

# North Atlantic Hurricane Model

## RQE® v23

*A Complete Solution for Managing Hurricane Risk in the North Atlantic*

A Hurricane can cause substantial damage to any property, community, or civilization that stands in its path.

In 2022, Hurricane Ian was responsible for significant damage across the southeastern United States. CoreLogic estimated that insured wind and flood, both coastal and inland, losses in Florida and other impacted southeastern states could be as high as \$53 billion.

Emphasizing it only takes one storm to cause devastating damage and financial loss.

As climate changes, future hurricane risk will change and be volatile, accuracy, efficiency and agility are required to manage it.

The North Atlantic Hurricane Model from CoreLogic® provides a granular, up-to-date, detailed risk model that enables professionals to appropriately manage portfolio risk and price policies accordingly.

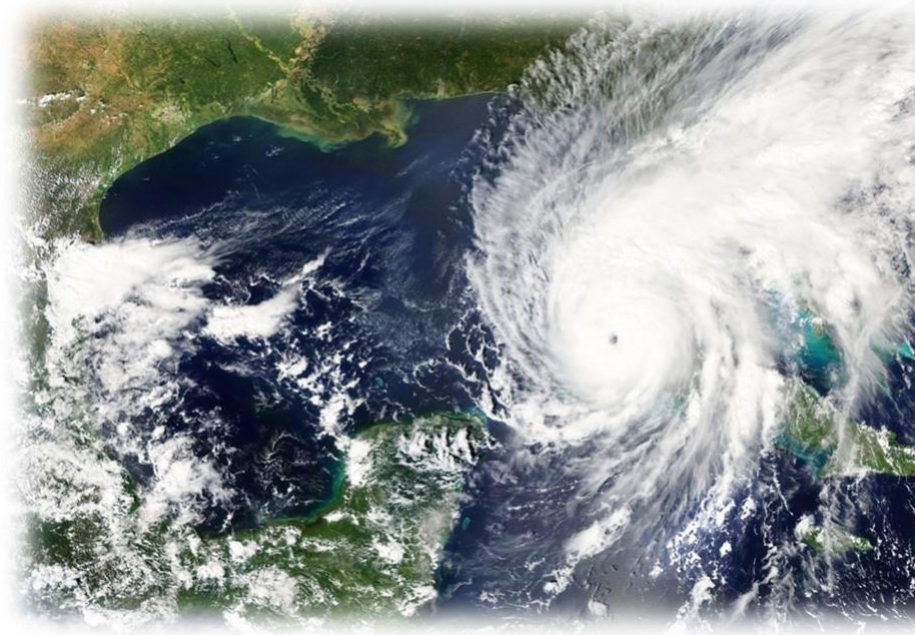
## Highlights

- High-resolution hazard and vulnerability modeling
- For the U.S., results can be calculated for hurricane winds and/or coastal storm surge flooding
- For the Caribbean Islands and Bermuda, results can be calculated for hurricane winds
- Multiple views of risk, covering both near-term and long-term frequencies
- High-resolution inland flood losses are available for all hurricane events in the model when used in conjunction with the CoreLogic® U.S. Inland Flood Model

## A Complete Analytic View of Risk

The model offers a complete view of risk from hurricanes and hurricane sub-perils that can affect the U.S., Caribbean Islands and Bermuda.

The model's robust probabilistic set includes approximately 110,000 events. In addition, 300,000 years of simulation covers gaps in the historical data set to provide a consistent, credible, and realistic view of hurricane risk, particularly for low-probability, high-consequence events.



Combined with historical losses and disaster scenarios, the model provides detailed results, allowing clients to create and reproduce numerous reports and data visualizations. This gives clients the ability to explore multiple risk perspectives to help identify the aspects and regions driving their portfolio risk.

## High-Resolution Hazard Model Wind & Storm Surge



Calculating the geographic pattern of peak wind gusts, the time-stepping wind field model collects and analyzes data such as wind speed, gust factors and other parameters that are key to measuring exposure to hurricane wind damage.

The storm surge model computes storm surge heights along the U.S. Atlantic coast using a high-resolution 10-meter Digital Elevation Model (DEM) for better risk differentiation. For each historical or stochastic event, the probabilistic distribution of storm surge inundation depth is calculated for each location.

## **Comprehensive Vulnerability Functions**

CoreLogic incorporates current engineering research, claims data, and expert opinion to develop the vulnerability functions within the model. Damage from wind and storm surge is calculated using a series of vulnerability functions specific to construction type and occupancy.

The model provides a full suite of structure types, including High Value Homes and dozens of occupancy categories for each line of business. This helps differentiate risk across hundreds of combinations, allowing realistic pairings of occupancy and construction.

## **Regulation**

The model has been certified by the Florida Commission on Hurricane Loss Projection Methodology since the inception of its process in 1997. Most recently, June 1, 2023.

## **Why Consider CoreLogic?**

Increasing catastrophic events are challenging the P&C insurance industry to revisit existing catastrophic risk management and loss adjustment strategies by improving the overall understanding of all natural hazards. CoreLogic is dedicated to the science of understanding natural hazard risk and focused on delivering decision support data and products to the insurance industry. With a staff of Ph.D.-level scientists and engineers, we have taken risk assessment a step further by developing a proprietary methodology that enables a more granular level of risk management control and reporting.