Late Summer/Autumn 2002

http://wchs.csc.noaa.gov

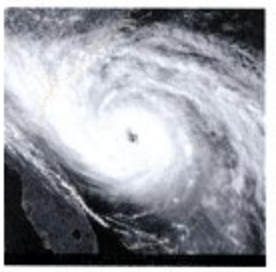
Storm Courier

National Weather Service Forecast Office Charleston SC

Working Together To Save Lives.

Inside this issue:

Hurricane Season 2002



Hurricane Hugo-September 1989

Dr. William Gray and his research team at Colorado State University have gradually been revising down the hurricane season forecast for 2002. The initial assessment made on Dec 7th indicated that the 2002 Atlantic hurricane season would be active with 13 named storms. Thus far this hurricane season we have seen seven named storms, Arthur, Bertha, Cristobal, Dolly, Edouard, Fay and Gustav. For the remainder of the season which ends on November 30th, Dr. Gray expects to have one more named storm for a total of eight. Projections for the season are now below the climatological average of 10 named storms. This is based on Dr. Gray's latest forecast, released Sept. 2nd. This is in very good agreement with the NOAA forecast released Aug. 8th. The NOAA forecast, based on a strengthening El Nino in the equatorial Pacific, calls for a normal to below normal year, with 7 to 10 named storms.

The reasons for a below normal season are many. Sea surface temperatures across the Atlantic hurricane basin have cooled, and sea level pressures are ex-

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Did you know?

From the NWS Charleston website, (**http://wchs.csc.noaa.gov**) you can view our current radar data anytime you need it from our Doppler located in northern Jasper County SC. Precipitation amounts are available too! Choose either single frame or looping. From the main page, click on the radar picture near the lower left to get started.

What's In A Name?

Many people have asked "how do they choose names for tropical storms and hurricanes?" Here's the answer. The World Meteorological Organization based in Geneva, Switzerland chooses the names for all named storms that affect the Atlantic, Carribean Sea and Gulf of Mexico. The names are a mixture of male and female names. The names are a mix of Anglo, French and Hispanic names to reflect the history and cultural make-up of the region. Until 1979, only female names were used. Six lists are used in rotation. Thus, the list for 2002 will be used again in 2008. The WMO also chooses names for storms in the Eastern,

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The devastation after a hurricane.

2002 Hurricane Predictions

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pected to be above average. Above average easterly trade winds will enhance upwelling and low level shear. A developing moderate El Nino will cause stronger westerly mid and upper winds which will have the effect of shearing the tops off any developing convection. In addition, projected rainfall across the Sahel of Africa is expected to be below average, thus less and weaker disturbances are expected to move off the African coast this year. Only one of the seven major contributors necessary for having an active hurricane season is positive. The high level stratospheric winds from 30 to 50 millibars will in a westerly phase which is favorable for more, as well as more intense, hurricanes.

Even with a forecast of a below normal hurricane season, people across the low-

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Did you know?

You can view current data from any NWS Doppler radar in the 50 states as well as Puerto Rico and Guam! Just go to **http://weather.noaa.gov/radar/national.html**. Just click on the site of your choice!

Storm Names

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Central and Western Pacific.

The only time when there's a change in the list is if a storm is noteworthy for the amount of deaths and/or destruction it causes and future use of the name would be inappropriate for reasons of sensitivity. Some of the notorious storm names that have been retired are: Floyd (1999), Fran (1996), Hugo (1989), Andrew (1992), David (1979) and Hazel (1954).

For the complete list of storm names through 2007, visit ***www.nhc.noaa.gov/aboutnames.shtml***

The list of names for 2002 are: Arthur, Bertha, Cristobal, Dolly, Edouard, Fay, Gustav, Hanna, Isidore, Josephine, Kyle, Lili, Marco, Nana, Omar, Paloma, Rene, Sally, Teddy, Vicky and Wilfred.

Hot Enough For 'Ya?

The heat index is a measure of how hot it "feels" to the average person.

One of the phrases heard this past summer in weather forecasts was the "heat index." But what exactly is it, and how is it calculated? The heat index is a measure of the apparent temperature, that is, the perceived air temperature or a measure of what hot weather "feels like" to the average person for a given temperature and relative humidity.

The physiological effects are based upon an adult (either sex), 5 feet 7 inches tall, weighing 147 pounds, who is walking at 3 mph and wearing summer weight long trousers and a short-sleeved shirt or blouse.

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2002 Hurricane Predictions

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country of South Carolina and southeast Georgia should not let their guard down. Many hurricane seasons have seen below average numbers of tropical cyclones, yet devastating effects from major hurricanes have been wrought upon coastal residents. In 1992, only eight named storms were recorded, yet the most costly hurricane ever, Andrew, devastated both South Florida and southern Louisiana.

By John Cole

The best site for tropical weather is NOAA's Tropical Prediction Center at www.nhc.noaa.gov

Heat Index

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The heat index was derived with the idea that the ideal dewpoint temperature is 57F. If the dewpoint goes above 57 degrees F, then the heat index is higher than the actual temperature. If the dewpoint is lower than 57 degrees F, then the heat index is lower than the actual temperature.

The National Weather Service issues a Heat Advisory when the daytime heat index is expected to reach 105 to 115 degrees F (for more than 3 hours) for two consecutive days. An Excessive Heat Warning is issued when daytime heat index values are greater than 115 degrees F for any period of time.

By Hal Austin

To report severe weather 24/7, please call 1-800-897-0823. In the Charleston area, dial 554-0197. We want to hear from you!

Lowcountry Skywarn Association

One of the most valued resources the National Weather Service has in getting severe weather reports is amateur radio operators. Real-time observations from hams provide "ground truth" to our warnings.

In March 2002, the Lowcountry Skywarn Association was formed, with the call-sign WX4CHS. NWS Charleston forecaster Hal Austin (KE4WHO) is working with the local ham community to improve and expand ham radio operations at the weather office. There is an e-mail reflector on Yahoo! Groups for NWS Charleston weather spotters. If you would like to be included on this list, please

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SKYWARN

Visit the Skywarn homepage at www.skywarn.org

For more information on Skywarn Recognition Day, go to ***http://hamradio.noaa.gov***

Did you know?

Over 40 NOAA/NWS booklets and brochures are available online for a FREE download. Most are in color! Subjects include thunderstorms, tornadoes, hurricanes, floods, winter storms and spotter's guides. Go to: **www.nws.noaa.gov/om/brochures.shtml**

Skywarn

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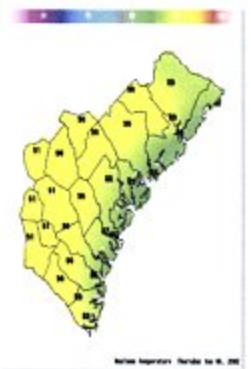
send an e-mail to skywarnnwschs@yahoogroups.com. In the subject line of the message, type "subscribe." For general information on Skywarn, visit their website at www.skywarn.org.

This year, Skywarn Recognition Day will be Saturday, December 7th. Skywarn Recognition Day is a joint effort with the NWS and the American Radio Relay League (ARRL). This is a 24-hour period beginning at midnight Friday, where hams at every NWS office attempt to make as many contacts as possible on many different bands. This will mark the fourth year the ARRL and the NWS have co-sponsored an amateur radio special event. The Recognition Day is aimed at celebrating the contributions ham radio operators make to the NWS during severe weather as members of the Skywarn program and as weather spotters during the hurricane season. WX4CHS will definitely be on the air, so if you're an amateur radio operator, mark your calendar now! 73s!

By Hal Austin



A graphical depiction of forecast high temperature across the NWS Charleston forecast area.

New Graphics

As part of a NWS-wide effort, WFO Charleston implemented a revolutionary new forecasting technology called the Graphical Forecast Editor (GFE) in late 2001 and early 2002. Government forecasters have produced public, marine, hydrologic, fire weather and aviation forecasts for the American public for over a century, but technological deficiencies limited the dissemination of these critical forecasts to a text format. These limitations were overcome during the late 1990s with the final deployment of the Advanced Weather Interactive Processing System (AWIPS) at all National Weather Service (NWS) WFO's across the country and at the National Centers for Environmental Prediction (NCEP). The implementation of AWIPS was one of many fruits of a 15 year multibillion dollar modernization initiative, which first began in the 1980s.

The GFE is only one of many forecasting components of AWIPS and will allow

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NWS Charleston broadcasts weather forecasts and observations 24/7 from five transmitters covering south coastal SC and southeast GA.

New Radio Voices

Please welcome two new "virtual employees" to the National Weather Service. They are "Craig" and "Donna", the names of two new voices you can now hear on your NOAA Weather Radio. National Weather Service Charleston broadcasts from five transmitters in south coastal South Carolina and southeast Georgia. The NWS operates 583 stations nationwide.

The NWS awarded Siemens Information and Communication Network of Boca Raton, FL a contract for the voice improvement. As part of the contract, Siemens teamed with SpeechWorks International of Boston MA, to provide

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Graphics

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NWS forecasters at all 123 WFO's across the United States, Guam and Puerto Rico to produce forecasts in several formats including graphics, text and grids. This will give all users of NWS products more flexibility in how they use and manipulate the information to best suit their needs. By 2003, the NWS will fully implement the National Digital Forecast Database (NDFD). The NDFD will be a conglomerate of all future gridded forecasts produced by WFO's and NCEP. In addition to representing the official NWS forecast, it will allow users to adapt the NDFD to their own external needs, thus supplementing NWS graphical, gridded and text forecasts.

The United States' National Weather Service is the world's premier government weather forecasting agency. Its highly trained forecasters produce timely severe weather warnings and accurate forecasts to support a wide range of users including other federal agencies and the private sector. The implementation of the GFE and its capability to produce forecasts in a wide variety of formats will help ensure that the NWS continues to provide its users the service that they expect well into the future.

By Steven Taylor

To view NWS Charleston's experimental graphics, go to http://wchs.csc.noaa.gov/gfe/gridded.

Radio Voices

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evaluated five voices and reviewed 19,000 Internet survey comments from the public in the effort to choose the new voices.

The NWS first used a computer synthesized voice technology as part of a console replacement system in 1997. Automating the weather radio enables us to send out multiple independent warnings over multiple transmitters at the same time, allowing faster delivery of severe weather warnings and more lead-time for the public.

"The old voice was state-of-the-art when first placed in service in 1997, but advances in artificial speech technology now make it possible for us to provide a service that is more understandable to the public," said retired Air Force General Jack Kelly, director of the National Weather Service. "This reinforces our commitment to continuously use new technology to improve the timeliness and effectiveness of public warnings."

To learn more about NOAA Weather Radio, go to www.nws.noaa.gov/nwr.

By Hal Austin

Whenever you travel, don't forget to take a weather radio with you! NOAA Weather Radio broadcasts local forecasts and observations in all 50 states.

New synthesized voices on NOAA Weather Radio help warnings to be broadcast quickly and understandably.

National Weather Service Forecast Office

5777 South Aviation Ave.
Charleston, SC 29406-6162

Phone: (843) 744-0303
Fax: (843) 744-5405

The BEST site for weather for the South Carolina Lowcountry and adjacent southeast Georgia is at: http://wchs.csc.noaa.gov

Seasonal Weather Folklore

With autumn just around the corner and winter not that far off, here is some weather folklore for the upcoming seasons (compiled by Hal Austin).

The wider the brown (middle) band on a woolly bear caterpillar, the milder the winter.

When leaves fall early, autumn and winter will be mild; when leaves fall late, winter will be severe.

Much rain in October, much wind in December.

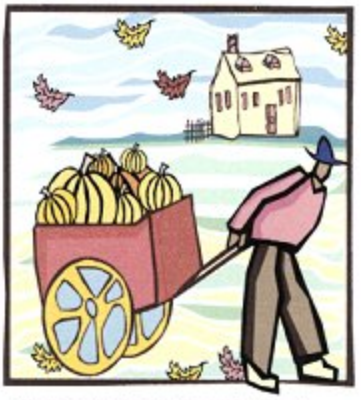
When bees build their nests high in the trees, a hard winter is coming.

Full moon in October without frost, no frost until November's full moon.

Onion skins very thin, mild winter coming in; onion skins thick and tough, coming winter cold and rough.

It will be a tough winter if birds migrate early.

Flowers blooming in late autumn are a sign of a bad winter.



Autumn arrives at 12:55 am EDT September 23rd. Winter begins at 8:14 am EST December 21st.