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**For Immediate Release**

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## **WERE ALL OF THE 2007 ATLANTIC CYCLONES REALLY TROPICAL OR HAVE THE TROPICAL STORM GUIDELINES CHANGED?**

### **Weather Research Center's OCSI 2007 Hurricane Season Forecast Verifies**

**Houston** – According to meteorologists at Houston based Weather Research Center, there were six storms named this year that most likely would not have been named in the past. Twenty to thirty years ago, the central pressure was the key element used to determine if a tropical cyclone got a name. Many of the named storms this year had minimum central pressures of 1000 mb or more and only brief periods when the winds were tropical storm force. Taking this into account, there most likely would have been six fewer storms this year dropping the 13 named tropical cyclones and 1 sub tropical storm to seven. WRC was the only organization that was forecasting for a below normal season by forecasting seven named tropical cyclone with four of these cyclones intensifying into hurricanes. The actual numbers, discounting the six storms that would not have been named in past years, were seven named tropical storms with five of these intensifying into hurricanes, which verifies WRC 2007 forecast.

There have only been nine years since 1871 when there were more than 14 named storms during a season. Weather Research Center's meteorologist Jill F. Hasling expressed that, "There have only been eight years since 1871 that have had 10 named storms after September 1." [1887 had 12 storms, 1949 had 10, 1953 had 10, 1961 had 10, 1969 had 12, 2000 had 10, 2001 had 11 and 2005 had 18.] That gives us a 5% chance in any year of having 10 named storms in a year, which is what we need to reach a total of 15 named storms for the season.

There were nine named storms after September 1 with four of these storms being questioned whether they should have been named at all. The hurricanes were Hurricanes Dean, Felix, Humberto, Lorenzo and Noel. According to the official National Hurricane Season summary, there were 13 named tropical storms and 1 sub-tropical storm. Weather Research Center meteorologist Jill F. Hasling doubts that all 13 of these storms were "tropical" and most likely during past seasons, the following storms would not have been named or at best would have been sub-tropical storms. Questionable named storms for 2007 were Chantal, Erin, Gabrielle, Ingrid, Jerry, and Melissa. If you remove these doubtful storms then there were only seven tropical cyclones in the 2007 Atlantic Hurricane Season.

1. Tropical Storm Barry – June 1 - 2
2. Hurricane Dean – August 13 - 23
3. Hurricane Felix – August 31 - September 5
4. Hurricane Humberto – September 12 - 14
5. Tropical Storm Karen – September 25 - 30
6. Hurricane Lorenzo – September 25 - 28
7. Hurricane Noel – 28 October – November 2

Weather Research Center's (WRC) Orbital Cyclone Strike Index [OCSI] was developed to indicate which section of the US coast line has the highest risk of experiencing a tropical storm or hurricane. The sections of the US coast with the highest risk in 2007 were from Brownsville, Texas to Key West, Florida, which had a 66% chance of experiencing a landfall of a tropical storm or hurricane. This forecast verified with the landfalls of Tropical Storm Barry and Hurricane Humberto. The 2007 Hurricane Season forecast verified with Tropical Storm Barry making landfall along the western Florida coast and Hurricane Humberto making landfall at the Texas/Louisiana border.

#### **2007 WRC OCSI LANDFALL RISK FORECAST FOR THE UNITED STATES COAST**

| <b>COAST</b>                  | <b>WRC OCSI</b> | <b>CLIMATOLOGY</b> | <b>OBSERVED</b> |
|-------------------------------|-----------------|--------------------|-----------------|
| <b>Mexico</b>                 | <b>33%</b>      | <b>40%</b>         | <b>Lorenzo</b>  |
| <b>Texas</b>                  | <b>66%</b>      | <b>51%</b>         | <b>Humberto</b> |
| <b>Louisiana to Alabama</b>   | <b>66%</b>      | <b>59%</b>         | <b>Humberto</b> |
| <b>West Florida</b>           | <b>66%</b>      | <b>71%</b>         | <b>Barry</b>    |
| <b>East Florida</b>           | <b>10%</b>      | <b>41%</b>         |                 |
| <b>Georgia to N. Carolina</b> | <b>33%</b>      | <b>56%</b>         |                 |
| <b>East Coast of US</b>       | <b>10%</b>      | <b>36%</b>         |                 |
| <b>Gulf Oil Blocks</b>        | <b>90%</b>      | <b>88%</b>         | <b>Humberto</b> |

#### **Other 2007 Predictors from WRC's OCSI:**

|  | <b>Forecast</b> | <b>Observed</b>    | <b>Corrected Observed</b> |
|--|-----------------|--------------------|---------------------------|
| <b>Number of Named Storms:</b>                 | <b>7</b>        | <b>13</b>          | <b>(7)</b>                |
| <b>Number of Storm Days:</b>                   | <b>22</b>       | <b>32</b>          | <b>(28)</b>               |
| <b>Number intensifying into Hurricanes:</b>    | <b>4</b>        | <b>5</b>           |                           |
| <b>Number of Hurricane Days:</b>               | <b>19</b>       | <b>11</b>          |                           |
| <b>US Landfalls:</b>                           | <b>3</b>        | <b>3</b>           |                           |
| <b>Cat 3 or Higher Storms in the Atlantic:</b> | <b>67%</b>      | <b>Dean, Felix</b> |                           |

WRC's forecast for 2007 and 2008 was complicated by determining when the sun spot minimum would occur. So far the minimum has not occurred and is predicted to occur in March 2008 which would make 2008 the year of the sun spot minimum. However, if the monthly sun spot count starts to increase in the next few months and occurs in 2007, then the forecast for 2007 would have been different and would have been similar to the current outlook for 2008.

## 2008 WRC OCSI FORECAST FOR THE ATLANTIC

| COAST                  | WRC OCSI | CLIMATOLOGY |
|------------------------|----------|-------------|
| Mexico                 | 40%      | 40%         |
| Texas                  | 40%      | 51%         |
| Louisiana to Alabama   | 60%      | 59%         |
| West Florida           | 70%      | 71%         |
| East Florida           | 40%      | 41%         |
| Georgia to N. Carolina | 90%      | 56%         |
| East Coast of US       | 60%      | 36%         |
| Gulf Oil Blocks        | 90%      | 88%         |

### Other 2008 Predictors from WRC's OCSI:

|   | OCSI Forecasts |
|---|----------------|
| Number of Named Storms:                 | 11             |
| Number of Storm Days:                   | 83             |
| Number intensifying into Hurricanes:    | 5              |
| Number of Hurricane Days:               | 24             |
| US Landfalls:                           | 4              |
| Cat 3 or Higher Storms in the Atlantic: | 50%            |

The OCSI was developed by Houston meteorologists Dr. John C. Freeman and Jill F. Hasling. This index has been used since 1984 to make annual hurricane season forecasts of which section of the North American coast has the highest risk of experiencing a tropical storm or hurricane.

The Houston-based Weather Research Center is one of a handful of organizations that make 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 24-year period from 1984 to 2007, 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 87.5% accuracy rate.

In addition to its ongoing research, WRC also provides storm and hurricane information via the Internet through Storm Navigator®. This service helps provide 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 world wide, severe weather advisories, marine forecasts, long-range outlooks, environmental studies and forensic meteorology services. Weather Research Center 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.

President Jill F. Hasling 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 The John C. Freeman Weather Museum at Weather Research Center, please call (713) 529-3076 or logon to [www.wxresearch.org](http://www.wxresearch.org).

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