

HurLoss[®]

FACT SHEET

THE MOST ADVANCED NORTH ATLANTIC HURRICANE MODEL

- Long-term, current, and future hurricane climatology options
- Updated land cover data (NLCD 2019)
- High value home vulnerability
- Additional building code eras and wind zones for Florida

EVENT SETS

- 64,000-event stochastic catalog with differing event rates for current climatology, future climatology, long-term historical climatology, and warm sea surface temperature years
- Historical event set consisting of over 200 events from 1900 onward
- Cat response event footprints available within 24-36 hours of landfall

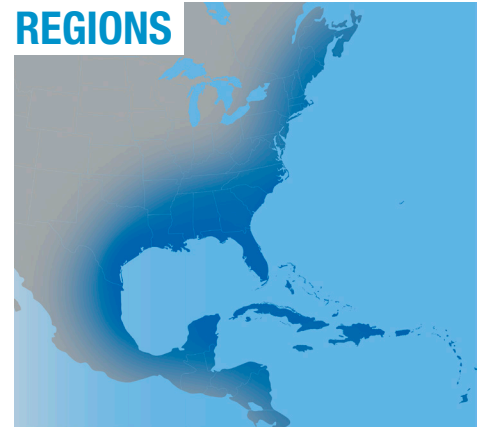
STORM SURGE

- NOAA SLOSH model driven by ARA event set and ARA wind field
- Includes wave setup from coupled SLOSH-SWAN wave model
- Downscaled results for higher resolution of natural and man-made barriers
- Allows for “leakage” of storm surge losses into wind-only policies

DEMAND SURGE

- Function of event intensity and size

REGIONS



North Atlantic Basin



CLIMATE CONDITIONING

Derived from critical environmental inputs:

- Sea Surface Temperature
- Tropopause Temperature
- Wind Shear



FOR MORE INFORMATION, CONTACT:
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PHYSICS-BASED HURRICANE HAZARD MODELING

- Use of hurricane pressure field as primary wind field model input eliminates high bias found in models fit to HURDAT2 wind speeds
- Derives wind speeds and directions by numerically solving the differential equations of a translating storm instead of using approximate parametric models
- Includes a modern hurricane boundary layer model based on peer-reviewed, published fits to dropsonde data
- Surface friction modeling approach produces the most accurate transition of winds from sea-to-land found in any commercially available model

ENGINEERING LOAD AND RESISTANCE MODELING

- Allows validation of both physical damage and economic loss
- Accurately predicts building response at hazard intensity levels where claims data are sparse or non-existent
- Uses paid claims data for validating and refining a complete 3-D engineering model instead of fitting a purely statistical model
- Provides an explicit framework for proper propagation of uncertainties
- Reduces need for engineering judgment and provides explicit mechanisms for reducing uncertainties
- Accurately models interactions between key building characteristics without the need for extreme simplifying assumptions
- Explains why and how losses in high-value homes are correlated with square footage



ARA HURRICANE HAZARD MODELS HAVE BEEN THE BASIS FOR WIND DESIGN MAPS IN U.S. HURRICANE-PRONE STATES SINCE 1998 (ASCE 7)

AVAILABLE ON MULTIPLE PLATFORMS



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