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Don't Get Burned: Evaluating Wildfire Loss Exposures

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According to the Insurance Council of Texas, insured losses from the wildfires in Texas could hit \$250 million. The number of catastrophic wildfires in some regions of the United States poses an increasing risk for insurers. Wildfires present unique challenges for insurers evaluating accounts for property owned in wildfire hazard areas.

A wildfire is an unplanned, uncontrolled burning of vegetation, often occurring in wildlands (timber, woodlands, or brushy or grassy areas). Wildfires can spread rapidly to damage or destroy residential and commercial properties, especially those that are located in a wildland/urban interface (WUI) or in heavily forested areas. Considering the increase of catastrophic wildfires and population movement into WUIs, insurers should evaluate any variables that may increase their loss potential and the impact of potential wildfires on their exposure accumulation.

A major contributing factor to the occurrence and extent of wildfires is the availability of fuel to burn. Heavy fuels, such as significant underbrush in a forest, cause wildfires to grow intense and to spread rapidly. Wildfire fuels and their impact have been studied and categorized to determine the potential wildfire hazard and are often color-coded on wildfire maps. Insurance Services Office, Inc. (ISO), Risk Management Solutions, Inc. (RMS), and other organizations interested in preventing and mitigating wildfires have developed maps using satellite imagery in geographic information systems (GIS) to indicate areas that are at greatest risk for wildfires.

The most common cause of ignition in wildfires is lightning strikes; however, several other factors contribute to the spread and extent of wildfires:

- Weather conditions—High temperatures and lack of rain or humidity are major contributing factors in the ignition and spread of wildfires.
- Wind velocity—High winds fan flames, causing them to spread rapidly. Additionally, high winds can cause burning embers and sparks to land on structures or other vegetation away from the fire itself.
- Location—Wildfires differ from fire in heavily populated areas because, in remote areas, they can ignite and develop into significant fires long before they are detected and before any or sufficient fire suppression efforts can reach and extinguish the blaze.
- Slope of the land—Wildfires spreads more rapidly in terrains where slopes are steep. Terrains with steeper slopes are more difficult to access for fire suppression efforts.
- Availability of access roads—Some organizations that study wildfires develop access ratings, which consider dead-end roads, access to water hydrants, access to roads wide enough for water-tanker engine passage, access roads through heavy fuel regions, and related issues.

The causes of wildfires and its spread indicate that some regions are more prone to wildfires than others. For example, remote areas with heavy fuels that are subject to arid conditions and high winds are more prone to wildfires. Based on past wildfires and studies of the conditions that support the ignition and spread of wildfires, various regions in the U.S. have been identified as wildfire hazard areas. Although most states in the U.S. are subject to wildfires in forests and grasslands, the most costly wildfires have been reported in California, New Mexico, Arizona, and Texas.

In addition to the loss of natural resources—such as forests, grasslands, and wildlife—wildfires cause significant insured damage. When property, such as buildings, personal property, and autos, is in the path of a wildfire, the result will most likely be total losses. Other property may be destroyed by sparks and burning embers that are carried on the wind some distance from the actual wildfire. The majority of wildfire insurance claims are paid to property owners for damage to property, rather than for destruction of property.

Some extensive wildfires that were difficult to suppress have resulted in government-mandated evacuations of entire communities. Whether evacuation is government mandated or needed to remediate smoke or other damages, losses from wildfires include tremendous business interruption.

With technology's fast spread of information and warning systems, people are generally informed in sufficient time to evacuate an area that is threatened by wildfires. But rapidly changing winds can catch people off guard and result in deaths and injuries. Also, some people fail to heed warnings and evacuation orders and stay to defend their property against fire, often causing injuries and deaths. Loss of human lives and injuries sustained from fire, heat, and smoke inhalation are tremendous costs to society and can also result in workers compensation, medical, and life insurance claims.

Insurers can introduce programs and other loss mitigation efforts to help reduce damage and destruction from wildfire hazards. Many insurers preclude coverage for properties located in a WUI or other wildfire-prone areas

or charge significantly higher rates for properties in such regions. Insurers can also create education programs for insureds that own property in wildfire-prone areas to explain how to create and maintain defensible space, introduce more fire resistance in structures, and develop procedures that help mitigate damage when a property is threatened by wildfire. Providing discounts to insureds who follow insurers' wildfire mitigation recommendations encourages building owners to accept responsibility for protecting their own property from wildfire.

It is important for insurers to manage and monitor their overall books of business. Because losses from wildfires often simultaneously affect many insured properties, insurers must be aware of the distribution and aggregation of their wildfire exposures. Effectively mapping exposures can assist an insurer in its loss mitigation efforts, new or updated business development programs, and reinsurance programs.

Additionally, insurers can work with federal, state, and local governments and other organizations to mitigate loss due to wildfire. Insurers can share information with governments and authorities on wildfire hazards, develop programs for inspection of wildfire-prone areas, and assist with improvements to help reduce the risk of wildfire spread and damage.



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