

Testimony of Dr. Michael J. Medler

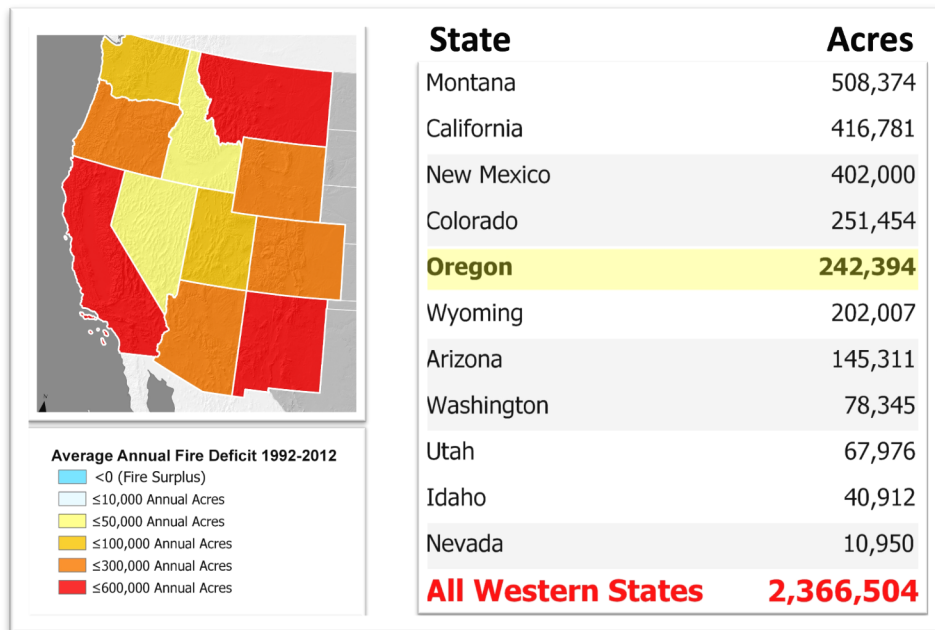
Past President of The Association for Fire Ecology, founding editor of the journal *Fire Ecology*
Professor, Department of Environmental Studies, Western Washington University
Before a Hearing on “Forest Resilience and Management for Wildfire”
State of Oregon, Senate Committee on Natural Resources and Wildfire Recovery
Oregon State Capitol (Remotely), March 15, 2021

Chairman Golden, Vice-Chair Heard, members of the committee. It is an honor to be here. My name is Michael Medler, I teach at Western Washington University. I have also worked as a firefighter out of the ranger district that was hit so hard by the Holiday Farm Fire. I have served as the president of The Association for Fire Ecology, and I was the founding editor of the scientific journal *Fire Ecology*. I now work with students that are studying fire and a lot of my research involves making maps about wildland fire. So, what I want to talk about today is the size of the wildfire problem and the size of some solutions.

Fire Deficit

A useful way to think about fire is to consider a “fire budget.” Each ecosystem has a fire regime that includes things like how often fire occurs, and how large they burn. If we make changes, (like suppressing fire), you see changes to the way fires burn. Even with the larger fires of the last decade, Oregon has been running a long-term fire deficit of about ¼ million acres a year. This means that even just since the 1980s, **Oregon has fallen behind about 10 million acres.** (see figure 1)

Figure 1, Average annual fire deficit in the western U.S., 1992-2012



This lines up pretty well with other research and other speakers here today, and actually understates how big an area of Oregon needs fuel treatments for other reasons. Additionally, over the last few decades, Oregon has increased its Wildland Urban Interface, or (WUI) to **about 2.5 million acres.**

I have worked in the Oregon woods thinning with chainsaws, and I can tell you that 10 million acres is too big a problem to solve with saws. It is a massive area. I am proposing that instead we focus on thinning in buffers around communities. This would let us put our resources into a space about 100th the size and have a far bigger impact.

Community Protection Buffers

Forest Service research has shown that a ¼ mile buffer is enough to keep most fires out of most communities. These buffers need to have reduced fuel loads and roads for easy movement, but they are essentially parkland. If these buffers were maintained, we would expect to see a large decrease in the number of fires entering communities. This is where thinning would make a real difference.

Just to get a sense of the scale of this proposal, we mapped ¼ mile buffers around all the communities named by the US Census, which including tinny communities in the backcountry. Then counted the number of acres in the buffers that fall in WUI. **The result is that these community buffers make up only 165,000 acres of the state. Of that only about 100,000 acres are likely to need much work.** (see figure 2 and Maps in the Appendix))

Figure 2

Acres of WUI Inside 400 Meter Populated Places Buffer, Western States			
State	WUI Interface	WUI Intermix	WUI Interface and Intermix
Arizona	81,625	158,836	240,462
California	333,987	479,741	813,728
Colorado	80,578	145,685	226,263
Idaho	33,442	47,682	81,124
Montana	44,355	62,349	106,704
Nevada	21,479	24,920	46,399
New Mexico	56,288	143,484	199,772
Oregon	68,138	97,381	165,519
Utah	68,942	42,261	111,202
Washington	133,569	240,479	374,048
Wyoming	25,863	38,862	64,725

Takeaway

So, the takeaway is that there are about 5-10 million acres in Oregon that need fuel treatment. We are falling behind another ¼ million acres every year. This is simply too large of an area to effectively thin. However, only about 1% of that needs treatment to directly protect communities. What this means is that we should be targeting our efforts in these buffers if we are serious about protecting these communities from fire. As an extra benefit, this would also allow more latitude for the use of fire in the backcountry, which is realistically the only way we will ever make real headway in reducing fuels in the backcountry.

Thank you for your time and I'd be happy to answer any questions.

Appendix

