NOAA's National Weather Service, Newport/Morehead city NC

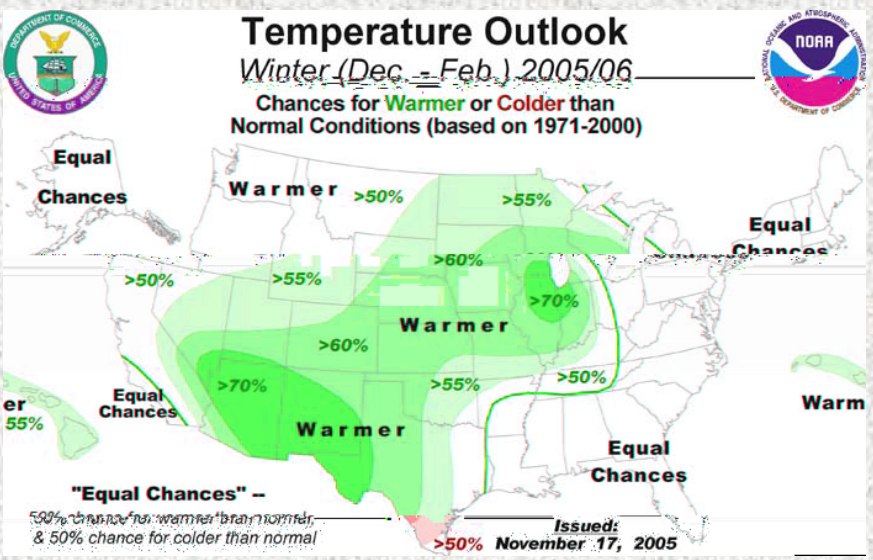
www.erh.noaa.gov/mhx - *BOOKMARK IT!*

Carolina Sky Watcher

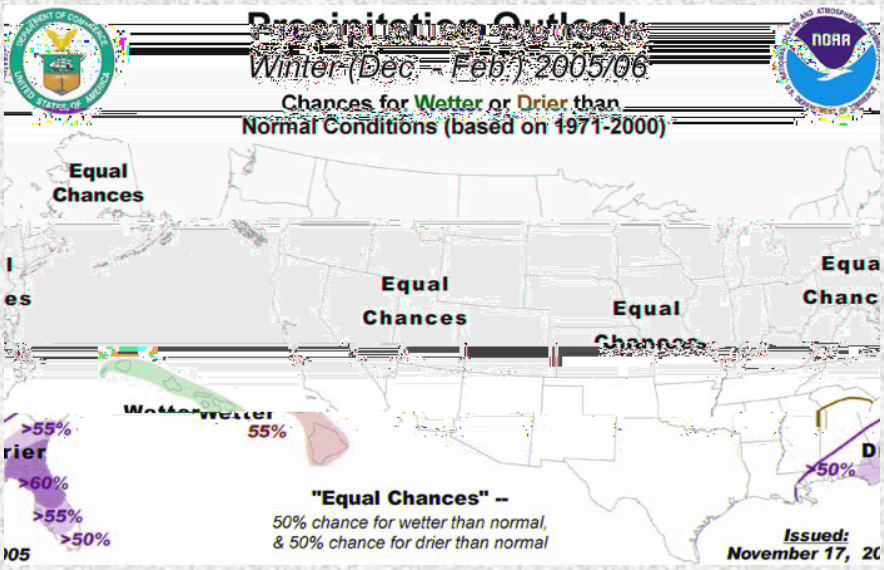
Fall & winter 2005-2006 edition

WINTER 2005-06 OUTLOOK *BY JIM MERRELL*

With weak La Niña conditions likely during the next 6-9 months, there are no clear cut factors to determine if it will be hotter or colder, wetter or drier for most of the eastern U.S including eastern North Carolina. Thus the official outlook issued by the NOAA Climate Prediction Center calls for equal chances of above, near, or below normal temperatures and equal chances of above, near, or below normal precipitation for the area for the December 2005 to February 2006 period.



"Equal chances, for temperature or precipitation, means there are no strong or consistent climate signals for either above or below normal conditions during the season," said Edward O'Lenic, lead outlook forecaster at the NOAA Climate Prediction Center. "Therefore, the selected area has an equal chance of warmer than, cooler than or near normal," he added. You can read the entire outlook at: **www.noaanews.noaa.gov/stories2005/s2534.htm**



Inside this issue:

WINTER WEATHER DEFINITIONS *BY SARAH JAMISON*

Heavy Snow: more than 7 inches in 12 hours, or 9 inches in 24 hours .

Blizzard: the most severe winter storm. Wind or wind gusts exceeding 35 mph for 3 hours or more combined with blowing and/or falling snow. Visibilities near zero. Widespread whiteout conditions. Blizzards are a serious life-threatening weather hazard!

Snow Squall: intense periods of snow with near blizzard or blizzard conditions at times.

Snow Shower: intermittent falling snow

Snow Flurries: very light snow with little or no accumulation.

Freezing rain: rain that freezes on contact with all exposed surfaces. Objects become encased in ice, can damage trees and power lines.

Sleet: Frozen raindrops that bounce on impact with the ground. Does NOT glaze over or encase objects with ice. This weather episode is often mistaken for hail, but hail is associated more with thunderstorms NOT winter events.

A winter storm can last for a couple hours and upwards of several days and be accompanied by high winds, freezing rain or sleet, heavy snowfall, and cold temperatures. People can become trapped at home, without utilities or other services. Cape Hatteras lows typically develop into strong Nor'easters, which can also become very hazardous to mariners who can become caught out to sea when a storm develops. Attempting to travel by car or boat during winter storms could become a deadly decision.

Storm effects such as extremely cold temperatures and snow accumulation, and sometimes coastal flooding, can cause hazardous conditions and hidden problems for people in the affected area. Some winter storms may be large enough to affect the entire region, while others may affect only a single community.

Winter Storms are considered deceptive killers because most deaths are indirectly related to the storm. Everyone is potentially at risk. The threat of winter weather hazards to you depends on your specific situation.

- The leading cause of death during winter storms is from automobile accidents.
- Exhaustion and heart attacks caused by overexertion are two more common causes of winter storm-related deaths.
- Elderly people account for the largest percentage of hypothermia victims, and often this occurs in the home.
- House fires occur more frequently due a to lack of proper safety precautions when using alternative heat sources.

What to Listen For This Winter

Winter Weather Outlook—Issued prior to a Winter Storm Watch. A general indication of the type of weather is included, while the specific timing and amounts of precipitation are not usually addressed.

Winter Storm Watch—The risk of a winter storm event has increased significantly (Heavy Sleet, Ice Storm, Heavy Snow and Blowing Snow, or a combination of events) to meet or exceed Winter Storm Warning Criteria in the next 12 to 48 hours.

Winter Storm Warning—At least 3" of snow in 12 hours, or 4" in 24 hours is imminent, or has a very high probability of occurrence. Also, sleet accumulations of 1/2" or more, or ice accumulations of 1/4" or more is imminent or has a very high probability of occurrence.

Winter Weather Advisory—Issued when an average of 1" of snow or any ice accumulation is expected within 12 hours.

Wind Chill Advisory—Conditions are favorable for wind chill temperatures **> –15 F and ≤ 0 F** and wind speeds **≥ 10 mph**.

Wind Chill Warning- Conditions are favorable for wind chill temperatures of **≤ -15 F** and wind speeds **≥ 10 mph**.

Snow Advisory—Snowfall of **> 1"** and **< 3"** in 12 hours, or **> 1"** and **< 4"** in 24 hours.

Blowing Snow Advisory—Widespread or localized blowing snow reducing visibilities to **≤ 1/4 mile and winds < 35 mph**.

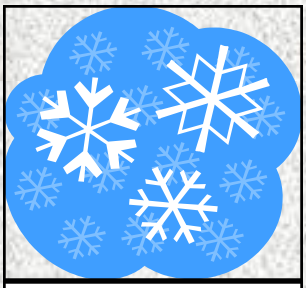
WINTER WEATHER DANGERS *BY BRANDON VINCENT*

As the winter season approaches, it is important to remember that even though eastern North Carolina maintains a relatively mild climate during this time, adverse winter weather remains a distinct possibility every season. Potential winter weather hazards in eastern North Carolina include snow, ice, cold temperatures, wind chills, strong winds and coastal flooding. The biggest winter weather threat to eastern North Carolina is from snow and ice. 70% of winter storm fatalities caused by snow and ice are due to motor vehicle accidents.

Heavy snowfall, although infrequent, occasionally affects eastern North Carolina. Heavy snow can immobilize a region and paralyze a city, stranding commuters, closing airports, stopping the flow of supplies, and disrupting emergency and medical services. The cost of snow removal, repairing damages and loss of business can have severe economic impacts on cities and towns. Heavy snowfall (4-7") fell just last year on December 20, 2004 in portions of Beaufort, Pamlico and Carteret counties. Even brief, light snowfall can paralyze a city. On January 19, 2005, a trace to an inch of snow fell in Raleigh, NC. Unusually cold road surface temperatures, air temperatures in the lower 20's, and a mass exit of traffic from early afternoon closures all resulted in very slick driving conditions, numerous accidents and traffic jams. Many motorists were stranded on the interstate or highway when their vehicles ran out of gas. School children were stranded overnight at their schools, unable to get home because of poor road conditions and traffic jams.

Ice storms are a frequent occurrence for central North Carolina and inland portions of eastern North Carolina, predominately in areas west of Highway 17. Heavy accumulations of ice can bring down trees and topple utility poles and communication towers. Ice can disrupt power and communications for days while utility companies repair extensive damage. Even small accumulations of ice can be extremely dangerous to motorists and pedestrians. Bridges and overpasses are particular dangerous because they freeze before other surfaces. In December of 2002 a severe ice storm in central North Carolina caused widespread tree and power line damage, resulting in power outages that lasted up to a week and widespread property damage.

For official weather forecasts, including the latest information on winter weather watches, warnings and advisories, visit the NWS Newport/Morehead City, NC webpage at: **www.erh.noaa.gov/mhx**. For other information, including climate outlooks and winter weather safety tips, visit the following National Weather Service website: **www.weather.gov/om/winter/index.shtml**.



Winter begins at 1:35 pm EST on Wednesday, December 21st.

"The key to safety is for people to be prepared BEFORE winter storms strike." *Jim Laver, Director, NOAA Climate Prediction Center*

For road conditions, go to the NCDOT Traveler Information Management System webpage at: **http://apps.dot.state.nc.us/tims**

To hear the latest forecast, just give us a call! Dial (252) 223-5737 and select from the following:

1— New Bern and vicinity

2— Outer Banks

3— Offshore waters beyond 20 NM

4— Coastal waters out to 20 NM

5—Tropical weather outlook (in season)

NWS Newport forecasts 24/7 for 4 area airports: New Bern, Greenville, Kinston and Jacksonville.

AVIATION PROGRAM EXPANDS! *BY HAL AUSTIN*

In October, WFO Newport/Morehead City greatly expanded its' aviation program! Previously, our office issued only one Terminal Aerodrome Forecast (TAF) for Craven County Regional Airport (EWN) in New Bern. Beginning in October, we added three more: Pitt-Greenville Airport (PGV) in Greenville, Albert J. Ellis Airport (OAJ) in Jacksonville and Kinston Regional Jetport (ISO) in Kinston. The TAFs are issued four times daily at 00Z, 06Z, 12Z and 18Z, and are updated as needed. Each one is valid for 24 hours and is a forecast of wind direction/speed, cloud heights and any obstructions to visibility (precipitation, fog, haze, smoke). All four TAFs can be accessed from the Aviation Weather Center's homepage at: **http://aviationweather.gov**.

HURRICANES & NOR'EASTERS-WHAT'S THE DIFFERENCE?

	HURRICANE	*NOR'EASTER*
Temperature	Warm air in its' core	Cold air in its' core
Size	200-300 miles across	As much as 1000 miles across
Shape	Very symmetrical. Center often clearly defined.	Irregular shape. Sometimes difficult to fine the center.
Duration	Usually pass a location in 6-8 hours.	Can last as much as a week.
Frequency	Less frequent north of the Carolinas.	100% chance. 20-30 form each year. At least 3 will become significant storms.
Intensity	Winds of 74 knots or higher.	35-50 knots onshore, higher over the ocean
Season	June through November	October through April
Tracking	Easily spotted by satellites and path can be calculated with reasonable accuracy	Can spring up out of various conditions. Once formed, usually take a NE course.
Damage	Can virtually level an area, but limited in size	Spreads damage around a greater area.
Geography	Generally occur over southern latitudes	Generally occur over northern latitudes
Seas	Wind speed, duration and fetch determine wave severity	Nor'easters are typically larger systems allowing wind to create large waves
Name	Only hurricanes are officially named	Are sometimes linked to a date, such as "The March 1993 Superstorm"

SNOWFALL CLIMATOLOGY *BY HAL AUSTIN*

Here's a representative sampling of snowfall averages around the NWS Newport/Morehead City forecast area. The data was obtained from the Southeast Regional Climate Center's website (North Carolina page). Sorry, no data was available for Greene County. There are several more cities in our area that you can view. Just go to: **www.dnr.sc.gov/climate/sercc/climateinfo/historical/historical_nc.html**. There's *lots* more data there, including average high/low, rainfall, spring/fall freeze probabilities and heating/cooling degree days. Check it out!

County/City	*December*	*January*	*February*	*March*	*TOTAL (inches)*
Beaufort/Washington	0.4	0.7	0.6	0.7	**2.4**
Carteret/Morehead City	0.1	0.3	0.6	0.4	**1.3**
Craven/New Bern (airport)	0.3	0.8	0.7	0.5	**2.3**
Dare/Manteo	0.3	0.3	0.6	0	**1.2**
Dare/Cape Hatteras	0.5	0.4	0.5	0.4	**1.9**
Duplin/Sloan	0.5	1.0	1.3	0.7	**3.5**
Hyde/New Holland	0.4	0.5	0.7	0.1	**1.7**
Jones/Trenton	0.7	1.1	1.0	0.8	**3.7**
Lenoir/Kinston	0.4	0.7	0.6	0.5	**2.1**
Martin/Williamston	0.5	1.3	1.1	1.0	**3.9**
Onslow/Maysville	0.4	1.0	0.8	1.2	**3.4**
Pamlico/Bayboro	0.5	0.2	0.6	0.6	**1.9**
Pitt/Greenville	0.5	1.1	1.2	0.7	**3.6**
Tyrrell/Columbia	0	0.7	1.3	0.1	**2.2**
Washington/Plymouth	0.4	1.1	1.2	0.7	**3.4**

Snow conditions and maps on the web:

Interactive snow cover maps from The National Operational Hydrologic Remote Sensing Center: **www.nohrsc.nws.gov/interactive/html/map.html**

Snow links from the Hydrologic Information Center: **www.nws.noaa.gov/oh/hic/current/snow.shtml**

NOAA's National
Weather Service,
Newport/Morehead City

533 Roberts Rd.

Phone: 252-223-5122
Fax: 252-223-3673

Website: www.erh.noaa.gov/mhx

SKYWARN RECOGNITION DAY 2005

BY HAL AUSTIN

Skywarn Recognition Day 2005 at NWS Newport was a huge success! Partly cloudy skies, light winds and highs in the lower 50s made for a beautiful day. Hams came from around the area and took turns operating the WX4MHX radios all day Saturday. It was a great way to "road test" our new HF antenna, which performed wonderfully. Contacts were made on 2, 20, 40 and 80 meters as well as APRS (Automatic Position Reporting System) from as near as the Outer Banks to as far as Costa Rica and NWS Anchorage! A grill was set up and a cookout of hamburgers and hotdogs with chips and drinks was enjoyed by all. After lunch, Newport Meteorologist-In-Charge Tom Kriehn presented certificates of appreciation to Bill Sanford K4VHO for his advice in upgrading the office ham shack, and to Eric Christensen KF4OTN for his creating and maintaining the Newport District Skywarn website (**www.mhxskywarn.org**). Ken Ball KE4BKR accepted a certificate of appreciation to all the hams that provided reports to NWS Newport during the past year.

NWS Windchill Chart

Wind (mph) \ Temperature (°F)	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Calm																		
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times — 30 minutes — 10 minutes — 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

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

1-800-889-6889