Carolina Skies

National Weather Service, Wilmington, NC **Summer 2003**

Severe Weather Season

Severe Weather

Severe weather events are defined as thunderstorm or flash flood related, where significant damage occurred - either trees downed or structural damage due to wind judged or measured at least 58 mph, including tornadoes. Hail stones at least 3/4 inch in diameter...penny-size, also qualify for a severe weather event.

The NWS Wilmington County Warning Area includes these eight counties in SC: Williamsburg, Darlington, Marlboro, Dillon, Florence, Marion, Georgetown, and Horry...and these six counties in NC: Robeson, Bladen, Columbus, Brunswick, Pender, and New Hanover.

Through May, there were 120 reported severe weather events- 1 in Feb, 18 in Mar, 4 in Apr and May was very busy with 83 severe events.

We appreciate all the reports provided by the crack Skywarn volunteer spotters and county 911 centers. You make the difference in a successful warning program.

Active Weather Season So Far

Spring is known as the season for severe weather, and as we have seen so far in 2003, its reputation is a well-deserved one.

NWS forecasters recognized a severe weather threat on Tuesday, May 27, and issued a Severe Weather Outlook at 11:26 A.M.. By early afternoon, thunderstorms had developed and were gaining strength. The strongest storm in the area began to rotate as it entered western Pender County and interacted with a low-level boundary. WFO Wilmington meteorologists were monitoring the storm closely on 88-D Doppler radar, and noted a strong mid-level rotation as it began to lower toward the ground. A tornado warning was issued for Pender county at 2:26 P.M..

The first report of storm damage came into the office at 2:37 P.M.. Pender county 911 operators were on the phone with a person on Horse Branch Road who was observing a tornado on the ground. From that point on, several additional reports of snapped trees and downed power lines were received. The storm continued on an east-northeast track across Pender county at around 30 mph, and weakened as it moved into Onslow counties.

A NWS storm survey team was dispatched around 3:30 P.M. Tuesday. The first area of damage observed was on Penderlea Highway about 4 miles west of Watha. Numerous large pine trees (up to 16 inches in diameter) were snapped off about 40 feet off the ground. Damage patterns at this location indicated that there was in fact a tornadic rotation on the ground. Based on the type of damage observed, winds were estimated to be up to 70 mph (F0).

The initial touchdown was brief, but the storm continued to track east over Watha and produce significant wind damage along the way. The roof of a barn was blown off and strewn up to 100 yards. Also, numerous trees were uprooted and a brick chimney was toppled. Near Highway 117, about 3 miles east of Watha, an eyewitness reported seeing a funnel cloud hovering just off the ground as the storm approached. Just after the storm passed this location, the tornado touched down once again, snapping numerous pine trees as large as 2 feet in diameter. Once again, the touchdown was brief, and damage was estimated as F0.

The tornado lifted as the storm moved over swampland, but funnel clouds were reported 3 miles west of Maple Hill. Around 3:00 P.M., a tornado reportedly crossed a blueberry field, but apparently caused no significant damage.

Another round of severe weather took aim at southeastern North Carolina during the afternoon and evening of Saturday, May 31. Several strong mesocyclones developed and brought large hail and damaging winds to many areas.

Golfball-sized hail fell around 5:15 P.M. near Riegelwood in Columbus county, and was six inches deep in some areas. The large hail broke windows, dented cars and damaged siding on several homes. A funnel cloud was observed with this storm but it never touched down.

The most severe damage occurred in the Brittany Woods subdivision in northern New Hanover counties around 9:00 P.M. Saturday night. A National Weather Service Damage Survey Team was dispatched to the area by 10:00 P.M..

Damage included numerous snapped trees, splintered fences, blown in windows and garage doors, and a few homes with structural damage to roofs and walls. Although no evidence of a rotation was evident in the debris field, it was obvious that 80 to 100 mph winds blasted a path through the neighborhood. After careful assessment, it was determined that the damage pattern was more consistent with that of straight-line winds associated with a microburst. Although the damage was apparently not caused by a tornado, it was comparable to damage that would have been produced by an F1.

Several dozen homes sustained at least some damage, but in the most severe cases (limited to around half a dozen), garage doors or windows gave in to the wind first, allowing air to enter the structure and blow portions of walls and/or roofs away. Extensive damage to one home resulted from large sections of a wooden fence being lifted and blown literally through the walls. Toward the end of the damage path, a large travel trailer and a RV motor home were flipped.

WFO Wilmington, NC issued a Severe Thunderstorm Warning for New Hanover county at 8:40 P.M., and the damage occurred to the subdivision around 8:56 P.M.. Although many people were at home during the height of the storm, most that we talked to sought shelter in the interior sections of their homes, away from doors and windows. Fortunately no injuries were reported.

Hurricane Season 2003

Last year, the Carolinas were affected most notably by tropical storm Kyle, which brushed the coast on October 11. As Kyle approached, a wet disturbance from the west caused extensive ponding on roadways in the Pee Dee area, and then interacted with Kyle's winds to cause a tornado that touched down with F2 strength (near 150 mph) in Georgetown, causing $3/4 Million in damage and injuring eight people. As Kyle continued moving Northeast up the coast, winds gusted around 40 mph.

The 2002 hurricane season was fairly active in the Atlantic Basin, with 12 tropical cyclones reaching Tropical Storm status (wind at least 39 mph). However, only four storms reached hurricane strength, as warm Pacific conditions (El Nino) kept Atlantic activity suppressed. The only hurricane to make landfall on the U.S. last year was Lili, on the Louisiana coast on Oct 3...the first to do so after a record 21 consecutive hurricanes since 2000 that did not hit the U.S.

The past eight years have been the most active eight years on record, with 62 hurricanes and 29 intense (Category 3 +) hurricanes, and this year is expected to continue active. The Pacific has turned cool (La Nina), leaving little to suppress hurricane development. The NOAA forecast for the Atlantic Basin (including the Gulf of Mexico) is for 11 to 15 Tropical Storms (long-term average is 10), and 6 to 9 hurricanes (long-term average is 6)...and 2 to 4 intense

hurricanes, which do 85% of the damage.

On average, 1 out of every 3 intense hurricanes makes landfall...but of the last 29, only 3 (or less than 1 out of every 9) have hit the U.S. - we have been very, very lucky! However, complacency has increased as we have built more and more along the coast, leaving us more vulnerable to destruction. Our luck cannot beat long-term averages for long.

Please...take the opportunity to review your home security plan - the same plan you need in the event of fire or if drastic action must be taken. Talk it over with the family and get their input - they need to know that the family is prepared.

OPC Forecaster Visits ILM

Ocean Prediction Center (OPC) Marine Forecaster Jim Nolt spent a week at the National Weather Service office in Wilmington in May. Jim spent time working with WFO ILM's forecasters preparing gridded marine forecasts and issuing statements. Jim also presented information about the Ocean Prediction Center during the Carolina Coastal and Marine Weather Workshop at the Brunswick Community College on May 21st. Jim's visit was part of a Forecaster Exchange Program that allows forecasters from the National Weather Service field offices and the National Centers to switch positions for a week. As part of the program WFO ILM's forecaster Ron Steve spent a week working alongside forecasters at the Ocean Prediction Center in Silver Springs, MD last November.

New Buoy Deployment in August

The National Data Buoy Center, Stennis Space Center, MS, has informed the National Weather Service in Wilmington that a buoy will be deployed in August to replace the equipment on the aging Frying Pan Shoals Light Tower. Frying Pan is scheduled to be demolished, but not until after the new buoy is deployed. The new buoy will be identified as Buoy 41013 and positioned approximately ½ mile south of Frying Pan Shoals (approximately 35 miles southeast of Cape Fear). The new buoy will report wind, pressure, air/sea temperature, wave height and period. In addition, Buoy 41013 will be equipped with a wave direction sensor.

Georgetown Weather Radio

Weather radio reception has been weak in the area, so Georgetown County Emergency Manager Lewis Dugan applied for a grant from the U.S. Department of Agriculture to purchase a transmitter and broadcast antenna and have them installed just north of Georgetown. Broadcast range and quality testing will continue into August, when it is expected to be used for the issuance of forecasts and warnings for the area, as well as the coastal waters.

Climate

Temperatures across the area were slightly below normal for the period of January, February, and March. After a colder than normal January and February where temperatures were well below normal, temperatures rebounded and were well above normal in March.

Precipitation amounts across the area were slightly below normal for the period of January, February, and March. After a very dry January with well below normal rainfall amounts, precipitation increased somewhat in February but was still slightly below normal. March was the wettest month area wide with over 7 inches reported at both Lumberton and North Myrtle Beach, and over 5 inches recorded at Wilmington and Florence. Despite the above normal rainfall in March, it was not enough to overcome the deficits posted in January and February.