NATIONAL WEATHER SERVICE, NEWPORT/MOREHEAD CITY NC

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CAROLINA SKY WATCHER

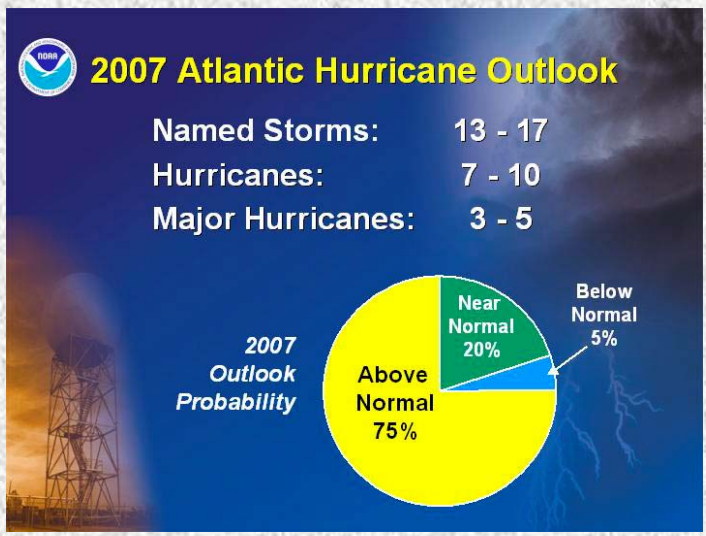
SUMMER/FALL 2007 EDITION

ACTIVE HURRICANE SEASON AHEAD!

By Hal Austin, Forecaster

On May 22nd, the National Oceanic and Atmospheric Administration (NOAA) released their forecast of tropical activity for the 2007 season. The report forecasts a 75% chance of above normal activity.

"For the 2007 Atlantic hurricane season, NOAA scientists predict 13 to 17 named storms, with seven to 10 becoming hurricanes, of which three to five could become major hurricanes of Category 3 strength or higher," said retired Navy Vice Adm. Conrad C. Lautenbacher, Ph.D., undersecretary of commerce for oceans and atmosphere and NOAA administrator. An average Atlantic hurricane season brings 11 named storms, with six becoming hurricanes, including two major hurricanes.



Reasons for the expected above normal activity are: the ongoing multi-decadal signal (the set of ocean and atmospheric conditions that spawn increased Atlantic hurricane activity), warmer-than-normal sea surface temperatures in the Atlantic Ocean and expected La Niña conditions. "There is some uncertainty this year as to whether or not La Niña will form, and if it does how strong it will be," said Gerry Bell, Ph.D., lead seasonal hurricane forecaster at the NOAA Climate Prediction Center. "The Climate Prediction Center is indicating that La Niña could form in the next one to three months. If La Niña develops, storm activity will likely be in the upper end of the predicted range, or perhaps even higher depending on how strong La Niña becomes. Even if La Niña does not develop, the conditions associated with the ongoing active hurricane era still favor an above-normal season."

For the eastern seaboard of the United States, 92% of hyperactive seasons have had at least one hurricane strike, and 42% have had at least two hurricane strikes. “With expectations for an active season, it is critically important that people who live in East and Gulf coastal areas as well as the Caribbean be prepared," said Bill Proenza, NOAA National Hurricane Center director. "Now is the time to update your hurricane plan, not when the storm is bearing down on you."

The Atlantic Hurricane Seasonal Outlook is an official forecast product of the NOAA Climate Prediction Center. Instituted in 1998, this outlook is produced in collaboration with NOAA scientists at the NOAA Climate Prediction Center, NOAA National Hurricane Center, NOAA

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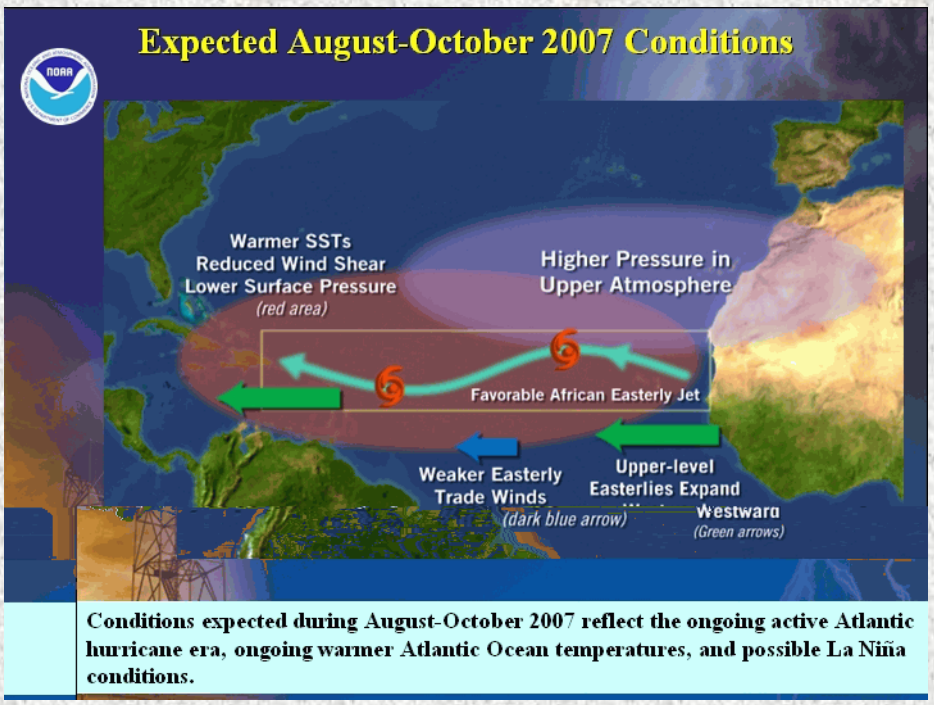
ACTIVE HURRICANE SEASON AHEAD *(continued from page 1)*

Hurricane Research Division and the NOAA Hydrometeorological Prediction Center.

Read the full report at:
www.cpc.ncep.noaa.gov/products/outlooks/hurricane2007/May/hurricane.shtml



HURRICANE HUNTER AIRCRAFT IN NC

By Hal Austin, Forecaster

On May 3rd, as part of the annual Hurricane Awareness Tour, the NOAA P-3 Orion hurricane hunter aircraft made a stop at the U.S. Coast Guard base in Elizabeth City. The goal of the tour was to promote public awareness of hurricanes that can threaten the Atlantic Seaboard. On board were newly-named National Hurricane Center Director Bill Proenza, National Weather Service Eastern Region Director Dean Gulezian, Senior Hurricane Specialist Richard Knabb PhD and Admiral Richard Behn of the NOAA Aircraft Operations Center.

Other stops on the tour were in Rhode Island, New Jersey, Maryland and Florida.

National Weather Service Newport/Morehead City staff participating in the tour were Meteorologist-In-Charge Tom Kriehn, Warning Coordination Meteorologist John Cole, Information Technology Officer Rich Bandy, Journey Forecasters Sarah Jamison and Hal Austin, and Intern Casey Quell. A "NOAA In The Carolinas" booth was set up to promote NOAA's mission in the area. The booth was staffed by NWS Newport personnel as well as staff from NWS offices in neighboring Wakefield VA and Raleigh.

National Hurricane Center Director Bill Proenza briefed a large gathering of officials from federal, state and local government and emergency management and Coast Guard officials.

The P-3 Orion was open through the day to allow the public to climb on board and see how data is gathered and ask questions of the crew. Over 700 students from area schools toured the plane in addition to the general public. Before touring the plane, the school groups listened to a 30-minute presentation on hurricanes and hurricane safety presented by NWS Newport staff and local American Red Cross representatives.

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HURRICANE HUNTER AIRCRAFT *continued from page 2*

Other displays that day included several U.S. Coast Guard aircraft, amateur radio, state/local emergency management and law enforcement.

PHOTOS FROM HURRICANE AWARENESS TOUR IN ELIZABETH CITY

Hurricane Hunter aircraft "*Kermit The Frog*"

School groups touring the plane

NHC Director Bill Proenza

Nose art from the P-3 aircraft

NEW HURRICANE BUOYS *By Hal Austin, Forecaster*

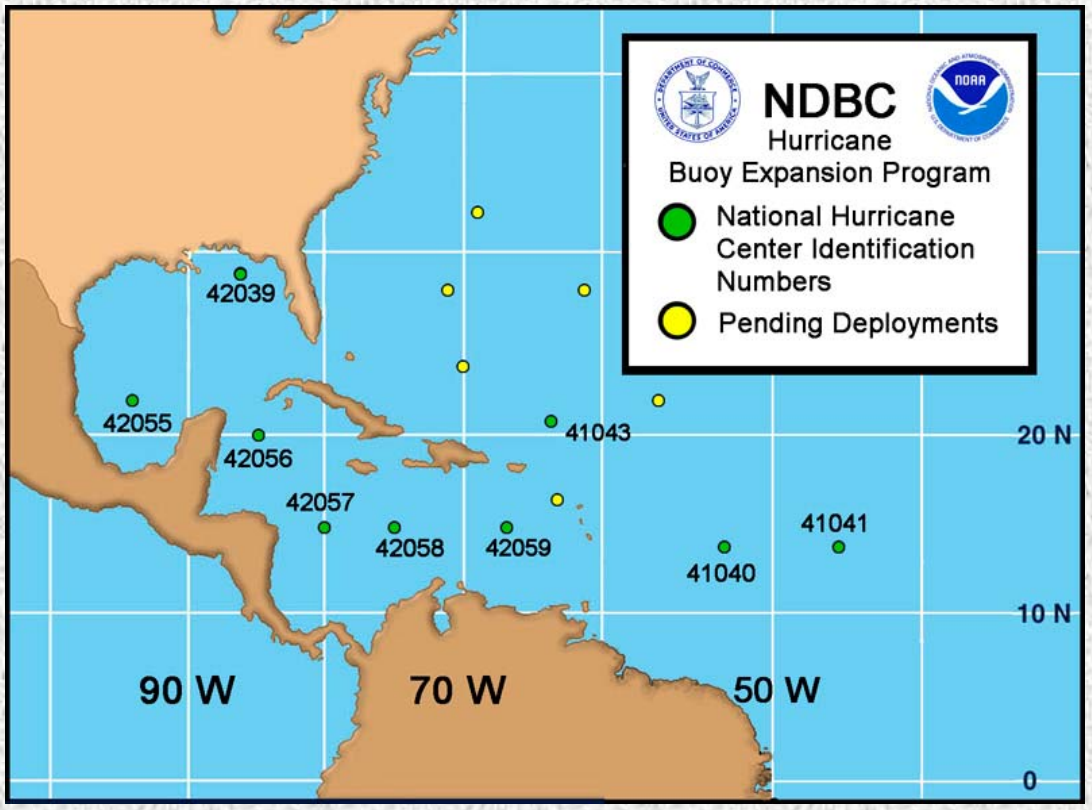
This April, NOAA deployed the first two of eight new hurricane buoys off Puerto Rico in an effort to provide a better network of data-gathering sites in the southwest Atlantic. The remaining six buoys will be deployed before the end of hurricane season on November 30th.

The buoys measure wind, wave, barometric pressure, and air/sea temperatures to determine hurricane formation or dissipation, extent of wind circulation, maximum intensity and center location. Hurricane buoys provide data year-round for analysis and forecasts of other marine disturbances but are more robust than other weather buoys because they contain an internal back-up system.

The first of the eight new hurricane buoys also is the 100th weather buoy maintained by NOAA's National Data Buoy Center (**www.ndbc.noaa.gov**), located at Stennis Space Center in Bay St. Louis, Miss., and is part of the National Weather Service. The center has expanded the number of weather buoys by 54 percent over the last seven years.

"This growth was fueled by the recognition that there is only one way to really know the weather at sea—by being there," states Paul Moersdorf, Ph.D., Director of the National Data Buoy Center. "Priority has been placed in areas with serious weather. For example, we deployed 13 buoys in Alaskan waters, which experiences nasty weather all year long. We also have nine buoys that are designed to take a hurricane 'licking' and continue providing critical data to the National Hurricane Center and coastal residents of the Caribbean, Central America and southeast U.S."

In addition to the weather buoys, the National Data Buoy Center maintains 56 coastal stations, 28 tsunami warning and detection stations and 55 climate forecasting and research stations. The center also processes, quality controls and distributes data from more than 250 non-National Weather Service sources.



2006 vs 2007 Hurricane Outlooks

By Sarah Jamison, Forecaster

The Atlantic hurricane outlooks for 2006 and 2007 were very similar, with the same prediction of above normal activity in the Atlantic Basin. However the 2006 tropical season was considered to be at or below average. The lack of tropical activity in 2006 was emphasized by the fact that it followed the record-breaking season of 2005, which still lingers in people's minds today. So the big questions are:

1. What happened in 2006 to keep the storms from forming?

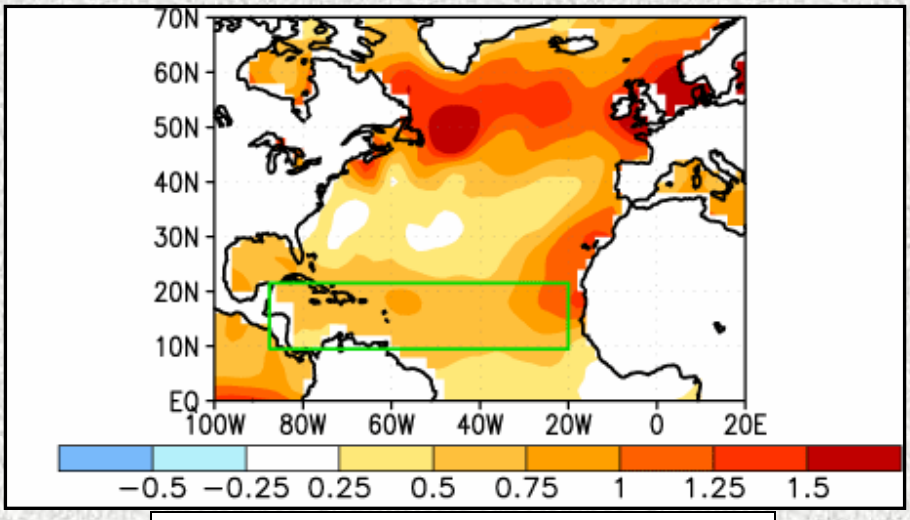
2. What can we expect to be different for 2007?

"Even though last season had a below average number of tropical cyclones with no landfalling hurricanes (2006), we remain in an active hurricane cycle likely to last another 10 to 20 years."

Bill Proenza, Director National Hurricane Center

A number of unforeseen conditions developed from June through October which drastically reduced hurricane activity. A rapidly developing El Niño seems to have been the primary cause, forcing sinking air over the Atlantic basin, leading to more stable and drier conditions than usual. When making a seasonal outlook, forecasters consider three primary things: sea surface temperatures in the Atlantic basin, state of the ENSO (El Niño/La Niña/Neutral), and the expected state of the upper air conditions. The main source of forecast error is the lack of El Niño forecast skill in the summer months. It took the extremely warm waters of the Atlantic and some favorable atmospheric during September to generate enough storms to make it a near average year. However a strong trough over the eastern U.S. prevented most from making landfall.

Seasonal forecasts are still more skillful than climatology over the long run.



August-October sea surface temperature anomalies in the green box were the second warmest since 1871.

The 2007 hurricane outlook is very similar to the one that was issued in 2006. Unlike 2006 however, there seems to be a strong signature of La Niña conditions developing. During a La Niña period, cooler than normal waters develop over the eastern Pacific. The impact from this is the opposite of an El Niño, with more rising and moist air over the Atlantic with less wind shear. These conditions are all favorable for hurricane development. The La Niña is expected to affect most if not all of the hurricane months of 2007. Another factor conducive to enhanced hurricane activity is the above normal water temperatures of the Atlantic. The warmer water temperatures, a result of a multi-decadal oscillation which is expected to last another 10 to 20 years.

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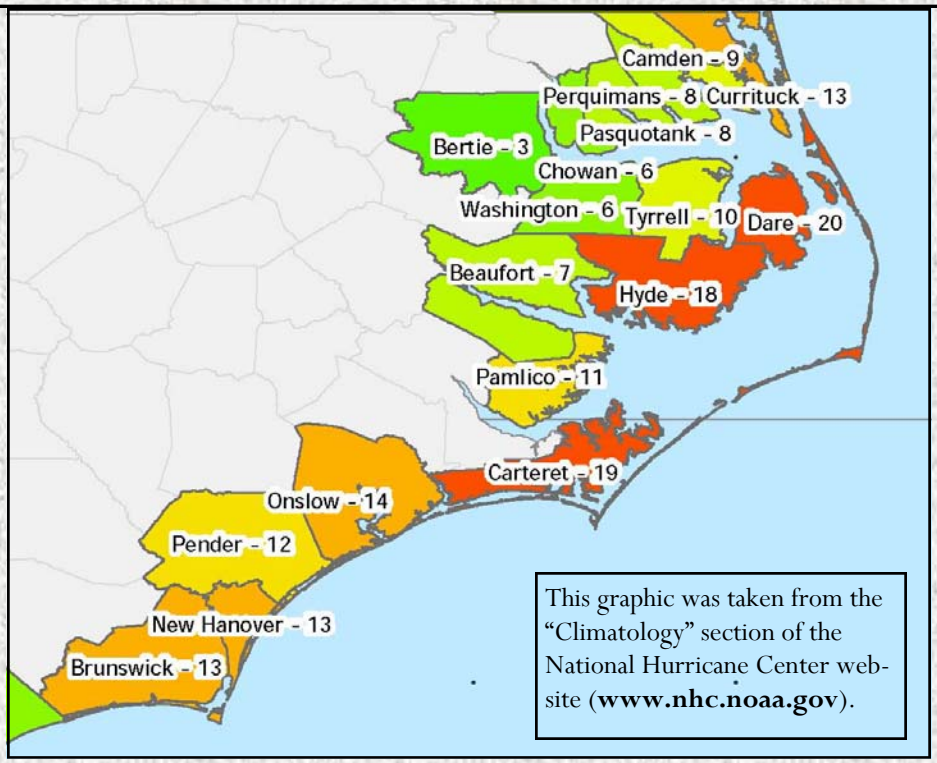
TOTAL # OF HURRICANE STRIKES 1926-2005



This graphic was taken from the "Climatology" section of the National Hurricane Center web-site (**www.nhc.noaa.gov**).

To report adverse weather conditions 24/7, please call us at:

1-800-889-6889