



® Weather Research Center



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**For Immediate Release**

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**WRC's Hurricane OCSI Index gives the Gulf Coast from Louisiana to Alabama the highest chance of experiencing a tropical storm or hurricane this summer. The OCSI also calls for a below average season with only 7 named storms.**

**Weather Research Center's New Freeman/Hasling Hurricane Damage Potential Scale Risk Assessment Tool Will Become Operational for Offshore Interests during the 2009 Hurricane Season**

**2009 WRC OCSI FORECAST FOR THE ATLANTIC**

<b>COAST</b>	<b>WRC OCSI</b>	<b>CLIMATOLOGY</b>
Mexico	40%	40%
Texas	40%	51%
<b>Louisiana to Alabama</b>	<b>70%</b>	<b>59%</b>
West Florida	60%	71%
East Florida	30%	41%
Georgia to N. Carolina	50%	56%
East Coast of US	30%	36%
Gulf Oil & Gas Leases	90%	88%

**Other 2009 Predictors from WRC's OCSI**

	<b>OCSI Forecasts</b>
Number of Named Storms	7
Number Intensifying into Hurricanes	4
Number of Hurricane Days	7
Number of Tropical Storm Days	47
US Landfalls	3
Category 3, 4 or 5 Storms in the Atlantic Basin	50%

The risk of tropical cyclones occurring in the Atlantic Basin by month is as follows: May - 10%, June - 50%, July - 30%, August - 80%, September - 100%, October - 100% and November - 40%.

**Houston, TX** – Weather Research Center (WRC) in Houston is forecasting a 70 percent chance of a tropical storm or hurricane landfall along the Louisiana to Alabama Gulf coast during the upcoming 2009 hurricane season, above the climatological average of 59 percent. According to WRC meteorologist Jill F. Hasling, WRC's 2009

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outlook forecasts at least seven named storms in the Atlantic Basin with four of these tropical storms intensifying into hurricanes. Additionally, the outlook anticipates seven hurricane days and 47 tropical storm days during this year's season.

WRC will be implementing its new risk assessment tool, the Freeman/Hasling Hurricane Damage Potential Scale (Freeman/Hasling HDP), this season to give offshore operators and insurers a better estimate of the potential property damage when a hurricane threatens the Gulf. In 2008, Hurricane Ike demonstrated that size matters when it comes to hurricanes and their damage potential. Although Ike was a Category 2 hurricane on the Saffir/Simpson Scale, it caused catastrophic damage to offshore operations as well as structures along the upper Texas Coast due to its very large wind field radius. Through research based on past Gulf of Mexico hurricanes, WRC meteorologists developed the Freeman/Hasling HDP which takes into account the size of the hurricane when determining the potential damage to Gulf structures. Hurricanes Ike, Rita, Katrina and Ivan all would have been classified at the highest damage potential on the Freeman/Hasling HDP (number 5).

### **2009 Forecast Details**

WRC's Orbital Cyclone Strike Index (OCSI) was developed in 1984 to compute which section of the United States coastline has the highest risk of experiencing a tropical storm or hurricane. The 2009 forecast is based on the activity in the following years: 1879, 1890, 1902, 1914, 1924, 1934, 1945, 1955, 1965, 1977, 1987 and 1997.

Significant storms in this phase of the OCSI:

- 1924: 2 strong hurricanes – Cat 4 on East Coast and Cat 3 along West Florida
- 1945: 3 strong hurricanes – Cat 3 East Florida, Cat 4 Texas and Cat 4 in Miami
- 1955: 3 hurricanes moved up the East Coast – Connie, Diane and Ione
- 1965: Hurricane Betsy struck Louisiana

There have been two years in this group with only one tropical cyclone, but also two years with 11 named storms and one year with as many as 12 named storms. The number of cyclones, however, is not as important as the area of the Gulf they traverse, their wind intensity and wind field size, and where they make landfall. The Freeman/Hasling HDP will allow operations managers and insurers to assess the risk posed by a cyclone to their specific Gulf assets.

### **Freeman/Hasling Hurricane Damage Potential Scale**

The Freeman/Hasling HDP is not only based on the maximum sustained winds in the storm but also the central pressure, storm speed, storm heading, radius of 34 and 64 knot winds, the area of significant wave heights and the duration of the winds greater than 64 knots. For each storm, a Freeman/Hasling HDP number (0 to 5) is calculated based upon the radius of hurricane force winds in nautical miles and the Saffir/Simpson storm category. This number, in turn, provides an estimate of the number of offshore platforms exposed to the storm that could be damaged or destroyed. For example, for a storm with a Freeman/Hasling HDP number of 4, eight percent of exposed platforms could be damaged or destroyed.

The table below provides the Freeman/Hasling HDP number compared with the Saffir/Simpson category for some past Gulf hurricanes. When size is taken into account, the six storms highlighted in red would have rated a higher number on the Freeman/Hasling HDP Scale than the Saffir/Simpson Scale, indicating greater damage potential to Gulf assets than the wind intensity category alone would imply.

Past Storms	Saffir/Simpson Scale	Freeman/Hasling Hurricane Damage Potential Scale
Ike 2008	2	5
Gustav 2008	3	1
Dolly 2008	2	0
Rita 2005	4	5
Katrina 2005	5	5
Ivan 2004	4	5
Lili 2002	3	1
Georges 1998	2	0
Andrew 1992	4	5
Frederic 1979	4	5
Carmen 1974	4	2
Camille 1969	5	1
Betsy 1965	3	5
Hilda 1964	5	3
Carla 1961	5	5
Audrey 1957	4	2

### **About Weather Research Center and the Orbital Cyclone Strike Index**

Houston-based Weather Research Center is one of a handful of organizations that makes seasonal hurricane predictions. WRC uses a model called Orbital Cyclone Strike Index (OCSI) which uses the solar cycle (an indication of the solar system's orbit) to predict the risk for coastal residents each hurricane season. The OCSI model is based on the premise that there are orbital influences that are reflected in the global circulation pattern on the sun as well as the global circulation pattern of the earth. These orbital influences are reflected in the 11.1-year sun spot cycle.

During the 25-year period from 1984 to 2008, there have only been three years (1987, 1992 and 1999) when a storm or hurricane did not make landfall in the section of the United States coastline that had the highest risk. In all three of these years, cyclones made landfall in the section of the coast with the second highest risk. This gives the OCSI an 88 percent accuracy rate.

In addition to its ongoing research, WRC also provides storm and hurricane information via the Internet through Storm Navigator®. This service offers detailed storm updates and related information. WRC's current and past predictions can be found at [www.wxresearch.com/outlook](http://www.wxresearch.com/outlook).

Founded in 1987, the non-profit Weather Research Center manages a worldwide forecasting operation and provides groundbreaking research to scientists around the world. Meteorologists provide tropical cyclone advisories worldwide, severe weather advisories, marine forecasts, long-range outlooks, environmental studies and forensic meteorology services. WRC provides research into tropical cyclones as well as real-time weather forecasts. WRC can also provide you with an assessment of your severe weather and tropical weather plans.

Jill F. Hasling, WRC President, is a Fellow and Certified Consulting Meteorologist from the American Meteorological Society as well as a member of the National Council of Industrial Meteorologists.

For more information about Weather Research Center and the John C. Freeman Weather Museum, please call (713) 529-3076 or visit [www.wxresearch.com](http://www.wxresearch.com).

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