



North Carolina Climate September 2008

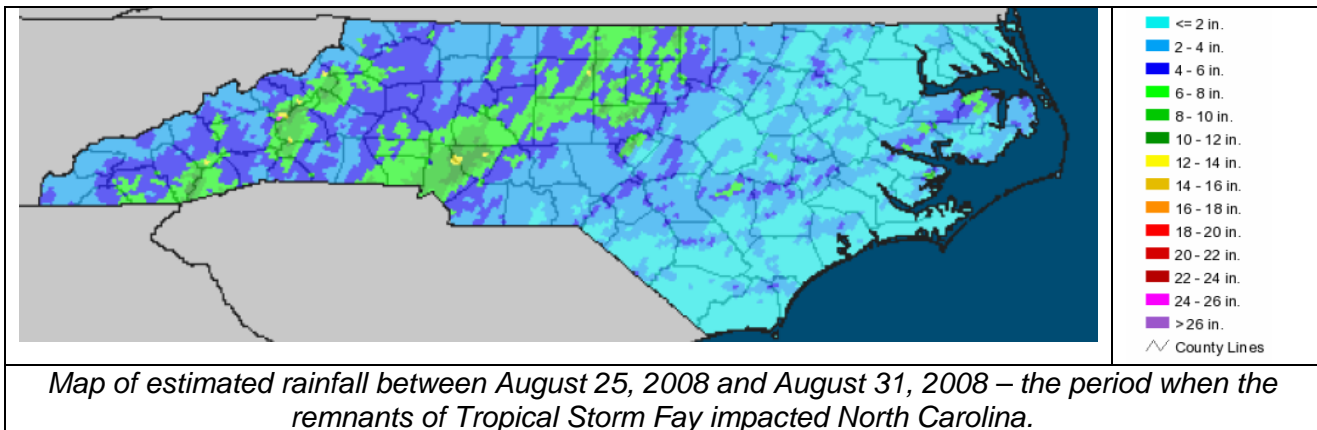
Online: <http://www.nc-climate.ncsu.edu/office/newsletters/>

North Carolina Climate, the monthly newsletter of the State Climate Office of NC, covers the drought, recent tropical storm activity, and our move to a new location.
Published September 15, 2008

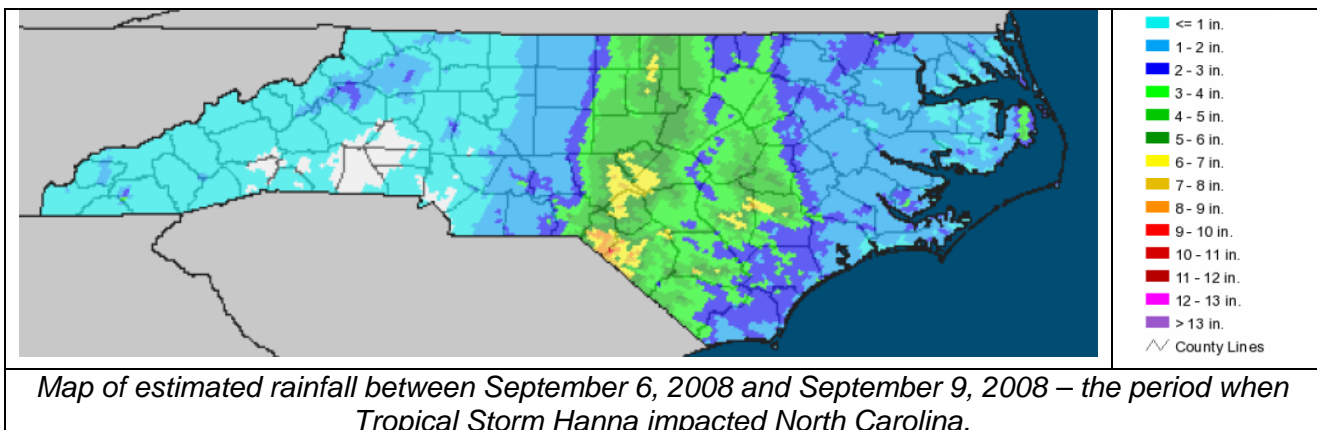
2 tropical storms bring flooding, drought relief

How quickly things can change. In just 3 weeks, North Carolina was impacted by Tropical Storm Hanna and the remnants of Tropical Storm Fay.

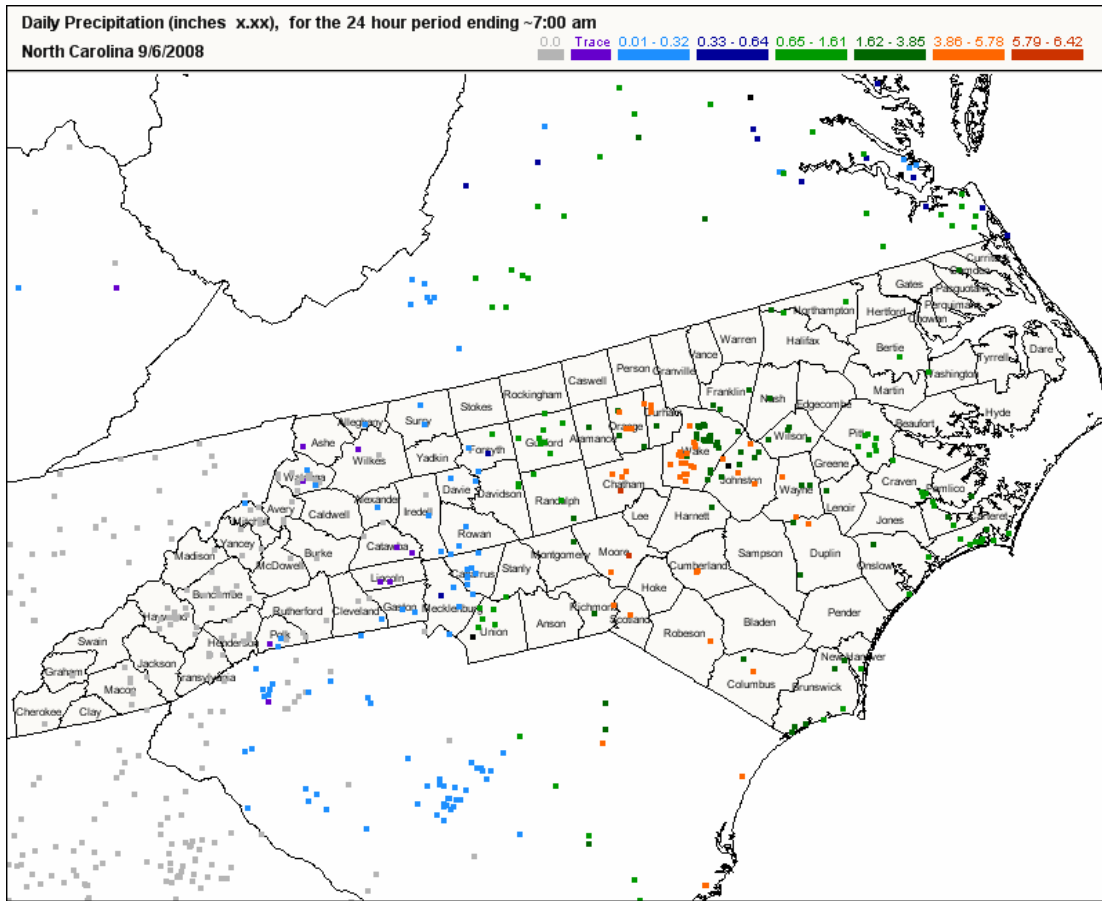
Fay brought rainfall to central and western North Carolina in late August, including nearly 12 inches to parts of Mecklenburg and Cabarrus Counties. This rain brought substantial flooding to these areas, but also provided needed drought relief. Just goes to show - you don't need a Category 3 hurricane to bring damaging floods.



Tropical Storm Hanna made landfall near the NC-SC border during the evening of Sept 5, and brought 3-7 inches to central and southeastern NC. Flooding from Hanna was much more limited, but also provided the second punch to drought conditions in central NC.



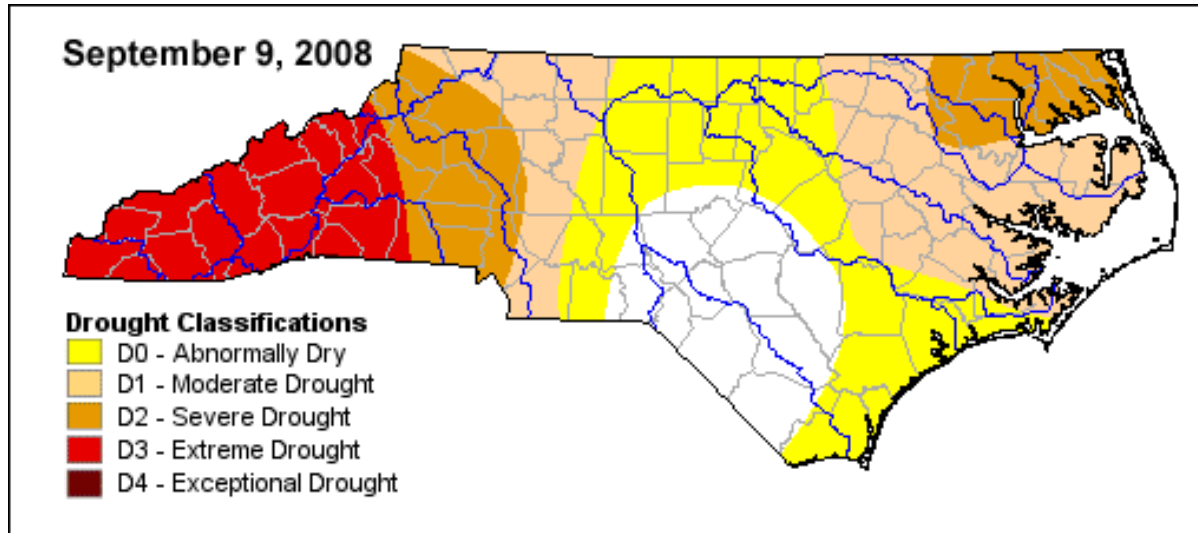
Much of central NC, including parts the Triangle area, have received more than 10 inches of rainfall in less than 20 days. This equates to approximately a 5-year event based on precipitation frequency statistic from the National Weather Service.



And a big shout out to all those dedicated Coop and CoCoRaHS observers - the rainfall reports from all the volunteer observers makes analysis of these storms SOOOOO much easier and accurate. The map above shows CoCoRaHS observations from September 6, 2008.

So there's no drought anymore in NC, right? Well...

Conditions in central NC are certainly much improved, and one is hard pressed to find any drought impacts in this region. However, you don't have to go too far west or too far east to find impacts. Indeed, D3 conditions are still widespread in the far western counties, and the counties north of the Albemarle Sound are still showing severe (D2) drought impacts. But most of central NC is D0 or D1 - so no drought impacts.



What?!! You mean we've had 2 tropical storms, lots of flooding, and there's still drought? Yup - here's why. Drought emerges slowly, over many weeks to months. Rain from tropical storms falls in days. The ground just can't absorb it all that fast. What doesn't get absorbed goes to runoff. Runoff is great if you have a surface reservoir to capture it, but 7 inches of rainfall doesn't provide as much benefit for groundwater. And groundwater provides the base flow for streams and water supplies for many smaller communities. Indeed, groundwater levels in western NC and northeastern parts of the state are still very low for this time of year. 7 inches of rain spread out evening over 2 weeks would provide much more drought relief than 7 inches in 2 days.

State Climate Office moves to new location

For all you readers out there who have followed the climate office activities over the past decade or so remember the great move of 2001, the squeeze move of 2003, and the expansion move of 2007. Well, we're at it again. We've moved everyone down to the first floor of the Research III Building on the Centennial Campus of NC State University. Same building and little less space, but hey - we got new paint and carpet in the process. Our phone numbers, website, and e-mail addresses remain unchanged.



Statewide Summary for August 2008

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 products is available online at:

<http://www.nc-climate.ncsu.edu/cronos/review/>

August 2008

Station	Avg Daily Max Temp	Avg Daily Min Temp	Total Rainfall	Total Et	Avg Daily Wind Speed	Max Daily Wind Speed	Vector Avg Wind Speed
Aurora, NC (AURO)	86.9° F (-0.8° F) 4 mi	70.1° F (+1.6° F) 4 mi	3.3 in	5.1 in	3.2 mph	22.3 mph	0.4 mph Southeast (132°)
Boone, NC (BOON)	78° F (+2.6° F) 1 mi	56.5° F (-0.1° F) 1 mi	9 in		3.1 mph	25.8 mph	0.6 mph West (270°)
Buckland, NC (BUCK)	87.7° F (+0.9° F) 15 mi	65.2° F (+1.2° F) 15 mi	0.9 in	4.6 in	1.5 mph	15.1 mph	0.3 mph East (80°)
Burnsville, NC (MITC)	65.5° F (-2.1° F) 1 mi	52.2° F (+0.6° F) 1 mi	13.2 in		9.4 mph	48.1 mph	1.3 mph Southwest (222°)
Castle Hayne, NC (CAST)	86.1° F (-2.3° F) 0 mi	64.8° F (-3.9° F) 0 mi	4.1 in	4 in	2.8 mph	24.4 mph	0.9 mph East (100°)
Clayton, NC (CLAY)	87° F (-0.6° F) 3 mi	67.8° F (+0.6° F) 3 mi	3.1 in	5.6 in	4.5 mph	22.9 mph	0.2 mph East (80°)
Clayton, NC (CLA2)	88.3° F (+0.7° F) 3 mi	64.5° F (-2.7° F) 3 mi	2.6 in		1.9 mph	12.9 mph	0.2 mph North Northeast (13°)
Clinton, NC (CLIN)	86.6° F (-1.6° F) 0 mi	67.5° F (-0.8° F) 0 mi	8.5 in		2.7 mph	22.5 mph	0.6 mph East (83°)
Fletcher, NC (FLET)	83.4° F (+0.9° F) 0 mi	60.2° F (+1.2° F) 0 mi	5.9 in	5.2 in	3 mph	19.5 mph	1 mph North Northeast (14°)
Franklin, NC (WINE)	69.7° F (-13.5° F) 11 mi	54.9° F (-6.3° F) 11 mi	7.1 in		5.7 mph	18.9 mph	1.3 mph East Northeast (73°)
Frying Pan Mountain, NC (FRYI)	72.5° F (-8° F) 10 mi	55.4° F (-3.6° F) 10 mi	0.5 in		9.5 mph	35 mph	1.4 mph South Southwest (204°)
Goldsboro, NC (GOLD)	87.3° F (-2° F) 5 mi	66.5° F (-3.1° F) 5 mi	6.2 in	5.3 in	4.6 mph	38.5 mph	0.3 mph East Northeast (67°)

Greensboro, NC (NCAT)	86.7° F (+1° F) 12 mi	65.6° F (-1.2° F) 12 mi	5.6 in	5.5 in	2.5 mph	19.3 mph	1 mph Northeast (52°)
Hamlet, NC (HAML)	87.5° F (-1.6° F) 4 mi	67.7° F (+1.9° F) 4 mi	12.1 in		3 mph	28.2 mph	1.2 mph East Southeast (104°)
Hendersonville, NC (BEAR)	73.6° F (-9.6° F) 7 mi	60° F (+0.4° F) 7 mi	5.2 in		8 mph	31.7 mph	2.6 mph East Northeast (69°)
High Point, NC (HIGH)	85.8° F (-1.6° F) 2 mi	63.8° F (-2.3° F) 2 mi	5.5 in		1.9 mph	15.2 mph	0.6 mph Northeast (39°)
Jackson Springs, NC (JACK)	86.4° F (-1° F) 0 mi	67° F (-0.9° F) 0 mi	7.3 in	4.9 in	5.3 mph	31.9 mph	1.3 mph East Northeast (74°)
Kinston, NC (KINS)	88.3° F (-2.1° F) 5 mi	67.7° F (-0.6° F) 5 mi	4.5 in	4.9 in	3.9 mph	22.3 mph	0.5 mph East Southeast (104°)
Laurel Springs, NC (LAUR)	77.1° F (-1.2° F) 1 mi	55.4° F (+1° F) 1 mi	7.1 in	4.2 in	3 mph	26.2 mph	0.3 mph Northeast (40°)
Lewiston, NC (LEWS)	86.6° F (-1.3° F) 0 mi	66.7° F (+1° F) 0 mi	1.8 in	4.7 in	4.2 mph	26.4 mph	0.4 mph Southeast (137°)
Lilesville, NC (LILE)	122.9° F (+34.4° F) 9 mi	68.4° F (-0.4° F) 9 mi	0.5 in		2.6 mph	29.1 mph	0.9 mph Southeast (126°)
Oxford, NC (OXFO)	85.8° F (-0.9° F) 0 mi	64.9° F (-0.3° F) 0 mi	5.9 in	5.3 in	3.2 mph	22.9 mph	3.2 mph North (2°)
Plymouth, NC (PLYM)	86.8° F (-1.5° F) 2 mi	66.1° F (-1.9° F) 2 mi	0.8 in	10.4 in	5.6 mph	26.2 mph	0.7 mph South Southeast (148°)
Raleigh, NC (LAKE)	88.1° F (+0.9° F) 0 mi	67.2° F (-1° F) 0 mi	3.3 in	5.3 in	3.4 mph	21.2 mph	0.2 mph North (11°)
Raleigh, NC (REED)	87.2° F (+1.3° F) 3 mi	67° F (-1.1° F) 3 mi	5.2 in		3.7 mph	26.5 mph	0.1 mph North Northeast (33°)
Reidsville, NC (REID)	84.4° F (-2.4° F) 0 mi	64.8° F (+0.4° F) 0 mi	0 in	4.8 in	4 mph	26.5 mph	1.4 mph North Northwest (345°)
Rocky Mount, NC (ROCK)	87.6° F (0° F) 0 mi	67° F (+0.1° F) 0 mi	5.1 in	5.4 in	3.9 mph	26 mph	0.6 mph East Southeast (107°)
Salisbury, NC (SALI)	86.2° F (-0.1° F) 0 mi	64.1° F (-0.9° F) 0 mi	0 in	4.7 in	2.7 mph	18.7 mph	0.7 mph Northeast (48°)

Siler City, NC (SILR)	87.1° F (+0.3° F) 5 mi	60.5° F (-5.1° F) 5 mi	3.7 in		3.5 mph	23.7 mph	1.4 mph Northeast (51°)
Waynesville, NC (WAYN)	81.2° F (-0.3° F) 0 mi	57.4° F (+1.2° F) 0 mi	5.4 in	5.1 in	2.8 mph	18.1 mph	1.5 mph East (101°)
Whiteville, NC (WHIT)	87.9° F (-3.1° F) 0 mi	68° F (+0.6° F) 0 mi	4.6 in	3.3 in	2.8 mph	24.3 mph	1 mph East Southeast (116°)
Williamston, NC (WILL)	86.8° F (-0.1° F) 4 mi	67.9° F (+0.2° F) 4 mi	3.1 in		2.9 mph	23.9 mph	0 mph Southwest (222°)

Legend:

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