

2003 Hurricane Season Summary

The 2003 Hurricane Season was an active season with over \$1.5 Billion in property damage to the United States and Bermuda. Tropical cyclones developed in the Gulf of Mexico, the Caribbean Sea, and the inter-tropical convergence zone of the Atlantic Ocean. Although activity for Florida has been below average this year, the Atlantic region has been above average for cyclone development. During 2003, the Atlantic region has had 19 tropical cyclones, of which 14 became named storms, of which 7 of the named storms became hurricanes, of which 3 of the hurricanes became major hurricanes. The following chart compares actual activity to Dr. Gray=s official forecast for the 2003 season:

	<u>ACTUAL</u>	<u>Dr. GRAY=s FORECAST</u>
Named Storms	14	14
Hurricanes	7	8
Major Hurricanes	3	3

As you can see, Dr. Gray=s forecast was almost exact for the actual activity that occurred. Of the 19 tropical cyclones this year, 10 made landfall somewhere in the Atlantic region. The following is a review of the landfalling tropical cyclones during 2003.

<u>SYSTEM</u>	<u>WINDS</u>	<u>LANDFALL LOCATION</u>
Tropical Storm Bill	60mph	Southeast Louisiana
Hurricane Claudette	90mph	Southern Texas
Tropical Depression #7	35mph	Central Georgia
Hurricane Erika	75mph	Northeast Mexico
Tropical Storm Grace	40mph	Central Texas
Hurricane Fabian	115mph	Bermuda
Tropical Storm Henri	50mph	Northwest Florida Peninsula
Hurricane Isabel	105mph	North Carolina-North
Hurricane Juan	75mph	Nova Scotia
Tropical Storm Larry	60mph	Southern Mexico

This year we had two major hurricanes that created severe damage in populated areas. The first was Hurricane Fabian with sustained winds of 145mph. By the time Fabian reached Bermuda, it had weakened to sustained winds of 115mph. This system

moved directly over the island of Bermuda in early September. Rainfall of 15 inches and winds gusting to 125mph were reported throughout the island. The island had a 98% power outage for about a week. The second major hurricane was Hurricane Isabel with maximum sustained winds of 160mph. Isabel remained a Category V hurricane for two days and began to weaken as it approached the United States. Isabel made landfall over North Carolina and other parts of the northeast coast of the United States as a Category II hurricane with winds of 105mph. Extreme flooding and wind damage occurred from North Carolina north to Maine. While the damage estimates change frequently, the last reported damage estimate was over \$1Billion. Hurricane Kate also became a Category III hurricane, but never threatened any land mass.

Tropical Storm Ana was the first tropical cyclone ever to develop during the month of April. This system did not threaten any land mass as it stayed in the middle of the Atlantic Ocean. As for the southeast United States, Florida was spared from any significant tropical cyclones. Tropical Storm Henri was the only system to make land fall over Florida. It moved inland north of Tampa and exited near Flagler County. For the most part, Indian River County did not receive any impacts from the 2003 Hurricane Season. Other than some rough surf from Hurricane Isabel and heavy rainfall from a westward moving low pressure area (that would eventually enter the Gulf of Mexico and become Hurricane Erika), Indian River County survived another hurricane season.

This was the genesis year for the new 5 day forecast from the National Hurricane Center. As we started the 2003 Hurricane Season, all emergency managers were skeptical about the impact of an extended forecast. What we observed was a very positive response by the public to the extended forecast. The extended forecast did not increase public anxiety and actually provided a much better preparedness lead time during Hurricane Fabian and Hurricane Isabel. Over the winter, we will be reviewing the 5 day forecast data for accuracy and model consistency. But, after reviewing the early data, it appears that the 5 day forecast is a success and will be a great hurricane planning tool in the future. Congratulations to the scientists at the National Hurricane Center for this forecasting achievement.

Looking ahead to 2004, we can expect to see another above average year for tropical cyclone development. The big factor for the 2004 season will be the development or absence of the El Nino phenomenon in the Eastern Pacific Ocean. El Nino data will be available in April, 2004.

The following is a list of the tropical cyclones for the 2003 Hurricane Season:

<u>NAME</u>	<u>DATES</u>	<u>HIGHEST WINDS</u>
Tropical Storm Ana	April 21-24	40mph
Tropical Storm Bill	June 29-July 1	60mph
Hurricane Claudette	July 8-17	90mph
Hurricane Danny	July 16-20	75mph
Hurricane Erika	August 14-17	75mph
Hurricane Fabian	August 27-September 8	145mph
Tropical Storm Grace	August 30-31	40mph
Tropical Storm Henri	September 3-8	50mph
Hurricane Isabel	September 6-19	160mph
Hurricane Juan	September 25-29	105mph
Hurricane Kate	September 25-October 7	125mph
Tropical Storm Larry	October 1-6	60mph
Tropical Storm Mindy	October 10-14	45mph
Tropical Storm Nicholas	October 13-23	70mph
Tropical Depression #2	June 10-11	35mph
Tropical Depression #6	July 19-21	35mph
Tropical Depression #7	July 25-27	35mph
Tropical Depression #9	August 21-22	35mph

Tropical Depression #14

September 8-10

35mph

The 2003 Hurricane Season does not officially end until November 30, 2003. However, because of the Thanksgiving holiday weekend, I am sending the year-end report out early. No further tropical activity is expected to threaten Florida for 2003.

Submitted By,

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Worldwide Tropical Cyclones 2003
Details at <http://www.solar.ifa.hawaii.edu/Tropical/tropical.html>



38 75 113 150 kt

Plotted Mon Nov 24 15:21:36 GMT 2003