

# Verisk Severe Thunderstorm Model for the United States



## Release Information

Release Date	<ul style="list-style-type: none"><li>June 2022</li></ul>
Software Systems	<ul style="list-style-type: none"><li>Touchstone 2022</li><li>Touchstone Re 2022</li></ul>

## Model Details

Domain	Conterminous United States (48 states plus D.C.)
Peril(s) <sup>1</sup>	<ul style="list-style-type: none"><li>Hail</li><li>Convective straight-line winds</li><li>Tornadoes of at least EF-1 intensity (<math>\geq 86</math> mph)</li></ul>
Model Resolution	Location-level covering the exact footprint of each sub-peril (listed above)
Intensity Parameter(s)	<ul style="list-style-type: none"><li>Hail – Hail total kinetic energy (<math>\text{J/m}^2</math>)</li><li>Convective straight-line wind – Average maximum wind speed (3-sec gust; mph)</li><li>Tornado – Maximum wind speed (3-sec gust; mph)</li></ul>
Geospatial Layers	None

## Touchstone Stochastic Catalogs

Catalogs	<ul style="list-style-type: none"><li>10,000-year (all-events and cat-only)</li><li>50,000-year (all-events and cat-only)</li><li>100,000-year (all-events and cat-only)</li></ul>
Event IDs	All event IDs are new

## Touchstone Re Stochastic Catalog

Catalogs	10,000-year cat-only <sup>2</sup>
Event IDs	All event IDs are new

## Event Sets

Historical Event Set	Total of 35 events (5 perturbations of 7 events)
World Scenarios Event Set	None

<sup>1</sup> The model supports the use of explicit peril codes created in Touchstone 2021 for each of the supported sub-perils.

<sup>2</sup> The Touchstone Re stochastic catalog contains industry losses for cat-only events and zero industry loss placeholders for non-cat events to support losses from detailed company loss files/company loss association files (CLF/CLA) that may include these non-cat events. They will not produce industry loss but will produce loss for non-cat events if they are present in the CLF/CLA.

Touchstone Geographic Resolution	
<ul style="list-style-type: none"> <li>County</li> <li>Complete Address (including street, city, and state)</li> </ul>	<ul style="list-style-type: none"> <li>ZIP Code</li> <li>User-specified latitude/longitude</li> </ul>
Touchstone Re Lines of Business	
<ul style="list-style-type: none"> <li>Residential</li> <li>Manufactured (mobile) home</li> </ul>	<ul style="list-style-type: none"> <li>Commercial/Industrial</li> <li>Automobile</li> </ul>
Supported Construction and Occupancy Classes	
Construction	140 classes
Occupancy	112 classes (includes 62 large industrial facilities classes)
Supported Secondary Risk Characteristics (SRCs)	
Straight-Line Wind and Tornado Damage	27
Hail Damage	13
Industry Exposure Database	
Vintage	2019
Geographic Resolution	90 m