



Where the Wildfire Conversation is Headed Sept. 2022 Deputy Chief James Furnish (Ret.)

In 2020, 2021 and again this year, we have seen extreme wildfires driven by drought and wind, and increased home and community loss. People across the West are all living with wildfire and desperate for durable, effective solutions to limit the increasing impact of wildfires on homes and communities. I write to lay out what I see as important truths and observations that I think inform where the conversation about how to live with wildfire is headed.

Climate change is upon us and increasing wildfire activity in both human communities and large swaths of forest, particularly the American West. Rising temperatures and prolonged drought have lengthened fire seasons and, along with strong wind events, have led to many large fires that are too often becoming destructive to human communities. Costs of fire suppression have risen dramatically, with little correlation to reduced acres burned. We have not experienced reduced risk to communities and development near and within forests, in spite of increasing investment in altering forest vegetation. While fire science has made dramatic gains in recent decades, forest fires present an enigma. The big question we are all facing is: how can we bend the curve of escalating cost and losses to both homes and communities and to the benefits our natural landscapes provide to all of us?

For a long time, we have heard that the problem is in the forests, and that we must ramp the pace and scale of work in these forests. The proponents ask for our continued faith that scaling is possible, even though they have been at it for nearly 30 years and most of our home and community loss happens in grasslands and shrublands.

Let me begin by citing the large Jasper Fire, in SD's Black Hills National Forest, circa 2000. Jasper Fire burned almost 90,000 acres of intensively managed Ponderosa pine forest, about 10 percent of the entire national forest. Human caused, it was ignited on a hot, dry, windy July day – quite typical of weather in peak burning periods nowadays. Suppression efforts were immediate and used every tool in the agency's tool box... to no avail. Notably, the burned terrain exemplifies what we consider the best way to reduce fire intensity, if not fireproof, a forest. This mature forest of small saw timber had been previously thinned to create an open stand intended to limit the likelihood of a crown fire. Yet, the fire crowned anyway and raced across the land at great speed, defying control efforts. Much of the area remains barren 20 years later, while the Forest Service slowly replants the area.

I cite this example, because it represents precisely what agencies posit as the solution to our current crisis: 1) aggressively reduce fuel loading through forest thinning on a massive scale

of tens if not hundreds of millions of acres (at a cost of several \$ billion, and then do it again), while trying to 2) come up with sensible answers about how to utilize the finer woody material that has little or no economic value; and 3) rapidly expanding the use of prescribed fire to reduce fire severity. These solutions are predicated on the highly unlikely (less than 1%) probability that fire will occur exactly where preemptive treatments occurred before their benefits expire. These treatments are not durable over time and space, and only work if weather conditions are favorable, and fire fighters are present to extinguish the blaze.

To be blunt, the ineffectiveness of current practices has led many scientists to suggest, based on peer reviewed science and field research as opposed to modeling, that agency “fire dogma” needs to be revisited. The call for a true paradigm shift is occurring both within and outside the agency. Several truths have emerged:

- 1) Fires burn in ways that do not “destroy”, but rather reset and restore forests that evolved with fire in ways that enhance biodiversity.
- 2) Forest carbon does not “go up in smoke” – careful study shows that more than 90 percent remains in dead and live trees, as well as soil, because only the fine material burned.
- 3) The biggest trees in the forest are the most likely to survive fire, and thinning efforts that remove mature and older trees are counter-productive. We are seeing more cumulative fire mortality in thinned forests, than in natural forests that burn.
- 4) Thinning and other vegetation removal increases carbon losses more than fire itself and, if scaled up, would release substantial amounts of carbon at a time when we must do all we can to keep carbon in our forests.
- 5) If reducing home loss is our goal, experts are telling us that the condition of the structure itself and vegetation immediately adjacent to the home are the primary drivers of home ignition and loss, and that the condition of vegetation more than 100 feet from the home has nothing to do with the ignitability or likelihood a home will burn.
- 6) Large, wind-driven fires defy suppression efforts and many costly techniques simply waste money and do more damage. Weather changes douse big fires, people do not.

Right now the policy debate is being unduly influenced by a vocal group of agency-funded scientists that have invested their entire careers in promoting vegetative management. The agency also benefits as it received substantial funding from Congress for this work, which sustains its budgets. These scientists tout their “collective experience in wildfire science” and claim they know best what constitutes valid information. They have self-appointed themselves as gatekeepers of fire science and truth.

My charitable judgment is that their belief that thinning forests to reduce fire severity may be effective sometimes at accomplishing that goal – if weather is favorable, when we don’t have extreme wind and drought, and we have adequate firefighters on hand. Overall, however, this strategy is not working out well for human communities – as we have been at it for over thirty years, and we are seeing increasing losses. While careful thinning can work in favorable conditions, we rarely see careful thinning without a commercial component that takes the big

trees. Projects that involve prescribed fire and cultural burning are few and far between. Recommendation for careful thinning are not always, perhaps even rarely, faithfully implemented by the line officers in federal agencies.

As to private forest land, the experts cannot and do not claim that careful management is occurring on private industrial lands that dominate significant swaths of at-risk forestland in the Western United States, nor do they suggest that private industrial forests incur less fire losses. In fact, studies have shown that fires are often worse on private forests. We continue to see extensive industry misinformation, which include grossly oversimplified narratives promoting more “forest management” that is pushed out to the public through well-funded campaigns.

The scientists who tout an increase in forest management call what they propose “treatments” and “restoration”, and state that the science supports them. The scientific studies they claim are supportive often rely on modeling and assumptions that do not capture future climate, and often ignore significant ecological costs. The scientists who propose scaling up treatments are too often dismissive of anything that questions their positions, and uncomfortable with answering the hard questions about the costs and challenges of scale regarding landscape vegetation manipulation. I have looked and have yet to see a credible business plan or scaling up what they propose over space and time, based on a full accounting of costs and operational challenges, and that is free from confirmation bias.

They also fail to acknowledge the scientific findings that efforts to control vegetation and fire severity in wet, western Cascade forests, for example, are unequivocally useless over space and time because these forests quickly grow back - and these forests represent the bulk of our Western forests. They fail to acknowledge that embers are primarily what ignites structures, and that forest management and treatments will not eliminate the potential for burning embers to travel long distances and ignite structures. They fail to acknowledge that most home loss, over 2/3rds nationwide and 80 percent in California, occurs in grass lands and shrublands - and so, therefore, efforts to alter forests will have no effect on the vast majority of home loss.

This is why I conclude that the conversation is headed toward a prioritization of what we can and should spend money on - protecting homes and communities from the home outward, not from the forest in. People across the West can no longer afford to have decisions made and funds allocated based on a false narrative. They will no longer accept home and community destruction. This change can either come quickly, with less pain and loss, or slowly, with more pain and loss - but it will come eventually.

The emerging science does not support the notion that we can eliminate the loss from fires through tinkering in forests, or even scaling up the projects. The nasty truth is that forest fires defy simple explanations and solutions. We need to ask the tough questions, and make the hard choices to prioritize what we do spend money on. What’s been done and being done hasn’t worked well, and we are not close to pulling ourselves through the knothole of now. We need new thinking and new approaches that see fire management in context with community adaptation, preventing loss of homes, climate change, forest carbon storage, biodiversity, clean water and air quality. New approaches are needed now to prevent further irretrievable losses.

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