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OPINION

Let beavers get busy fighting fires — and climate change

Beavers bring much-needed water back to the land, and their wetlands slow, store, and cleanse water — water that residents need to fill their wells, water plants and crops, and, yes, fight the coming wildfires.

By **Leila Philip** Updated December 12, 2022, 3:00 a.m.



New England has an overlooked and generally abundant firefighting ally: *Castor canadensis*, the North American beaver. ADOBE STOCK/PETR MALYSHEV - STOCK.ADOBE.COM

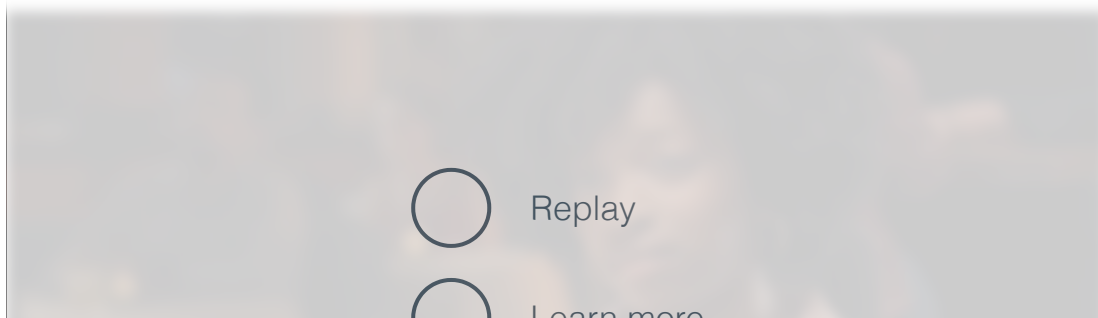
Last summer's record-setting drought brought more to the Northeast than browning lawns, undersized produce, and water restrictions. It also raised a frightening new concern — wildfires. Massachusetts, which usually sees fewer than 50 wildfires a season, had over 100 fires in August alone.

Wildfires are growing worse as climate change brings hotter, drier weather and longer fire seasons. Forty percent of the Northeast is comprised of forest. Along the East Coast, lightning storms are also often accompanied by rain which can lead to a particularly dangerous type of wildfire characterized by “delayed ignition.” In these highly unpredictable wildfires, sparks smolder hidden in the tree canopy, sometimes for weeks, before bursting into flames. But New England has an overlooked and generally abundant firefighting ally: *Castor canadensis*, the North American beaver.

“We’ve known for some time that beavers can change the direction of a fire,” said Emily Fairfax, an ecohydrologist at California State University Channel Islands, one of the lead researchers behind a new pilot that is studying the ways that wildfires can be controlled with the aid of beavers. “The question we want to pursue now is how much beaver activity is needed over what areas to impact fire behavior.”

The idea that a relatively small rodent could impact a wildfire moving at terrifying speeds seems improbable, but Fairfax and other researchers [published a study in 2020](#) that documented the extent to which beavers and beaver wetlands had created refugia in even some of the worst of the recent wildfires out West. She and other scientists also documented the ways many beaver damming complexes in those fire-ravaged zones played a critical role in post-fire recovery by cleansing the water of ash.

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Fairfax's new study, which she has undertaken with geomorphologist Joe Wheaton of Utah State University and which is funded by the US Fish and Wildlife Service, now pushes this research into beavers and wildfire one step further. They are studying the nuts and bolts of how beavers might be implemented within wildlife-mitigation programs. "There has been so much talk about the potential for beavers in riverscape restoration to help in the context of fire," Fairfax explained, "My goal is to make this an actionable climate change solution."

For some time, beavers have been used for river restoration throughout North America — actively reintroduced to river systems in places like Milwaukee and Maryland to aid water storage, cleansing, and to mitigate flooding, but it's fascinating to think of beavers now helping fight wildfires. When you think about it, the relationship between beavers in the landscape and increased wildfire fire protection makes sense; as Wheaton commented, "It's not really that complicated, water doesn't burn."

Beavers are one of the greatest conservation [comeback stories of the 20th century](#). They were almost wiped out during the fur trade, but smart wildlife reintroduction programs in the early 1900s returned them to the landscape. Now beavers have a new role to play in creating climate resiliency if communities, municipalities, and individual landowners can take advantage of what they naturally do.

Here in the Northeast, the challenge will be to create enough beaver habitat that is free of human-wildlife conflicts. Beavers are going to do what beavers do best — cut down trees, build dams, and create wetlands. Beavers can flood roads and other infrastructure. But

there are increasingly sophisticated methods of managing beaver activity, including the installation of pond levelers and flow devices that can protect roads and culverts.

The Northeast needs updated education and updated beaver management policies. Where I live in Connecticut, beavers cannot be relocated, a vestige of a time when it was believed that beavers posed significant risk of disease transmission. This law should be changed; beavers don't carry high levels of disease and there are plenty of places where the water and biodiversity they bring is needed — and where they can thrive without causing human-wildlife conflict.

Most of all, we can't afford to keep thinking of beavers as a nuisance animal and lose out on the [valuable environmental services they offer](#); [beavers can be part of a viable North American climate action plan](#) — they bring much-needed water back to the land, and their wetlands slow, store, and cleanse water — water that residents need to fill their wells, water plants and crops, and, yes, fight the coming wildfires. Maybe the Forest Service should consider a new animal mascot, Smokey the Beaver.

Leila Philip is the author of [“Beaverland: How One Weird Rodent Made America”](#) and a professor in the English Department at the College of the Holy Cross.

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