



# Methow Beaver Project

*Partnering with beavers to adapt to climate change and its predicted impacts*

## **Hello Beaver Believers,**

Our best laid plans for significant summer field work have been temporarily put on hold as wildfires are currently impacting our work areas, which leaves us wondering about beavers... What's their evacuation plan? Are the beaver complexes burning or are they intact? During the fires of 2014 and 2015, our beaver relocation sites located inside the burned areas either survived as lush green oases surrounded by a charred landscape or suffered what appeared at first to be a complete loss. In the latter case, we installed a trail camera and to our sheer delight the beavers survived but didn't stay long due to the complete combustion of food resources. Even though many beaver complexes were impacted by fire, most established beaver dams held strong and captured sediment from the burn scars over the winter. Beaver holding ponds and dam "road bumps" reduced the sediment loads that reached the Methow River, thus reducing the negative impact on water and habitat quality and salmonid survival in the mainstem. The beavers, ever resilient, relocated and rebuilt.





## Beavers naturally moderate wildfire!

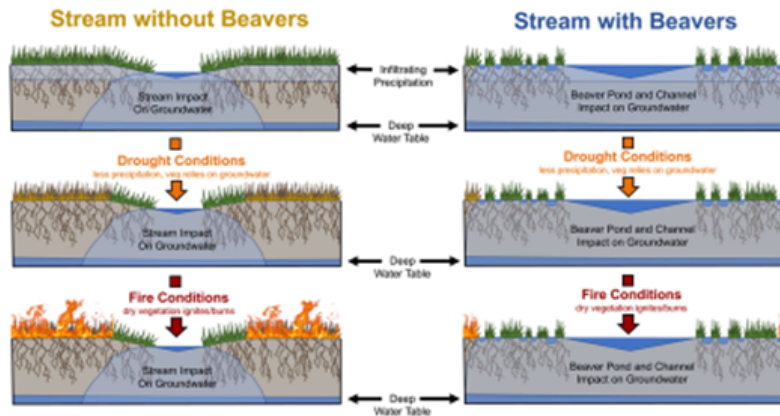


As wildfires rage in the Methow and Okanogan Valleys and across western North America, it seems appropriate to re-highlight the work of Dr. Emily Fairfax, Assistant Professor in the Department of Environmental Science and Resource Management at California State University Channel Islands. She's an

enthusiastic beaver believer whose research focuses on the interactions of beaver and wildfire. Through her groundbreaking research, the idea of “Smokey the Beaver” was born.

As the American West experiences more drought and wildfire, it's time to take a long hard look at beavers and the fragile wetland ecosystems they create and maintain. With only 2% of wetland habitat left in the Western US, and 80% of all species relying on them for part or all of their life cycles, wetlands are a critical habitat that needs preservation. A single large wildfire could be the difference between survival or extinction for some threatened wetland species. Dr. Fairfax's research proposes, “What if there were patches of cool, wet, green vegetation they could hunker down in and wait it out?” Emily and her team researched fire impacted areas with and without beavers. They concluded the water stored in the “beaver ponds and active pond management by the beavers kept plants lush and green during intense droughts. When fires sparked in these drought-stricken areas the wet green and beaver-dammed wetlands are too soggy to burn”. Best of all, those “green riparian ribbons provided refugia for all the species who can't outrun or outfly a spreading wildfire”. Indeed, wetted beaver complexes form a space where individuals from many species can just hunker down and wait it out and then repopulate the burned areas after fire, literally acting as a seed population for the future.

Smokey the Beaver: beaver-dammed riparian corridors stay green during wildfire throughout the western United States



Ecological Applications, Volume: 30, Issue: 8, First published: 02 September 2020, DOI: (10.1002/eap.2225)

The diagram shows how the water table is impacted by the presence or absence of beavers. Water in the beaver dammed streams spreads laterally and saturates vegetation during droughts, making it harder to burn.

## ***Let the Beavers do the work***

The work beavers perform in a landscape helps restore the natural processes that increase resiliency to a variety of environmental stressors, such as drought, fire, and flooding. As available wetland habitat becomes increasingly limited, it becomes all the more essential to support its preservation. A low-cost, practical, natural and sustaining way is to let native beavers occupy, maintain, and protect wetlands. It requires so little from us; just some food, some space, tolerance and peace. Imagine if beavers were even half as abundant as they were in the past with an average of 5 beavers every stream kilometer instead of 10? Every waterway would support labyrinths of fire-resistant beaver wetland ready to act as a refuge for flora and fauna and slow the spread of fire across our landscape. A win-win solution for all biological communities because WATER IS LIFE and Beavers keep it around longer!

Here's a quick stop motion video by Dr. Emily Fairfax that encapsulates her research.

<https://www.bing.com/videos/search?>

q=emily+fairfax+you+tube+beaers+and+fire&&view=detail&mid=677F5959A048D776D407677F5959A048D776D407&rvsmid=623114904596133B6296623114904596133B6296&FORM=VDQVAP

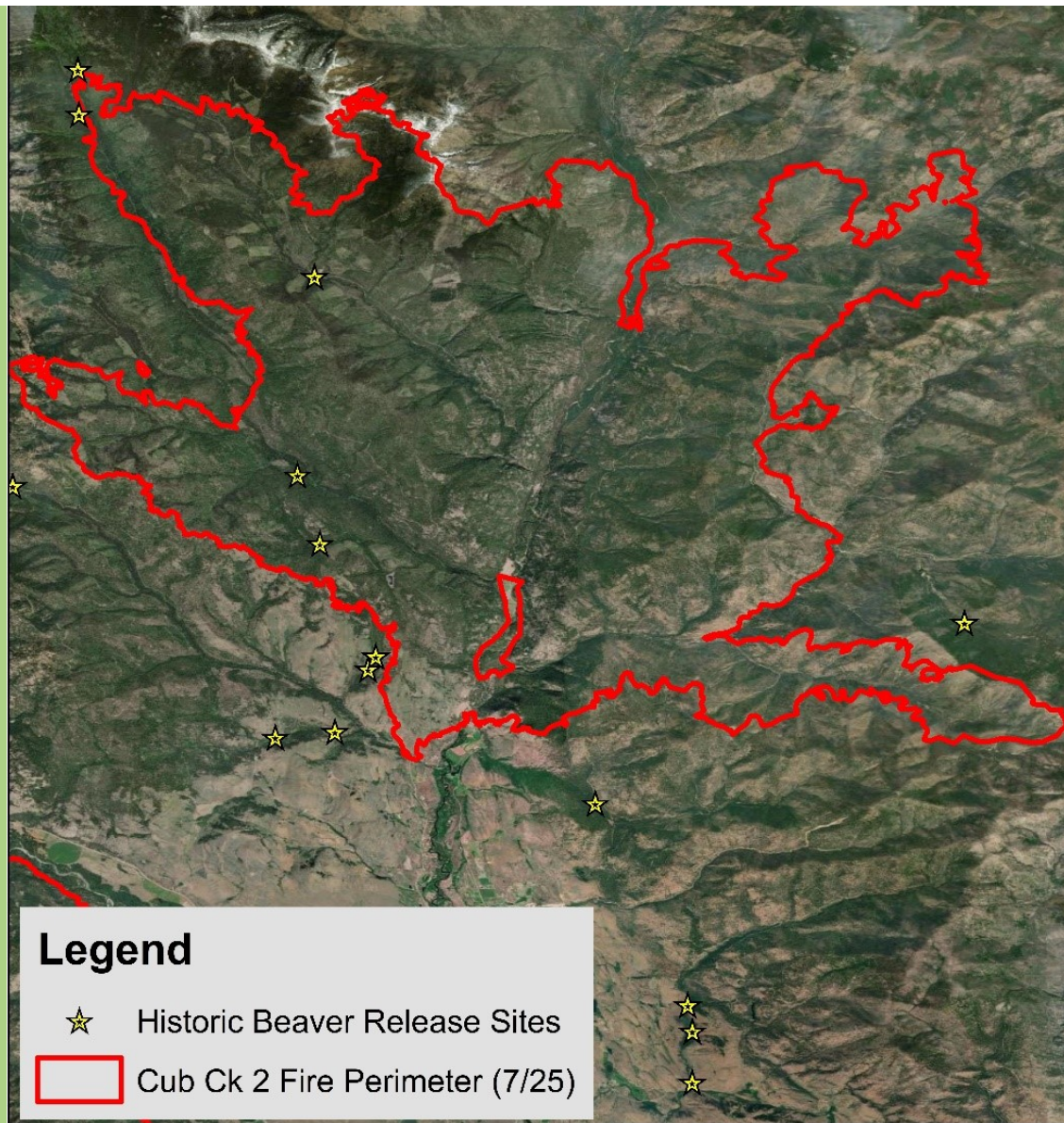
Smokey the Beaver: beaver-dammed riparian corridors stay green during wildfire throughout the western United States, Emily Fairfax, Andrew Whittle, <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.2225>

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## Beavers and MBP

We were curious if any our relocation sites were inside current fire zones. The nimble fingers of our tech-savvy staff created this map of the Cub Creek 2 fire perimeter overlaid with past beaver release sites and it appears we are in luck. We look forward to lacing up our boots and revisiting these sites post fire to document their response to the wildfire and if they exhibited any signs of natural fire resistance.





### Legend

★ Historic Beaver Release Sites

▭ Cub Ck 2 Fire Perimeter (7/25)

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## Wildlife Speaker Series

*Methow Valley Citizens Council  
is partnering with Confluence Gallery to bring you:*

*Cascadia: Flora, Fauna and Terra of the North Cascades  
Thursdays August 26- September 23rd.*

**September 16: Benevolent Beavers: Supporting Biodiversity for over 7 million  
years! Alexa Whipple, Methow Beaver Project**

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## Hot Off the Press

Our summer intern, Josiah Shaver, wrote an article about beavers that has just been published!

"I was grateful to have the opportunity to write a feature article for the American Water Resources Association's IMPACT Magazine this summer. You can read my article here, titled "Keystone Conflict: Unlocking Ecological Vitality with Beavers while Solving Legitimate Beaver Frustrations."

I'd like to thank the Methow Beaver Project for their support in the research and writing process".

<https://online.flippingbook.com/view/345337166/36/>

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Stay as cool as you can, everyone, and thank your local beavers for keeping precious water around longer!!



[methowbeaverproject.org](http://methowbeaverproject.org)



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