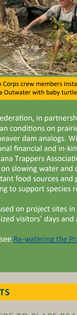
Montana Beaver Working Group

Connecting and providing resources to people interested in the role of beavers in watershed and riparian health

Stories and News

Beaver Mimicry Aims to Restore Riparian Habitat in North-Central Montana



Left: Montana Conservation Corps crew members install BDAs in Cottonwood Creek. Photo by Sarah Bates
Right: Nick Hagan and Jenna Outwater with baby turtles at the Sevenmile project site. Photo by Amy Chadwick

The National Wildlife Federation, in partnership with the U.S. Bureau of Land Management, is taking steps to improve riparian conditions on prairie streams in north-central Montana, using low-tech methods that include beaver dam analogs. With core funding from the National Fish and Wildlife Foundation and additional financial and in-kind support from diverse partners ranging from Defenders of Wildlife to the Montana Trappers Association (as well as private donors and foundations), this three-year project is focused on slowing water and creating wet meadows on priority sage-grouse habitat. This will provide important food sources and protective cover for vulnerable sage-grouse chicks in dry summer months, helping to support species recovery.

Work this summer focused on project sites in Valley and Phillips counties, and will expand further in 2021, along with organized visitors' days and a convening to discuss lessons learned.

For more information, see Re-watering the Prairie, a blog describing project work at Cottonwood Creek in Phillips County.

UPCOMING EVENTS

IDENTIFYING WHERE TO PLACE BEAVERS AND WHEN TO USE BEAVER MIMICRY IN LOW-TECH RESTORATION

September 24, 1:00-2:30 MDT

Webinar presented by the Association of State Wetlands Managers, featuring Joe Wheaton, Utah State University

This second webinar in the ASWM-BLM Beaver Restoration Webinar Series focuses on making decisions about where beaver restoration and/or the use of beaver dam analogs (BDA) can have the greatest positive and least negative impacts. Understanding that beaver restoration is not well-suited for all contexts and purposes, this webinar will discuss risk assessment and introduce participants to the primary elements required to assess the efficacy of beaver projects for specific watersheds and sites. The webinar will cover how data can be used to make decisions about different kinds of flow devices and when beaver mimicry/BDAs make more sense. The webinar will include a demonstration of Utah State University's Beaver Restoration Assessment Tool (BRAT), a model that helps planners assess key parameters (such as human interaction, hydrological setting, etc.) essential to beaver work. The webinar will end with discussion about the importance of post-construction monitoring.

The webinar is free; there is a charge to non-ASWM members who wish to receive a certificate of participation for Continuing Education Credits.

Register for the webinar here

For any questions about this or other ASWM webinars, contact the Association of State Wetlands Managers.

MONTANA ASPEN WORKSHOP

Virtual workshop: September 28, 2020, 9:00 am-noon MDT

In-person field day: Dillon, MT, September 29, 2020, full day (limited participation, subject to change per COVID guidelines)

Presented by the Heart of the Rockies Initiative, in collaboration with multiple partners.

Workshops will include presentations and discussion about: aspen ecology and functional types; monitoring goals, protocols, and treatments; and how different goals (e.g. wildlife use, grazing impact, post fire effects, insects & disease presence/impacts) influence survey types.

The workshops are free.

Register here for both events.

For any questions about this event, contact Emily@heart-of-rockies.org

VIRTUAL FIELD TRIP: NON-LETHAL BEAVER CONFLICT RESOLUTION

Oct 8, 2020, 11:00 a.m.-noon MDT

Beavers' natural dam-building behaviors create wetlands, store water, provide wildlife habitat, and retain sediment. Ecologically they are a keystone of healthy watersheds, but sometimes they also cause real damage to human infrastructure or property. In 2019, the Clark Fork Coalition, National Wildlife Federation, and Defenders of Wildlife started a pilot conflict resolution program. Our goal: to address landowner concern and mitigate damage through nonlethal methods and increased tolerance.

We invite you to join a Virtual Field Trip event to explore this work. In this **live Zoom webinar**, you'll see videos and photography from the field showing diverse approaches to mitigate damage and just how these techniques and structures work. We'll be joined by a panel of experts in the field, including Mike Callahan, a national beaver expert, who has engineered and installed over 1500 successful non-lethal structures. Through panel discussion and live Q&A, you will have the chance to dig deeper into what makes these projects work.

Register in advance for this webinar: https://us02web.zoom.us/webinar/register/WN_KDjl--WwQrOyFG9OhrvQng

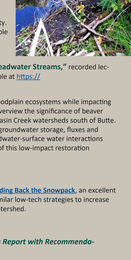
After registering, you will receive a confirmation email containing information about joining the webinar.

This collaborative project aims to sustain healthy watersheds in Montana by providing resources and training to help landowners and local governments reduce human-beaver conflicts. This NWF blog highlights some of the work featured in our webinar. https://blog.nwf.org/2020/06/make-way-for-beavers/

RESOURCES

Valerie Kurth, Storing Water Naturally in Montana, blog posted on Montana Watershed Coordination Council website

This blog links the growing appreciation for natural water storage to the Montana State Water Plan (2015), and links to a recently issued DNRC information paper on the subject. Among the highlighted examples is beaver mimicry in Ninemile Creek, which—combined with other measures—has increased late summer flow from 6 cfs to 7 cfs.



Emily Fairfax & Jennifer Whittle, "Smokey the Beaver: beaver-dammed riparian corridors stay green during wildfire throughout the western USA," *Ecological Applications* (Sep. 2, 2020), available at https://doi.org/10.1002/eap.2225

Abstract: Beaver dams are gaining popularity as a low-tech, low-cost strategy to build climate resiliency at the landscape scale. They slow and store water that can be accessed by riparian vegetation during dry periods, effectively protecting riparian ecosystems from droughts. Whether or not this protection extends to wildfire has been discussed anecdotally but has not been examined in a scientific context. We used remotely sensed Normalized Difference Vegetation Index (NDVI) data to compare riparian vegetation greenness in areas with and without beaver damming during wildfire. We include data from five large wildfires of varying burn severity and dominant landcover settings in the western USA in our analysis. We found that beaver-dammed riparian corridors are relatively unaffected by wildfire when compared to similar riparian corridors without beaver damming. On average, the decrease in NDVI during fire in areas without beaver is 3.05 times as large as it is in areas with beaver. However, plant greenness rebounded in the year after wildfire regardless of beaver activity. Thus, we conclude that while beaver activity does not necessarily play a role in riparian vegetation post-fire resilience, it does play a significant role in riparian vegetation fire resistance and refugia creation.

Evan Norman, "Quantifying Low-impact Restoration Techniques in Headwater Streams," recorded lecture from Montana Tech's Restoration Seminar series (Feb. 12, 2020), available at https://digitalcommons.mtech.edu/campus_lectures/104/

Abstract: Stream channel morphology drives the health of riparian and floodplain ecosystems while impacting groundwater connectivity especially in high divide regions. This talk will overview the significance of beaver dam analogue (BDA) installations in the upper stretches of Blacktail and Basin Creek watersheds south of Butte. Monitoring was designed to look at spatial and temporal relationships of groundwater storage, fluxes and surface water balances. The data collected provides an insight into groundwater-surface water interactions along control and treatment reaches and the implications to ecosystems of this low-impact restoration technique.

Big Hole Watershed Committee, Holding Back the Snowpack, an excellent video illustrating beaver mimicry and similar low-tech strategies to increase natural water storage in the Big Hole watershed.

King County (WA) Beaver Working Group, ***Good Neighbor Workshops Report with Recommendations*** (Aug. 2020)

Last fall, the King County Beaver Working Group held two "Good Neighbor" workshops. The purpose was to hear from people living next to County-owned lands what it means to them for the County to be a good neighbor when it comes to beavers. We have collated the feedback and ideas, summarized it, and created recommendations based on what we heard. The report is available now: Good Neighbor Workshops Report.

Catherine Arnold, Nature's Ecosystem Engineers, *National Wildlife* (August-September, 2020)

This short piece includes a photo by Amy Chadwick of Montana beaver mimicry work and references to low-tech restoration in Idaho and Montana.

Doug McConnell, NBC Open Road episode on mountain meadow restoration in the Sierra Nevada Mountains, available here.

Brock Dolman consulted on the show production, encouraging them to add beavers to the agenda, with good results. In his words, "Hopefully the many folks who watch TV in the Bay Area and beyond will gain more of an appreciation for our wonderful Mountain Meadows & beaver in the Sierra Nevada & Southern Cascades of California." Thanks, Brock!

In 2016, The Nature Conservancy installed several post and willow weave beaver mimicry structures on Long Creek, a TNC property in the Centennial Valley of Southwest Montana. Over the years, TNC planted willow stakes, potted willows and maintained the structures on the stream, prompting the existing upstream beaver population to expand both their population and their habitat downstream. In the summer of 2019, the beavers began building a large dam across Long Creek and have continued to expand the dam (now over 20 feet in length) this summer. This section of Long Creek now resembles a large pond and has created a lot of wetland habitat. Thanks to **Sierra Harris** for sharing the story and photos.

Photo A (top): Long Creek human-built beaver mimicry structures (installed in 2016)
Photo B (bottom left): Newly created beaver-built dam upstream of structure in Photo A.

Please send stories, upcoming events, and other resources to:
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MT Beaver Working Group newsletters are posted online at:
nwf.org/NorthernRockies/Beavers