



Wildfire & How to Prevent Community Loss, Keep Insurance & Support Firefighters Before Fire Comes, and Prevent Trillion Dollar Disasters

Ralph Bloemers
Director of Fire Safe Communities
Green Oregon Alliance
February 8, 2024

Re: Supporting Oregonians to Prepare Homes & Communities for Fire

Dear Chair Golden and Members of the Committee:

I support SB 1511. We need leadership at all levels supporting mitigations that matter, and the mitigations that matter the most to preventing home and community loss begin at the neighborhood level. There are communities in the West that are scaling these mitigations and there are fire departments in Oregon that are leading the way (e.g. Ashland) in doing home assessments. Not taking action, not making investments has serious consequences, as we see a stepwise progression in extreme fire weather. I have spent the last two years deeply immersed in these issues, attended insurance conferences of the Casualty Actuarial Society on wildfire, the Wildfire Resistant Homes Conference, the Association of Fire Ecology, and interviewed and spoken to dozens of experts in this space. I write to share what I have learned, as it is compelling and provides a strong case for this legislation to sail through to passage.

California - A Harbinger. In 2023, companies like Farmers, Allstate, USAA, and State Farm have limited any new business in California. In addition, seven of the 12 top home insurers in the state have paused or placed harsh restrictions on policy holders and raised premiums by nearly 10 times. The number of companies exiting California continues to grow, and the State's efforts do not appear to be stemming the tide.

Insurance Exit Happening in Oregon. According to sources and based on my own investigation here in Oregon, I understand that Austin Mutual, Kemper, Nationwide Private Client, Oregon Mutual have exited new business. Progressive, apparently, has been exiting from southern Oregon and Eastern Oregon. Farmers has pulled back from new business as well in Deschutes County, and for renewals premiums have gone up 40%. State Farm is not renewing business in parts of the state (Southern Oregon), or raising premiums significantly. My investigation is ongoing, I believe this is just the tip of the iceberg.

Drawing Hard Lines Where They Will Write. The insurance brokers I have spoken to have indicated that outside of population centers like Portland, Salem, Eugene, and even in populated areas like Sisters, Bend, Medford, it is far harder to write insurance, particularly as get away from a manned fire department. One broker said to me: "Most of the carriers used to use ISO Protection Class numbers for determining fire danger. Now they are drawing hard lines around where they will write."



Expert Research on Stopping Community Conflagration. So what do we do? Over the past 7 years, I have had the good fortune to interview and learn from Dr. Jack Cohen and from Roy Wright and the other experts at the Insurance Institute for Business & Home Safety. Jack ran the Missoula Fire Lab for nearly 40 years, and he was involved in the founding of the Insurance Institute for Building and Home Safety. He also developed the training used by the National Fire Protection Association for home assessors. My testimony stands on the shoulders of Dr. Jack Cohen's work, the work of the Presidential Mitigation and Management Commission and many others. I speak with Dr. Cohen regularly and continue to learn from him. His work tells us that we have solutions, and that those solutions must focus on interrupting the house being ignited from fire brands.

Extreme Weather, Community Loss & Housing Deficits. Oregon lost over 5,000 homes in the 2020 Labor Day fires. Building costs and home prices have gone up even faster than inflation for the last decade, and we are already at a housing deficit. Losing more homes to wildfire is far more expensive for communities than making investments to prevent the loss. Increasingly, weather is increasing the number of extremely destructive events per year. And each disaster decreases housing supply by making homes unlivable and by keeping builders busy with repairs instead of creating more homes. One of the most important and concerning developments right now is the interplay between extreme weather and the availability of insurance coverage for homeowners.

Billion Dollar Disasters. There have been a total of 25 billion dollar disasters in the US as of December 10, 2023, and one of them was a severe fire. In 2022, we had 18 billion dollar disasters. In the past two decades, Texas, Louisiana and Florida have been hit the hardest. California and Puerto Rico coming in second and New York, New Jersey, North Carolina, and Mississippi ranking high in the list. And there's a very clear upward trend since 1980.

Insurance and Climate Risk. Insurance is a fascinating lens into climate risk and wildfire hazard because the entire industry relies on accurate prediction and pricing of risk. If communities do not reduce their risk of exposure or insurance companies are unable to charge homeowners enough to pay for the risk of future damage, communities will lose access to insurance because insurance companies will not be able to price and weather the risk.

Homes Become the Fuel. Increasingly we are seeing fires burn into suburban communities - like the Marshall fire burning over 1,058 homes in less than 8 hours in December

2021. We also experienced urban fire disasters in Coffee Park in Santa Rosa and Paradise CA when over 18,000 structures burned in under 10 hours. Oregon had homes burn, and ignite other homes in 2020, when statewide 5,000 homes burned over a period of several days during a statewide downslope wind event. These are wind events with fire in them, where the homes become the fuel to ignite other homes. These are fires that escape control and exceed limits of firefighting capacity.



Two Fire Years Wiped Out Double 26 Years of Profits. According to the leading insurance consultant Milliman, the combined 2017 and 2018 wildfire seasons wiped out more than double the insurance industry profits for the previous 26 years (See attachment). The enormity of these disasters with immense payouts have rattled the insurance market and constrained their ability to do new business in California. Here are the key factors:

1. Premiums Not Keeping Pace With Risk. California limits, how quickly insurance premiums can be raised. The risk of loss has gone up faster than premiums are able to be adjusted, and so companies in California started to write fewer policies in the most hazardous areas. Reinsurance companies are not constrained by state regulations, they insure the companies and have raised the premiums. What is happening is the result of reinsurance companies keeping up with the risk, but primary insurers not being able to keep up with the risk.

2. Back-Up Plans are Overweight with Risk. California and other western states have created back-up plans for insurance. (Called the FAIR plan in California). All insurers that do business in the state play into the back-up plan to cover future payouts after disasters, and also cover the plan as a whole (reinsurance). The problem is the backup plan has been taking on all of the riskiest properties, it is overweight with high risk. The California plans are massively overweight in at least a dozens parts of community, and a single big event in one of these areas could take the back-up plan out, and lead to more exits of the insurers as well.

3. Back-Up Insurance Expensive, Inadequate Cover. Insurance coverage under the back-up plans can cost many times the market rate insurance coverage and provides far less coverage. The back-up market is supposed to be a market of last resort, a temporary solution - it is becoming the primary plan. As Nancy Watkins has said - this is like the crutch becoming your permanent leg. The crutch is not designed to be a permanent leg.

4. Insurance On the Hook for Failure of Back-up Plan. All insurance companies in California are required to pay a fee that supports the back-up plan and the plan is growing and continues to grow. Between 2018 and 2022, its total policies more than doubled. If there is a major loss, and there are not enough reserves in the back-up plan (which is currently the case) the deficit would have to be born by the insurance companies operating in California.

No New Policies. And that's exactly what's happening. All State, State Farm, Farmers and many others (nearly 85%) all stopped writing new policies in the state together. It is not hard to imagine two devastating fires in one year, like the Camp Fire, which destroyed 18,000 structures and cost over 10 billion in total direct losses. And those fires happening in areas overweight with the FAIR plan.

Risk of Market Collapse. If we don't change course, there is an increased risk that the whole insurance market in California will collapse because of it. The California situation appears to be a harbinger of what we might see happen in Oregon, and here in Oregon it appears to be significant already. And what happens if the insurance market in California collapses? Real estate transactions would be severely disrupted by the inability to get insurance and it could severely affect real estate values. It is possible that banks might not be able to lend in significant parts of California

What Happens to Real Estate. Over 63% of homes in the US have mortgages and mortgage holders are required to have insurance to mitigate the lender's risk. Mortgages and insurance are both fundamental underpinning of the real estate market and our economy. Can banks keep offering loans for homes and businesses if the insurance market fails? What happens if an insurer drops a homeowners's policy after an extreme event? I worked on an episode of PBS Weathered on this topic - you can watch it here:

The Insurance Industry Cannot Weather Another Wildfire Season Like This (PBS)
<https://www.youtube.com/watch?v=ej94dKmo4Vw>

National Implications. California's GDP is the fifth largest in the world, so impacts on California property values could have wide ranging implications on the global economy. And this is not happening in a vacuum. The insurance industry in Louisiana and Florida are also very fragile, making the risk national, if not global.

Research Driven Shift on How We Prevent Community Conflagrations. The research shows we can prevent homes and communities from burning in extreme conditions. What will it take to shift everyone's focus and action on the durable, effective ways to protect entire communities?

Spending on Fire Suppression, Vegetation Management Dominates. First, let's look at how California has been spending money on wildfire. In 2021 and 2022, California created a funding package of \$1.2 billion for preparing for wildfires. That special budget was outside of and additional to firefighting and fire suppression - and 96% of it is spent on things like thinning forests, creating



fuel breaks, and preparing for evacuation. Oregon, in total from state and federal sources, spend the vast majority of funds on suppressions and vegetation management. The ratios in Oregon are similar to those in California.

Spending on Wildfire Prepared Homes Is Very Small. Second, let's contrast that with the research from the Insurance Institute for Business and Home Safety, which shows how important the design of the home and its immediate surroundings are to preventing it from igniting - known as the Wildfire Prepared Home or home hardening. However less than 4% of California's fire budget is spent on home hardening.



Solutions Are Available, But Not the Focus. While many experts are advocating for a significant if not paradigm shift in how we currently spend money to protect homes and communities from wildfire, the solutions have not been receiving the level of public investment commensurate with the durability and effectiveness of those solutions. We need to flip from spending money in a reactive way, if not futile way to spending in ways that bends down the risk curve. The 1990s approaches - expensive suppression and landscape scale vegetation management - are not keeping up with the 21st Century climate.

Elements of a Wildfire Prepared Home.

1. A non-flammable roof. Almost 95% of homes in California are Class A rated already.
2. Next, the vents for the attic or the crawl space need to have a fine mesh on there so embers don't come in and ignite the house from inside the house.
3. And next the area that is within five feet of the home needs to be entirely non-flammable. This is probably the hardest part from a social standpoint but fairly easy to accomplish physically - disconnecting flammable fences, removing shrubs and bark mulch from areas adjacent to the house, below the siding, etc.

4. And then out to 30 feet, dealing with sheds, connected fences, wood piles, cypress, juniper, and all the other high heat, flash burning concentrations of materials.

Third Party Certification. The IBHS has adopted the Wildfire Prepared Home as an independent third party designation that is specific to each home and it tells the insurance industry this home is done exactly what the scientific research says will significantly limit the odds that the home will. This designation focuses on the home out to about five feet and then to a lesser degree out to 30 feet.

Limits of Vegetation Management. What about managing vegetation more than 60-100 feet from the home? What about landscape scale management of forests? Well 90 percent of homes are ignited by burning embers, not a wall of flame - and more than 80% of homes that are lost in the United States are burning in grasslands and shrublands. The cost per acre of thoughtful vegetation management is between \$2,000-\$5,000 per acre, and we have hundreds of millions of acres of vegetated landscape in the West. (Note, in 2006, the Federal Office of Inspector General estimated that it would take 60-90 years to treat a portion of a portion of the highest risk landscapes, and this timeframe did not account for the cost of maintenance.)

Challenges with Fuelbreaks and Firebreaks. So if your fire break is 10 feet wide, the embers can be cast right over the top of it. Even if you have a 400 foot firebreak, the question is when's the last time you maintained it? The challenge with vegetation management is that it grows back, and even maintained areas can contribute to increased wind speeds and ember cast.

What Matters for the Wildfire Prepared Home Certification. The Wildfire Prepared Homes designation is focused on the home and the immediate area. There is nothing in the Wildfire Prepared Homes designation that requires fuel breaks or fire breaks or asks about the conditions of the landscape or vegetation management away from the home. This is because the research shows that actions distant from the home do not bend down the risk curve of wildland or urban fire disasters.

The Good News. We have all the tools and technology for homeowners to take steps to reduce the risk of their homes being destroyed by extreme weather, and those mitigation efforts appear to be the key to preventing the whole insurance system from toppling over. IBHS has recommendations for fortifying your house against fire, wind, hail, and wind-driven rain. Home builders, homeowners, home buyers are no longer able to ignore climate risks, and many people and local communities are starting to take steps to ensure they are prepared.

I have included some charts and graphs in an attachment, feel free to reach out if you would like further information on these subjects.

Sincerely,



Ralph Bloemers
Director of Fire Safe Communities
Green Oregon Alliance

References and Citations

Balch, J. K., B. A. Bradley, J. T. Abatzoglou, R. C. Nagy, E. J. Fusco, and A. L. Mahood. 2017. "Human-Started Wildfires Expand the Fire Niche Across the United States." *Proceedings of the National Academy of Sciences* 114 (11): 2946–2951

Barrett, K. 2023. "Wildfires Destroy Thousands of Structures Each Year." *Headwaters Economics*, August. <https://headwatersseconomics.org/natural-hazards/structures-destroyed-by-wildfire/>

Boulder County. 2022. "Boulder County releases updated list of structures damaged and destroyed in the Marshall Fire." <https://bouldercounty.gov/news/boulder-county-releases-updated-list-of-structures-damaged-and-destroyed-in-the-marshall-fire/>

Branson-Potts, Hailey. 2021. "Dixie Fire Races Toward Susanville, Forcing Some Residents to Evacuate." *The San Diego Union-Tribune*, August 18. <https://www.sandiegouniontribune.com/news/california/story/2021-08-18/dixie-fire-races-toward-susanville-forcing-some-residents-to-evacuate>

Campbell, J. L., M. E. Harmon, and S. R. Mitchell. 2012. "Can Fuel-Reduction Treatments Really Increase Forest Carbon Storage in the Western US by Reducing Future Fire Emissions?" *Frontiers in Ecology and the Environment* 10 (2): 83–90. <https://doi.org/10.1890/110057>.

Cohen, J. n.d. "A More Effective Approach for Preventing Wildland-Urban Fire Disasters." <https://static1.square-space.com/static/61ef51b68cfef85e3fed8d43/t/6340520e899c747a294725bf/1665159696338/Dr.+Jack+Cohen+Wildland+Urban+Fire+Primer+for+Elemental+Viewers.pdf>

Colorado Division of Fire Prevention and Control. 2021. "Marshall Fire: Facilitated Learning Analysis." <https://storymaps.arcgis.com/stories/83af63bd549b4b8ea7d42661531de512>

Congressional Budget Office. 2022, June. "Wildfires." <https://www.cbo.gov/publication/58212#footnote-007-backlink>

Downing, W. M., C. J. Dunn, M. P. Thompson, M. D. Caggiano, and K. C. Short. 2022. "Human Ignitions on Private Lands Drive USFS Cross-Boundary Wildfire Transmission and Community Impacts in the Western US." *Scientific Reports* 12 (1): 2624

FDACS (Florida Department of Agriculture and Consumer Services). n.d. "Wildfire Fuel Reduction." <https://www.fdacs.gov/Forest-Wildfire/For-Communities/Firewise-USA/Wildfire-Fuel-Reduction>

Fire Aside. n.d. "Our Impact." <https://www.fireaside.com/impact>

Gabbert, B. 2021. "A List of Some of the Fires Attributed to PG&E Powerline Equipment." *Wildfire Today*, April 6. <https://wildfiretoday.com/2021/04/06/a-list-of-some-of-the-fires-attributed-to-pge-powerline-equipment/>

Higuera, P. E., M. C. Cook, J. K. Balch, E. N. Stavros, A. L. Mahood, and L. A. St Denis. 2023. "Shifting Social-Ecological Fire Regimes Explain Increasing Structure Loss from Western Wild-

fires.” Proceedings of the National Academy of Sciences - PNAS Nexus 2 (3). <https://doi.org/10.1093/pnasnexus/pgad005>

Insurance Institute for Business & Home Safety. 2019. “Embers Cause Up to 90% of Home & Business Ignitions During Wildfire Events.” <https://ibhs.org/ibhs-news-releases/embers-cause-up-to-90-of-home-business-ignitions-during-wildfire-events/>

Joyce, S. 2018. “Built to Burn.” 99Percentinvisible Podcast, July 31. <https://99percentinvisible.org/episode/built-to-burn/>

NASA. n.d. “Enabling Better Wildlands Fire Management.” <https://appliedsciences.nasa.gov/what-we-do/wildfires>

National Weather Service. n.d. “Fire Weather.” National Oceanic and Atmospheric Administration. <https://www.weather.gov/fire/>

NFPA (National Fire Protection Association). n.d. “Preparing Homes for Wildfire.” <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Preparing-homes-for-fire>

Park, T., H. Hashimoto, W. Wang, B. Thrasher, A. Michaelis, T. Lee, I. Brosnan, and R. Nemani. 2023. “What Does Global Land Climate Look Like at 2°C Warming?” *Earth’s Future* 11:e2022E-F003330. 2022EF003330. <https://doi.org/10.1029/2022EF003330>

PBS. 2023 “The Insurance Industry Can’t Weather Another Wildfire Season.” “Weathered” Episode, August 1. <https://www.pbs.org/video/the-insurance-industry-cant-weather-another-wildfire-season-5q4yvww/>

Schwartz, M. W., and A. D. Syphard. 2021. “Fitting the Solutions to the Problems in Managing Extreme Wildfire in California.” *Environmental Research Communications* 3 (8): 1005. <https://doi.org/10.1088/2515-7620/ac15e1>

Siegler, K. 2021. “Winds Have Been High as the Caldor Fire Threatens California’s South Lake Tahoe.” NPR, August 31. <https://www.npr.org/2021/08/31/1033002680/winds-have-been-high-as-the-caldor-fire-threatens-californias-south-lake-tahoe>

Trisos, C. H., C. Merow, and A. L. Pigot. 2020. “The Projected Timing of Abrupt Ecological Disruption from Climate Change.” *Nature* 580 (7804): 496–501. <https://doi.org/10.1038/s41586-020-2189-9>

US Forest Service. 2023. “Confronting the Wildfire Crisis.” <https://www.fs.usda.gov/managing-land/wild-fire-crisis>

Vance, B. M., A. Templeton, and C. Wilson. 2017. “Eagle Creek Fire Jumps Columbia River Gorge Overnight.” OPB, September 24. <https://www.opb.org/news/series/wildfires/oregon-columbia-river-gorge-wildfires-interstate-84/>

Wildland Technology Funders Group. 2022. “The State of FireTech: Progress, Gaps, Futures.” Compiled by Wonder Labs. California, USA. https://www.wonderlabs.org/uploads/6/4/2/1/6421555/stateoffiretech_v4_3.pdf

Zald, H. S. J., and C. J. Dunn. 2018. “Severe Fire Weather and Intensive Forest Management Increase Fire Severity in a Multi-Owner Landscape.” *Ecological Applications* 28 (4): 1068–1080. <https://doi.org/10.1002/eap.1710>