

# Montana Beaver Working Group

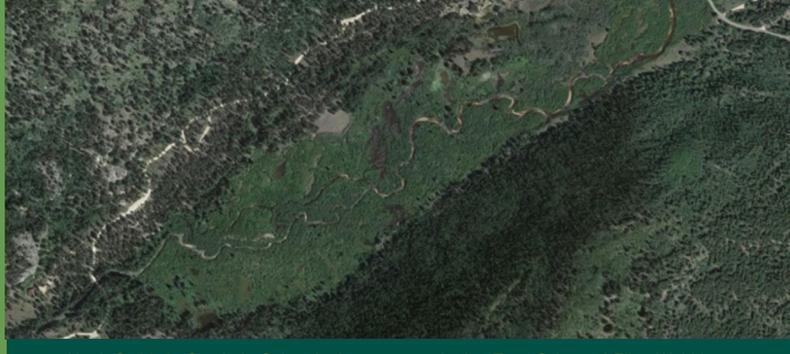
Connecting people and sharing resources  
to advance the beaver's keystone role in watershed health



Photo: Rob Rich

## STORIES AND NEWS

### EXPLORING THE ROLE OF REFERENCE CONDITIONS



North St. Vrain Creek, in Colorado, is one example that Traci Sylte and Ellen Wohl have used to demonstrate the visual appearance of reference conditions. With beavers unconstrained by humans, wet meadows with side channels and abundant vegetation stretch from valley wall to valley wall. Photo: Google Maps

"...saw a vast number of beaver in many large dams which they had maid in various bayoes of the river which are distributed to the distance of three or four miles on this side of the river over an extensive bottom of timbered and meadow lands intermixed. in order to avoid these bayoes and beaver dams which I found difficult to pass I directed my course to the high plain to the right which I gained after some time with much difficulty and wading many beaver dams to my waist in mud and water. I would willingly joined the canoes but the brush were so thick, the river crooked and bottoms intercepted in such manner by the beaver dams, that I found it uceless to attempt to find them, and therefore proceeded on up the river in order to intercept it where it came near the plain and woult be more collect- ed into one channel."

Thus reflected Meriwether Lewis, upon ascending the Jefferson River, on July 30, 1805. With the distance of hindsight, this desparate account of being lost might invite our spellcheck and sympathy, but it also has a lot to say about rediscovering the role of beavers in North America today. While the American desire to command an increasingly competitive Fur Trade propelled Lewis and Clark's journey, can we now look to the Expedition's observations to recover, not conquer, the rodent who sculpted the watersheds of the American West?

For Traci Sylte, Hydrologist with Lolo National Forest, the answer is yes. Having spent her career looking up the valley of Lolo Creek, where Lewis and Clark ascended through the Bitter-roots, Sylte has increasingly considered the past as a hint for restoration possibilities. The Expedition's motives were different than Sylte's, the fact that beavers receive mention in a quarter of Lewis and Clark's daily entries sparked Sylte's vision for a wetter, more resilient future in the watersheds she manages.

To this end, Sylte has steadfastly pursued the questions about where beaver can resume old roles on a changed landscape. She has been a key leader and partner in key efforts such as the Lolo National Forest [Watershed Vulnerability Assessment \(2016\)](#), which explored the impact of climate change on bull trout, water supply, and forest infrastructure in the LNF. This set the stage for her subsequent collaborations with [Citizen-Science Beaver Habitat Surveys](#), which drew on the skills and curiosities of middle-school aged crews, as well as research on fish passage and beaver dam analogue feasibility, with [Andrew Lahr](#), a doctoral candidate at the University of Montana.

Through all her efforts, Sylte continues to grapple with the idea of watershed reference conditions with unconstrained beaver populations— those places where systems are resilient and functional, with minimal human alteration. Such places are not easy to find, and they might not always exist as science can envision, given that Indigenous peoples have been active in dynamic riparian zones for millennia. And if they do exist, we might not always have the eyes to see how they were, given how quickly our baseline perceptions can change.

Lewis and Clark give us clues, but Sylte is also now working with fluvial geomorphologists like Ellen Wohl, of Colorado State University, to identify and champion "messy" watersheds. Over the last year, they've been working to document reference conditions for unconstrained beaver populations on national forests throughout the American West, so that we have actual examples to prove that rivers are not just active channels, but riparian corridors with lateral, vertical, and longitudinal connectivity that is complex and diverse.

Was this what Lewis saw when he wrote of that slog through "three or four miles on this side of the river over an extensive bottom with timber and meadow lands intermixed?" Despite the difficulties he had to get back to the "one channel," are there better ways we might see and share the values of these riparian corridors today? Sylte doesn't promise all the answers, but you can trust she's chasing these questions.

## UPCOMING EVENTS

### ASWM-BLM BEAVER RESTORATION SERIES

March 10, 2021, 1-2:30pm MST.

Register and (view the previous four webinars) [here](#).

The Association of State Wetland Managers and the Bureau of Land Management continues to co-sponsor its Beaver Restoration Series.

Webinar #6: **Beaver Restoration and Climate Change**

**Michael Pollock** – National Oceanic Atmospheric Administration

**Emily Fairfax** – California State University Channel Islands

### MONTANA TECH PUBLIC LECTURE SERIES

March 31, 2021, 4pm MST.

Stay tuned and find access [here](#).

On March 31, **Carly Peach** of Montana Technological University will offer her presentation, **"Beaver Ponds as Catchment-Wide Retention Basins for Heavy Metals Sequestration."**

### CALIFORNIA BEAVER SUMMIT

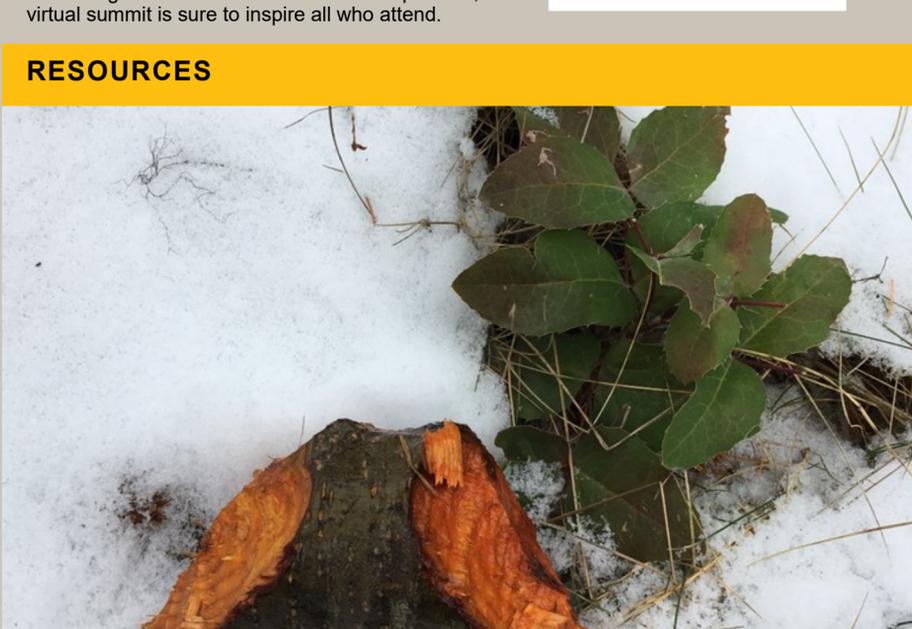
April 7-9, 2021, 9-11am.

Learn more and sign up [here](#).

During two half-days in early April, this event will explore the many benefits that beavers offer to the ecosystems they occupy. Featuring two keynote presentations on the relationships between beavers, salmonids, and fire refugia, as well as short sessions with leaders advancing the best available science and practice, this virtual summit is sure to inspire all who attend.



## RESOURCES



Beaver sculpt wood in many shapes and sizes. They can chisel down enormous trees for the branches above, and they can whittle small carvings, like this bright chunk of alder. Have you ever found any beaver cuttings that have filled you with curious awe? We welcome your photos of beavers and their habitat creations, as we'd love to help share them in this newsletter. Photo: Rob Rich

### ASWM-BLM, Beaver Restoration Professionals Survey

The **Association of State Wetland Managers (ASWM)** and the **Bureau of Land Management (BLM)** are working to better understand the barriers and opportunities to beaver restoration projects; existing or needed resources; and ideas, questions, or success stories you have encountered in your experiences that can be shared to improve beaver restoration processes and outcomes nationwide.

To help with this effort, ASWM has developed a Google Form to gather any information you are willing to share. They will then use this information to help develop a dedicated web resource on beaver restoration, which ASWM will host. This outreach effort includes representatives from Federal, State and Tribal agencies, as well as non-profit, academic and other beaver restoration professionals.

They are especially interested in learning about: Barriers/challenges to beaver restoration work; communication strategies, tools, or resources; training needs; example beaver restoration projects; opportunities to expand collaboration and education or improve outcomes; existing or needed technical resources.

You can learn more and participate [here](#).

### Working with Beaver for Stream and Riparian Health: How University Research Supports Conservation and Management, Part 1 and Part 2

[Part 1](#) (featuring Andrew Lahr, Andrew Bobst, and Jamie McEvoy) and

[Part 2](#) (featuring Torrey Ritter and Rebekah Levine) of this series,

sponsored by the **National Wildlife Federation** and The **Nature Conservancy** for the **Institute on Ecosystems' Rough Cut Seminar Series**, are now available online. The series will return in Fall 2021 with Part 3.

### Trout Unlimited, Uppr Columbia Beaver-Powered Decision Support System

[This blog](#) post describes a new tool to aid conservation specialists and agency staff in the identification of beaver-powered restoration opportunities in north-central Washington. As a complement to Beaver Restoration Assessment Tool (BRAT) modeling, it allows users to perform landscape-level analysis and prioritize sites based on relevant factors such as land ownership, water storage potential, fire impact, and more.

### Miistakis Institute, Textural Beaver Repellent for Tree Protection

The Alberta-based **Miistakis Institute's "Putting Beavers to Work Initiative"** has concluded a useful new study exploring the efficacy of sand-paint repellent as a nonlethal tool to reduce beaver herbivory in areas with trees that people want to protect. In their 2020 summer/fall pilot study, researchers found that the repellent was successful in Calgary's Fish Creek Provincial Park, and that they are eager to explore the effects of this visually-discrete, nonlethal, non-toxic, and cheap technique in other areas of Alberta, and beyond.

This new video describes the study and its impact: <https://www.rockies.ca/beavers/landowners.php>

### Montana Department of Natural Resources & Conservation, Montana Stream Permitting Guide

While not a "new" resource, [this document](#) received a revision in 2020, and it provides useful information for those looking to navigate permits and options related to beaver, stream, and riparian restoration.



Please send photos, stories, upcoming events, and other resources to:

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MT Beaver Working Group newsletters are posted online at:  
[nwf.org/WorkingWithBeavers](http://nwf.org/WorkingWithBeavers)