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During the prior, relatively inactive, 1970-1994 period, hurricane seasons averaged only 9 tropical storms, 5 hurricanes, and 2 major hurricanes. Only three seasons during this entire period were classified as above normal (1980, 1988, 1989), compared to seven in the last nine years. These inactive seasons featured fewer hurricanes forming in the deep tropics, and fewer hurricane landfalls in the U.S.

Last year, there were two hurricanes that made landfall in the United States, Claudette, a category 1 hurricane hit the Central Texas coast on July 15, and Isabel, a category 2 hurricane, that made landfall on September 18 along the Outer Banks. National Weather Service (NOAA) has been issuing hurricane seasonal forecasts for the last six years and they have been very accurate. They are based on NOAA's Accumulated Cyclone Energy – or ACE – Index. The ACE index measures the collective strength and duration of tropical storms and hurricanes in a given region. It has proven to be highly predictable and is a key forecast parameter for NOAA hurricane outlooks.

For 2004, NOAA predicts an above normal hurricane season. The outlook calls for:
- 12-15 tropical storms
- 6-8 becoming hurricanes – at least 74 mph winds
- 2-4 becoming major hurricanes (Categories 3-5) – at least 115 mph winds.

Based on historical data, similar seasons have averaged two to three land-falling hurricanes in the continental United States, and 1-2 hurricanes in the region around the Caribbean Sea.

This above normal forecast is continuing the trend of above normal activity since 1995. Between 1995-2003, Atlantic hurricane seasons have averaged 13 tropical storms, 8 hurricanes, and 4 major hurricanes. An above-normal season features a lot of activity in the deep tropics of the Atlantic. These become hurricanes and major hurricanes, and have general westward tracks toward the United States. This is why we have so many more hurricane landfalls in the U.S. during above-normal seasons.

However, whatever the seasonal outlook, just ONE land-falling hurricane or tropical storm can kill hundreds if people are not prepared. PREPAREDNESS IS KEY. People living in Eastern North Carolina and elsewhere along the Atlantic and Gulf coast states must stay alert, listen to NOAA weather forecasts and take common sense measures to protect their property, and most importantly, their lives.

By Tom Kriehn

Hurricane Floyd
NOAA's Storm Prediction Center
Channel 4 Enhanced (999-999-9999)
September 9, 1999

Hurricane Word Search
How many of these words can you find?
5 and 50: The anniversaries of two of North Carolina’s most Destructive Hurricanes:

Name: Hurricane Hazel
Date: October 15, 1954
Category 4

Hurricane Hazel was first spotted east of the Windward Islands on October 5. It moved through the islands later that day as a hurricane, then it moved westward over the southern Caribbean Sea through October 8. Hazel turned north and accelerated on October 15, making landfall as a Category 4 hurricane near the North Carolina-South Carolina border. Subsequent rapid motion over the next 12 hours took the storm from the coast across the eastern United States into southeastern Canada as it became extratropical. High winds occurred over large portions of the eastern United States. Myrtle Beach, South Carolina reported a peak wind gust of 106 mph, and winds were estimated at 130 to 150 mph along the coast between Myrtle Beach and Cape Fear, North Carolina.

Impacts: Hazel was responsible for 95 deaths and $281 million in damage in the United States, 100 deaths and $100 million in damage in Canada, and an estimated 400 to 1000 deaths in Haiti. The brunt of the storm hit during highest lunar tide of the year, with an 18-foot storm surge (in some areas). Many believe it was the most destructive hurricane to hit North Carolina with record rainfall. Hurricane Hazel’s path of destruction spread over 2,000 miles. Massive destruction to the beaches of New Hanover and Brunswick counties from tidal surge. Total Dollar Damage: Estimated $136 million (North Carolina damage) Deaths: 19 (North Carolina) Injuries: 200 (North Carolina) Structural Damage: 15,000 homes and structures destroyed. 39,000 structures damaged.
Floyd was first detected as a tropical wave that moved off the African coast on September 2. The system developed into a tropical depression over the tropical Atlantic on September 7. Moving steadily west-northwestward, the system became a tropical storm the next day and a hurricane on the 10th. It became a Category 4 hurricane on September 13 as it approached the central Bahamas Islands. This was followed by a gradual turn to the north-northeast, which brought the center to the North Carolina coast near Cape Fear on September 16 as a Category 2 hurricane. Floyd continued north-northeastward along the coast of the Mid-Atlantic into New England, where the storm became extratropical on the 17th. The remnants of Floyd merged with a large non-tropical low on September 19.
Do You Have a Family Plan for a Hurricane??????

If you do not have a family plan in the event of a hurricane, you should strongly consider making one. People who have been stranded by hurricanes or have been adversely affected by hurricanes in the past have wished that they had made preparations prior to the onset of the event. Some of the effects of hurricanes can cause major interruptions to our normal activities that we take for granted. Heavy rainfall from tropical systems (not just Hurricanes but Tropical Storms as well) can cause major flooding. High winds can cause trees to fall, which could land on your house or car and power lines to come down with electric service interrupted for up to two or three weeks depending on your location.

You should keep a written plan and be sure to share it not only with your family, but also with your friends and neighbors. That way everyone will know what you are going to do when a hurricane threatens.

Creating a disaster supply kit

There are certain items that you need to have in your kit regardless of where you ride the hurricane out. A disaster kit is a useful tool when you evacuate, as well as making your family as safe as possible in your home. Your kit should include the following...

- At least 1 gallon of water per person per day for 3 to 7 days.
- About 3 to 7 days worth of non-perishable food.
- Blankets and pillows.
- Seasonal clothing including rain gear and sturdy shoes.
- Special items for children and the elderly.
- First aid bandages, medicine, and prescription drugs.
- Toiletries.
- Flashlights with batteries.
- A battery powered radio and NOAA Weather Radio All Hazards.
- Cash (banks and ATM’s may be closed for extended periods).
- Keys.
- Toys, books, and games.
- Important documents in a waterproof container (insurance papers).
- Tools.
- A vehicle with its fuel tank filled.
- Pet care items.
- Special items for children and the elderly.
- First aid bandages, medicine, and prescription drugs.
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By Wayne Shaffer

Available 24 Hours a Day!

This quarterly newsletter is for Skywarn Spotters, schools, emergency managers, media, and other interested parties in the 15 county area in east-central North Carolina served by the National Weather Service Office in Newport, NC.

This publication, as well as all of our forecast products, are also available on our internet page at: www.erh.noaa.gov/mhx/