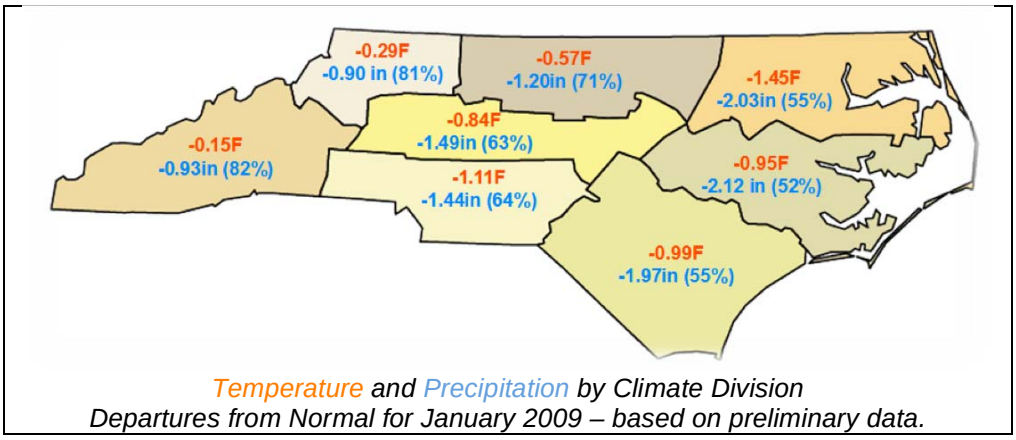
North Carolina Climate
February 2009

Online: http://www.nc-climate.ncsu.edu/office/newsletters/

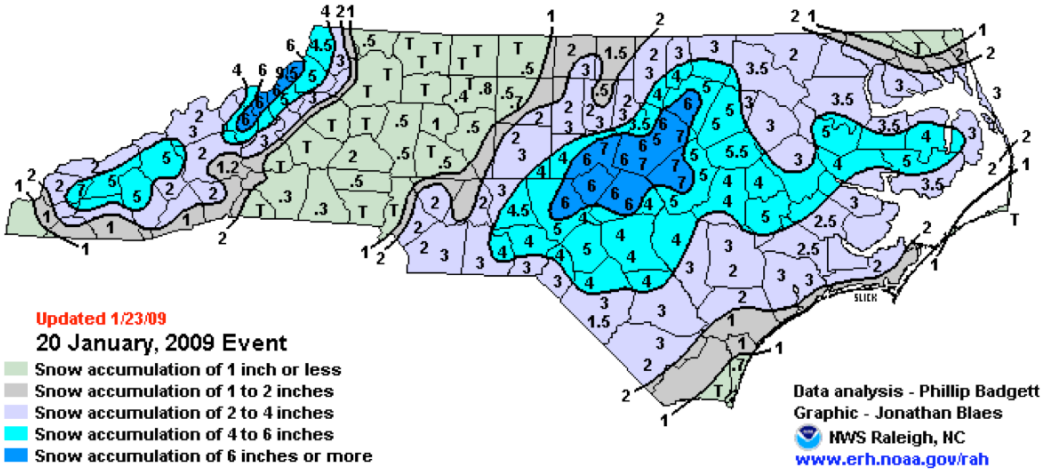
North Carolina Climate, the monthly newsletter of the State Climate Office of NC, covers recent weather conditions across our state, a drought review, and the SCO's Groundhog Day festivities at the Museum of Natural Sciences.
Published February 5, 2009

Cold, Dry in the East

Most of North Carolina was cold and dry during January 2009. In particular, temperatures in central and eastern NC were between 0.5 °F and 1.5 °F below normal. These same regions were also drier than the mountain regions with precipitation observations typically only 55%-70% of normal. The entire state experienced several cold air outbreaks including bitter temperatures on January 16-17 and 21 and substantial snowfall on January 20.



Temperature and Precipitation by Climate Division
Departures from Normal for January 2009 – based on preliminary data.

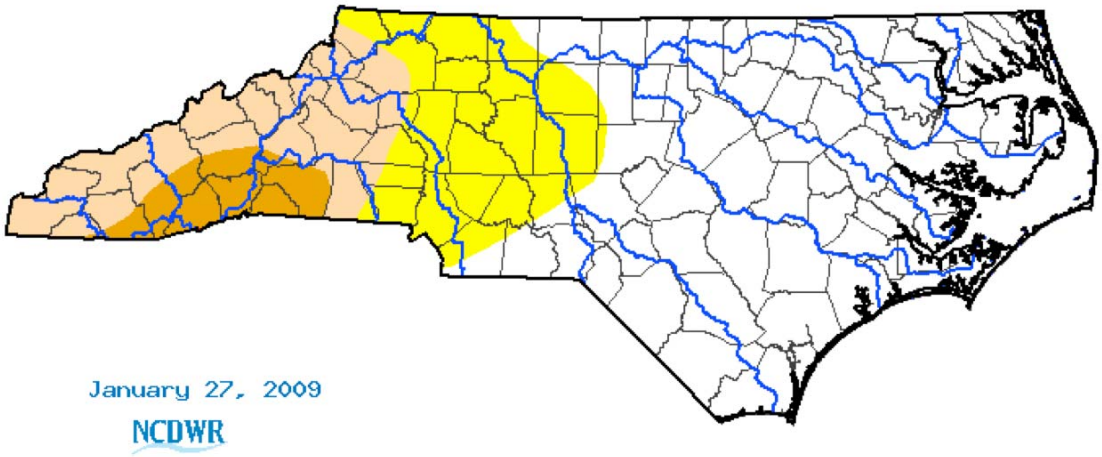


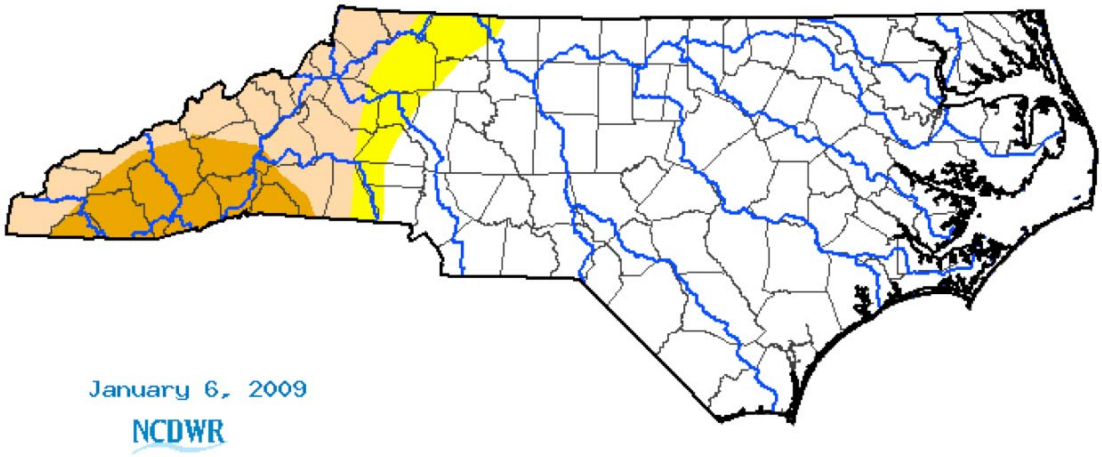
Impacts to Agriculture and Water Resources

Despite the relatively dry conditions across central and eastern NC in January, impacts to water resources and agriculture were minimal. Topsoil moisture is adequate for the winter grains that are still in production, and precipitation from previous months in central and eastern NC prevented negative impacts to water supply systems in those regions. This pattern is illustrated by the lack of change in the US Drought Monitor depictions for NC (shown below). While stream flow and groundwater levels continue to be quite low for this time of the year in western NC, low demand for water resources has so far kept water supply systems from experiencing problems.

Change in US Drought Monitoring Status during January 2009

Provided by DENR Division of Water Resources





Groundhog Day

On February 2, 2009, the State Climate Office celebrated Groundhog Day with the Museum of Natural Sciences in downtown Raleigh, NC. Meteorologist Ashley Frazier and graduate student Heather Dinon presented to kids and parents on common animal folklore and various instruments used to monitor weather. Experiments demonstrating the strength of our atmosphere, the formation of clouds, and updrafts, were the hit of the show. And who could forget the museum's infamous thunderstorm? Many thanks go out to Mary Fore, the museum's audio/visual crew, and the wonderful audience for helping us make the presentation such a huge success.

In continuing our collaboration with the museum, the State Climate Office of North Carolina has created a groundhog climatology depicting how our furry friend's predictions have faired for various cities across the state of North Carolina. This page shows not only how accurate Sir Walter Wally's forecasts have been in the past, but keeps up with the current year as the six-week period progresses. Average temperatures are calculated for each week, and are compared to the normal temperatures for the same time period. Positive temperature differences suggest temperatures are above normal (warmer weather), while negative temperature differences suggest below normal temperatures (cooler weather).

Information describing other animal and weather folklore is included on the groundhog climatology page beneath the section for Sir Walter Wally's forecast record. Also provided are the most recent satellite and radar images over the southeastern U.S. and the Climate Prediction Center's climate outlook over the next few months.

Additionally, we built a holiday climatology webpage containing historical summaries of temperature and precipitation from NWS Cooperative stations across NC. Below are the warmest, coolest, and wettest Groundhog Days on record for a few selected stations in our state.

Station	Warmest Groundhog Day	Coldest Groundhog Day	Wettest Groundhog Day
Asheville WSO Airport (310300)	February 2, 1989 Max Temp: 75.9°F Min Temp: 41°F	February 2, 1951 Max Temp: 19.9°F Min Temp: 7°F	February 2, 1983 2.18 inches
Cape Hatteras Billy Mitchell Field (311458)	February 2, 1989 Max Temp: 73.9°F Min Temp: 60.1°F	February 2, 1971 Max Temp: 28.9°F Min Temp: 21°F	February 2, 1972 2.68 inches
Charlotte Douglas Airport (311690)	February 2, 1989 Max Temp: 80.1°F Min Temp: 55.9°F	February 2, 1971 Max Temp: 33.1°F Min Temp: 12.9°F	February 2, 1973 2.3 inches
Greensboro WSO Airport (313630)	February 2, 1988 Max Temp: 70°F Min Temp: 55.9°F	February 2, 1971 Max Temp: 30.9°F Min Temp: 6.1°F	February 2, 1973 2.21 inches
Greenville (313638)	February 2, 1988 Max Temp: 75.9°F Min Temp: 60.1°F	February 2, 1971 Max Temp: 32°F Min Temp: 12°F	February 2, 1896 1.45 inches

Hickory Regional Airport (314020)	February 2, 1989 Max Temp: 78.1°F Min Temp: 44.1°F	February 2, 1971 Max Temp: 32°F Min Temp: 10.9°F	February 2, 1983 2.04 inches
Raleigh Durham WSFO Airport (317069)	February 2, 1988 Max Temp: 75°F Min Temp: 60.1°F	February 2, 1971 Max Temp: 33.1°F Min Temp: 5°F	February 2, 1973 3.22 inches
Wilmington WSO Airport (319457)	February 2, 1950 Max Temp: 80.1°F Min Temp: 61°F	February 2, 1980 Max Temp: 34°F Min Temp: 17.1°F	February 2, 1982 1.58 inches

Statewide Summary for January 2009

As part of the monthly newsletter, the SCO provides a basic summary of monthly conditions for all locations that have an automated reporting station. A daily version of this product is available online at:
http://www.nc-climate.ncsu.edu/cronos/review/

January 2009

Station	Avg Daily Max Temp	Avg Daily Min Temp	Total Rainfall	Avg Daily Wind Speed	Max Daily Wind Speed	Vector Avg Wind Speed
Aurora, NC (AURO)	50.6° F (-2.6° F) 4 mi	33.3° F (+1.9° F) 4 mi	2.2 in	4.6 mph	33.2 mph	1.8 mph West Northwest (288°)
Boone, NC (BOON)	40.5° F (+1.2° F) 1 mi	22.2° F (+2.6° F) 1 mi	3.3 in	7.7 mph	37.4 mph	6.3 mph West (277°)
Buckland, NC (BUCK)	49.5° F (+0.6° F) 15 mi	30.3° F (+3.8° F) 15 mi	1.9 in	2.8 mph	24.2 mph	1.3 mph West Southwest (243°)
Burnsville, NC (MITC)	33° F (-1.2° F) 1 mi	17.1° F (-0.2° F) 1 mi	3.6 in	18.5 mph	78.3 mph	19.6 mph West (278°)
Burnsville, NC (BURN)	45.1° F (-1° F) 8 mi	23.9° F (+2.2° F) 8 mi	2.7 in	4.6 mph	39.6 mph	3.6 mph Northwest (316°)
Castle Hayne, NC (CAST)	54° F (-2.2° F) 0 mi	35.7° F (+2.4° F) 0 mi	2 in	4.1 mph	33.6 mph	1.9 mph West Northwest (293°)
Clayton, NC (CLAY)	47.4° F (-2.6° F) 3 mi	31° F (+2.9° F) 3 mi	2 in	6 mph	36.8 mph	2.5 mph West (280°)
Clayton, NC (CLA2)	48.9° F (-1.1° F) 3 mi	28.5° F (+0.4° F) 3 mi	3 in	3 mph	20.6 mph	1.2 mph West Northwest (286°)

Clinton, NC (CLIN)	50.6° F (-1.7° F) 0 mi	32.7° F (+1° F) 0 mi	2.1 in	4.5 mph	36.4 mph	1.5 mph West (273°)
Fletcher, NC (FLET)	47.9° F (+1.9° F) 0 mi	25.3° F (+2.3° F) 0 mi	2.3 in	5.4 mph	25.5 mph	3.3 mph North Northwest (349°)
Franklin, NC (WINE)	36.2° F (-11.5° F) 11 mi	19.1° F (-4.9° F) 11 mi	6.9 in	10.4 mph	33 mph	9 mph West Northwest (289°)
Frying Pan Mountain, NC (FRYI)	40.2° F (-5.6° F) 10 mi	20.1° F (-2.9° F) 10 mi	0 in	9.8 mph	41.1 mph	7.6 mph West Southwest (256°)
Goldsboro, NC (GOLD)	49.2° F (-4.5° F) 5 mi	31.1° F (-1.9° F) 5 mi	2.4 in	6.3 mph	45.2 mph	2.6 mph West Southwest (237°)
Greensboro, NC (NCAT)	47.4° F (+0.2° F) 12 mi	28.5° F (+0.3° F) 12 mi	2.6 in	3.7 mph	32.3 mph	1.7 mph West (275°)
Hamlet, NC (HAML)	51.7° F (-0.9° F) 4 mi	32.3° F (+4.2° F) 4 mi	1.8 in	4.2 mph	49.2 mph	1.8 mph West Southwest (252°)
Hendersonville, NC (BEAR)	39.1° F (-9.6° F) 7 mi	22.4° F (-3.5° F) 7 mi	2 in	16.2 mph	43.5 mph	12.6 mph North Northeast (33°)
High Point, NC (HIGH)	47.3° F (-2.5° F) 2 mi	27.9° F (-1.7° F) 2 mi	2.3 in	3.2 mph	23.7 mph	1.5 mph West Northwest (283°)
Jackson Springs, NC (JACK)	48.6° F (-1.1° F) 0 mi	30.9° F (0° F) 0 mi	1.5 in	6.4 mph	75.5 mph	2.2 mph West (270°)
Kinston, NC (KINS)	50.2° F (-5.7° F) 5 mi	32.4° F (-0.8° F) 5 mi	2.6 in	5.8 mph	47.2 mph	2.6 mph West (266°)
Laurel Springs, NC (LAUR)	41° F (+0.1° F) 1 mi	21.5° F (+3° F) 1 mi	2.7 in	5.5 mph	35 mph	3.8 mph West Northwest (296°)
Lewiston, NC (LEWS)	47.4° F (-3.7° F) 0 mi	30.2° F (+0.4° F) 0 mi	2.3 in	6.1 mph	46.1 mph	2.3 mph West (272°)
Lilesville, NC (LILE)	50.9° F (-0.6° F) 9 mi	33.9° F (+2.2° F) 9 mi	1.8 in	4 mph	48.5 mph	1.5 mph West Southwest (250°)
Oxford, NC (OXFO)	46.2° F (-2.1° F) 0 mi	28.4° F (+0.8° F) 0 mi	2.6 in	4.7 mph	39.6 mph	4.7 mph North (3°)

Plymouth, NC (PLYM)	48.3° F (-5.7° F) 2 mi	29.2° F (-3.9° F) 2 mi	1.8 in	8.1 mph	41.6 mph	3.2 mph Northwest (311°)
Raleigh, NC (LAKE)	47.8° F (-3.6° F) 0 mi	30.9° F (-1.1° F) 0 mi	2.3 in	5 mph	39.1 mph	2.5 mph West (277°)
Raleigh, NC (REED)	47.6° F (-1.2° F) 3 mi	31.1° F (+1° F) 3 mi	3.1 in	4.7 mph	33.3 mph	2.3 mph West Northwest (294°)
Reidsville, NC (REID)	45.6° F (-1.4° F) 0 mi	27.5° F (+0.4° F) 0 mi	0 in	5.4 mph	29 mph	3.1 mph West Northwest (288°)
Rocky Mount, NC (ROCK)	47.8° F (-3.5° F) 0 mi	30° F (-0.8° F) 0 mi	2.5 in	5.6 mph	41.3 mph	2.2 mph West (269°)
Salisbury, NC (SALI)	48.7° F (+0.6° F) 0 mi	26.9° F (+0.9° F) 0 mi	0 in	4 mph	44.3 mph	1.7 mph West Northwest (285°)
Siler City, NC (SILR)	47.3° F (-1.9° F) 5 mi	26.5° F (-2.3° F) 5 mi	2.5 in	4.7 mph	35.1 mph	1.7 mph West (281°)
Wallace, NC (WILD)	53° F (-3.7° F) 8 mi	33.4° F (-1.4° F) 8 mi	2.1 in	5 mph	71.8 mph	1.9 mph West (275°)
Waynesville, NC (WAYN)	47.7° F (+0.7° F) 0 mi	23.1° F (+1.5° F) 0 mi	3.4 in	4.2 mph	25.2 mph	0.9 mph West (279°)
Whiteville, NC (WHIT)	53.2° F (-3.3° F) 0 mi	33.5° F (+1° F) 0 mi	1.7 in	4 mph	28.5 mph	1.5 mph West (277°)
Williamston, NC (WILL)	48.7° F (-3.3° F) 4 mi	31.1° F (-0.8° F) 4 mi	2.1 in	4.2 mph	40.9 mph	1.8 mph West (272°)

Legend:

Parameter
Parameter's value approximated from hourly data. (+/- Departure from normal) Distance to reference station