

Wildfire & Insurance: Risk, Recovery & Resiliency

Montana Modernization & Risk Analysis

(MARA) Committee October 10, 2024

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Property Insurance Markets Deteriorating

The Palm Beach Post	San Francisco Chronicle					
Florida's property insurance is in crisis.	OPINION // EDITORIALS California's insurance market is a ticking time bomb.					
Florida should end "Citizen's Insurance" as a company of last resort and establish competition for existing and new insurance companies coming into the state.	No one wants to have to pay more, but maintaining the status quo of the state's home insurance market in the face of climate change is even costlier.					
Scott Schneider Palm Beach Post Published 5:25 a.m. ET March 13, 2024 Updated 10:53 a.m. ET March 14, 2024	By Chronicle Editorial Board					
Florida's homeowner insurance crisis has become a nig them out of the state. Home insurance premiums conti competition in the market. The does take time for that to happen — which is why it's all the more important that we hit the regular ast and hard with these legislative changes. The provide previous of reference on the state interview of the state interview						
Newsweek						
Newsweek ifornia's Insurance Crisis Is Spiraling Outof Control						

AM Best Downgrades Personal Lines Insurance – Both HO & Auto (March 2024)

Personal lines insurance outlook = <u>Negative</u> (*first ever*)



- Underwriting losses: 2022-2024(est.) = -\$40/48/21 billion
- "underwriting profitability... over the near term appears highly unlikely"

Auto insurance outlook = <u>Negative</u>



- Worst 3-year stretch of losses in recent memory
- Causes: Inflation, supply chain disruption, record driving, worse driving, technology costs, legal system abuse

Homeowners insurance outlook = <u>Negative</u>



– 5 consecutive years of

underwriting losses (HO & Farmowners Multi-peril 2020-2024p)

What is Causing Increased HO Losses It's not just the weather

Verisk: The factors causing a doubling of average annual natural catastrophe losses over the last decade are (in order of importance):

- 1. A rise in exposure values and replacement costs, represented both by continued construction in high-hazard areas and by high levels of inflation that are driving up repair and rebuild costs
- 2. The natural variability that comes from selecting any five-year sample of natural catastrophe experience
- 3. The effects of climate change on different atmospheric perils
- 4. The impacts of man-made loss drivers, such as social inflation and legal and regulatory factors



Growing Losses

Global Insured natural catastrophe losses (USD bn)



U.S. Insured Natural Catastrophe Losses

Costliest 4-year period ever for U.S. insurers

Since 2020, U.S. insurers have incurred <u>\$381.8 billion</u>, in 2023 dollars, representing <u>72%</u> of global insured natural catastrophe losses.

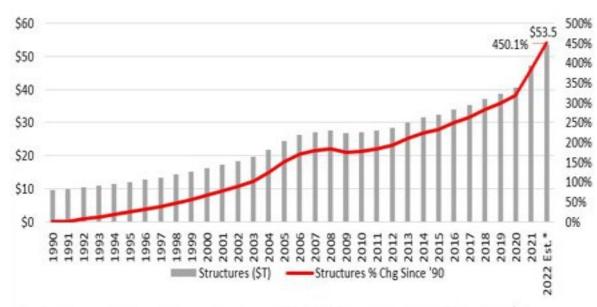


Data Source: APCIA, via Aon Climate & Catastrophe Insight Includes 50 U.S. States & Territories (Puerto Rico, U.S. Virgin Islands and other U.S. territories)



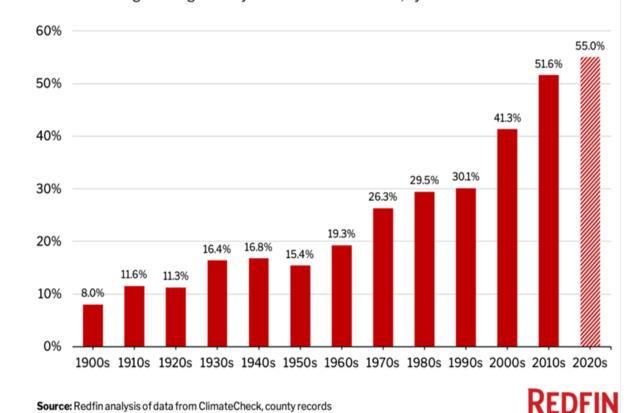
Increasing Cost Inputs & Climate Risk

U.S. Replacement Cost of Structures BEA Current-Cost Net Stock of Private Fixed Assets (\$T)



Source: APCIA using U.S. Bureau of Economic Analysis year-end estimates; Swiss Re 2022 estimate via sigma No 1/2023. ("Structures" include residential and non-residential structures.)

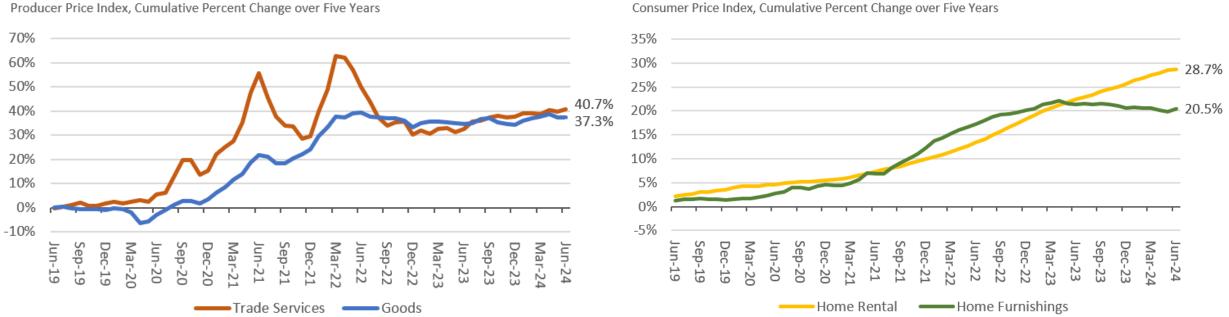
Fire Risk Plagues More Than Half of Recently Built Homes Share of existing U.S. single-family homes that face fire risk, by decade built



Source: Redfin analysis of data from ClimateCheck, county records



Increasing Inflation Cost Inputs: Homeowners Insurance



Consumer Price Index, Cumulative Percent Change over Five Years

Source: U.S. Bureau of Labor Statistics Monthly data Jun 2019 through Jun 2024, as of Jul 16, 2024.

Producer Price Index: Inputs to Single Family Residential Construction, Trade Services ("Labor") Producer Price Index: Inputs to Single Family Residential Construction, Goods

Consumer Price Index for All Urban Consumers: Rent of Shelter Consumer Price Index for All Urban Consumers: Household Furnishings & Operations



Insurance Availability Pressures

Property insurance demand and costs are increasing; capital is decreasing

DEMAND = INCREASING

- Higher Rebuilding Values
- Demographic growth/shifts
- Inflation
- Worsening weather
- Legal System Abuse

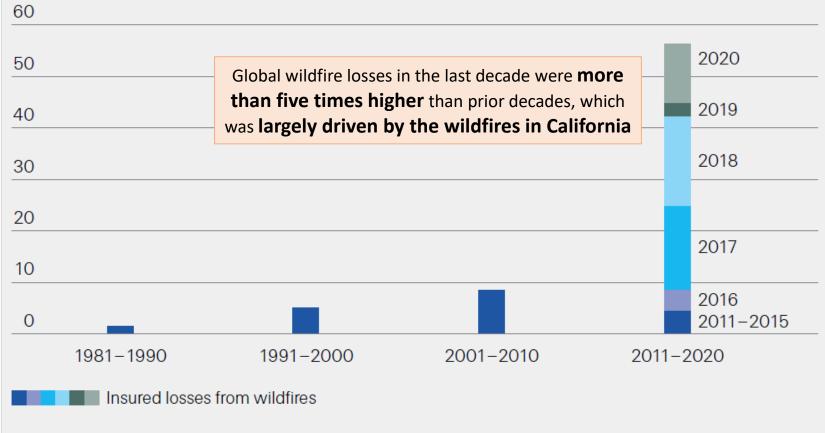
SUPPLY = DECREASING

- Rate suppression/delays

 (1 to 2-year lag time for rate filings, approvals, and rolling into new policies)
- Premiums falling behind losses
- Less surplus
- <u>Lack of profitability + volatility =</u> <u>Deters new investment capital</u>

Increasing Losses from Wildfires

Global insured losses from wildfires (in USD billion, at 2020 prices)



Global Top 10 Costliest Wildland Fires

(Insured Losses in \$ millions, in 2023 dollars)

- 1. \$12,286 2018 Camp*
- 2. \$10,932 2017 Tubbs*
- 3. \$5,206 2018 Woolsey*
- 4. \$3,852 1991 Tunnel
- 5. \$3,748 2017 Atlas*
- 6. \$3,644 2016 Horse Creek (Canada)
- 7. \$3,540 2020 Glass
- 8. \$3,500 2023 Maui (Hawaii)*
- 9. \$3,019 2020 CZU Lightning Complex
- 10. \$2,811 2017 Thomas*

Sources, Aon, Triple-I, RMIIA

Bold emphasis indicates U.S. wildfires * Indicates utility-involved ignition





Global Costliest Insured Wildland Fires *Utility-involved ignitions since 2017*

Rank	Insured Losses	Event	Location		
1	\$12.3 B	2018 Camp 18,800 structures	California		
2	\$10.9 B	2017 Tubbs 5,600 structures	California		
3	\$5.2 B	2018 Woolsey 1,600 structures	California		
5	\$3.7 B	2017 Atlas 700 structures	California		
8	\$3-4 B estimate	2023 Maui 2,200 structures	Maui		
10	\$2.8 B	2017 Thomas 1,000 structures	California		
11	\$2.8 B	2021 Marshall 1,000 structures	Colorado		
(Above losses adjusted to 2023 dollars)					
	\$1-2 B estimate	2020 Labor Day 4,000 structures	Oregon		
	Less than \$1 B estimate	2024 Smokehouse Creek 500 structures, 15k cattle	Texas		

Montana Wildfire Risk is High

States At High to Extreme Wildfire Risk, 2021						
Rank	State	Estimated number of properties at risk	Rank	State	Percent of properties at risk	
	TOTAL	4,515,200				
1	California	2,040,600	1	Montana	29%	
2	Texas	717,800	2	Idaho	26%	
3	Colorado	373,900	3	Colorado	17%	
4	Arizona	242,200	4	California	15%	
5	Idaho	175,000	5	New Mexico	15%	
6	Washington	155,500	6	Utah	14%	
7	Oklahoma	153,400	7	Wyoming	14%	
8	Oregon	147,500	8	Arizona	9%	
9	Montana	137,800	9	Oklahoma	9%	
10	Utah	136,000	10	Oregon	9%	
11	New Mexico	131,600	11	Texas	7%	
12	Nevada	67,100	12	Nevada	6%	
13	Wyoming	36,800	13	Washington	5%	

Montana has the <u>highest</u> 'Percent of Properties at Risk'

Learn More:

'Wildfire Risk in the Wild, Wild, West' -- a three-part white paper series focused on identifying the challenges and opportunities affecting consumers and property insurance markets in wildfire-exposed states.

PART I: INCREASING Wildfire Risk in the Wild, Wild, West -The evolving conditions resulting in growing exposure in the wildland-urban interface

This paper examines the underlying issues contributing to growing exposure and increasing costs in the wildland urban interface (WUI), which are affecting the affordability of insurance in wildfire-exposed regions.

(link: https://www.apci.org/attachment/static/7103)

Source: Verisk, via Insurance Information Institute (data as of As of October 2021).

Montana Wildfire Risk is Very High

Rank	State	low to moderate risk	high to extreme risk	TOTAL
1	Wyoming	48	6	54
2	Montana	39	12	51
3	Texas	39	6	45
4	Oklahoma	42	2	44
5	New Mexico	34	9	43
6	Colorado	21	10	31
7	Arizona	26	5	31
8	Utah	18	6	24
9	Idaho	11	11	22
10	California	12	8	20
11	Oregon	15	4	19
12	Nevada	14	3	17
13	Washington	14	2	16

Montana has the <u>highest</u> '**Percent of Properties at Risk**' (high to extreme risk)

Source: Verisk 'Wildfire Risk Analysis' Note: Structure data is based on Verisk's Industry Exposure Database. This database includes commercial and residential structures.

Link to this report for Montana and other states: <u>https://www.verisk.com/resources/campaigns/location-fireline-state-risk-report/</u>



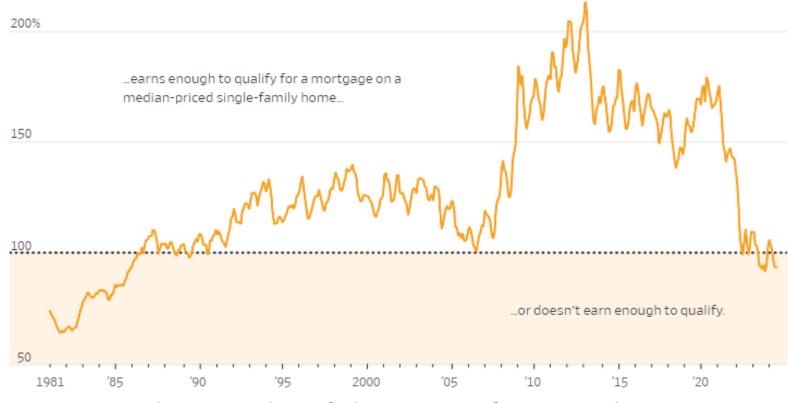
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Homeownership is Getting Harder

Housing Affordability Challenges



The housing affordability index shows whether the typical family...

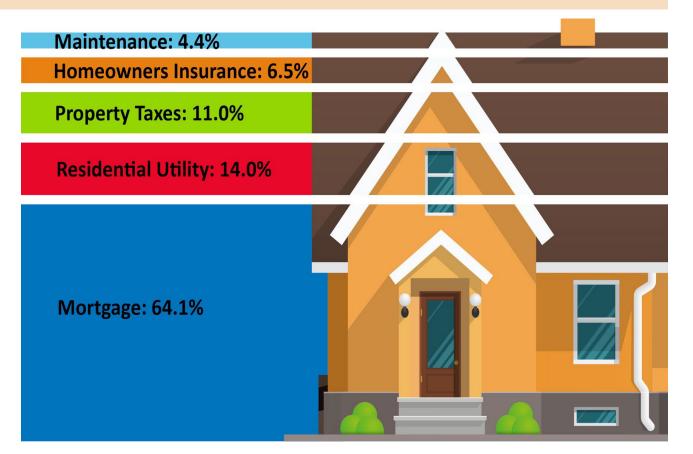


Note: Assuming a 20% down payment and 30-year fixed-rate mortgage. Data for June 2024 is preliminary. Source: National Association of Realtors

Sources: Wall Street Journal August 2024

Monthly Cost of Homeownership Breakdown

HO Insurance is a Small % of the Overall Costs of Homeownership



Sources: Experian, Statista, ATTOM, Statista, Insurify, Bureau of Labor Statistics

Multi-Family Housing Affordability Challenges



Multi-family housing is experiencing some unique challenges:

Aging condos (many built before modern building codes) and deferred maintenance are contributing to increasing risk, adversely impacting condo HOA insurance costs.

Higher interest rates and insurance pricing pressure across all liability lines (in addition to higher construction materials and labor costs) is adversely impacting costs for housing developers and builders of multifamily or lowincome housing projects -- costs they may not be able to fully pass on to consumers, if subject to government rent control.



We cannot suppress, regulate, or market price our way out of the wildfire crisis we must mitigate.

Insurance Institute for Business & Home Safety (IBHS)

Mitigation to Bend the Loss Curve Down



https://wildfireprepared.org/



Started with Two Homes and Ended with Only One Standing

Mitigated Property

Unmitigated Property





Started with Two Homes and Ended with Only One Standing



Living with Wildfire

- Ember resistant in Zone Zero
- Parcel level & Communitywide Mitigation
- Change how we build, landscape & maintain homes



Started with Two Homes and Ended with Only One Standing





... Only <u>One</u> Left Standing



See the video...

NBC Bay Area: https://www.nbcbayarea.c om/investigations/consum er/two-tiny-homes-set-onfire-big-lessons-foreveryone/3360568/

Good Morning America: https://www.goodmorning america.com/news/video/ demo-shows-protecthome-wildfires-103680552

The mitigated home remained largely untouched and still livable.

However, in <u>only 12 minutes</u> of embers igniting vegetation, the unmitigated home is burned to the ground.

Chain of Events Under Extreme Fire Conditions



Conflagration-scale loss events occur when the <u>SPEED</u> of fire spread overwhelms the capacity and response time of our fire suppression

resources, limiting ability to extinguish and/or steer the fire away from the community.

Under extreme fire conditions, only **mitigated properties can slow this progression**, by eliminating fuel sources and pathways that enable the rapid spread of fire.

Link: https://ibhs.org/wp-content/uploads/Suburban_Wildfire_Conflagration_WhitePaper.pdf

1st Home designated "Wildfire Prepared Home"





Paradise, CA (Jun 2022) Photo Credit: <u>https://www.sfgate.com/california-wildfires/article/Paradise-home-is-first-to-be-wildfire-prepared-17263738.php</u>

Building Codes: Performance in Hawaii (2023) (and defensible space)



The fire that devastated historic Lahaina in western Maui left a red-roofed house relatively unscathed. Its owner says he wants to open the house to the neighborhood to help the rebuilding process. Patrick T. Fallon/AFP via Getty Images



Stakeholder Alignment on Policy Priorities

Individual and Community Action

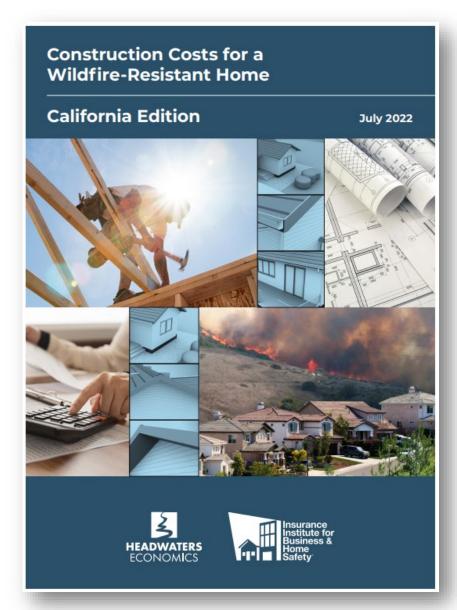
- Where and how we build: Improve land use policies, adopt and enforce building codes/defensible space
- Risk awareness: Updated wildfire hazard maps and wildfire hazard disclosures
- *Resources:* Financial incentives

Alignment on IBHS science: <u>*"Wildfire Prepared Home" framework*</u>

Infrastructure

• Harden electric utility equipment and power lines

American Property Casualty Insurance Association



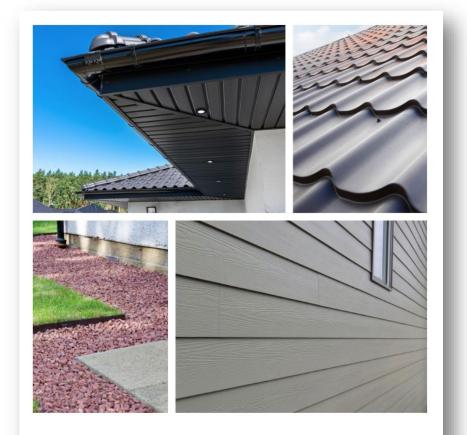
The Cost of Mitigation? Less than you think!

NEW CONSTRUCTION - The report compares the costs for constructing three different versions of a wildfire-resistant home in California:

- Baseline home compliant with the minimum requirements of Building Code Chapter 7A
- **Enhanced home** augmenting Chapter 7A requirements with a vertical under-deck enclosure around the perimeter of the deck and a noncombustible zone around the home (0 to 5 feet), including under the deck and extending five feet out from the deck perimeter
 - *i.e., Wildfire Prepared Home* increased construction costs by approximately <u>\$2,800</u>, above baseline home.
- **Optimum home** constructed to the most stringent, fire-resistant options (e.g., use of a noncombustible material), or in some cases, a "Code plus" option (an option not currently included in Chapter 7A). Optimum performance levels were selected based on recent research findings and best judgment.
 - *i.e., Wildfire Prepared Home PLUS* increased construction costs by approximately <u>\$18,200 (in northern CA)</u> and <u>\$27,100 (in southern CA)</u>, above baseline home.

Link: https://ibhs.org/ibhs-news-releases/new-headwaters-economics-ibhs-study-analyzes-costs-of-wildfire-resistant-construction-in-california/





Retrofitting a Home for Wildfire Resistance Costs and Considerations

Spring 2024

Kimiko Barrett, Ph.D. Stephen L. Quarles, Ph.D



The Cost of Mitigation? Less than you think!

RETROFITTING – The report compares the costs for various levels of wildfire resilience.

A typical 2,000-square-foot home in California, costs can range from:

• <u>\$2,000</u> for minimal retrofits

installing metal flashing at all deck-to-wall intersections (and roof-to-wall intersections)

\$10,000 to \$15,000 for effective retrofitting strategies

Wind-blown embers protection

- installing metal flashing at all deck-to-wall intersections (and roof-to-wall intersections)
- replacement of exterior vents with ember- and flame-resistant vents
- maintaining clean gutters and installing metal gutter guards
- replacing bark mulch with noncombustible mulch such as gravel

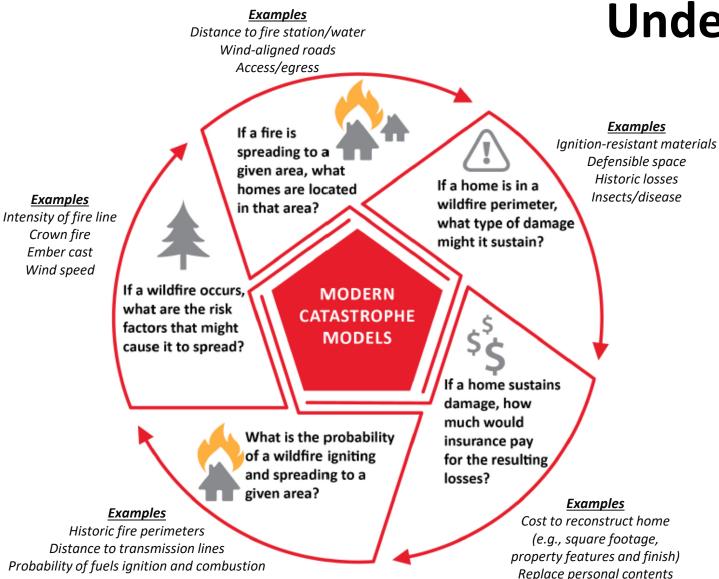
Radiant Heat protection

- enclosing eaves with noncombustible soffit material,
- ensuring windows are dual-paned, metal-clad wood framed with tempered glass,
- replacing the first 10 feet of fencing with noncombustible material

• upwards of \$100,000 for the highest level of protection

• full replacement and upgrading of all exterior components with the highest wildfire-resistant building materials and assemblies (e.g., roof, siding, decks)

Link: https://headwaterseconomics.org/wp-content/uploads/2024/06/Wildfire Retrofit Report 20240624.pdf



Understanding Current Risk

A catastrophe model (or "cat" model): is designed to help *quantify the financial impact* of a range of potential future disasters by informing *where future events are likely to occur* and *how intense they are likely to be*.

Wildfire cat models help identify the interactions between weather, local vegetation, and topography, and are *becoming increasingly more granular* by considering additional *parcel-specific factors such as defensible space and construction materials, as well as mitigation efforts*.



Focus on the 'Low-Hanging Fruit'

New Construction & Reconstruction

- Mitigation Costs: can be financed into mortgage and spread over time
- *Enforcement*: Building codes and ordinances
- *Emotional Barriers*: No existing attachments to vegetation



Change of Ownership

- Mitigation Costs: can be financed into mortgage and spread over time
- *Enforcement*: Defensible space inspection requirement as part of the closing
- Emotional Barriers: Breaks emotional attachment to vegetation adjacent to home*

(*local fire officials suggest this is the most difficult barrier to overcome)



Financial Incentives for Resilience

- **Grants** States or local communities can establish resilience grant programs to help property owners. Programs could include a cost-share match from the property owner or through a public-private partnership.
- Low interest loans States or local communities can establish a revolving fund that helps provide loan interest loans for resilience projects. Alternatively, incorporate funding for mitigation into mortgage costs, to spread over 20-30 years (i.e., points or better rates) or through home equity lines of credit (HELOC).
- **Waive/reduce fees** Communities can provide a rebate, waive, or reduce building permit fees or the cost of designation program inspections, for properties that achieve a qualified resilience designation, such as IBHS FORTIFIED or IBHS Wildfire Prepared Home.
- **Tax credits** States or local communities can provide a variety of tax credits, such as income tax credits for costs to retrofit homes or businesses, sales tax credits for materials purchased to retrofit, or property tax credits for properties that achieve and/or maintain a resilience designation, such as IBHS FORTIFIED or Wildfire Prepared Home.
- **Insurance Incentives** States can encourage insurers to provide premium credits for resilience actions.



Incentives Based on Science: WILDFIRE

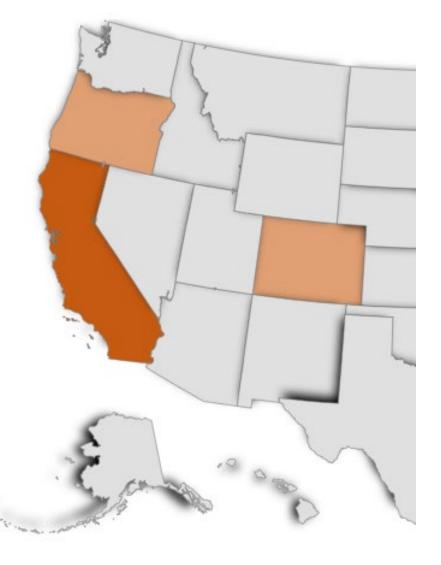
In California, and a couple other states, laws have similarly been passed to require insurers provide discounts for actions that make homes more resilient to wildfire.

The **IBHS Wildfire Prepared Home** standard requires a set of actions to be <u>taken together</u> to meaningfully reduce risk of ignition from embers, direct flames, and radiant heat. Thus, homes that meet (and maintain) this standard are *scientifically shown* to be the <u>most resilien</u>t.

Though, similar action must be taken (and maintained) at a community-scale to fully reduce risk of conflagration events.

https://wildfireprepared.org/





Policy Priorities: Consumer Empowerment

A three-prong strategy to help consumers better manage disaster risk



Mitigation

• Reduce the likelihood or potential severity of a loss, potentially avoiding an insurance claim

Catastrophe Deductibles

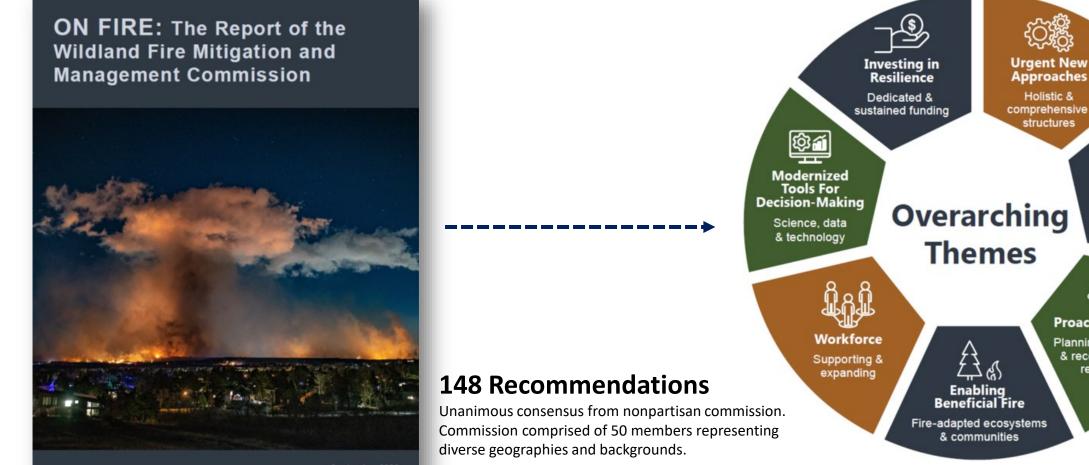
- Increase 'share of risk' (i.e., higher deductible) to reduce insurance costs
- Reinvest premium savings in mitigation or CSA

Catastrophe Savings Account (CSA)

• Establish a pre-tax savings account to help cover predisaster expenses (e.g., mitigation), or in the event of a loss, post-disaster expenses (e.g., deductible)



Federal Efforts to Reduce Exposure and Losses



September 2023

https://www.usda.gov/topics/disaster-resource-center/wildland-fire/commission

Collaboration

Shared

decision-making

đ

Proactive Action

Planning, mitigating & recovering with

resilience



THANK YOU

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Learn more...

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PART I: INCREASING Wildfire Risk in the Wild, Wild, West - The evolving conditions resulting in growing exposure in the wildland-urban interface

This paper examines the underlying issues contributing to growing exposure and increasing costs in the wildland urban interface (WUI), which are affecting the affordability of insurance in wildfire-exposed regions. (link: https://www.apci.org/attachment/static/7103)

PART II: MANAGING Wildfire Risk in the Wild, Wild, West - The growing challenges property insurers face in the wildland-urban interface

This paper examines the constraints and concerns insurers face in managing the peril of wildfire, which impacts both the affordability and availability of insurance for consumers residing in wildfire-exposed regions. (link: https://www.apci.org/attachment/static/7104)

PART III: TAMING Wildfire Risk in the Wild, Wild, West - The current state of mitigation in the wildland-urban interface

This paper provides an overview of the challenges related to wildfire mitigation, in addition to highlighting the latest research on wildfire mitigation and key programs. (link: https://www.apci.org/attachment/static/6885/)

Wildfire Risk in the Wild, Wild, West

A three-part series focused on identifying the challenges and opportunities affecting consumers and property insurance markets in wildfire-exposed states



INCREASING Wildfire Risk in the Wild, Wild West The evolving conditions resulting in growing exposure in the wildland-urban interface

Part I | November 2022





Questions?

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