

In May, we worked in Texas Creek building post-assisted BDAs (beaver dam analogs) to slow down and spread out water in this small, high-gradient stream. This will store it for later release in summer and fall when water typically has become more scarce downstream. Texas Creek has severe and lasting damage from the Carlton Complex fires and subsequent flooding and debris flows following extreme summer thunderstorms right after the fires. Texas Creek is one of our most challenging sites for stream restoration for all the factors listed above.

Building BDAs is tough work, but in the end, it is incredibly rewarding. First, we rely on the hard work of the crew from Methow Natives, LLC to pound untreated wood posts in a zigzag line across the stream channel. These folks provide the expertise and practiced muscle necessary to move the handheld, low impact, yet heavy equipment and operate the 90-pound hydraulic post pounder over their heads and in constantly varying stream substrates and conditions, no small task.

Once the posts are pounded, we tightly weave conifer boughs into the post line to mimic the semi-permeability of a natural beaver dam. See the photos below, noting the change in surface water storage. We've built a series of over 20 BDA structures within about a mile of stream habitat, with opportunistic small wood placement treatments in between.

Aaron Boley's arborist crew worked with us at this site too, climbing overgrown and mistletoe-infested Douglas Fir trees to provide wildfire thinning of low branches which can become ladder fuels to move ground fires into the forest canopy. Ladder fuels in the form of low branches on mature trees but also, and even more responsible, the sapling trees in the understory of mature conifer stands, can lead to the devastating crown fires and stand replacing fires we have been seeing more frequently over the last decade. Wildfire thinning also provides our essential BDA building materials which are primarily fir boughs for weaving our beaver dam-like structures that slow water down, capture sediment and nutrients, and provide a starting structure for beavers to work off when they do return to the creek.

We also had INCREDIBLE and much needed help from our FABULOUS volunteer crew for intensive material gathering, weaving, and wood loading days. If you

would like to get involved in this kind of work, please reach out via email and we will happily sign you up for an incredibly rewarding workday in a stream that needs your helping hands!

Texas Creek Before: (narrow channel of surface water)

After: (Widening of surface water being stored and sinking into the ground for slower return downstream)

We've been in the planning and permitting stages of this much anticipated project since 2020 and it is so gratifying to finally get our boots wet, our gloves dirty, our muscles tired, and faces smiling with satisfaction and wonder!

A BIG shout out to Jason Shira, our licensed hydrologist at Aspect Consulting, helping us monitor changes in groundwater with in-stream piezometers that will help show how effective these streamflow restoration strategies are.

In Gratitude

We would like to recognize our AMAZING funding and landowner partners that have made this project possible with a $1.3 million streamflow restoration and conservation easement grant from the Washington State Department of Ecology, which includes support for restoration in 7 streams over 3 years, a long-term monitoring effort to determine the success of the project,

applicability for other stream restoration projects, and access to public and private lands, as well as protection of restoration actions in perpetuity in the form of conservation easements on nearly 500 acres of private lands. In addition, we are receiving significant financial and/or collaborative support from the Wildlife Conservation Society (funding innovation, implementation, and education and public outreach around new restoration practices), as well as Seattle City Light, the Washington Department of Fish and Wildlife, and the Washington Department of Natural Resources.

We have more stream restoration workdays scheduled for the coming months-stay tuned for further updates and photos. If you use social media, you can see more frequent updates and photos by following our Facebook, Instagram, and Twitter accounts.

If you are in the area and interested in getting involved, please get in touch by emailing us at methowbeaverproject@methowsalmon.org.

MBP Volunteers 2022

One last exciting tidbit of news: the film crew for Mutual of Omaha's *Wild Kingdom* visited us for two days in mid-May to document some of the critical beaver restoration work we're doing. If you grew up watching nature documentaries on TV, then you are likely familiar with the old *Wild Kingdom* program. It's one of the pioneering TV programs in the nature documentary genre. They are now producing a TV series called "Protecting the Wild" (slated for release in January 2023) and one of the episodes is dedicated to beaver

conservation and habitat restoration. The crew was able to film our current restoration work in Texas Creek, along with one of our completed restoration sites from the Spring of 2020 at the Twisp River floodplain, and at an active beaver pond complex near Winthrop. Our MBP crew and fish biologist partners (from the Methow Salmon Recovery Foundation or MSRF) and WDFW Wildlife Area Manager Brandon Troyer, gave interviews and provided tours of the various sites for the film crew. The program host, Peter Gros, an internationally renowned wildlife educator, even donned a dry suit and went for a snorkel with MSRF Biologist Grace Watson, to look for juvenile salmon that are using habitat created by beavers. We look forward to seeing the final product this coming winter and invite you all to a future screening! Stay tuned.....

Peter Gros and MSRF Biologist Grace Watson

METHOW BEAVER PROJECT

Storing water for the future-one beaver at a time

www.methowsalmon.org

METHOW SALMON RECOVERY FOUNDATION

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