

Wildfires

THE TOPIC

June 2017

As many as 90 percent of wildland fires in the United States are caused by humans, according to the U.S. Department of Interior. Some human-caused fires result from campfires left unattended, the burning of debris, negligently discarded cigarettes and intentional acts of arson. The remaining 10 percent are started by lightning or lava.

Over the 20-year period, 1996 to 2015, fires, including wildfires, accounted for 1.8 percent of insured catastrophes losses, totaling about \$7.3 billion, according to the Property Claims Services (PCS) unit of ISO. The term "catastrophe" in the property insurance industry denotes a natural or man-made disaster that is unusually severe. An event is designated a catastrophe by the industry when claims are expected to reach a certain dollar threshold, currently set at \$25 million, and more than a certain number of policyholders and insurance companies are affected.

Damage caused by fire and smoke are covered under standard homeowners, renters and business owners insurance policies and under the comprehensive portion of an auto insurance policy. Water or other damage caused by fire fighters to extinguish the fire is also covered under these policies. In California the [California FAIR Plan](#) [1] covers residential and commercial properties located in brush and wildfire areas. Properties in those areas are subject to higher rates due to increased risk of fire.

RECENT DEVELOPMENTS

- **Research:** A 2015 study by CoreLogic identifies almost 900,000 residential properties across 13 states in the western U.S. currently at high or very high risk of wildfire damage. They represent a combined total property value estimated at more than \$237 billion. Of the total properties identified, 192,000 homes fall into the very high risk category, with total residential exposure valued at more than \$49 billion.
- California, Colorado and Texas are the states with the largest number of properties categorized as very high risk, with a combined property value exceeding 36 billion. The exposure jumps to \$188 billion when properties at high and very high risk are included.
- The cost of fighting wildfires reached \$3.5 billion per year from 2002 to 2012 according to a [report](#) [2] by Headwaters Economics, a nonprofit Research group.
- [Harvard School of Engineering and Applied Sciences](#) [3] researchers have concluded that by 2050 the number of wildfires in the West could rise by 50 percent, and across the U.S. the number would double.
- **2017 Wildfire Season:** From January 1 to June 7th, 2017, there were 25,699 wildfires, compared to 21,280 wildfires in the same period in 2016, according to the [National Interagency Fire Center](#) [4]. About 2.3 million acres were burned in the 2017 period, compared with 1.7 million in 2016.
- **2016 Wildfire Season:** There were a total of 5.5 million acres burned by wildfires in 2016. On May 1 of that year, a wildfire broke out in the Alberta city of Fort McMurray. The fire is set to become the costliest ever Canadian natural disaster for insurers, with 1,600 buildings destroyed

and more under threat. Two fatalities are attributed to the fire and the entire population of about 90,000 were evacuated. The smoke from the fire could be seen as far south as Iowa.

- **2015 Wildfire Season:** The 2015 fire season set a new record for the number of acres burned in the United States. Between January 1 and December 30, 2015 there were 68,151 wildfires, which burned 10,125,149 acres, according to the [National Interagency Fire Center](#) [5]. During the same period in 2014, 63,417 fires burned 3,577,620 acres. The previous record was set in 2006 at 9,873,745 acres.

BACKGROUND

Researchers are discovering that embers blown by the wind during wildfires cause most of the fires that burn homes. Also, homes that are less than 15 feet apart are more likely to burn in clusters. In such cases, fire is often spread by combustible fences and decks connected to houses, a study by the Institute for Business & Home Safety (IBHS) found.

The risk of wildfires is likely to continue to grow as temperatures rise, lengthening the fire season, and more people move into steep forested areas once largely uninhabited. Thirty-eight states have wildfire risks, according to IBHS, and the risk of wildfires keeps growing as more homes are built in wildland areas, some five million in California alone. Among the preventive features recommended in the IBHS study were noncombustible siding, decking and roofing materials; covered vents; and fences not connected directly to the house. In addition, combustible structures in the yard such as playground equipment should be at least 30 feet away from the house and vegetation 100 feet away.

Total Potential Exposure To Wildfire Damage By Risk Category, 2014 (1)

(\$ billions)

State	Low	Moderate	High	Very high
Arizona	\$9.64	\$0.98	\$1.76	\$1.57
California	75.84	61.92	89.35	16.10
Colorado	18.63	11.53	14.58	13.91
Idaho	9.20	5.56	3.71	2.62
Montana	14.63	4.43	2.29	2.40
Nevada	4.24	5.19	4.57	0.16
New Mexico	11.65	4.62	7.07	2.46
Oklahoma	31.92	16.77	0.03	0.00
Oregon	8.24	9.49	11.91	3.20
Texas	59.53	147.68	48.26	6.33
Utah	2.85	3.93	0.77	0.01
Washington	84.07	18.08	2.88	0.51
Wyoming	3.68	2.62	0.49	0.33
Total, states shown	\$331.27	\$292.81	\$187.66	\$49.61

(1) Reconstruction value of single-family residences at risk.

Source: CoreLogic, Inc., a data and analytics company.

[View Archived Tables](#) [6]

Top 10 Most Wildfire Prone States, 2015

By households			By percent of households		
Rank	State	Households at high or extreme risk from wildfires (1)	Rank	State	Percent of households at high or extreme risk from wildfires
1	California (2)	2,054,4001		Montana	
2	Texas	706,2002		Idaho	
3	Colorado	363,9003		Colorado	
4	Arizona	227,1004		California (2)	
5	Idaho	163,5005		New Mexico	
6	Washington	157,9006		Wyoming	
7	Oregon	153,4007		Utah	
8	Oklahoma	148,8008		Oregon	
9	Montana	130,2009		Oklahoma	
10	Utah	128,80010		Arizona	

(1) Number of households is based on data from the 2010 U.S. Census.

(2) Data for 2016.

NA=Data not available.

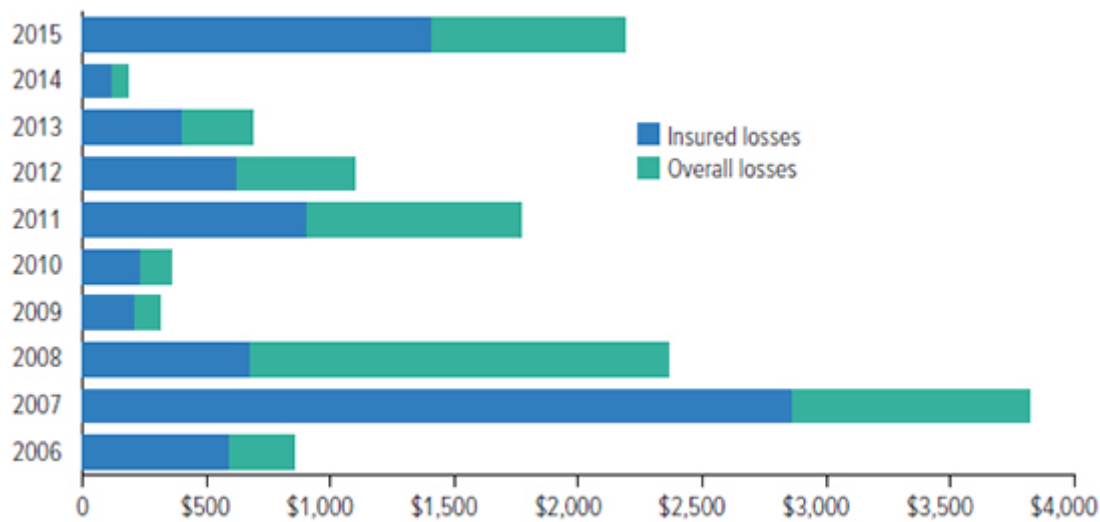
Source: Verisk Insurance Solutions ? Underwriting and Verisk Climate units of Verisk Analytics®.

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Wildfire Losses In The United States, 2006-2015 (1)

(2015 \$ millions)

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(1) Adjusted for inflation.

Source: © 2016 Munich Re, Geo Risks Research, NatCatSERVICE.

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Natural Catastrophe Losses In The United States, 2015 (1)

(\$ millions)

Event	Number of relevant events (2)	Fatalities	Overall losses
Severe thunderstorm		37	114
Winter storms and cold waves		11	98
Flood, flash flood		12	86
Earthquake and geophysical		0	0
Tropical cyclone		2	5
Wildfire, heat waves and drought		19	14
Other		4	7
Total		85	324

(1) As of February 2016.

(2) Events that have caused at least one fatality or losses of \$3 million or more.

(3) Based on property losses including, if applicable, agricultural, offshore, marine, aviation and National Flood Insurance Program losses and may differ from data shown elsewhere.

Source: Munich Re NatCatSERVICE; Property Claim Services®, a unit of ISO®, a Verisk Analytics® business. © 2016 Munich Re, NatCatSERVICE.

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Top 10 States For Wildfires Ranked By Number Of Fires And By Number Of Acres Burned, 2016

Rank	State	Number of fires	Rank	State	Number of acres burned
1	Texas	9,3001		Oklahoma	767,780
2	California	7,3492		California	560,815
3	Georgia	5,0863		Alaska	496,467
4	North Carolina	4,0074		Idaho	361,649
5	Alabama	3,9235		Texas	356,680
6	Florida	3,0676		Kansas	349,829
7	Missouri	2,6107		Arizona	308,245
8	Arizona	2,2888		Washington	293,717
9	Tennessee	2,1659		Nevada	265,156
10	Montana	2,02610		Oregon	219,509

Source: National Interagency Fire Center.

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Top 10 Costliest Wildland Fires In The United States (1)

(\$ millions)

Rank	Date	Name, Location	Estimated insured loss Dollars when occurred
1	Oct. 20-21, 1991	Oakland Hills Fire, CA	\$1
2	Oct. 21-24, 2007	Witch Fire, CA	1
3	Oct. 25-Nov. 4, 2003	Cedar Fire, CA	1
4	Oct. 25-Nov. 3, 2003	Old Fire, CA	
5	Nov. 28-30, 2016	Great Smoky Mountains Fire, TN	
6	Sep. 12-14, 2015	Valley Fire, CA	
7	Nov. 2-3, 1993	Topanga Fire, CA	
8	Sep. 4-9, 2011	Bastrop County Complex Fire, TX	
9	Oct. 27-28, 1993	Laguna Canyon Fire, CA	
10	Jun. 24-28, 2012	Waldo Canyon Fire, CO	

(1) Property coverage only for catastrophic fires. Effective January 1, 1997, ISO's Property Claim Services (PCS) unit defines catastrophes as events that cause more than \$25 million in insured property damage and that affect a significant number of insureds and insurers. From 1982 to 1996, PCS used a \$5 million threshold in defining catastrophes. Before 1982, PCS used a \$1 million threshold.

(2) Adjusted for inflation through 2016 by ISO using the GDP implicit price deflator.

Source: The Property Claim Services® (PCS®) unit of ISO®, a Verisk Analytics® company

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Resources

Verisk Insurance Solutions ? Underwriting and Verisk Climate, units of Verisk Analytics. [FireLine State Risk Report](#) [13]

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Links:

[1] <http://www.cfpnet.com/>

[2] <http://headwaterseconomics.org/wphw/wp-content/uploads/fire-costs-background-report.pdf>

- [3] <http://seas.harvard.edu/>
- [4] <https://www.nifc.gov/fireInfo/nfn.htm>
- [5] http://www.nifc.gov/fireInfo/fireInfo_statistics.html
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- [13] <http://www.verisk.com/underwriting/property/fireline-state-risk-report.html?source=iii>