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WILDFIRES AND INSURANCE: RECOVERY OF IMPACTED COMMUNITIES

Senate Insurance Committee and
Assembly Insurance Committee

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Napa Valley College

Last year, wildfires tore through the state, burning 1.2 million acres of land and destroying over 10,000 structures (more than the previous nine years combined). These events resulted in almost 68,000 insurance claims totaling about $14 billion. But the standard homeowner's policy is designed for the once-in-a-while single home fire. Recent catastrophic fires have dramatically increased rebuilding costs and raised questions as to whether the standard homeowner's insurance policy meets the needs of consumers when thousands of homes are lost at the same time. This paper provides a roadmap of the insurance policy, the rebuilding process, and the insurance claims process. It also examines the coverage needed following a catastrophe compared to the standard policy, as well as how homeowners, communities, and insurers are responding to the ever-increasing threat of wildfire.

Homeowner's Insurance Basics

A home is frequently a family's most important asset. Homeowner's insurance not only provides money to rebuild or repair the home when damaged, but also provides financial assistance to help families bear the added cost of living while the home is repaired or rebuilt.

A typical homeowner's policy will protect against a variety of property and casualty losses with each typically having a separate coverage limit. Dwelling coverage (referred to as “Coverage A”) pays for damage to or destruction of the dwelling and related costs. Damage or destruction of other structures on the property such as fences and freestanding garages (referred to as “Coverage B”) is considered separately from the dwelling loss. Damage or destruction to personal property such as furniture, clothes, appliances, and electronics (referred to as “Coverage C”) is also separated out from dwelling coverage. Standard policies also cover additional living expenses (referred to as ALE), such as temporary housing, while a home is replaced or repaired. Some risks, such as earthquake and flood, are usually not covered by a standard homeowner's policy (separate coverages are available for those risks). If the policy limit is not sufficient to rebuild or repair the home, the homeowner is responsible for the remaining expense.

There are a few basic types of homeowner's policies in terms of dwelling coverage:

Actual Cash Value – This policy provides for the cost to repair or replace the home (less depreciation) and caps the coverage based on the estimated normal cost of replacement.

Replacement Cost – This policy provides for the cost to repair or replace the home (without depreciation) and caps the coverage provided based on the estimated normal cost of replacement.

Extended Replacement Cost – Like the replacement cost policy, this policy provides for the cost to repair or replace the home (without depreciation) up to the estimated replacement cost, but provides additional coverage should the cost of replacement exceed the dwelling limit. This additional coverage typically increases the dwelling limit by 25% - 50%.

Guaranteed Replacement Cost – This policy does not have a limit on the dwelling coverage (although premium is charged based on the estimated normal replacement cost).

Stated Value – This policy provides coverage for a predetermined amount in the case of a loss. Stated value policies are commonly used to cover mobilehomes.

Most policies require a deductible, an amount the insured must pay before coverage applies. Limits, deductibles, and exclusions are ways to define both the coverage provided and the risk borne by the homeowner (sometimes referred to as “risk retention” or “self-insurance”). Risk retention provisions are included to eliminate/reduce small value claims for losses easily borne by the homeowner, and to provide a financial incentive to the homeowner to take responsibility for protecting the property. The less risk transferred to the insurer (higher deductibles and lower limits), the lower the premium charged for the policy. However, lower premium (and the associated reduced coverage) increases what the homeowner may have to pay out-of-pocket.

Usually, Coverage A” establishes the baseline for calculating other limits. The chart below describes the various coverages and common limits for those coverages.

Coverage	Description	Common Limit
A. Dwelling	Pays for damages to the house and attached structures.	Consumer selects
B. Other Structures	Pays for damages to fences, tool sheds, freestanding garages, etc.	10% of Coverage A
C. Personal Property	Reimbursement for the value of lost possessions such as furniture, clothing, appliances, and others.	50% of Coverage A
D. Additional Living Expense (ALE)	Reimbursement for additional living expenses while the home is repaired.	20% of Coverage A
E. Personal Liability	Pays for financial losses arising from some forms of legal liability.	Consumer selects
F. Medical Payments	Pays for medical expenses for people injured on the property.	Consumer Selects

Policies may also provide code upgrade coverage (typically with an additional premium charged) to pay for costs of rebuilding based on updated building codes. One expert notes that code upgrades to a home built before the early 2000s can drive up construction costs as much as 20%.[1]

Some insurers offer to increase the limit annually based on inflation and/or the increased the cost of building. The premium charged will reflect the increased coverage. These mechanisms are designed to prevent the value of the Coverage A limit from eroding over time, but these increases may not suffice when the cost of rebuilding increases dramatically after a catastrophe.

Rebuilding After a Catastrophe

In the last two years, California has suffered three of its top 20 largest wildfires (by acreage), five of the most deadly, and six of most destructive (in terms of structure loss).[2] Almost 10,000 structures were destroyed in 2017; the Tubbs, Nuns, and Atlas fires together account for 7,774 structures. Rebuilding after any disaster is a daunting task, but California has never seen the scale of devastation these wildfires have left on so many homes and communities.

Insurance payments not only provide the resources to individual homeowners to rebuild, they also put financial resources into the community which supports long-term recovery. For the individual, insurance helps to pay for temporary housing and purchase new clothes, cars, and other necessities, as well as provide a resource to rebuild the home. This purchasing power supports local businesses, and the rebuilt homes revitalize a decimated property tax base.

[1] Laura Newberry, *One year after California's most devastating wildfire, Santa Rosa is a patchwork of loss and renewal*, Napa Valley Register (Oct. 18, 2018), https://napavalleyregister.com/news/local/one-year-after-california-s-most-devastating-wildfire-santa-rosa/article_0f5d46ce-ad9e-5547-9f48-ae2fc43bdf29.html.

[2] California Department of Forestry and Fire Protection, *Top 20 Largest California Wildfires (Sept. 5, 2018)*; *Top 20 Deadliest California Wildfires (Aug. 20, 2018)*, *Top 20 Most Destructive California Wildfires (Aug. 20, 2018)*; http://cdfdata.fire.ca.gov/incidents/incidents_statsevents.

The Process of Rebuilding

The goal of a homeowner's insurance contract is to get the home rebuilt. But there are many steps that come before that: debris must be removed, a contractor selected, building plans approved, permit fees paid, and the house constructed. Delays can increase construction costs and lengthen the period that a displaced insured relies on ALE coverage. Most homeowners have not been through the process of building a home and may need to find a contractor or qualified architect that can help to coordinate the process.

Typically, the process starts with removing debris. Debris includes the ashes and rubble, compromised foundations and driveways, and other remnants of the home and belongings. The cleanup after a major fire has become more complicated because of the potential environmental impact. Our homes are increasingly populated with hazardous chemicals that are released in a fire. After recent major fires, local governments have worked with state and federal agencies to provide for consolidated debris removal for affected homeowners. Under this process, homeowners have the option to sign over their rights to debris removal payments from their insurer and are relieved of any financial responsibility for the cleanup.

The 2017 fires caused so much damage and created so much hazardous waste that the Governor's Office of Emergency Services, Federal Emergency Management Agency and local officials are working with the U.S. Army Corps of Engineers (USACE) to remove debris. Although the USACE routinely cleans up after hurricanes or floods, these were their first wildfire cleanup projects. Most of the debris removal operations arising from the 2017 fires were completed by May 2018.[3] However, complaints were raised that some properties were over-excavated and left with gaping pits or that contractors damaged driveways, pipes, and septic tanks. Some of those repairs are ongoing. Other homeowners did not participate opting for privately funded cleanup.

Once the lot is prepared the builder must still have building plans approved by the local planning agency. Even pre-existing plans may need to be updated to reflect new energy efficiency, environmental, and safety standards. In areas where housing meets or intermingles with undeveloped wildlands, called the Wildland Urban Interface (WUI), special standards apply because of the consistently high risk of fire.[4]

Some local governments have out-sourced some or all of the permit review process in order to expedite recovery in fire areas. The insurance policy covers the fees required to rebuild, but those fees are charged to the Coverage A limit. Some local governments have waived fees, but other could only lower them out of concern that a waiver would jeopardize federal assistance funds. These fees can be sizable. Sonoma County lowered its fees but may still charge more than $10,000 to rebuild a 1,500 square foot home and more than $14,600 if it's 3,000 square feet.

[3] County of Sonoma and City of Santa Rosa, *Major Debris Removal Operations are Complete Following October 2017 Wildfires In Northern California* (May 10, 2018), https://www.sonomacountyrecovers.org/major-debris-removal-operations-are-complete-following-october-wildfires/.

[4] Chapter 7A of the California Building Code and Chapter R337 of the California Residential Code.

(Prior to the reduction, residents would have been charged between $35,800 and $69,500.[5]) Homeowners that build beyond the original floor area may be subject to development impact fees for schools, parks, sewer, and other public infrastructure.

With debris cleared and a permit issued, a contractor can begin work. Selecting a contractor under normal circumstances is difficult, but may be far more problematic when competition is so high, especially if the homeowner is having insurance problems. After catastrophic events, homeowners may be desperate and contractors can be in short supply which allows them to dictate their terms and refuse to accept work with potential uncertainty or undue bureaucratic delay.

Areas with a healthy pool of native contractors may have a better starting position to rebuild. But outside contractors will also flow in when they see an opportunity. There are reports that contractors left Lake County, where construction prices were running $200 to $250 a square foot, for more profitable locations like Sonoma County where costs exceeded $400 per square foot.[6] Outside contractors need temporary housing for workers at a time when it is at its highest demand. Damaged roads and other infrastructure may increase delays. Delays lead to higher costs and may impair a contractor's ability to meet other obligations.

The additional costs arising from a catastrophe results in what some experts call "loss amplification," a dramatic and temporary increase in the cost to rebuild following a large-scale disaster. Loss amplification is driven by "demand surge" when scarcity of supplies and labor drive up the cost and other factors.[7]

Claims Issues

In the midst of rebuilding their life and home, the insured must shepherd an insurance claim through the settlement process. This process starts when the insured notifies the insurance agent or insurer. The Unfair Practices Act[8] and the Fair Claims Settlement Practices Regulations [9] govern these claims and impose timelines and prohibit conduct an insurer might engage in to leverage an unfair settlement.

The insured may need to submit a proof of loss form that provides basic information about the claim. The insurer will assign an adjuster to investigate the claim and inspect the property if necessary. The adjuster is the insurer's key person when evaluating the claim to see whether the damage is covered and determine the cost to repair or rebuild.

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[5] J.D. Morris, *Sonoma County post-fire reconstruction permit fees reduced, but fire victims wanted more*, The Press Democrat (Dec. 31, 2017), https://www.pressdemocrat.com/news/7813056-181/sonoma-county-post-fire-reconstruction-permit.

[6] Cynthia Hubert, *They lost their home in a massive 2015 wildfire. Their story shows what new victims can expect*, Sacramento Bee (Aug. 4, 2018), https://www.sacbee.com/news/state/california/fires/article215263200.html#storylink=cpy.

[7] Auguste Boissonnade, Ph.D., Modeling Demand Surge, Presentation at Stanford University (Mar. 26-27, 2007), www.ripid.ethz.ch/PPT/Hallegatte_ppt.pdf.

[8] Ins. Code § 790 et seq.

[9] 10 CCR 2695.1 et seq.

There are a few ways to establish a value for the claim. The adjuster may develop or hire another party to develop a "scope of loss" that will describe in detail the damage to a structure and estimate the materials and costs to rebuild it. The insured may wish to hire their own expert, such as an architect or contractor, to prepare a "second opinion." Adjusters may rely on software tools to calculate an estimated repair or rebuild cost. Some consumer advocates warn that these software tools may not provide accurate estimates, particularly after a catastrophic fire. They cite fluctuations in construction costs after a large fire, as well as problems in communities with unusual housing stock (e.g., complex lots, historical buildings, strict design standards) that are not well represented in these tools. One construction industry representative estimates the real cost of framing and roofing in Sonoma County may be about twice as much as the amount offered by some insurers.[10]

The adjuster may request that the claimant submit documentation to support the claim such as lists of personal property and estimates for repair. The adjuster may also facilitate advance payments for certain expenses such living expenses, replacing personal contents, and funds to rebuild or repair the home or property.

While insurance companies maintain a staff of company adjusters, when faced with a major event they typically rely on independent contractors who specialize in catastrophes ("cat adjusters"). Cat adjusters follow disasters all over the country to adjust claims for any number of insurers who may have different procedures, documentation requirements, and settlement standards. The use of cat adjusters provides insurers with the added capacity needed to handle a sudden surge of claims. However, cat adjusters face challenges in understanding local building costs, unique features of California law, and generally have less experience with catastrophic fires. (Nationally, wind, hail, and water damage typically represents around 65% of the homeowners insurance losses, while fire and lightning damages represent about 25%.)[11]

Insurers' frugality may play an important role in stabilizing and keeping costs down. In an unstable market, contractors can change or raise prices and be selective about their jobs. Some experts suggest that demand surge occurs when insurers expand coverage or adjusters are unable to scrutinize claims properly after a disaster.[12] When contractors can be selective, they may be less inclined to accommodate the demands of an insurer, such as when they are preparing a replacement estimate for the home. That invites more headaches for the insured who can be caught between an adjuster demanding extensively documented estimates and contractors unwilling to provide them. Such delays can also increase stress for homeowners facing limits on the ALE provided.

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[10] Bill Swindell, *Insurance shortfalls hamper Sonoma County fire victims' ability to rebuild*, The Press Democrat (Mar. 26, 2018), https://www.northbaybusinessjournal.com/industrynews/insurance/8156165-181/insurance-shortfalls-hamper-sonoma-county.

[11] Insurance Information Institute, *Facts + Statistics: Homeowners and renters insurance*, last accessed on Oct. 25, 2018, https://www.iii.org/fact-statistic/facts-statistics-homeowners-and-renters-insurance.

[12] Anna H. Olsen and Keith A. Porter, *What We Know about Demand Surge: Brief Summary*, Natural Hazards Review, Vol. 12, Issue 2 (May 2011), sparisk.com/pubs/Olsen-2011-NHR-WWKADS.pdf, p.65; Mark E. Ruquet, *Demand Surge Not Driven By Economic Demand*, PropertyCasulaty360 (Mar. 19, 2009), https://www.propertycasualty360.com/2009/03/19/demand-surge-not-driven-by-economic-demand/?slreturn=20180925073304.

On October 14, 2017, the Insurance Commissioner issued a notice to insurers asking them to expedite claims handling procedures for wildfire damage claims in order to help fire victims recover more quickly. Those voluntary, expedited procedures included a four month advance on ALE upon request of the insured, an advance payment of at least 25% of policy limits for contents (Coverage C) after a total loss, a 30 day grace period for billing leniency, and a less burdensome itemization of contents in wildfire total losses, including grouping of items into categories. Most of the major homeowners' insurers in the state agreed to the expedited processing for claimants, and some agreed to offer up to 75%-80% of contents coverage without requiring an inventory. According to the Department of Insurance, a few companies offered 100% of contents coverage to their insureds who suffered a total loss. On December 21, 2017, the Insurance Commissioner sent another notice to insurers calling on them to provide up to 100% of contents coverage limits to victims of the wildfires without requiring claimants to complete a detailed inventory.

United Policyholders is a nonprofit organization that advocates for residential insurance policyholders. They survey fire-impacted insureds regarding their insurance experiences. They released a 2017 North Bay Fires Survey which covers responses between August 7, 2018, and October 1, 2018. The responses came from 555 households representing 1,335 individuals. Of those responding to United Policyholders:

- 24% received 100% of their contents benefits without being required to complete an itemized home inventory;
- 50% received varying amounts of contents benefits without an inventory; and
- 62% have or intend to submit a *complete* inventory.

Together the Atlas, Nuns, and Tubbs fires destroyed over 5,700 homes. Napa County lost over 600 and Sonoma County lost over 5,000. Homeowners are competing for limited resources in a time when their worlds have been ripped apart. The frustrations and challenges of rebuilding, especially when coupled with insurance difficulties, may discourage homeowners from rebuilding at all.

The losses have been astronomical. Many of the homes in both counties are covered, at least in part, by insurance. The chart below, compiled from data published by the Department of Insurance, shows insured losses from the 2018 mudslide and the 2017 and 2018 wildfires in the two counties (including data for Santa Rosa) for residential properties.[13]

Jurisdiction	**Claims**	**Total Losses**	**Direct Incurred Losses**
Napa County	2,607	492	$1.2 billion
Sonoma County	14,975	4,869	$7 billion
Statewide	50,604	7,886	$11.7 billion

Given the challenges involved with rebuilding, homeowners must decide whether to rebuild or relocate. Of those responding to the United Policyholders survey:

[13] California Department of Insurance, *Insured Losses from the 2018 Mudslide and the 2017 & 2018 Wildfires* (Sept. 6, 2018), https://www.insurance.ca.gov/0400-news/0100-press-releases/2018/upload/nr106Insuredlosses090618.pdf.

- 62% of survey respondents plan to rebuild;
- 17% do not plan to rebuild; and
- 20% are undecided.

Of the 17% who do not plan to rebuild, 67% reported that their insurance company is restricting their benefits to buy elsewhere (ex. deducting land value, not willing to pay extended replacement cost or not willing to pay code upgrade coverage), and 53% have reported that they have not yet settled the dwelling portion of the claim.

Progress Report: Napa and Sonoma Counties and the City of Santa Rosa

Rebuilding for the individual and the community is a challenge. Both Napa and Sonoma Counties have made efforts to streamline, expedite, and assist affected homeowners, but it will still take a long while to recover.

According to Napa County, 653 homes were lost. Currently it has received 172 residential permit applications for those homes it lost in 2017. The county has issued 103 permits with 83 homes under construction. Only one home has been rebuilt. Napa County is on track to recover about 26% of the homes lost.

Sonoma County (including Santa Rosa) took the brunt of the damage from the fires losing over 5,000 homes. Unincorporated Sonoma County has issued 702 residential permits. The City of Santa Rosa has issued about 1,000 permits. Two neighborhoods in Santa Rosa that have received the most attention in the press are Coffey Park and Fountaingrove.

Coffey Park is a middle-income community originally built on standard lots with standard models by a few builders in the 1980s. It is not near a forested area and was not considered high fire-risk area. These homes were ignited by embers driven miles from the fires by the wind. Those embers likely landed on flammable material, such as roof or deck, that were blown into an attic vent, or fell on yard debris.

Relative to other areas, rebuilding in Coffey Park is progressing faster and costing less. Many homeowners are choosing a standardized model with pre-approved plans for homes which makes the costs more predictable. The lots are flat and lend themselves to building. Although there are reports of homeowners that lack adequate coverage, the costs in Coffey Park are not spiking as high as other areas (running about $280 per square foot for a group build).[14] The first home in Coffey Park was completed in late May.[15] Recent data from the city shows that, of the 1,253 parcels involved in some sort of recovery, 30 residences have been rebuilt, 543 are under construction, 148 permits have been issued with construction pending, and 127 permits are under review.

Progress is much slower in Fountaingrove (an upscale neighborhood where custom built homes dot the steep slopes and canyons). This area had seen fire before. The 1964 Hanly Fire followed

[14] Swindell, *supra*, note 10.

[15] Cornell Barnard, *First home rebuilt in Santa Rosa's Coffey Park after North Bay fires*, ABC7 News (May 24, 2018), https://abc7news.com/first-home-rebuilt-in-santa-rosas-coffey-park-after-north-bay-fires/3517817/.

nearly the same path as the Tubbs Fire.[16] The Tubbs Fire ravaged almost 1,800 structures in that area and was so severe that some water pipes melted and contaminated the water supply with benzene and other pollutants.

Reports indicate building costs of $600 per square foot or more (some as high as $800).[17] The first home in Fountaingrove was completed in early September. [18] No other homes have been completed. Recent data from the city shows, of the 1,243 parcels involved in some sort of recovery, 161 residences are under construction, 76 permits have been issued with construction pending, and 111permits are under review. The chart below compares the progress of the two neighborhoods.

Rebuilding Homes	Parcels	Construction Complete	Under Construction	Permit Issued, Const. Pending	Permit In Process
Coffey Park	1,253	30	543	148	127
Fountaingrove	1,243	1	161	76	111

While examining the rebuilding progress in these various communities does not speak directly to the insurance experiences of the homeowners, it does illustrate what sort of homes and communities will be more or less affected by loss amplification and unpredictable swings in replacement costs.

"The Right Amount" of Coverage

Coverage A limits are based on an estimate of the cost to fully replace the home under normal circumstances. If the limit is set too low and the coverage will not be enough to rebuild it following a loss, it can be considered "underinsured." If the limit is set too high, the home will be over-insured and the insured is paying for coverage they won't use. Existing law places the responsibility to select coverage limits on the insured.[19] While homeowners might have an intimate knowledge of the home, they are not likely to know much about construction costs. Homeowners can (but rarely do) hire a contractor or a specially trained real estate appraiser, or other expert to prepare an estimate, but that could cost a few hundred dollars. Most commonly, the replacement cost estimate provided by the insurer is the basis for setting the Coverage A limit.

The insurer will usually offer an estimate generated by third-party software that uses publicly available information about the home and construction costs, supplemented with information provided by the homeowner. The estimates produced by different insurers are likely to vary, possibly significantly, based on the software they use. Estimates are by nature highly sensitive to assumptions, and rebuilding estimates are no different. Accordingly, there are a range of reasonable rebuilding estimates for any given home. A homeowner can choose an estimate at the

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[16] Kevin McCallum, *After burning twice in 53 years, should Fountaingrove even be rebuilt?*, The Press Democrat (Oct. 30, 2017), https://www.petaluma360.com/news/7581315-181/after-burning-twice-in-53.
[17] Swindell, *supra,* note 10.
[18] Wayne Freedman, *First home completed in Santa Rosa's Fountaingrove after wildfire destroyed community*, ABC7 (Sept. 4, 2018), https://abc7news.com/first-home-completed-in-fountaingrove-after-wildfire-destroyed-santa-rosa-community/4146724/.
[19] *Everett v. State Farm General Ins. Co.* (2008) 162 Cal.App.4th 649.

lower end of the range and assume a higher risk (and pay a lower premium) or at the higher end of the range and assume less risk (and pay a higher premium). Some insurers allow agents/brokers to set Coverage A limits within a narrow band around the replacement cost estimate. There is evidence (supported by anecdote and intuition) to indicate that consumers select insurance based on price. A global consumer survey indicates that half of insurance consumers make their decisions based on cost rather than adequacy of coverage.[20] Thus, absent any intervention, consumer behavior tends to drive down Coverage A limits

The uncertainty in rebuilding estimates has been recognized for some time. Extended Replacement Cost (ERC) policies are designed to provide homeowners with protection from some of this uncertainty. ERC policies are widely available and some large market share insurers have indicated that approximately 80% of their policies have ERC coverage. However, most ERC policies will fall short if construction costs double or triple after a catastrophe.

In recognition of the challenge presented in establishing sound Coverage A limits, a number of actions have been taken in recent years:

- The Department of Insurance adopted regulations that require replacement cost estimates to consider a number of essential factors including the cost of labor and materials, debris removal, plans and permits, the type of foundation and frame, roofing, siding.[21]

- The Department of Insurance also adopted a regulation requiring agents and brokers to take a special three-hour course on homeowner's insurance valuation.[22]

- The Department of Insurance regulations also require insurers to verify that the software generating replacement cost estimates is updated at least annually.[23]

- The Legislature recently passed Assembly Bill 1797 (Levine) which require insurers to provide updated estimates every two years or include automatic inflation escalators to policy limits.

- Lastly, California law requires insurers to provide multiple disclosures about the risks of underinsurance.

Still, these "reformed" estimates and disclosures are in service of generating a more accurate estimate in a standard loss scenario, not in a post-catastrophe scenario associated with demand surge. To make matters more complicated, not all disasters result in demand surge. Some research suggests that demand surge is affected by conditions unrelated to the event, including the influence of other catastrophes that have occurred nearby and whether the construction sector

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[20] Swiss RE, *Underinsurance of property risks: closing the gap*, Sigma (No. 5, 2015), p. 21, media.swissre.com/documents/sigma5_2015_en.pdf.
[21] 10 CCR 2695.183.
[22] 10 CCR 2188.65.
[23] 10 CCR 2695.183(e).

is in a growth stage.[24]

The United Policyholders survey also queried respondents about their insurance experiences and found that:

- 34% of respondents reported experiencing delays in communication with their insurer;
- 30% reported delays in payment of benefits; and
- 31% of survey respondents reported receiving a "lowball" settlement offer.

In response to recent fires, the Legislature enacted several bills (a summary list is provided in appendix A) designed to better address the needs of disaster victims. While actual replacement costs might be hard to predict, catastrophic events are predictably becoming more frequent. Climate change, tree mortality, wildfire management practices, population growth in high-risk areas, and other factors have greatly increased the losses from wildfires. Massive simultaneous losses are driving up rebuilding costs and aggravating a severe affordable housing problem. To the extent insurance coverage does not keep pace with the risk, the types of challenges communities are seeing today may get worse.

The Cost of a Scenic View

As more people move into high risk areas, such as the WUI, the potential for catastrophic losses grows. About four million California homes are located in the WUI with a quarter of those in areas at high- or very high-risk for wildfire.[25] Several experts suggest that increased forest management alone will not prevent significant losses either and that fire losses in the WUI are not a *forest fire* problem, but one of community planning.[26] Since catastrophic fires are far more likely to occur where there is fuel and human-related ignition sources, communities should build in ways and locations with fire risks in mind.

In order to avoid wildfire risk, the home must be built in a low-risk area. An insured can take steps to mitigate fire risk for each individual home, sometimes called fire hardening. Fire hardening includes clearing brush, installing ember resistant screens, or using special types of roofing. However, these efforts can have limited effectiveness in catastrophic situations and are most effective when a critical mass of homeowners have treated their homes (similar to herd immunity for vaccines). State laws have expanded to address building standards in the WUI and other high-risk areas and require new homes to be built with fire resistant materials. Nonetheless, even those homes are not immune, and little is being done to bring older homes into compliance with the new standards.

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[24] David Döhrmann, Marc Gürtler, and Martin Hibbeln, *An econometric analysis of the demand surge effect*, Working Papers IF44V1, Technische Universität Braunschweig, Institute of Finance (2013), https://ideas.repec.org/p/zbw/tbsifw/if44v1.html.

[25] California Department of Insurance, *The Availability and Affordability of Coverage for Wildfire Loss in Residential Property Insurance in the Wildland-Urban Interface and Other High-Risk Areas of California: CDI Summary and Proposed Solutions* (Dec. 2017), p. 1, https://www.insurance.ca.gov/0400-news/0100-press-releases/2018/upload/nr002-2018AvailabilityandAffordabilityofWildfireCoverage.pdf.

[26] Max Moritz, *Translating Research into Policy & Planning Reforms* (Sept. 2018).

Human efforts to prevent destruction by fire have a limited effectiveness in many cases. In 2017, the Thomas Fire in Ventura County indiscriminately destroyed more than 150 homes despite strictly enforced defensible space standards (clearing and landscaping standards designed to keep fuels away from the homes).[27] Although defensible space perimeters primarily give firefighters room to work, they are not as effective at keeping wildfires from spreading.

The City of Santa Rosa, developers, and others were well aware of the fire risks of building in Fountaingrove and the community took several steps to avoid or mitigate fires. Homeowners paid $67 per month to reduce weeds, remove dying trees, maintain firebreaks, etc. and the city imposed code restrictions that included forms of home hardening.[28] Again, these measures might help, but will not likely prevent wildfire destruction in high risk areas in all circumstances.

As long as the affordable housing crises squeezes California residents and local governments alike, compromises are likely to be made and development in the WUI is likely to continue. This is not a new problem. According to recent study published in the National Academy of Sciences:

> The number of houses within burned areas in the different decades is a strong indication of how much WUI growth can exacerbate wildfire problems. In 1990, there were 177,000 houses within the perimeters of the fires that occurred in the subsequent 25 y. By 2010, there were 286,000 housing units in the same fire perimeters, i.e., 109,000 more, which corresponds to 62% growth (far outpacing the average US housing growth rate of 29%). Of these new houses, those built before the wildfires occurred complicated firefighting because more houses had to be protected and more residents had to be evacuated. Similarly, houses built after fires occurred are of concern because new development in areas that burned recently, and thus are known to have a high fire risk, suggests that there is little adaptation to fire risk.[29]

In these areas, destroyed homes are rebuilt beside brand new developments. Unfortunately there is also some evidence to suggest that the higher premiums in high risk areas discourage higher levels of coverage despite the apparent need for higher coverage.

Increasing Fire Risk on the Insurance Market

A recent study sponsored by the California Natural Resources Agency and published by the RAND Corporation compared the insurance market in certain areas of the Sierra Foothills and San Bernardino County. The study also looked at the potential impact of climate change on that market based on recent trends. Although the study only looked at two areas in California, the

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[27] Emily Guerin, *'Defensible Space' Couldn't Keep Thomas Fire From Burning Ventura County*, KQED (Dec. 19, 2017), https://www.kqed.org/news/11638362/defensible-space-couldnt-keep-thomas-fire-from-burning-ventura-county.

[28] Kevin Mccallum, *Fire-scorched Fountaingrove in Santa Rosa focal point of debate over rebuilding*, The Press Democrat (Oct. 28, 2017), https://www.pressdemocrat.com/news/7572376-181/fire-scorched-fountaingrove-in-santa-rosa.

[29] Volker C. Radeloffa et al., *Rapid growth of the US wildland-urban interface raises wildfire risk*, National Academy of Sciences (Mar. 7, 2018), p. 3316, available at http://www.pnas.org/content/115/13/3314.

findings are useful for all Californians who live in or near similar forested areas. That study made several findings pertinent to any conversation on high-risk areas and the insurance market.[30] The study found evidence of the following:

- The average acres burned annually in specified areas of the Sierra Foothills will double by midcentury and, absent aggressive improvements in carbon emissions, double again by the end of the 21st century.
- Homeowners in high-risk areas purchase less as coverage as compared to relative to structure value.
- Although premiums in the higher-risk areas have been growing more rapidly, some insurers maintain that that those premiums do not reflect the full difference in risk from consumers in low-risk areas. The Department of Insurance must approve any rate increase, but has held that the insurers have not sufficiently justified requested rate differentials.
- Climate change could substantially affect the insurance market in some parts of the Sierra Foothills. In some of the highest fire risk, by 2055 the rate per $1,000 of coverage in the admitted market is projected to rise by 18%, the insurance-to-value ratio is expected to drop by 6.5% (homeowners will be even more underinsured), and deductibles will increase by $121.

The study also discusses the recent catastrophic loss on insurers underwriting profits. The underwriting profit represents that portion of the premium that is set aside to pay claims but is not used (insurers also make money through other means, such as investments.) What is not used one year, may be reserved and used in future years. The authors examined the underwriting profits in the homeowners multiple peril line (policies that cover a variety of damage types) and noted that they were highly negative in 2017. Many insurers lost money, and a good portion of those losses were due to wildfire. Those losses were paid for by profits from prior years. The study notes:

> The underwriting experience between 2001 and 2017 illustrates that an extended period of underwriting profits can be wiped out by a very large wildfire or other catastrophic event (a fire following an earthquake, for example). Underwriting profits in the Homeowners Multiple Peril and Fire lines totaled $12.1 billion from 2001 through 2016 combined, and were almost completely wiped out by the results for 2017. Insurers may not believe that the return is adequate to justify the risk, even once investment returns are included.[31]

The study explains that 45% of the 132 insurance companies and 43% of the 76 insurance groups that wrote at least $10 million in direct written premium over this period lost as much as they

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[30] Lloyd Dixon, Flavia Tsang, and Gary Fitts, *The Impact of Changing Wildfire Risk on California's Residential Insurance Market*, RAND Corporation and GreenwareTech (Aug. 2018), p. 47, available at https://www.rand.org/content/dam/rand/pubs/external_publications/EP60000/EP67670/RAND_EP67670.pdf .
[31] *Id.* at 55.

made in underwriting profit or more. In other words, nearly one-half of insurers made no underwriting profit or lost money between 2001 and 2017.[32]

In its report, Trial by Fire: Managing Climate Risks Facing Insurers in the Golden State, the Department of Insurance raises concerns that the impacts of climate change have begun to materialize noting that major insurers have begun withdrawing from some markets and are significantly increasing premiums in the WUI. The Department also notes that insurers have sought to increase deductibles. Some insurers have recently received approval for "split" deductibles that are higher for wildfire damage in an effort to keep rates lower.[33] While these approaches make insurance more affordable, it also shifts more risk back to the policyholder.

Conclusion

There is no "right" answer to the problem of how to provide financial protection from catastrophic wildfire losses. The grim truth is that these losses will occur and the losses will be spread in varying amounts to insurers, the government, or individual homeowners. To the degree we develop public policy to minimize the losses borne by individual homeowners, we are necessarily increasing the degree to which those losses are spread to other policyholders through premiums and/or to taxpayers more generally. Finding the balance between individual responsibility (i.e., paying higher premiums and buying more insurance in high risk areas) and collective protection (i.e., spreading costs and raising premiums in low fire risk areas) is an inherently subjective endeavor. Most any balance found is likely to clash with other difficult and important public policy issues such as the availability and affordability of housing, planning and land use policy, protection of property rights, environmental protection, and climate change. In addition, the Legislature is precluded by Proposition 103 from passing mandates relating to insurance rates. Proposition 103 grants sole authority over rates to the Insurance Commissioner which further constrains the range of policy alternatives available to the Legislature.

Policies that shift these losses, and the cost of bearing the risk of future losses, would create incentives that sometimes support and sometimes impinge on policies being pursued to address these other issues. For example, spreading the losses widely across homeowner's insurance policies and suppressing the cost of insurance in high fire-risk areas will reduce the cost of homeownership in those high risk areas, but increase it in low risk areas. While insurance is a relatively small portion of the total cost of owning a home, for those on the margins an added insurance cost may be the difference between affording a home or not. Assessing how strong an incentive this might present and how it interacts with other policies being pursued regarding further development in the WUI, and the absolute need to build more housing units is a complex and nuanced task. By the same token, pursuing a policy that focuses insurance costs more strongly in high fire risk areas creates the opposite incentives with no less complex and nuanced implications. Any significant policy proposal in this area is based (implicitly or explicitly) on a series of value judgments regarding the relative priority of competing policy priorities and conceptions of fairness.

[32] *Id.* at 53.
[33] California Department of Insurance, *Trial by Fire: Managing Climate Risks Facing Insurers in the Golden State* (Sept. 2018), http://www.insurance.ca.gov/0400-news/0100-press-releases/2018/upload/nr106TrialbyFire090618.pdf.

APPENDIX A – A DECADE OF WILDFIRES

The following list includes the largest, deadliest, and most destructive fires that have occurred in California over the last decade (based on data published by California Department of Forestry and Fire Protection).

Fire Name	Counties	Acres	Structures	Deaths	Ranks
Carr (2018)	Shasta County, Trinity County	229,651	1,604	7	6th Destructive, 7th Largest, 13th Deadliest
Mendocino Complex (2018)	Mendocino, Lake, Colusa, Glenn	459,123	280	1	Largest
Thomas (2017)	Ventura & Santa Barbara	281,893	1,063	2	8th Destructive, 2nd Largest
Tubbs (2017)	Napa & Sonoma	36,807	5,636	22	Most Destructive, 3rd Deadliest
Nuns (2017)	Sonoma	54,382	1,355	3	7th Destructive
Atlas (2017)	Napa & Solano	51,624	783	6	12th Destructive, 14th Deadliest
Redwood Valley (2017)	Mendocino	36,523	546	9	18 Destructive, 10th Deadliest
Cascade (2017)	Yuba	9,989	266	4	20th Largest
Valley (2015)	Lake, Napa & Sonoma	76,067	1,955	4	4th Destructive
Butte (2015)	Amador & Calaveras	70,868	921	2	11th Destructive
Rough (2015)	Fresno	151,623	4	0	16th Largest
Happy Camp Complex (2014)	Siskiyou	134,056	6	0	20th Largest
Rim (2013)	Tuolumne	257,314	112	0	5th Largest
Rush (2012)	Lassen	271,911	0	0	4th Largest
Station (2009)	Los Angeles	160,557	209	2	15th Largest
Sayre (2008)	Los Angeles	11,262	604	0	15th Destructive
Iron Alps Complex (2008)	Trinity	105,855	10	10	9th Deadliest
Basin Complex (2008)	Monterey	162,818	58	0	13th Largest
Klamath Theater Complex (2008)	Siskiyou	192,038	0	2	10th Largest

APPENDIX B – RECENTLY ENACTED LEGISLATION

The following insurance-related measures were enacted in 2018 in response to the 2017 wildfires. More information is available at http://leginfo.legislature.ca.gov/.

SB 30 (Lara), Chapter 614, Statutes of 2018, requires the Insurance Commissioner to convene a working group to assess new and innovative investments in natural infrastructure and insurance products in light of California's worsening fire vulnerability due to climate change.

SB 824 (Lara), Chapter 616, Statutes of 2018, prohibits an insurer from canceling or refusing to renew a homeowners' insurance policy for one year from the date of a declaration of a state of emergency, as specified; and requires admitted insurers with at least $10 million in written premiums in California to biennially report to the California Department of Insurance specified fire risk information on residential property policies.

SB 894 (Dodd) Chapter 618, Statutes of 2018, requires insurers to renew a residential insurance policy for at least two renewal periods (24 months); requires an insurer to grant an additional 12-month extension for a total of 36 months for additional living expense if an insured acting in good faith encounters a delay in the reconstruction process, subject to policy limits; allows an insured to combine payments for actual losses up to the policy limits for the primary dwelling and other structures, limited to the amount necessary to rebuild or replace the home if the policy limits for the dwelling are insufficient; and specifies that the payments for losses under this provision shall be full replacement value without requiring the replacement of the other structures.

SB 917 (Jackson) Chapter 620, Statutes of 2018, provides that if loss or damage results from a combination of perils, one of which is a landslide, mudslide, mudflow, or debris flow, an insurer shall provide coverage if an insured peril is the efficient proximate cause of the loss or damage and coverage would otherwise be provided for the insured peril; provides that this is declaratory of existing law.

AB 1772 (Aguiar-Curry) Chapter 627, Statutes of 2018, extends the minimum time limit for an insured to collect the full replacement cost of a loss related to a state of emergency to 36 months; requires an insurer to provide additional extensions of 6 months if the insured, acting in good faith and with due diligence, encounters a delay or delays in approvals or reconstruction of the home; and requires all policy forms issued or renewed by an insurer to be in compliance with these changes on or after July 1, 2019.

AB 1797 (Levine), Chapter 205, Statutes of 2018, requires an insurer that provides replacement cost residential property insurance to provide to the policyholder, every other year at the time of the offer to renew the policy, an estimate of the cost necessary to rebuild or replace the insured structure, with certain exceptions as specified; and takes effect on July 1, 2019.

AB 1799 (Levine) Chapter 69, Statutes of 2018, requires the complete copy of a residential insurance policy provided to an insured after a loss to include the full insurance policy, any endorsements to the policy, and the policy declarations page; and provides that if the request for a copy of the policy is a result of a loss in a state of emergency, the insurer may, upon the request of the insured, provide an electronic copy of the entire policy, as specified.

AB 1800 (Levine) Chapter 628, Statutes of 2018, prohibits, in the event of a total loss, a residential property insurance policy from containing a provision that limits or denies payment of building code upgrade cost or replacement cost, including extended replacement cost, to the extent those costs are otherwise covered under the policy, based on the fact the insured has chosen to rebuild or purchase a home at a new location.

AB 1875 (Wood) Chapter 629, Statutes of 2019, establishes the California Home Insurance Finder that will connect consumers who need residential property insurance with agents and brokers to help ensure they obtain plans and coverage that suit their specific needs and requires insurers to annually report the amount of extended replacement cost coverage to the Department of Insurance as specified.

AB 2229 (Wood), Chapter 75, Statutes of 2018, requires a residential property insurer to disclose any fire safety discounts it offers upon offer or renewal of a homeowner's insurance policy on or after January 1, 2020.

AB 2594 (Friedman) Chapter 639, Statutes of 2018, revises the standard form fire insurance policy to extend the statute of limitations to bring suit to 24 months after the inception of the loss if the loss is related to a state of emergency, as defined.