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Fighting fire with beavers: How dam-building rodents are deployed to prevent megafires, restore scorched wildlands

Source(s): The Colorado Sun <https://coloradosun.com/2024/04/19/fighting-wildland-fire-with-beavers-colorado/>

The American West has lost 90% of its historical wetlands since European settlement,,,, 50% in Colorado, according to the Colorado Wetlands Information Center.

In their heyday, BEAVERS, a keystone species, may have submerged up to 300,000 square miles of North America — more land than the state of Texas, the National Park Service says.

This was the natural, healthy state of the American West for thousands of years. And simply put, that much water on the land has quite the dampening effect for large wildfires.

BEAVER DAMS hold back water and beaver canals spread it out. The weight of the pond presses water into the ground and out over a broad swath of the valley floor, raising the water table and increasing soil moisture. The result: a verdant valley bottom that doesn't burn.

Stretches of river that had BEAVER DAMS fared better in three fearsome Colorado fires in 2020. People charged with repairing wildfire damage are taking heed.

A study published in The Geological Society of America in January 2024 found... River segments hosting BEAVER-created dams fared far better during and after megafires than riverscapes without BEAVER activity, leaving pockets of intact habitat crucial for wildlife, and protecting waterways from runaway erosion.

The study, led by University of Minnesota Twin Cities ecohydrologist Emily Fairfax, investigates three megafires that took place partially or wholly within Colorado borders in 2020 — Cameron Peak, East Troublesome and Mullen — which together burned 579,603 acres. Results.

“BEAVER-MODIFIED riverscapes are resistant to megafire-scale disturbance,” the authors wrote. “This resilience is directly attributable to BEAVER DAM and CANAL-CANAL BUILDING ACTIVITY.”

There are many related benefits for native plant species, terrestrial and aquatic wildlife, river health and human communities downstream of the burn scar, according to researchers. In fact, BEAVER HABITAT is proving so valuable for wildfire mitigation and restoration that restorationists are imitating these rodents across the state.

### FIREFIGHTER BEAVERS

If a megafire hits, the damage runs so deep that a forest must practically start over. So, the fact that BEAVER WETLANDS weather these tempests virtually unscathed is a big deal. These green islands represent a jumping-off point of recovery for wildlife and plant life.

These green islands constitute fire refugia: patches that either don't burn, or burn at a low-enough severity that wildlife can hide there while the fire rages, and where these same animals can find food, water and shelter afterward, when the rest of the forest is char black.

"Today, in the mountains — and especially in the river corridors — there's very little fire REFUGIA that's reliable outside of the BEAVER WETLANDS," Fairfax said. "They've become this disproportionately important source of healthy habitat."

About 80% of terrestrial species in the intermountain West need access to riparian wetlands for some portion of their life cycle. In the aftermath of a megafire, the intact habitat of green BEAVER wetlands is all the more important for maintaining precious biodiversity.

And BEAVER WETLANDS can help fight fires as well, serving as "speed bumps" to slow the spread or even function as fire breaks to help firefighters contain lower-intensity burns.

"BEAVER are built-in fuel thinners," Fairfax said. "They cut trees. So even when you're not in the pond ... they are still harvesting the surrounding area and thinning that fuel out. So they really do create this multilayered fire resistance."

IMO it should be against the law to "TAKE" aka: kill, harvest..... BEAVERS and all Wildlife