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Continuity IQ

Fast Facts for our Valued Friends and Clients

June 2009

Here are some bullets and brain teasers about current events from your friends at Disaster Survival Planning Network (DSPN). In this issue, we provide an update on hurricanes. If you'd like to forward this message to your colleagues, just click the "Forward Email" link at the bottom of this page.

Fast Facts about Hurricanes

Did you know...

- Hurricane season for the Atlantic Basin officially began this week and runs through the end of November. However, peak season in the Atlantic is August-October. In the Southwest Pacific basin, peak season is February-March.
- A near-average Atlantic hurricane season is on tap for 2009, according to the seasonal hurricane forecast issued June 2 by Dr. Phil Klotzbach and Dr. Bill Gray of Colorado State University (CSU). The CSU team is calling for 11 named storms, 5 hurricanes, and 2 intense hurricanes. Between 1950 - 2000, the average season had 10 named storms, 6 hurricanes, and 2 intense hurricanes. But since 1995, the beginning of an active hurricane period in the Atlantic, we've averaged 15 named storms, 8 hurricanes, and 4 intense hurricanes per year. The new forecast is a step down from their April forecast, which called for 12 named storms, 6 hurricanes, and 2 intense hurricanes. The new forecast calls for a near-average chance of a major hurricane hitting the U.S., both along the East Coast (28% chance, 31% chance is average) and the Gulf Coast (28% chance, 30% chance is average). The Caribbean is also forecast to have an average risk of a major hurricane.
- The forecasters said that one reason for downgrading their forecast was that sea surface temperature anomalies in the tropical Atlantic are quite cool. In fact, they are at their coolest level since July 1994. Cooler-than-normal waters provide less heat energy for developing hurricanes. In addition, an anomalously cool tropical Atlantic is typically associated with higher sea level pressure values and stronger-than-normal trade winds, indicating a more stable atmosphere with increased levels of vertical wind shear detrimental for hurricanes. Substantial cooling began in November 2008, primarily due to a stronger than average Bermuda-Azores High that drove strong trade winds. These strong winds increased the mixing of cool waters to the surface from below, and caused increased evaporational cooling.
- Another reason for downgrading the forecast was that hurricane activity in the Atlantic is lowest during El Niño years and highest during La Niña or neutral years. This occurs because El Niño conditions bring higher wind shear over the tropical Atlantic. The CSU team expects the current neutral conditions may transition to El Niño conditions (70% chance) by this year's hurricane season.
- The forecasters picked five previous years when atmospheric and oceanic conditions were similar to what we are seeing this year: neutral to slightly warm ENSO conditions, slightly

below-average tropical Atlantic SSTs, and above-average far North Atlantic SSTs during April-May. Those five years were 2002, which featured Hurricane Lili that hit Louisiana as a Category 1 storm; 2001, featuring Category 4 storms Michelle, which hit Cuba, and Iris, which hit Belize; 1965, which had Category 3 Betsy that hit New Orleans; 1960, which had two Category 5 hurricanes, Ethyl and Donna; and 1959, which had Category 3 Hurricane Gracie, which hit South Carolina. The mean activity for these five years was 10 named storms, 6 hurricanes, and 2 intense hurricanes, almost the same as the 2009 CSU forecast.

- The National Oceanic and Atmospheric Administration (NOAA), issued its 2009 Atlantic hurricane season forecast on May 21. NOAA anticipates that an average season it most likely, giving a 50% chance of a near-normal season, 25% chance of an above-normal season, and a 25% chance of a below-normal season. They give a 70% chance that there will be 9 - 14 named storms, 4 - 7 hurricanes, and 1 - 3 major hurricanes.
- According to records maintained by the National Hurricane Center, Category 3 hurricanes struck New England in 1938 and 1954.
- According to FEMA, high-rise buildings are vulnerable to hurricane-force winds, particularly at the higher levels since wind speed tends to increase with height. Recent research suggests you should stay below the tenth floor, but still above any floors at risk for flooding. It is not uncommon for high-rise buildings to suffer a great deal of damage due to windows being blown out. Consequently, the areas around these buildings can be very dangerous.
- As a hurricane moves over land, it quickly loses strength. However, intense hurricanes can deliver strong winds inland. For example, during Hurricane Hugo in 1989, Charlotte, NC, which is 175 miles from the shore, lost more than eighty thousand trees to the storm, many of which were more than seventy years old. Ninety-eight percent of the city's residents lost power, and for some, repairs were not made for more than two weeks.

Brain Teasers

True or False

1. These 3 terms describe the same type of hazard: "hurricane", "cyclone", "typhoon".
2. A cyclone in the Southern Hemisphere rotates in the opposite direction from a hurricane in the Northern Hemisphere.
3. The partial vacuum at the center of a strong hurricane allows the ocean to rise up in response, thus causing a destructive storm surge as it makes landfall.
4. Hurricanes weaken quickly when they come ashore because of friction caused by the land.
5. A relatively small hurricane is usually not a very intense hurricane.

Check your answers here...

Answers to the above questions:

1. *True.* Depending on their location and strength, tropical cyclones are referred to by other names, such as hurricane, typhoon, tropical storm, cyclonic storm, tropical depression and simply cyclone.
2. *True.* Cyclones in the Southern Hemisphere always have clockwise rotation while hurricanes in the Northern Hemisphere always have counterclockwise rotation.
3. *False.* Low pressure causes only 15% of the surge. According to NOAA, 85% of a storm surge is caused by winds pushing the ocean surface ahead of the storm on the right side of the track. (Northern Hemisphere).
4. *False.* According to NOAA, a hurricane over land will begin to weaken rapidly. not because of friction, but because the storm lacks the the moisture and heat sources that the ocean provided. This depletion of moisture and heat hurts the hurricane's ability to produce thunderstorms near

the storm center. Without this convection, the storm rapidly fails.

5. *False.* According to NOAA, there is very little association between intensity and size. Hurricane Andrew is a good example of a very intense tropical cyclone that was also relatively small.

Readiness Check

Hard-to-remember details:

1. How specifically does your insurance policy define water damage? Does the definition include damage caused by a plumbing break? Rising water? Wind-driven water? Storm surge? Many Katrina victims are still litigating imprecise water damage definitions.
2. Do you have enough generator capacity and fuel to manage a power outage that lasts for a week or more?
3. If you operate from your alternate work locations for an extended period, are the suppliers you will need located in that area as well?
4. Is the water for drinking fountains and toilets dependent on having electrical power in your building?
5. Have you pre-defined pay policies for your employees who you will ask to stay home during a hurricane?

Comments and Contributions

Tell us what you think...



Thanks to all of you who have sent us comments about this mailing.

In responding to recent incidents, did you discover an interesting detail that you would like to share with our readers? If so, send it along and we'll consider it for a future issue. If you want us to print a comment or submission about your company, be sure to give us permission when you write.

[Paul Klier](#)

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