

Industry wakes to rising wildfire risk

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Catastrophe modelers and insurers are grappling with how to better quantify and manage the financial impact of wildfire risk following record levels of insured losses from wildfires during the past two years.

Modelers have historically focused on other natural catastrophes, such as hurricanes and earthquakes, but the growing losses from wildfires in California and western Canada are causing the industry to pay increased attention to modeling the risk — an effort complicated by the unique characteristics of wildfires, experts say.

The more than \$25 billion in insured losses from U.S. wildfires in 2017 and 2018 is “off the charts” in terms of actual paid losses and property damage compared with prior years, causing a “shock to the system,” said Steve Bowen, director and meteorologist for Aon PLC’s Impact Forecasting unit in Chicago. “It has caused a reevaluation of wildfire risk,” he said.

The historic focus on other natural catastrophes means that wildfire risk modeling has lagged other perils, but wildfire models “have started to become more available now as the industry is starting to figure out how to quantify and better assess the risk,” said Balz Grollmund, head of treaty underwriting, Canada for Swiss Re Ltd., based in Toronto.

Wildfire risk was previously considered a secondary concern, and often was not modeled but treated as an “attritional loss that ate around the edges,” said Chris Folkman, senior director of product management at Risk Management Solutions Inc. in Newark, California.

“Wildfire is now going to be treated with the same kind of rigor and analytics and models as similar comparable perils,” he said.

“Insurers and reinsurers tend to have very well-formed views of hurricane risk, having studied it closely for around 30 years. Hurricane Andrew was the big wake-up call for them in 1992. For wildfire, the wake-up call is now,” Mr. Folkman said.

But wildfires have complex and unique characteristics that make the peril more difficult to model than other catastrophes, experts say.

The human factor to wildfires presents a challenge, according to Tammy Vigato, senior scientist at Boston-based AIR Worldwide.

“Humans are responsible for 85% of all ignitions,” she said.

There are many different parameters to wildfires, according to Mr. Bowen. Embers, for example, can fly and land on roofs that may not be immediately within the fire perimeter and cause damage, and shifts in wind direction can “happen on a dime” and change the direction of the fires.



THE CAMP FIRE IN ARADISE, CALIFORNIA, IN NOVEMBER 2018, AS ONE OF SEVERAL RECENT WILDFIRES THAT CAUSED SIGNIFICANT LOSSES TO INSURERS./ REUTERS

“There’s a lot of uncertainty surrounding the hazard itself. That alone creates a significant challenge for modelers that are trying to replicate these events,” he said.

Wildfire risk is also influenced by various changes in the climate which add to the complexity for modelers, experts say.

Warmer temperatures are creating drier surface conditions and increasing the risk of wildfire outbreaks, and drought, and hot and dry conditions have also weakened the resistance of trees to insect infestations that create additional fuel for future fires, Swiss Re said in a recent report.

The weather, climate and environmental conditions that make a certain property or a certain area wildfire-exposed change from season to season and year to year. “That’s an added level of difficulty that other perils don’t have,” Mr. Grollimund said.

“If we build a wildfire model today it’s good to have an idea of how the risk might change going forward, so what’s the signature of climate change on the current wildfire hazard and how do we anticipate that changing going forward?” he said.

For property/casualty insurers, climate change means that historical wildfire data may not have much relevance to what is happening today, said Greg Williams, senior director, at ratings agency A.M. Best Co. Inc. in Oldwick, New Jersey.

Given the difficulty insurers are having modeling such losses, some companies are taking actions to manage their wildfire exposures, either via rate increases or specific non-renewals or by purchasing more reinsurance, Mr. Williams said.

While some areas that burned during 2018 and 2017 were susceptible to wildfire, there were other areas that burned, which historically had not before, that perhaps were not coded as medium to high hazard risk, he said.

As a result, there has been “a renewed and increased focus on aggregation management” by insurers and they are taking a more granular look at their risks in certain areas, he said.

“Insurers are getting very detailed and instead of looking at a county or ZIP code area, they are maybe looking at a mile radius and their aggregation in that area,” he said.

Insurers and reinsurers need to keep their minds open to new tools for managing wildfire risk, said Mr. Grollimund.

“It’s important that we continue to recognize this is a very different peril and to keep our minds, eyes and ears open for whatever additional technologies we can leverage to better quantify and understand the risk,” he said.
