

# U.S. Wildfire HD Model

**Cutting Edge, High-Resolution Fire Modeling to Accurately Assess Today's Wildfire Risk Levels**



## KEY FEATURES AND BENEFITS

- Unrivaled coverage includes 48 contiguous U.S. States
- Ultra-realistic fire footprints addressing surface fuels, topography, weather conditions, moisture, and fire suppression
- Explicit ember and smoke simulations capture impact beyond the fire perimeter
- Mitigation and suppression features developed with leading global fire experts
- Wildfire hazard and scoring products differentiate risk at the point of underwriting.
- Accurate, flexible capture of key reinsurance terms such as hours and spatial clauses that define an event occurrence

## Granular Analytics for an Increasingly Pervasive Cat Risk

Looking back on the 15 devastating North America wildfire events between 2015 and 2018, it is clear that traditional hazard and scoring tools have proven inadequate in assessing the scale of fire risk in the United States. To address this issue, RMS® introduced its U.S. Wildfire HD Model to provide a more granular and comprehensive approach to underwriting and portfolio management for a peril of growing importance.

Through a 50,000-year fire weather and ignition simulation, the RMS model accurately characterizes fires as they start and travel in real life – spreading to neighborhoods, emitting damaging smoke, and creating burning embers that jump natural barriers such as rivers and roads.

The resulting damage to structures and contents can be used by insurers, reinsurers, governments, and financial institutions to differentiate safe structures from dangerous ones, accurately price fire risk, and optimize risk transfer.

## Fire Simulation: Addressing Challenges and Opportunities with Big Data

The RMS U.S. Wildfire HD Model simulates approximately 15 million wildfires across the contiguous United States. They capture the full impact of wildfires at high resolution, including the explicit contribution of embers and smoke. This enables better understanding of the complex behavior of wildfires to effectively price locations in and around the high-risk wildland-urban interface (WUI). In addition, with a full complement of site-specific adjustment features – such as roof covering, wall cladding, nearby fuel, and mitigation details – users can underwrite more effectively and deliver new types of coverages, such as smoke sublimits.

The contribution of embers – a major driver of loss – is explicitly simulated within the RMS U.S. Wildfire HD Model. This simulation goes beyond traditional fuel-based fire techniques and captures the extent that a fire can loft large accumulations of fire brands beyond the perimeter, carrying the risk to dense residential and commercial areas. Areas that have not been previously considered as threatened by wildfire can now have their risk appropriately quantified.

In addition, by leveraging the HD model framework, users can capture both the temporal and spatial elements of reinsurance terms related to wildfire, such as a seven-day hours clause and 150-mile radius.



### Changing the Analytics Game for a Changing Peril

The U.S. Wildfire HD Model offers new growth opportunities by quantifying the location and severity of wildfire risk beyond simple fuel and wildland urban interface (WUI) techniques. This enables a better understanding of the probabilistic risk of burn and smoke damage, along with the impacts of mitigation measures to intelligently price individual locations and entire portfolios.

### Find Out More

For more information, visit [www.rms.com](http://www.rms.com), email [sales@rms.com](mailto:sales@rms.com), or contact your RMS sales representative or customer services representative.

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