

Can we coexist with big wildfires? A new documentary, ‘Elemental,’ suggests we can

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The Insurance Institute for Business and Home Safety shoots embers at a duplex, with half of it traditional construction and half of it hardened against fire.

By [Ted Sickinger](#) | [The Oregonian/OregonLive](#)

“Elemental: Redefining our Relationship with Wildfire” – a new documentary by local filmmakers premiering Wednesday at the Hollywood Theatre, and with a heavy focus on Oregon – opens with a horrifying yet increasingly familiar montage of some of the most destructive and deadly western wildfires in recent memory.

As archival news footage rolls of neighborhoods in ruin, a reporter poses one of the central questions that this illuminating and visually arresting film sets out to answer:

“Residents are now left wondering if there’s anything that can be done to keep their communities safe.”

It’s a question being asked around the West. And the hint of an answer isn’t long coming, as one of the many scientists interviewed during the next 80 minutes offers a straightforward, if radical premise:

If state and federal authorities had been following a science-based approach to mitigating the effects of wildfire, the 2018 Camp fire, which destroyed 19,000 structures in Paradise, Calif., killed 86 people, and bankrupted that state’s largest utility, might have left much of the community unscathed.

“It’s very frustrating to me to realize that Paradise didn’t have to happen, and then listen to an interview of a fire professional saying there’s nothing we could have done,” Jack Cohen, a scientist well known for his research on wildfire and home ignitions, opines in the opening moments. “Because there is.”

Paradise is the natural place to start, as the catastrophic destruction and loss of life wrought by the Camp fire made it the defining wildfire disaster of our era, a light bulb moment for the public, lawmakers, fire professionals and utilities confronting the problem throughout the West. Harrowing footage of the fire, the panicked evacuation by community members and interviews with survivors drive home the existential threat that such conflagrations pose to our communities in an era of climate change. And they make it plain that what we’re doing today isn’t working.

But this film is relevant to anyone living in the western United States, and much of it is centered on Oregon, its wildfires, its resident fire scientists and most pointedly, on their research.

This is a film with a strong point of view, one that often runs counter to conventional wisdom and timber industry talking points. It provides a revealing historical view of how we got into this mess. It explores the personal, policy and spending choices we face as we try to get out of it. And it brings viewers into the field with indigenous fire managers and some of the top fire and climate scientists in the nation to explore how wildfire, healthy forests and communities can coexist.



Trip Jennings, director of "Elemental," says he took a rigorous, science-based approach to his research and scripting of the film. Courtesy @TrippJenningsVideo Trip Jennings, the film's Portland-based director, describes himself as a wannabe scientist who has been shooting and producing documentary work since high school. While a student at the University of Oregon, he produced a film about the Biscuit fire, a 2002 wildfire that burned 500,000 acres in the Rogue-Siskiyou National Forest. Some of his subsequent work was in the realm of outdoor adventure, including a handful of shows for National Geographic, but since 2020, he has also been producing a series for PBS, called

Weathered, about extreme weather, climate, and prepping.

His interest in a comprehensive documentary about wildfire was piqued in the aftermath of 2017's Eagle Creek fire, when then-U.S. Rep. Greg Walden, R-Oregon, proposed a bill to fast-track logging of the burned trees in the Columbia River Gorge Scenic Area and begin planting new ones.

"I knew that something was missing," Jennings told The Oregonian/OregonLive in an emailed response to written questions. "Specifically, I knew that most of the area he proposed to log was green trees that had barely been licked by flame."

Jennings applied to National Geographic for seed funding for a film. He took basic firefighter training, bought a set of Nomex protective gear, fire boots and a fire shelter, and was soon chasing fires with specialized camera equipment to document their impact on landscapes, the timber industry and communities in fire prone areas.

Meanwhile, he was collaborating with Ralph Bloemers, an environmental lawyer deeply immersed in the state's timber wars and wildfire policy debate. Bloemers, who ultimately became the film's executive producer, is also an amateur photographer who was spending days off and weekends lugging heavy packs of camera gear into the footprint of the Eagle Creek fire to document the natural recovery of flora and fauna in the wake of the fire.

"Many people think fire destroys forest and kills all wildlife," Bloemers said in an email. "I wanted to show through timelapse and wildlife photography that our landscapes and the wildlife in them thrive with fire. Young charcoal forests are full of life, and nature rapidly paints them green."



Goshawks nest and raise their young next to a high intensity burn

Bloemers said things became more personal after Oregon's historic Labor Day fires in 2020, when five megafires and a dozen smaller blazes charred more than a million acres across the state, destroying thousands of homes and killing nine. A number of his friends lost everything, including in what he says were powerline ignited fires in the Santiam Canyon. The official cause of those fires remains under investigation.

The standard narrative of how we got here is familiar: A century of successful but now understood to be misguided policy of total fire suppression by the U.S. Forest Service and local authorities virtually banished the natural, cleansing and regenerative cycle of fire from western forests. Coupled with limits on logging in federal forests since the 1980s, that left the woods choked with dead vegetation, downed branches and smaller trees that are fueling today's infernos.

"Elemental" doesn't try to debunk that story, per se. But it adds context, exploring the history of wildfire in the West, changing public perceptions, and how natural climate cycles have been inextricably linked to both fire patterns and the hubristic notion that we can control them.

The Yurok tribe has used cultural burning for centuries to make the areas around their homes safer, to regenerate native plants and provide habitat for the game they hunt.

The history begins with members of the Yurok Tribe, who used cultural burning for centuries to provide food and game, and to reduce fire risk around communities. But they were ultimately persecuted and aggressively prosecuted by white settlers who feared wildfire and wanted it eliminated from the lands they were colonizing.

The initial success of the Forest Service's total fire suppression strategy cemented public perception that we could control wildfire and was the progenitor of the industrial, mechanized firefighting complex we deploy today. But as Christopher Dunn, a fire scientist at Oregon State University, explains, a decades-long climatic shift toward cooler, wetter weather helped tamp down fire activity after World War II and played a big role in that success.

The climate cycle shifted back to warmer, drier weather in the 1980s. Acres burned have been on the rise ever since. Yet public expectations haven't changed. We still expect to be able to dominate these fires and prevent losses of property, of human life of the forests we love.



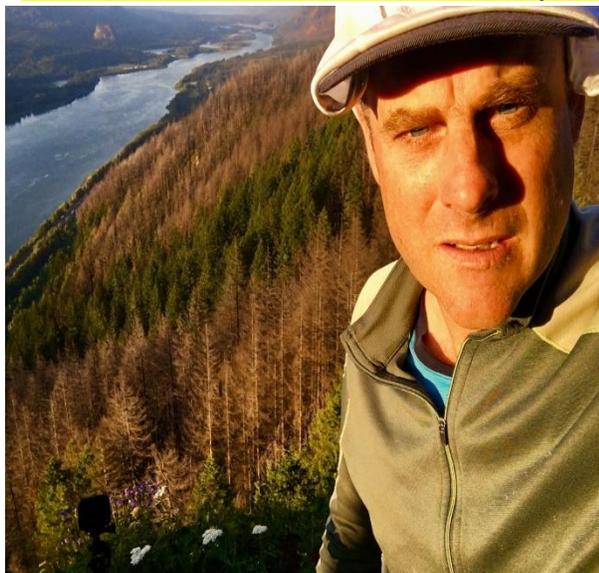
It's not that firefighting no longer works. Since 1983, the U.S. has seen an average of 72,000 fires a year, according to one statistic cited. And often heroically, firefighters manage to control nearly 98% of them before they blow into large and destructive conflagrations.

But as we've all come to know, the size, destructiveness and cost of fighting the fires that escape containment have exploded. We live in the age of megafires, and with climate change compounding the impacts of drought and disease in forests, scientists don't see that changing.

This is where the film leans into our current policy debate.

When it comes to large-scale wildfire prevention efforts, federal and state policy is still largely centered on logging. It's typically called forest restoration: thinning overstocked stands of trees, "raking" the forest floor, as our former president put it, and burning the debris.

Witness the federal infrastructure bill, which included billions of dollars to support such logging and restoration projects around the West. Or the recent proposal by a blue-ribbon panel in Oregon to "treat" some 5.6 million high-risk acres across the state during the next two decades. That's an area, incidentally, the size of New Jersey.



The premise is that by more heavily managing the forests, we can create better outcomes. It's an approach consistently promoted by timber industry lobbyists and representatives or rural communities who stand to benefit economically.

But researchers featured in "Elemental" suggest it's a ludicrous strategy. The scale of the problem is simply too large. The vegetation grows back in short order. The chance of a wildfire actually encountering an area that has been treated is less than 1%, one researcher found. And when one does, the treatments frequently have little to no effect on fire

behavior.

Ralph Bloemers, Elemental's executive producer, at Waespe Point, overlooking Oneonta Gorge, where the ecosystem is recovering after the Eagle Creek fire.

The film takes on another popular rationale for more aggressively managing our forests: Vast amounts of carbon stored in forests are evidently being released in these large fires. We're better off logging and storing carbon in long-lived 2x4s, then replanting young trees, which take up carbon faster as they grow than the mature trees that are going up in flames.

Here we go into the field with Beverly Law, an emeritus professor at OSU whose research focuses on the effects of climate change, fire, and land management on ecosystem carbon storage. She is part of worldwide consortium of scientists who have set up more than 1,000 research sites to measure the exchange of carbon dioxide between forests and the atmosphere.

"We found that mature and older forest are the workhorses," she said. "They take up more carbon annually and they have a lot more storage in the wood. ... We found young forests were a net source (of carbon) to the atmosphere for those first 20 years."

Her team also found that carbon emissions from wildfires are far lower than people think. "We found that when we were measuring emissions, the emissions from harvest were five to 10 times as much as they were from fire emissions," Law said.

During the 2020 Labor Day fires, one of the forests where Law made some of her most important findings burned, including the longest running site in the global network. What viewers encounter when the filmmakers bring Law back to the site – a barren, post-fire clearcut – is both instructive and poignant.

"Three decades," she comments. "That's all we have before we reach a tipping point."

So where does all this leave us in terms of prevention? What can we do to keep communities safe and coexist with wildfire?

Jennings, the director, said one of the most challenging moments in the project, intellectually, was when he learned about Jack Cohen, the scientist who opens the film claiming Paradise didn't have to burn.

Cohen spent much of his career studying the combustion of structures during wildfires. He burned large sections of forest and houses down in his experiments. Viewers get a front row seat on that research.

What he eventually concluded: that no matter what you do to reduce fuels or modify the landscape in a forest, unless its within 100 feet of a structure, it has virtually no impact on its survival in a fire.

The potential implications for policy, spending and individual actions are enormous.

"Spoiler," Jennings said. "He wasn't wrong. And the result is this film."

Where to see it: The film's Portland premiere is 7:30 p.m. Wednesday at the Hollywood Theater, 4122 N.E. Sandy Blvd. with a Q&A to follow with the filmmakers and Sen. Jeff Golden, D-Ashland. The film has been selected for screening at a number of film festivals and the plan is to screen it in towns across the West and then release it later in the summer via streaming.

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