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VERIFICATION OF THE HASLING CYCLONE STRIKE INDEX 2017 ATLANTIC HURRICANE OUTLOOK

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HOUSTON, TEXAS USA – The 2017 Atlantic Hurricane Season officially ends November 30, 2017. Jill F. Hasling, CCM using the Hasling Cyclone Strike Index [CSI] predicted that the Texas Coast and the west coast of Florida would have the highest risk of experiencing a tropical storm or hurricane this year with a 70% chance. This prediction verified with the landfall of Tropical Storm Cindy on the Texas/Louisiana border in June. Texas experienced a second storm with the landfall of Hurricane Harvey in August on the Texas coast. The forecast continued to verify for the west coast of Florida with the landfall of Irma, Philippe and Tropical Storm six.

The secondary predictors of the CSI called for 10 to 13 named tropical cyclones forming in the Atlantic with 5 of these cyclones intensifying into hurricanes. There were a total of 17 named storms in the Atlantic basin in the 2017 season,

Four of the tropical cyclones were expected to make landfall along the United States Coast. 2017 saw six US landfalls with Cindy, Tropical Storm Six, Harvey, Irma, Nate, and Philippe.

There was a 50% chance that one of the hurricanes would intensify into a Category 3 or higher hurricane somewhere in the Atlantic. This occurred with six of the hurricanes intensifying into major hurricanes. Harvey – Category 4, Irma – Category 5, Jose – Category 4, Lee – Category 3, Maria – Category 5 and Ophelia – Category 3.

The season was expected to start early with a chance of May tropical cyclone. The season indeed started early with the formation of Tropical Storm Arlene in April. The season was also expected to be a long season with named storms in December. The last storm of the 2017 season so far is Tropical Storm Rina in November.

The CSI for 2017 showed that Texas and the West Coast of Florida had the highest risk of a landfall of a named tropical cyclone. The Gulf of Mexico oil leases had a 100% chance of experiencing a tropical storm or hurricane this year. This verified with Hurricane Harvey moving over the western oil leases and making landfall along the Texas Coast.

There have been twelve Atlantic Hurricane Seasons since 1871 that we know when there were 15 or more named tropical cyclones in the Atlantic in a season [1887, 1933, 1936, 1969, 1995, 2003, 2005, 2008, 2010, 2011, 2012, 2016, and 2017]. Since 1871, there have been 50 years when a season had 10 or more named tropical cyclones. The season with the most Atlantic tropical cyclones is 2005 with 27 named cyclones with 15 intensifying into hurricanes. Below is the list of the 12 years with 15 or more named Atlantic tropical cyclones.

| | |
|------|-------------------|
| 2005 | 27 named cyclones |
| 1933 | 21 named cyclones |
| 1995 | 19 named cyclones |
| 2010 | 19 named cyclones |
| 2012 | 19 named cyclones |
| 1969 | 18 named cyclones |
| 1887 | 17 named cyclones |
| 2011 | 17 named cyclones |
| 1936 | 16 named cyclones |
| 2003 | 16 named cyclones |
| 2016 | 16 named cyclones |
| 2017 | 17 named cyclones |

2017 was Phase 10 of the Hasling Cyclone Strike Index and included years 1887, 1898, 1910, 1922, 1932, 1942, 1953, 1963, 1973, 1985, 1995, and 2005. The last two CSI Phase 10 years were 1995 and 2005. In 1995 the Atlantic experienced 19 tropical cyclones with 11 of them reaching hurricane strength and in 2005 we experienced 27 tropical cyclones with 15 of them intensifying into hurricanes. So 17 tropical cyclones in 2017 was not unexpected.

2017 WRC CSI ATLANTIC HURRICANE OUTLOOK/ VERIFICATION

| COAST | CSI | OBSERVED |
|---------------------------------------|-------------|---|
| Gulf of Mexico Offshore Leases | 100% | Nate, Harvey |
| Texas | 70% | Cindy, Harvey |
| Louisiana to Alabama | 50% | Cindy, Harvey, Nate |
| West Florida | 70% | Irma, Philippe, TS Six |
| East Florida | 30% | |
| Georgia to North Carolina | 60% | |
| East Coast of US | 20% | |
| Mexico | 50% | Franklin, Karia |
| SECONDARY CSI PREDICTORS | | |
| Number of Storms | 10-13 | 17 |
| Number of Hurricanes | 5 | 10 |
| Hurricane Days | 21 | 51 |
| Tropical Storm Days | 68 | 38 |
| US Landfalls | 4 | 6 |
| Category 3,4,5 Hurricanes | 50% | Harvey, Irma, Jose, Maria, Lee, Ophelia |

The outlook for 2018 is a more difficult forecast since it is Phase 11 of the Hasling Cyclone Strike Index. The years used for Phase 11 and 12 are 1888, 1899, 1900, 1911, 1912, 1943, 1974 and 1975. Recent years in Phase 11 and Phase 12 were 2006 and 2007.

According to the Hasling Cyclone Strike Index, the Louisiana to Alabama coast has the highest risk in 2018 of experiencing a landfall of tropical storm or hurricane. Ten to thirteen named tropical cyclones are expected in the 2018 season with six of them becoming hurricanes.

2018 WRC CSI ATLANTIC HURRICANE OUTLOOK

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|--|------------|
| 2018 Cyclone Strike Index Outlook | CSI |
| Gulf of Mexico Offshore Leases | 88% |
| Texas | 50% |
| Louisiana to Alabama | 75% |
| West Florida | 50% |
| East Florida | 13% |
| Georgia to North Carolina | 50% |
| East Coast of US | 25% |
| Mexico | 25% |
| SECONDARY CSI PREDICTORS | |
| Number of Storms | 10-13 |
| Number of Hurricanes | 6 |
| Hurricane Days | 24 |
| Tropical Storm Days | 30 |
| US Landfalls | 3 |
| Category 3,4,5 Hurricanes | 67% |

The Hasling Cyclone Strike Index [CSI] Outlooks have been issued each year since 1984. The seasonal index has verified 88% of the time in regards to the section with the highest possibility of landfall. Taking into account the areas of coastline with the second highest chance of landfall, the index verifies at 97%. For more information on the outlook go to <http://www.wxresearch.com/outlook>

For further information or questions regarding the hurricane outlook, please do not hesitate to contact Jill Hasling, CCM at wrc@wxresearch.org or 713-818-9346