GUY CARPENTER

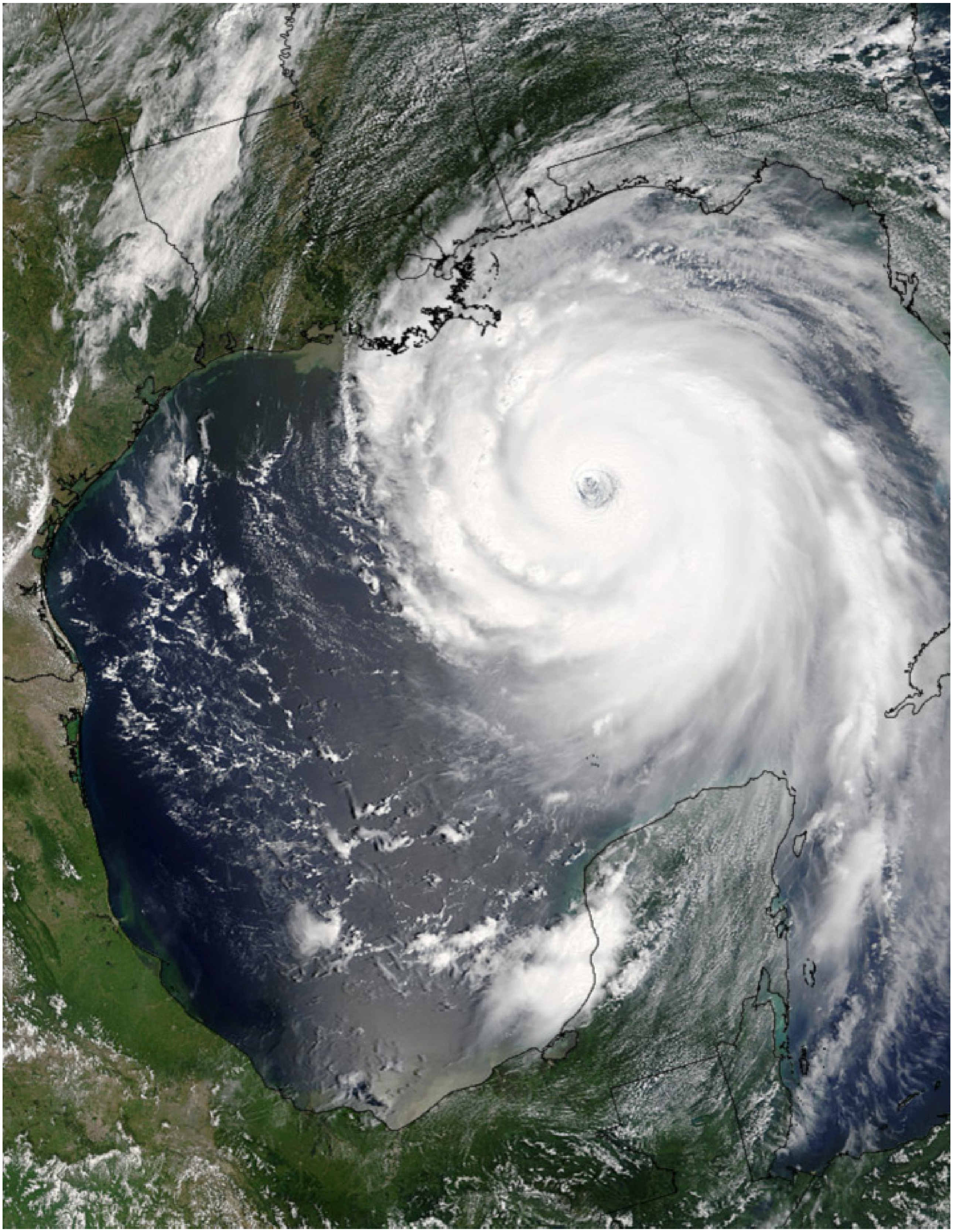
TEN-YEAR RETROSPECTIVE OF THE 2004 AND 2005 ATLANTIC HURRICANE SEASONS

PART 2: THE 2005 SEASON

The 2005 Atlantic hurricane season was the most active season on record. Coming on the heels of the costly 2004 season, the accumulated impact of the two seasons was felt throughout the insurance and reinsurance industries.

In Part I of this paper, the 2004 season was explored, including the underlying meteorological conditions and the immediate impacts to the insurance and reinsurance industries. Part II focuses on the 2005 hurricane season and the cumulative impacts of the combined seasons on the industry, including changes to underwriting and claims adjusting practices, insurance and reinsurance contract wording and the Florida Hurricane Cat Fund. In addition, responses from rating agency and catastrophe model vendors will also be explored.

F-1 | SATELLITE IMAGERY OF HURRICANE KATRINA, AUGUST 29, 2005.



(Source: NASA/Jeff Schmaltz, MODIS Land Rapid Response Team)

ATLANTIC HURRICANE SEASON SUMMARY

T-1 | 2005 ATLANTIC HURRICANE SEASON STATISTICS

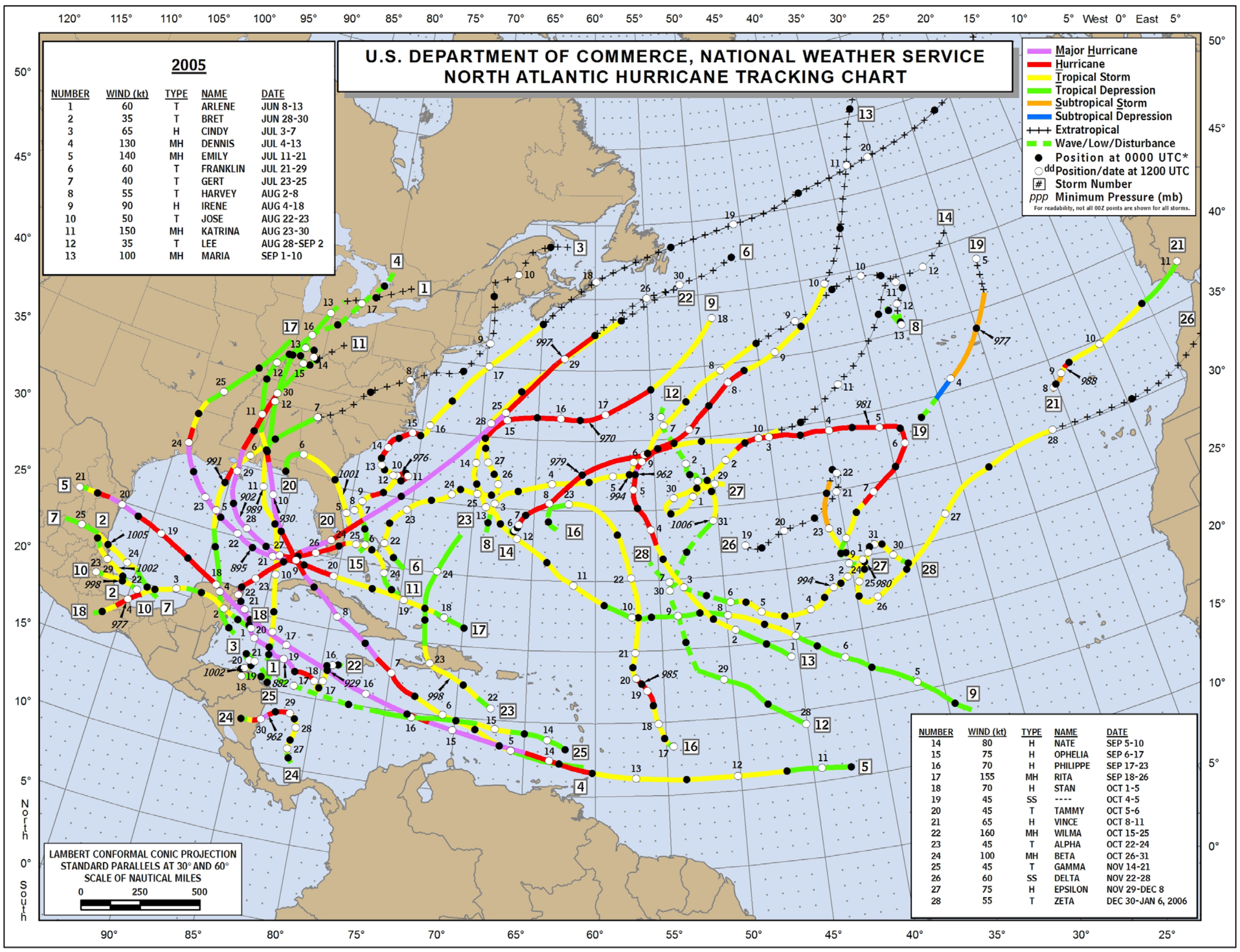
No.	Name	Class[a]	Dates[b]	Maximum 1-min Wind (kt)	Minimum Sea Level Pressure (mb)	Direct Deaths
1	Arlene	T	Jun 8–13	60	989	1
2	Bret	T	Jun 28–30	35	1002	1
3	Cindy	H	Jul 3–7	65	991	1
4	Dennis	H	Jul 4–13	130	930	42
5	Emily	H	Jul 11–21	140	929	6
6	Franklin	T	Jul 21–29	60	997	
7	Gert	T	Jul 23–25	40	1005	
8	Harvey	T	Aug 2–8	55	994	
9	Irene	H	Aug 4–18	90	970	
10	Jose	T	Aug 22–23	50	998	6
11	Katrina	H	Aug 23–30	150	902	1500
12	Lee	T	Aug 28–Sep 2	35	1006	
13	Maria	H	Sep 1–10	100	962	
14	Nate	H	Sep 5–10	80	979	
15	Ophelia	H	Sep 6–17	75	976	1
16	Philippe	H	Sep 17–24	70	985	
17	Rita	H	Sep 18–26	155	895	7
18	Stan	H	Oct 1–5	70	977	80
19	Unnamed	ST	Oct 4–5	45	997	
20	Tammy	T	Oct 5–6	45	1001	
21	Vince	H	Oct 8–11	65	988	
22	Wilma	H	Oct 15–25	160	882	23
23	Alpha	T	Oct 22–24	45	998	26
24	Beta	H	Oct 26–31	100	962	
25	Gamma	T	Nov 14–21	45	1002	37
26	Delta	T	Nov 22–28	60	980	
27	Epsilon	H	Nov 29–Dec 8	75	981	
28	Zeta	T	Dec 30– Jan 6	55	9	

(Source: NOAA/NWS)

a. T = tropical storm and ST = subtropical storm, wind speed 34–63 kt (17–32 m/s); H = hurricane, wind speed 64 kt (33 m/s) or higher.
b. Dates begin at 0000 UTC and include tropical and subtropical depression stages but exclude extratropical stage.

The 2005 season had 27 named storms — so many that the National Hurricane Center had to resort to Greek letters to name the storms beyond the standard 21 name list. A total of seven tropical cyclones made landfall in the United States: four major hurricanes, one additional hurricane and two tropical storms. The most memorable of these storms was Hurricane Katrina, which proved to be the deadliest U.S. hurricane since 1928 and the costliest of all time, with overall economic damage exceeding USD80 billion at the time (according to the National Oceanic and Atmospheric Administration (NOAA), although other sources have calculated this value to be much higher). One of the factors that may have led to the unusually high activity levels in 2005 was the anomalously high sea surface temperatures (SSTs) in the Caribbean Sea and tropical Atlantic Ocean. In addition, there was an anomalous ridge in the middle troposphere over the eastern United States – similar to one that had formed in 2004, although slightly farther south and west. This ridge may have helped steer hurricanes farther south and west than in 2004, into the Gulf of Mexico.

F-2 | TRACKS FOR 2005 ATLANTIC HURRICANES



(Source: NHC/NOAA)

The motto of the 2005 hurricane season might have been "early and often." The first storm, Tropical Storm Arlene, formed just over a week into the season, making landfall just west of Pensacola, Florida, on June 11. The final storm of the season, Tropical Storm Zeta, lingered into the new year, finally dissipating on January 6, more than a month after the official end of the season on November 30. Five hurricanes originated close to the U.S. mainland in the Caribbean, West Atlantic and Gulf, including Cindy, Ike, Katrina, Dennis and Ophelia.

F-3 | TIMELINE OF ATLANTIC STORMS IN 2005

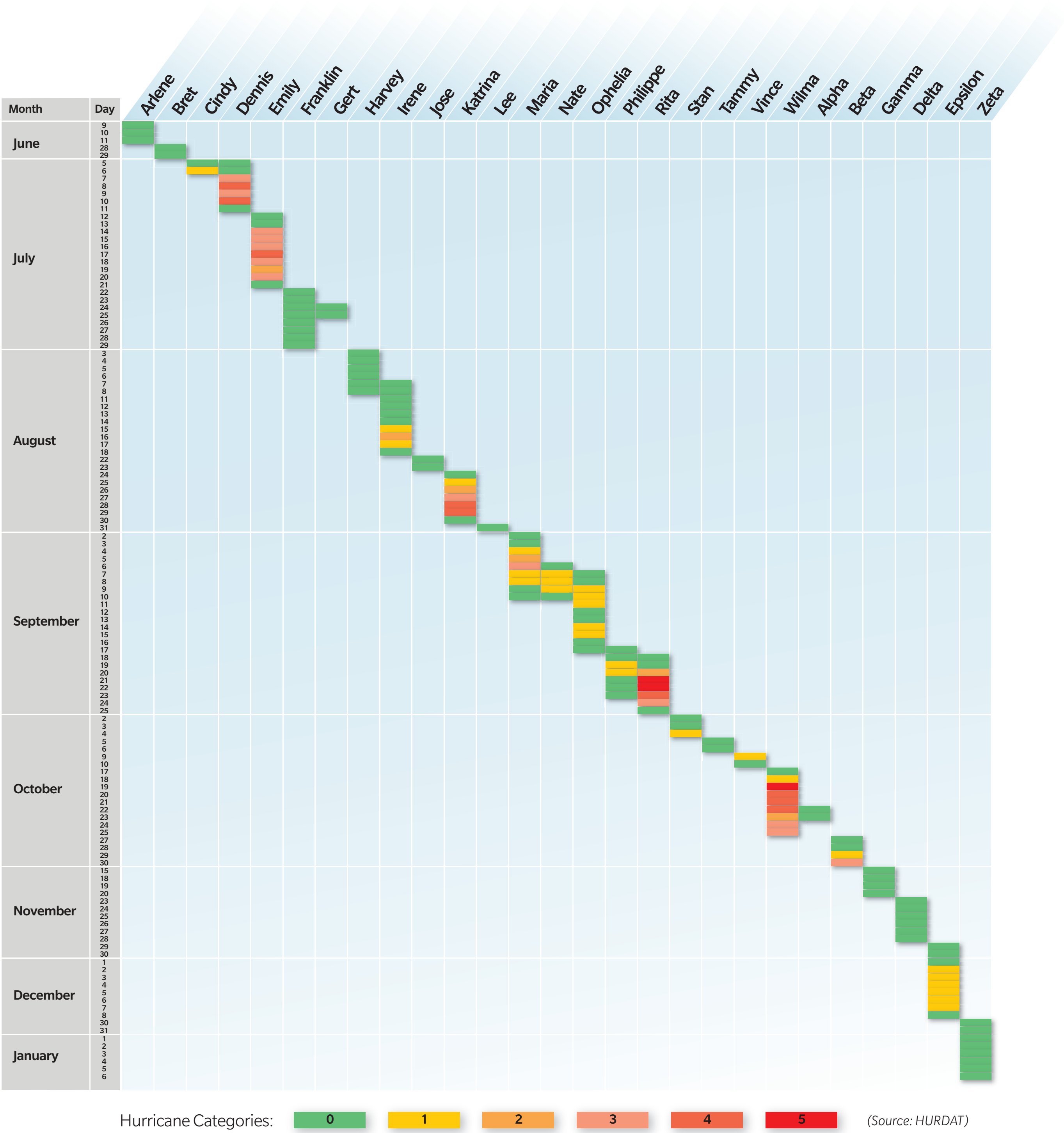


Chart shows storms from Tropical Storm (Category 0) to Hurricane (Categories 1-5). Maximum intensity for each day shown. Days determined by Greenwich Mean Time (Eastern Standard Time +5 hours)

The three most notable storms of the season were Hurricanes Katrina, Rita and Wilma, now widely known simply as "KRW." In addition, Hurricanes Dennis and Stan made significant impact in the Gulf of Mexico making landfall on Mexico and other parts of Latin America. Hurricane Dennis made landfall very close to the area devastated by Ivan in 2004. These five names were all retired after the 2005 season, the most in a single season.

Hurricane Katrina made its first landfall in southern Florida on August 25 as a Category 1 storm, crossing from the Miami-Dade/Broward County border to exit into the Gulf of Mexico on the western coast just north of Cape Sable. In the Gulf, Katrina reached its peak intensity of Category 5 on August 28, rapidly intensifying from a Category 3 to a Category 5 storm in less than twelve hours. The storm weakened back to a Category 3 before making landfall near Buras, Louisiana, on August 29. The most memorable component of Hurricane Katrina was the storm surge that occurred east of the storm's eye, in Louisiana, Mississippi and Alabama, which was far higher than expected for a Category 3 storm. The storm surge of 28 feet was the highest on record for the Mississippi Gulf Coast. Two factors that led to the significant storm surge were the large size of the storm — at landfall, the storm's radius of maximum winds was 25 to 30 nautical miles, with hurricane force winds extending out to 75 nautical miles east of the storm's center — and the northward-propagating swells that the storm was already generating while still in the Gulf of Mexico as a Category 5 hurricane. As Katrina moved towards the Northern Gulf Coast, winds affected Lake Pontchartrain from an easterly direction. As a result, the water level of Lake Pontchartrain rose significantly, leading to a 12- to 16-foot storm surge along its northeastern shore and a 10- to 14-foot surge along its Southern shore in western New Orleans. Levees were overtopped and/or breached, causing about 80 percent of the city of New Orleans to end up under 20 feet of water.

Hurricane Rita also reached Category 5 strength at its peak, causing flooding from storm surge as it bypassed the Florida Keys as a Category 2 storm on its way into the Gulf of Mexico where it reached its peak intensity — with one of the lowest central pressures on record. The storm went from a tropical storm to a Category 5 hurricane in 36 hours, before weakening to a Category 3 storm at landfall on the Texas/Louisiana border between Johnson's Bayou and Sabine Pass on September 24. In addition to the hurricane-force winds, Rita spawned at least 90 tornadoes. The wind and tornado damage extended from eastern Texas to Alabama, with major storm surge damage in southwestern Louisiana. Virtually every structure was destroyed in communities including Holly Beach, Cameron, Creole and Grand Cheniere in Cameron Parish, with some structures completely swept away by the surge.

The entire southern Louisiana coast was impacted by the storm surge. While the extent of the flooding was not as great in New Orleans as it had been from Hurricane Katrina, the additional flooding exacerbated water removal from the city, delaying the drainage of all floodwaters until October 11. In the wake of Katrina's devastation, Hurricane Rita's approach triggered one of the largest evacuations in U.S. history, with over two million evacuees in Texas alone.

F-4 | HOLLY BEACH, LOUISIANA

Top image: Pre-landfall; Bottom image: Post-Hurricane Rita. Flood waters caused total destruction to all the structures on this strip of beach. Note also sand deposit in lower image in the formerly grassy area midway between the yellow arrows.

(Source: USGS)

Hurricane Wilma has the distinction of having the all-time lowest central pressure in the Atlantic basin, estimated at 882 millibars. It intensified from a tropical storm to a Category 5 hurricane over a 24-hour period on October 18 and 19. The storm made landfall on the island of Cozumel in Mexico on October 21, tracking slowly northward across the Yucatan peninsula until it re-emerged into the Gulf of Mexico late on October 22. Wilma made a second landfall as a Category 3 storm near Cape Romano in southwestern Florida on October 24. The storm tracked across Florida to emerge into the Atlantic just southeast of Jupiter later that same day. In addition to major damage in the Yucatan peninsula, widespread damage was reported in Florida.

LOSS STATISTICS

The 2005 hurricane season saw two of the top ten costliest storms in terms of insured losses in the mainland United States between 1949 and 2012, according to adjusted PCS loss statistics.

T-2 | TOP 25 US TROPICAL CYCLONE EVENTS BY ADJUSTED PCS LOSS

Event Name	Year	PCS Estimate	PCS Estimate Adjusted by Guy Carpenter*	Rank Based on PCS Estimate	Rank Based on Guy Carpenter Adjusted Estimate
Hurricane Katrina	**2005**	**$41.10B**	**$57.53B**	**1**	**1**
Hurricane Andrew	1992	$15.50B	$46.35B	3	2
Hurricane Sandy	2012	$18.75B	$19.53B	2	3
Hurricane Betsy	1965	$0.52B	$18.86B	30	4
Hurricane Hazel	1954	$0.12B	$16.33B	48	5
Hurricane Ike	2008	$12.50B	$15.24B	4	6
Hurricane Hugo	1989	$4.20B	$14.59B	11	7
Hurricane Carol	1954	$0.14B	$13.56B	44	8
Hurricane Wilma	**2005**	**$10.30B**	**$13.35B**	**5**	**9**
Hurricane Charley	2004	$7.48B	$10.57B	6	10
Hurricane Cecelia	1970	$0.31B	$10.17B	35	11
Hurricane Ivan	2004	$7.11B	$9.99B	7	12
Hurricane	1950	$0.01B	$9.61B	93	13
Hurricane Donna	1960	$0.09B	$9.53B	57	14
Hurricane Carla	1961	$0.10B	$8.92B	54	15
Hurricane Rita	**2005**	**$5.63B**	**$8.34B**	**8**	**16**
Hurricane	1949	$0.01B	$6.96B	97	17
Hurricane Frances	2004	$4.60B	$6.50B	9	18
Hurricane Cleo	1964	$0.07B	$5.78B	62	19
Hurricane Frederic	1979	$0.75B	$5.18B	24	20
Hurricane Georges	1998	$2.96B	$5.16B	13	21
Hurricane Jeanne	2004	$3.66B	$5.16B	12	22
Hurricane Opal	1995	$2.10B	$5.12B	16	23
Hurricane Irene	2011	$4.30B	$4.65B	10	24
Tropical Storm Allison	2001	$2.50B	$4.62B	14	25

* Guy Carpenter adjusted the PCS Estimates from the year losses were incurred to 2014 levels by using a population (frequency) index and per capita income (severity) index.

(Source: PCS/Guy Carpenter)

When combined with the 2004 hurricane season, 2004 and 2005 saw seven of the top 25 costliest storms in terms of all-time insured loss.

The 2005 season in aggregate was the single costliest on record. The overall insured loss was USD58 billion, adjusted to over USD80 billion at 2014 levels.

T-3 | TOP 10 US TROPICAL CYCLONE SEASONS BY ADJUSTED PCS LOSS

Year	PCS Estimate	PCS Estimate Adjusted by Guy Carpenter	Rank Based on PCS Estimate	Rank Based on Guy Carpenter Adjusted Estimate
2005	**$58.30B**	**$80.89B**	**1**	**1**
1992	$17.10B	$50.14B	4	2
2004	**$22.90B**	**$32.31B**	**2**	**3**
1954	$0.27B	$31.10B	21	4
2012	$19.79B	$20.61B	3	5
1965	$0.52B	$18.86B	19	6
2008	$15.50B	$18.73B	5	7
1989	$4.32B	$15.12B	7	8
1970	$0.31B	$10.17B	20	9
1950	$0.01B	$9.61B	47	10

Guy Carpenter adjusted the PCS Estimates from the year losses were incurred to 2014 levels by using a population (frequency) index and per capita income (severity) index.

(Source: PCS/Guy Carpenter)

IMPACT TO THE INSURANCE AND REINSURANCE INDUSTRIES

INSURANCE AND REINSURANCE PRACTICES

The intense damage caused by wind and storm surge flooding, particularly from Hurricanes Katrina and Rita, led to a large amount of "coverage leakage," where insurers were forced to pay flood claims on wind policies for several reasons, including the total destruction of the property, making it impossible to determine if the damage was caused by wind or surge, unclear contract language and litigation brought by regulators to cover flood damage under wind-only policies. As a response many insurance companies revisited their policy wording on flood coverage, with some choosing to explicitly exclude all flood or storm-surge flood from their contracts.

In addition, wind underwriting guidelines became more stringent, including a combination of higher deductibles, wind sub-limits and/or constricting maximum lines for wind limits. After the 2004 and 2005 storms Citizens Property Insurance Corporation became a popular carrier for first-dollar wind coverage for many Florida homeowners. With reduced capacity for wind coverage (coupled with increases in technical pricing due to catastrophe model changes) rates for both personal and commercial lines increased by as much as 20 percent in 2006.

Many reinsurers explicitly incorporated anticipated changes in rating agency requirements and catastrophe models into their pricing for reinsurance for the 2006 contract year. In all cases this led to significant upward pressure on both estimated catastrophe exposure for their reinsurance contracts (and reinsurance portfolios as a whole) and pricing.

FLORIDA HURRICANE CATASTROPHE FUND CHANGES

In addition to the changes made to the Florida Hurricane Catastrophe Fund (FHCF) in response to the 2004 hurricane season, the state of Florida passed additional legislation in 2006 that required the FHCF premiums to include a 25 percent rapid cash build-up factor. Limited apportionment companies were also offered the option to purchase an additional USD10 million in coverage for the 2006 contract year only. This was eventually extended through 2011. The legislation also provisioned a one-year program to transfer the insurance policies of liquidating companies to the Citizens Property Insurance Corporation.

Beyond the legislative changes applied to the 2005 and 2006 hurricane seasons as a direct result of the significant hurricane activity, the storms' impact went much farther. In 2006, the FHCF experienced a funding shortfall for the first time in its history as a result of payments for the 2004 and 2005 storms and issued tax-exempt post-event bonds in July 2006 to meet its payment obligations. The bonds were financed via a one percent emergency assessment beginning on January 1, 2007. Due to continued development in losses, the FHCF was required to issue additional bonds in 2008 and 2010, increasing the assessment percentage to 1.3 percent. While the 25 percent rapid cash build-up factor was added to rebuild the depleted cash balance more quickly, the FHCF also issued USD2.8 billion of pre-event bonds for the first time in July 2006 to add to available cash.

The unprecedented loss activity from the 2004 and 2005 hurricane season plus the compounding impacts of catastrophe model changes and rating agency response caused insurance premiums to increase rapidly in Florida. In order to provide a measure of relief, in 2007 additional changes were made to the FHCF. These included the repeal of the 25 percent rapid cash build-up factor, extension of the USD10 million additional coverage layer available to specific eligible member companies and creation of optional layers expanding the FHCF coverage. The expanded FHCF coverage included the Temporary Emergency Additional Coverage Options (TEACO) to provide a mechanism for insurers to reduce their FHCF retention and the Temporary Increase in Coverage Limits (TICL) to provide USD12 billion of additional FHCF limit. While the initial timeframe for the expansion of coverage under TEACO and TICL was three years, some portion of the TICL coverage was offered through 2013.

RATING AGENCY RESPONSE

After the 2004 and 2005 hurricane seasons, the rating agencies reviewed their requirements for determining companies' ratings and the data requirements from insurers in order to determine the rates.

A.M. BEST

A.M. Best announced that companies would be expected to include options for storm surge, fire following earthquake and demand surge in their loss estimates as provided in the Supplemental Rating Questionnaire (SRQ) starting with the questionnaire for the 2005 year. In addition, A.M. Best stated a preference for the new "near-term" view of risk to be used for hurricane losses. Ancillary lines of business/causes of loss such as business interruption, additional living expenses, flood, auto, workers compensation, energy, marine and crop were also expected to be included. The SRQ also requested insurance companies to provide exposure information on aggregate insured value by territory. Changes were also made to A.M. Best's Capital Adequacy Ratio (BCAR) and stress test calculations, which impacted some ratings.

In addition to the new requirements for the SRQ, there was a focus on data quality, including accuracy of exposures entered into catastrophe models, insurance to value analysis and geocoding. A.M. Best also expected insurance companies to be able to explain their choice of which catastrophe model or models they used to represent their view of risk, as well as which options within the models were utilized. Companies were expected to demonstrate that managing catastrophe risk was integrated into their risk management strategies, including monitoring exposure concentrations, purchasing appropriate reinsurance and setting underwriting guidelines with a view toward catastrophe aggregations and risk.

STANDARD & POOR'S (S&P)

Beginning in 2005, S&P began utilizing the 250 year aggregate catastrophe loss to assess the capital charge for reinsurers with property catastrophe risk. Previously, this capital charge was measured by the 100 year loss. Similar to A.M. Best, S&P also requested the use of the near-term view of hurricane event frequency.

FITCH

In late 2005, Fitch announced that it would be shifting away from the single-point view of risk, such as the 100 or 250 year loss (or probable maximum loss) and focusing on the Tail Value at Risk (TVaR), which is an average measure of all the modeled losses above a specified threshold. As a result of the new focus on TVaR, combined with the changes to the catastrophe models in 2006, Fitch estimated an increase of 10 percent on average to the overall capital requirements of insurers writing catastrophe risk.

MOODY'S

Like A.M. Best and S&P, Moody's moved to a short-term frequency event set for the industry exceedance curves in their Moody's P&C Risk Adjusted Capital Model (MRAC). New modeled industry curves were released in August 2006, showing significant increases for both U.S. wind and earthquake losses.

IMPACT TO THE CATASTROPHE MODELS

Major updates to the U.S. hurricane models were made as a result of lessons learned during the 2004 and 2005 seasons. For many insurance companies, modeled output for the actual storms showed significant variance from the actual claims losses they were experiencing. Models often underestimated losses by as much as 30 to 60 percent, depending on the region and portfolio. While it was clear that there were some deficiencies in the catastrophe models, these disconnects between modeled and actual also highlighted deficiencies in the collecting and entering of exposure data into the catastrophe models. As a result many companies instituted initiatives to review and augment the accuracy and completeness of their catastrophe modeling data.

Below is a summary of the changes made by the modeling vendors in 2006 as an immediate reaction to the two seasons, with some additional commentary on later changes and where the models stand today.

FREQUENCY

After two back-to-back active hurricane seasons, many in the insurance industry, along with climate scientists, feared that the Atlantic basin was in a heightened period of hurricane activity due to climate change. In addition, it was identified that these seasons sat in a "warm phase" of the Atlantic Multi-Decadal Oscillation (AMO), a period which had begun in 1995.

As a reaction to this increased activity, RMS introduced a near-term or medium-term view of risk. This view was meant to represent the perceived hurricane activity over a rolling five-year horizon. This new view of event frequencies was determined by an "expert elicitation" convened by RMS to get the consensus view of several eminent atmospheric scientists and climatologists. Similar groups of scientists were convened each year between 2006 and 2008 to determine if and how the near-term view of risk should be adjusted for the upcoming five-year view. In 2011, with the release of RiskLink version 11, RMS moved to a more transparent statistical approach for determining the near-term hurricane frequencies. While the event set based on the long-term historical view of hurricane risk was and is still available in the RMS model, RMS's official view of risk is the near-term event set.

AIR followed suit in CLASIC/2 version 8.0 and provided an alternative view of frequency (called the "Warm Sea Surface Temperature" view) to help users understand the sensitivities to risk given warmer than average ocean temperatures.

EQECAT released their own near-term views of risk in WORLDCATenterprise version 3.8. EQECAT's near-term view is based on the same statistical techniques used to develop its long-term view, conditioned on being in the warm phase of the AMO.

Today all three models continue to include both historical (long-term) and alternative views of risk. Guy Carpenter's official recommendation is to use the long-term view.

VULNERABILITY

The 2004 and 2005 storms afforded the catastrophe modeling vendors a wealth of real-world claims data that were used to validate and update the vulnerability modules of their models. While the majority of the claims used for the 2006 updates were from 2004 (since the 2005 claims were still to be evaluated), some 2005 claims were utilized.

In addition to recalibrating their vulnerability curves, RMS reordered the importance of primary building characteristics in determining structure vulnerability. For personal lines, square footage was introduced as a new primary characteristic, and along with year of construction, this became a primary driver of vulnerability. For commercial lines, occupancy became the primary driver of vulnerability, followed by year of construction.

After further review of claims data from the 2005 storms, RMS later introduced a new construction class (Floating Structures) and a new occupancy class (Casinos) meant to account for the unique vulnerability and business interruption patterns of these types of risks.

AIR also updated their vulnerability functions. For personal lines, a new year-built band between 1995 and 2001 was added for Florida. For commercial lines, vulnerability for certain construction types, such as light metal, wood frame and unreinforced masonry, was increased, as were certain occupancy type vulnerabilities such as hotels and retail trade. New occupancy types were introduced, reflecting the higher vulnerabilities found for such risks as fast food restaurants, auto repair shops, primary and secondary schools, aircraft hangers, gas stations and golf courses.

EQECAT updated their vulnerability functions as well, focusing on the Gulf Coast region from Texas through Alabama, in which the loss data from the 2004 and 2005 storms revealed significant differences in building performance relative to other regions. These updates were released in 2007.

All three modeling firms have introduced other material U.S. hurricane model updates since 2006: AIR in 2010, and RMS and EQECAT in 2011. While the vulnerabilities shifted based on claims and lessons learned from later storms, such as Hurricane Ike in 2008, many of the lessons learned from the 2004 and 2005 storms are still incorporated in today's versions of the models.

STORM SURGE

RMS added high-resolution elevation data and revised the vulnerability curves for its storm surge model. These changes primarily affected the Gulf of Mexico region, driven by the surge losses seen in New Orleans as a results of Katrina.

AIR enhanced its storm surge model to reflect higher peak surge levels for the more intense storms. They also made changes to account for local terrain effects, particularly bays and estuaries. In addition, vulnerability functions were updated to include more variation by construction and occupancy type.

EQECAT introduced a flood model correlated with its U.S. hurricane event set in 2007, incorporating numerical hydrodynamic modeling for storm surge. The model was available on a consulting basis as early as 2006.

Storm surge continues to be an on-going topic of interest. In 2011, RMS substantially revised its storm surge model, incorporating numerical hydrodynamic modeling. In addition, it made changes to the user settings for applying storm surge in catastrophe models in version 11 and again in version 13. AIR plans an update to its storm surge model in the near future.

LOSS AMPLIFICATION/DEMAND SURGE

RMS introduced the concept of Loss Amplification in its 2006 model. This was an enhancement to the concept of demand surge, or the idea that the cost of goods and services necessary to rebuild and repair property damaged by a large event would perforce increase due to the limited availability of raw materials and labor. In addition to these factors, RMS also now includes the impact of claims inflation and claims expansion, "super cat" effects and increased correlation for the most severe events.

AIR introduced its own changes to its demand surge function in its 2005 model (after the 2004 season and before the impacts from Katrina, Rita and Wilma) that allowed users to apply demand surge on an aggregate basis. Both the RMS Loss Amplification model and Aggregate Demand Surge in AIR are still incorporated in the U.S. hurricane models of today.

EQECAT also updated its demand surge modeling based on data from the 2004 and 2005 seasons and incorporating information on regional supplies of construction labor and materials. The updated version was released in 2008.

INTERNAL ADJUSTMENTS

In addition to the changes made by the catastrophe modeling vendors, insurance and reinsurance companies increasingly began to make their own internal adjustments to modeled output after the 2005 hurricane season. In some cases, these adjustments took the form of uplift factors meant to mitigate the shortfalls in modeled to actual losses and to incorporate losses from non-modeled factors such as storm surge leakage and civil unrest following a "super cat" event such as Hurricane Katrina, for example, rioting, pollution, arson or theft.

After the next round of major updates to the hurricane models in 2010 and 2011, companies dug even deeper to derive their own view of risk, incorporating independent scientific research on hazard and vulnerability and other methods of validation into their investigations. Utilizing multiple models, blending one or more catastrophe models and/or adjusting catastrophe modeling output started to become the industry norm, and this trend continues to the present day.

CONCLUSIONS

The 2004 and 2005 Atlantic hurricane seasons ushered in a new era of increased focus on the potential for catastrophic tropical cyclone loss in the United States. Overall, the industry has embraced the opportunity to incorporate a strong understanding of property catastrophe risk as part of an overall enterprise risk management strategy. In the past ten years, insurance and reinsurance companies have focused on improving data quality and accuracy, as well as increasing their understanding of the science and underlying assumptions behind catastrophe models. This trend has ultimately led many companies to utilize multi-model views of risk, as well as making well-informed adjustments to out-of-the-box catastrophe model output to truly own their view of risk.

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Resources

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Note: PCS loss estimates used with permission: http://my.verisk.com/14q3catreview?source=gc

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