

Briefing Paper in Support of SB 1187: Making Investments to Support Firefighters Before Fire Comes, Prepare Homes to Resist Ignition in Fast Fires, Retain Insurance Markets

Insurance companies exiting markets in the West has become a significant problem for homeowners and communities. Without insurance, homes become difficult if not impossible to sell — it's like having the water turned off. We are in triage, and so we need to focus government spending on interrupting conflagration. Fortunately, we have decades of research and experience that informs the actions all Oregonians can take to prevent their homes from igniting in the fast moving fires that drive embers into communities and burn them.

The research also tells us that 88% of home and community destruction occurs in fast wind-driven fires, during drought conditions and that 80% occurs in grasslands and shrublands. The research from the Missoula Fire Lab, the Insurance Institute for Business and Home Safety, the National Fire Protection Association, the Fire Safety Research Institute, and the National Institute for Safety and Technology tells us that we have solutions, and that those solutions must focus primarily on protecting homes from being ignited by embers.

Across the West, there are communities that are following the research and using technology to reach people in their communities and scale efforts to pursue the mitigations that matter for preventing home and community loss. The two communities that are the furthest ahead of the curve in Oregon are Ashland and Eugene, which are using new technologies and empowering homeowners to be a force multiplier by preparing their homes and communities.

Not taking action, not making investments has serious consequences, which are becoming even more pronounced with a stepwise progression in extreme fire weather brought on by increased drought and wind. The situation provides a strong case for increasing funding for mitigation and adaptation programs that help Oregonians prepare before fire comes. This means focusing on spending that addresses the vulnerability of our homes and communities, and spending money in ways that support people to take actions to prepare their homes and the Home Ignition Zone (zero to 5 feet) to resist fire without firefighters on the scene.

The Office of State Fire Marshall has created a program to help people prioritize actions. The programs are sending people door to door to assess homes, and support homeowners to prepare their homes. These are the kinds of programs that OSFM is poised to scale up and work with local fire departments, non-profits, and firewise community groups to create action on the ground. These programs will reduce our fire suppression burden, support firefighters before fire comes and address the insurance crisis.



California - A Harbinger. In 2023, companies like Farmers, Allstate, USAA, and State Farm have limited any new business in California. In 2024, more insurance companies have left the California market. As of the early part of 2024, over 7 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, even more so now with the LA Fire Storms, yet at the same time there are some new entrants into the market.

Insurance Exit Happing in Oregon and Other Western States. In Oregon, Colorado, the insurance industry is raising premiums, not renewing policies and exiting certain parts of these states. In Oregon, 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, Oregon 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.

Drawing Hard Lines Where Insurance Will Provide Cover. In Oregon, 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 owners are further removed from a manned fire department. Because many of the insurance carriers use ISO Protection Class numbers for determining fire danger, they are drawing hard lines around where they will write based on these numbers.

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 Oregon is 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. In 2024, the United States had 27 billion dollar disasters. Oregon had one in 2024, the January wind storms. In 2023, there were a total of 25 billion dollar disasters in the US, 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 has been a very clear upward trend since 1980. Given all these losses, the insurance and reinsurance industry is having to decide what perils it can afford to cover and in which markets. The losses are growing greater than the total available cover.

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 Palisades and Eaton Fires which burned over 10,000 homes in 2025, the Lahaina Fire in 2023, and 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. The enormity of these disasters with immense payouts have rattled the insurance market and constrained their ability to do new business in fire prone states. 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 dozen communities, 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 are at risk of happening in areas overweight with the FAIR plan.

Risk of Market Collapse. There is a decent risk that the whole insurance market in California will collapse if the FAIR plan is hit with a loss beyond its reserves. The California situation appears to be a harbinger of what we might see or already are seeing in other Western States. 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. First Street predicts at -19 to -38% correction in real estate values. Banks might not be able to lend in significant parts of California and, in turn, the ability of municipal governments to issue bonds may likewise be compromised.

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? PBS Weathered produced an episode on this topic featuring interviews with Roy Wright from IBHS and Nancy Watkins from Milliman entitled: 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 that homeowners and communities can prevent their homes and communities from burning in extreme conditions. What will it take to shift our 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 response and mitigation. 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, spent 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, the Missoul Fire Lab, the National Fire Protection Association, the Fire Safety Research Institute, and the National Institute for Standards and Technology which shows how important the design of the home and its immediate surroundings are to preventing it from igniting. 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. Governments are largely spending money in reactive ways, not in proactive ways that bends down the risk curve for homes and communities. The 1990s approaches - expensive suppression and landscape scale vegetation management - are not keeping up with the 21st Century climate, and are why we need to put significant investments in resilient homes and to help communities become prepared for inevitable wildfires.

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. Fuel breaks can work in favorable conditions, but not in the target conditions where communities burn down. In contrast, modifications to a home and community are mostly durable over space and time, and far easier to maintain over space and time.

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.

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://head waterseconomics.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.sandiegou niontribune.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://story maps.arcgis.com/stories/83af63bd549b4 b8ea7d42661531de512

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 Wildfires." 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-igni tions-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/Preparinghomes-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:e2022EF003330. 2022EF003330. https://doi.org/10.1029/

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-5q4yvw/

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.wonder-labs.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