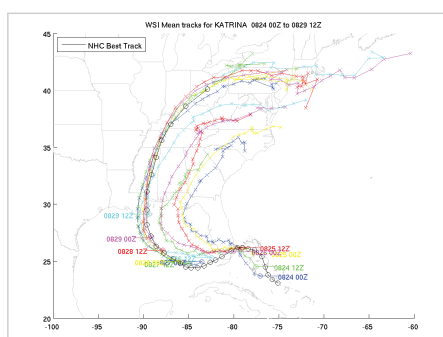
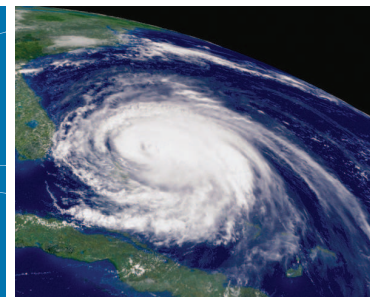


# WSI Hazard Forecast Tools

## FACT SHEET



Katrina, 2005

WSI forecasts for Katrina, issued at 12-hourly intervals from August 24-29, 2005. Each forecast is labeled with the date (e.g., 0825) and initialization time (e.g., 00Z or 0000 UTC) of the forecast. The observed track is denoted by a solid black line with open circles. Note the convergence of the WSI forecasts towards the eventual track.

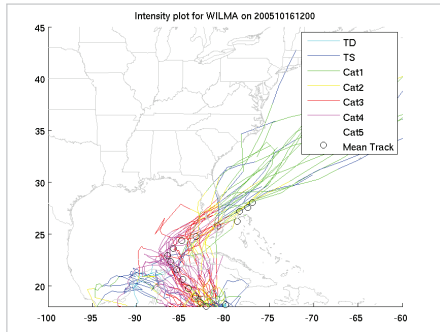
## WSI Hazard Forecast Tools

Every June 1st, the U.S. braces for another hurricane season. Just one direct hit along the Gulf Coast or Eastern Seaboard can result in billions of dollars in damage and property loss due to destructive winds and extensive flooding. While tropical forecasting continues to progress, the insurance industry has to endure the challenge of trying to assess the impact on U.S. risk portfolios without suitable lead time or confidence in forecast accuracy - preseason or during a live cat event. To address this, WSI and Guy Carpenter collaborated to develop a solution for insurers that combines WSI's forecasting expertise with Guy Carpenter's innovative risk management platform, i-aXs™. The result was the introduction of WSI's Hazard Forecast Tools, a series of sophisticated forecasts, that when integrated into i-aXs, will help insurers more accurately pinpoint areas at greatest risk for loss damage due to a hurricane many days earlier than other traditional forecasts.

WSI's Hazard Forecast Tools include detailed preseason, live hurricane and updated seasonal forecasts. These unique forecasts contain features that have been previously unavailable to the marketplace including hurricane predictions beyond 5 days, uncertainty estimates, and the incorporation of the entire suite of state-of-the-art global forecasting models. Insurers will benefit from increased lead time to make better, more proactive decisions and greater forecasting accuracy to help identify exactly where exposures exist. WSI's Hazard Forecast Tools represent a significant step forward in helping insurers plan more strategically each season for impending loss damage due to hurricanes.

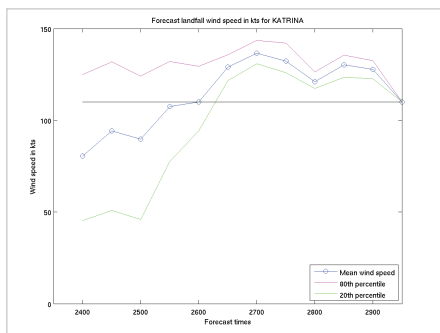
## Preseason Tropical Forecasts

WSI issues a preseason forecast every May for Atlantic tropical cyclone activity which includes the number of named storms, number of hurricanes, and number of intense hurricanes (category 3 or higher). This forecast is based on the warmth of the tropical Atlantic Ocean and the presence or absence of an El Nino or La Nina event, among other factors.



Wilma, 2005

All track realizations for Wilma from the 1200 UTC run on 16 October 2005. The colors represent the intensity forecasts, and the open circles represent the final WSI forecast. Note that the WSI forecast correctly indicated a South Florida landfall 8 days ahead of time.



Katrina, 2005

Time series of the landfall wind speed for Katrina forecasts. The forecast times on the x-axis are of the format 'ddhh', starting with the 0000 UTC 24 August forecast. The mean wind speed (the WSI forecast) is given in blue, while the 20th and 80th percentile wind speeds are given in green and magenta, respectively. The observed landfall wind speed is given by the black solid line (110 kts). Note that the errors in the WSI intensity forecasts never exceeded 30 knots, even out to 5 days. These numbers compare quite favorably to the NHC forecasts, both of which had average intensity forecast errors greater than 30 knots beyond 72 hours during Katrina.

## Hurricane Forecasts

As the hurricane season progresses, WSI issues forecasts for each named storm, every 12 hours, using a proprietary technique developed by WSI. The forecasts will predict US landfall location and storm intensity, including wind speed and direction, at landfall, with estimates of uncertainty for each. The forecasts, when combined with the uncertainty estimates, allow market participants to make better informed decisions on any approaching storm up to 10 days prior to landfall. This is 5 days sooner than what is currently offered by the National Hurricane Center.

## Seasonal Forecasts

WSI updates the preseason tropical forecast each month, from June through September, based upon the total activity to date, any changes to tropical Atlantic Ocean temperatures and other meteorological factors.

### About WSI Corporation

WSI Corporation is the world's leading provider of weather-driven business solutions for professionals in the aviation, media, energy and insurance markets. Over 200 energy, insurance, and risk management companies around the globe rely on WSI's weather information and expertise to make critical decisions in operational planning. Headquartered in Andover, Massachusetts with offices in Birmingham, England, WSI is a wholly owned subsidiary of Landmark Communications, Inc., a privately held company that also owns The Weather Channel® and weather.com. More information about WSI can be found at [www.wsi.com](http://www.wsi.com).

### About Guy Carpenter

Guy Carpenter & Company, LLC is the world's leading risk and reinsurance specialist and a part of the Marsh & McLennan Companies. Guy Carpenter creates and executes reinsurance solutions and makes available capital market solutions\* for clients worldwide through 2,600 professionals across the globe. The firm's full breadth of services includes 16 centers of excellence in Accident & Health, Agriculture, Alternative Risk Transfer, Environmental, General Casualty, Investment Banking\*, Life & Annuity, Marine & Energy, Professional Liability, Program Manager Solutions, Property, Retrocessional, Structured Risk, Surety, Terror Risk, and Workers Compensation. In addition, Guy Carpenter's InStrat® unit utilizes industry-leading quantitative skills and modeling tools that optimize the reinsurance decision-making process and help make the firm's clients more successful. Guy Carpenter's website address is [www.guycarp.com](http://www.guycarp.com).

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