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**EASTERN NORTH CAROLINA
MONTHLY CLIMATE REPORT**

AUGUST 2022

**WEATHER FORECAST OFFICE
NEWPORT/MOREHEAD CITY, NC**

National Weather Service

NEWPORT/MOREHEAD CITY, NC

MONTHLY SUMMARY

Meteorological summer ended with near average temperatures but drier than average conditions across eastern North Carolina. The hot streak from the end of July extended into the first week of August, but after an unusually strong cold frontal passage around mid-month, temperatures fell closer to seasonal norms and stayed there into September. Although precipitation amounts were respectable with a CWA average of just over 5" inches, it was still a few inches below average for all but a few counties. Despite this, drought conditions continued to improve with only the coastal plain experiencing abnormal dryness.

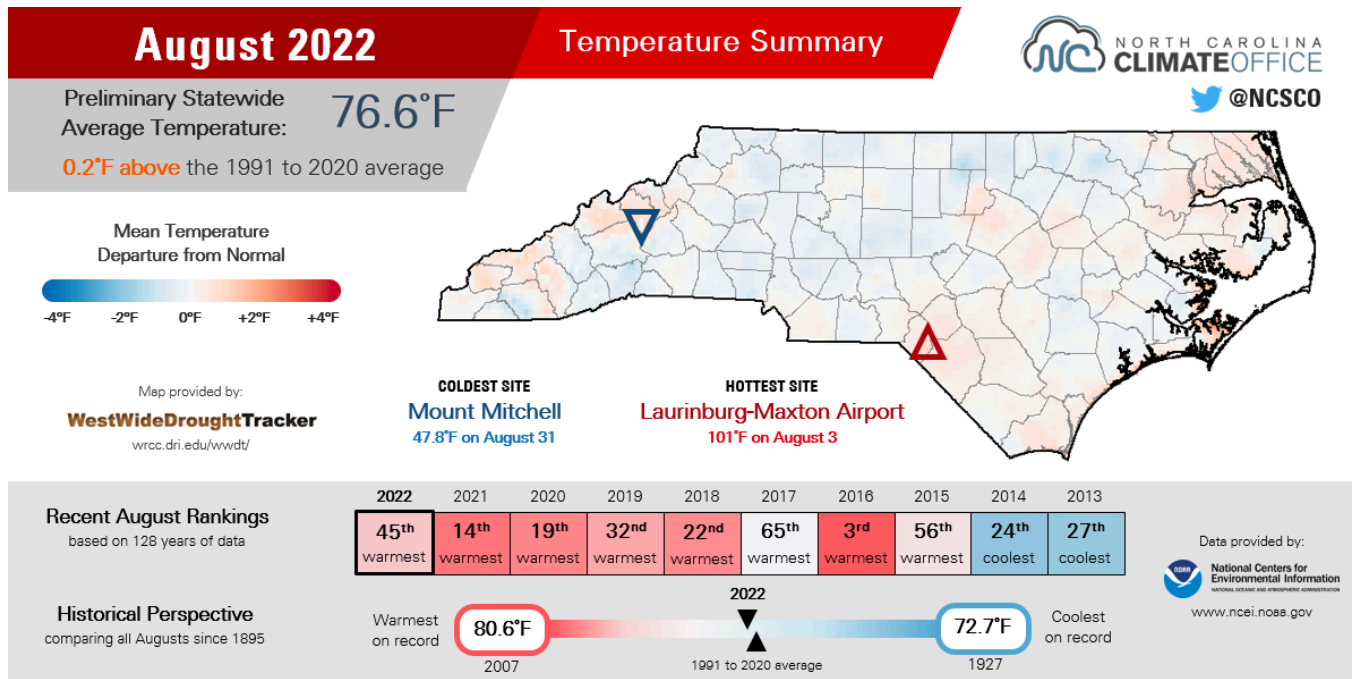
More notable in August was what did not happen - the Atlantic Basin was unusually calm. In fact, there were no tropical cyclones recorded for the month - the first time this has occurred in 25 years, according to the National Hurricane Center. The lack of activity likely played at least some role in below average precipitation, owing to North Carolina's frequent brushes with tropical cyclones during the late summer and early fall.

Seasonal drought outlooks do not suggest any appreciable drought development across the Carolinas in Fall 2022. Monthly outlooks slightly favor above-average temperatures (33-40%) and around equal chances of either above, normal or below average rainfall in September.

The September 2022 report will be published around October 15th, 2022.

TEMPERATURES

Meteorological summer closed on a decidedly average note, according to an analysis by the North Carolina State Climate Office. The average temperature statewide for August was 76.6°F or 0.2°F above the 1991-2020 average. This was the 45th warmest August statewide since records began in 1895, with 128 years of data.



August 2022 Temperature Summary from the North Carolina State Climate Office

Eastern North Carolina temperatures were similar to the statewide average. Temperatures at the three primary climate sites in the forecast area were within a degree and a half of normal. Additional observations can be found in Appendix A.

MHX Select Site Temperature Statistics: August 2022

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	86.5	75.2	80.9	79.5	1.4
Hatteras (KHSE)	85.3	73.9	79.6	80.7	-1.1

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	87.9	70.9	79.4	78.9	0.5

Normals are based on a period from 1990-2020.

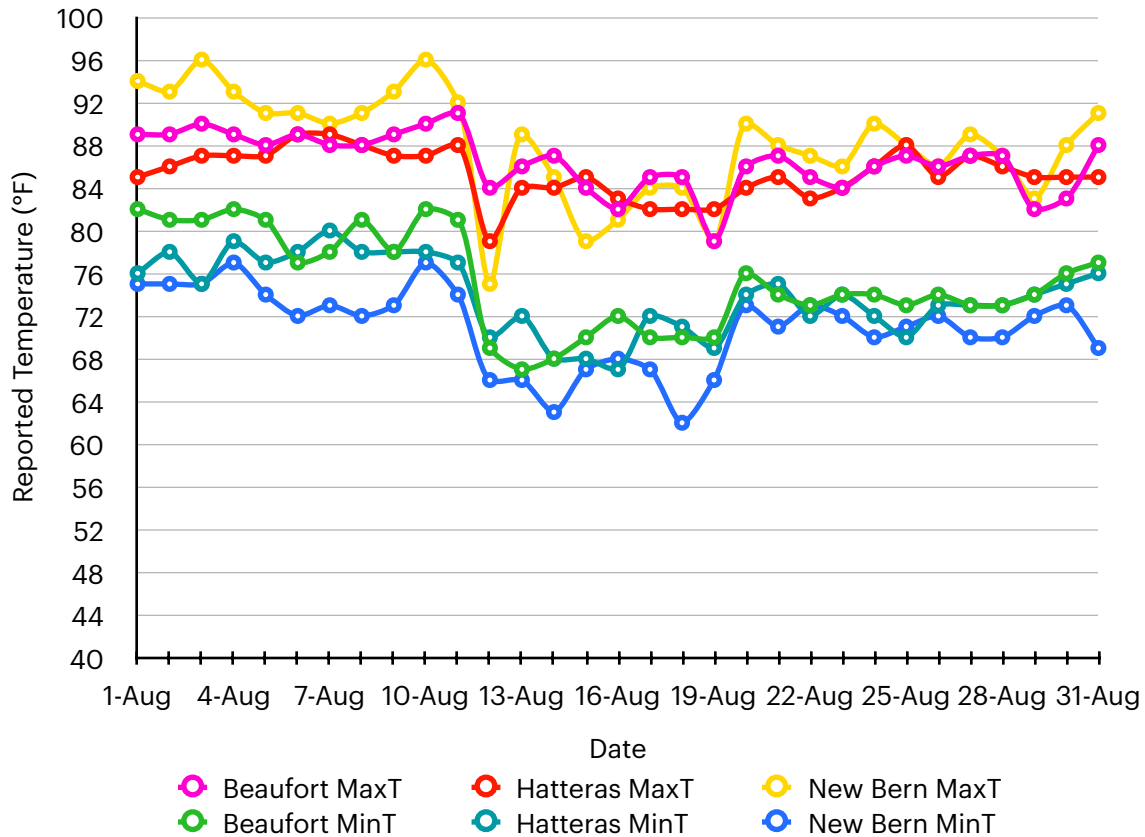
County-averaged statistics are presented in the following table. Note that mean temperature and anomaly calculations are based on a period of 1901-2000, rather than 1990-2020. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Temperature (°F)	Mean (°F)	Departure (°F)	Rank
Beaufort	78.2	77.8	0.4	61 W
Carteret	79.1	78.7	0.4	54 W
Craven	78.5	77.8	0.7	48 W
Dare	78.6	78.2	0.4	61 W
Duplin	78.6	77.6	1	34 W
Greene	78.3	77.6	0.7	51 W
Hyde	78.5	78.5	0	56 W
Jones	78.2	77.5	0.7	44 W
Lenoir	78.2	77.7	0.5	53 W
Martin	77.9	77.0	0.9	47 W
Onslow	78.9	77.8	1.1	35 W
Pamlico	78.6	78.5	0.1	56 C
Pitt	78.3	77.6	0.7	50 W
Tyrrell	78.3	77.7	0.6	57 W
Washington	78.1	77.2	0.9	50 W
Area Average	78.4	77.8	0.6	

Means are based on a period from 1901-2000. For rankings, "C" designates coldest and "W" designates warmest.

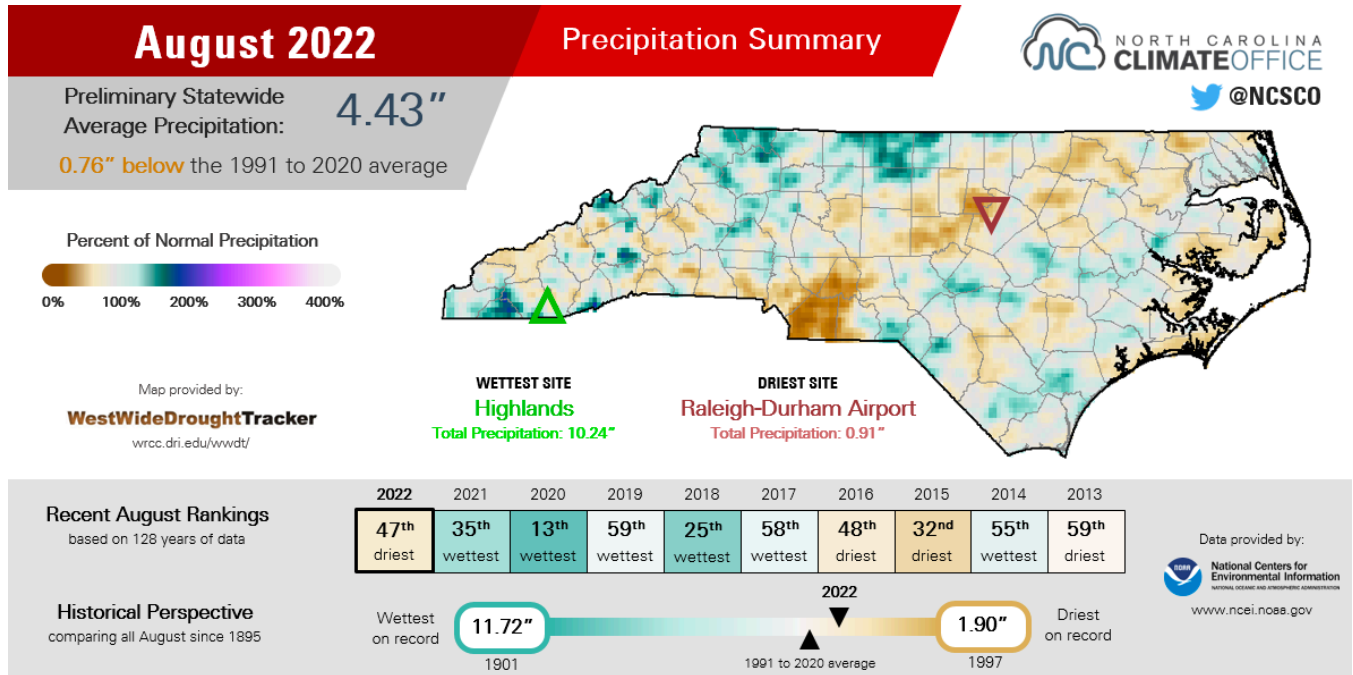
Temperatures continued on their hot streak from the end of July, with New Bern recording highs above 90 degrees for the first 11 days of August. After an unseasonably strong cold front pushed across the Carolinas, temperatures settled close to seasonal averages. After August 11, New Bern recorded a mere three 90+ degree days.

Daily Maximum and Minimum Temperatures



PRECIPITATION

Analysis conducted by the North Carolina State Climate Office indicated average statewide precipitation was 4.43” for August, or about 0.76” inches below average. This ended up being the 47th driest August for the state since records began in 1895.



August 2022 Precipitation Summary from the North Carolina State Climate Office

With a few exceptions, eastern North Carolina ended up being drier than the statewide average. Coastal areas saw considerably higher deficits, partially owing to a lack of tropical systems from an unusually subdued Atlantic Basin. Locales along the Albemarle Sound generally saw higher average rainfall for the month.

MHX Select Site Precipitation Statistics: August 2022

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	3.29	7.29	-4
Hatteras (KHSE)	2.71	6.73	-4.02
New Bern (KEWN)	4.83	6.81	-1.98

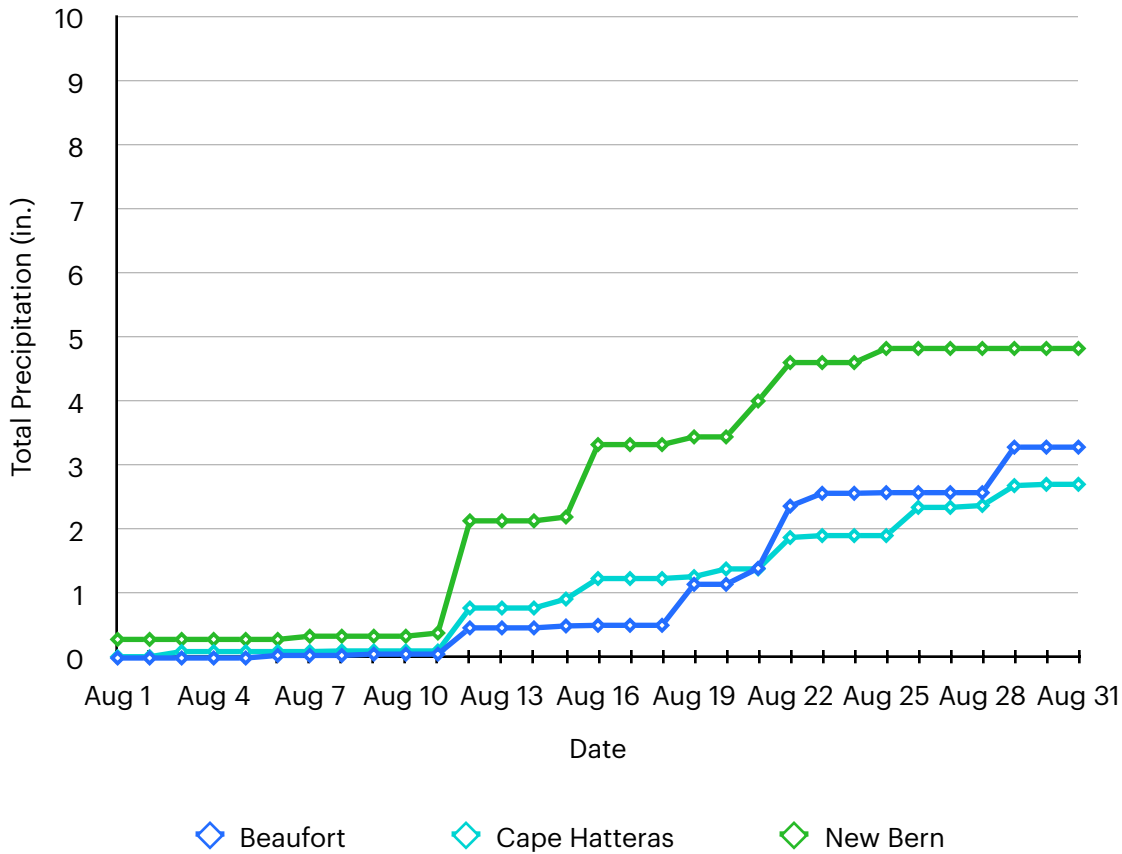
County-averaged statistics are presented in the following table. Like temperatures, mean and anomaly precipitation calculations are based on a period 1901-2000. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	5.27	6.18	-0.91	31 W
Carteret	5.63	6.87	-1.24	23 W
Craven	5.31	6.47	-1.16	30 W
Dare	4.71	5.78	-1.07	38 W
Duplin	4.67	5.86	-1.19	41 W
Greene	3.86	5.47	-1.61	52 W
Hyde	4.98	6.19	-1.21	27 W
Jones	5.19	6.33	-1.14	30 W
Lenoir	4.65	5.73	-1.08	60 W
Martin	4.98	5.58	-0.6	46 W
Onslow	5.43	6.57	-1.14	16 W
Pamlico	4.97	6.69	-1.72	23 W
Pitt	3.96	5.64	-1.68	35 W
Tyrrell	6.41	5.90	0.51	52 W
Washington	6.94	5.82	1.12	62 W
Area Average	5.13	6.07	-0.94	

Means are based on a period from 1901-2000. For rankings, “W” designates wettest and “D” designates driest.

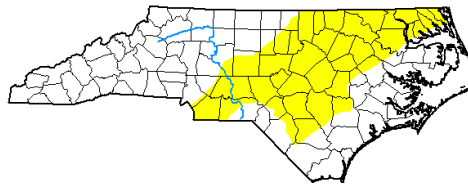
Apart from a few isolated storms, the first third of August remained stubbornly dry. With the frontal passage on August 11, a decidedly wetter pattern emerged and lingered through the rest of the month. As is typical in summer months, convective evolution sometimes greatly exacerbated differences in rainfall; CoCoRaHS reports from eastern Carteret County showed a monthly difference of nearly 5 inches over a mere 15 miles.

Monthly Accumulated Precipitation



Despite the below average rainfall, drought conditions continued to improve across the state. By the end of meteorological summer, no area was in D1 (Moderate) or higher drought and any abnormal dryness was confined to the inner coastal plain and central portions of the state. Monthly outlooks suggest some drought redevelopment across this same region in September.

U.S. Drought Monitor North Carolina



September 6, 2022
(Released Thursday, Sep. 8, 2022)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	61.72	38.28	0.00	0.00	0.00	0.00
Last Week 08-30-2022	71.07	28.93	0.01	0.00	0.00	0.00
3 Months Ago 06-07-2022	56.23	43.77	28.15	12.43	0.00	0.00
Start of Calendar Year 01-04-2022	2.84	97.16	60.20	2.76	0.00	0.00
Start of Water Year 09-28-2021	91.27	8.73	0.00	0.00	0.00	0.00
One Year Ago 09-07-2021	75.74	24.26	0.00	0.00	0.00	0.00

Intensity:

 None	 D2 Severe Drought
 D0 Abnormally Dry	 D3 Extreme Drought
 D1 Moderate Drought	 D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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droughtmonitor.unl.edu

ADDITIONAL CLIMATE RESOURCES

For a look at climate on the national scale, as well as statistics from a CONUS-wide to county and city level, please visit the **National Centers for Environmental Information** at <https://www.ncei.noaa.gov/>. Additional maps and data, as well as teaching materials and a climate resiliency toolkit, can be found at **NOAA's** <https://www.climate.gov>.

For additional drought information, including a wealth of maps of data focused on topics such as agriculture, fire, and water supply, please visit **NOAA's National Integrated Drought Information System (NIDIS)** at <https://www.drought.gov>.

For climate statistics and real time observations across the state of North Carolina, please visit the **North Carolina State Climate Office** at <https://climate.ncsu.edu/>.

For climate forecasts and outlooks, visit the **Climate Prediction Center** at <https://www.cpc.ncep.noaa.gov/>.

For community-based precipitation observations from across the United States, visit **CoCoRaHS** at <https://www.cocorahs.org/>.

For climate statistics relevant to various regions of North Carolina, please visit the following climate pages:

Eastern (WFO Morehead City): <https://www.weather.gov/wrh/climate?wfo=mxh>

Southeastern (WFO Wilmington): <https://www.weather.gov/wrh/climate?wfo=ilm>

Northeastern (WFO Wakefield, VA): <https://www.weather.gov/wrh/climate?wfo=akq>

Central (WFO Raleigh): <https://www.weather.gov/wrh/climate?wfo=rah>

Northwestern (WFO Blacksburg, VA): <https://www.weather.gov/wrh/climate?wfo=rnk>

Southwestern (WFO Greer, SC): <https://www.weather.gov/wrh/climate?wfo=gsp>

Cherokee and Clay Co. (WFO Knoxville, TN): <https://www.weather.gov/wrh/climate?wfo=mrx>

APPENDIX A: ADDITIONAL TEMPERATURE DATA

Cooperative Observation Site Temperature Statistics: August 2022

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	88.6	70.3	79.5	79.0	0.5
Kinston	88.2	69.5	78.9	79.2	-0.4
Williamston	87.8	69.7	78.8	78.4	0.4
Plymouth	87.9	69.0	78.5	78.3	0.2
Bayboro	86.4	67.5	77.0	77.9	-1.0
Manteo	86.7	73.7	80.2	78.2	2.0

Normals are based on a period from 1990-2020.

Maximum and Minimum Monthly Temperatures: August 2022

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	91	Aug 11	67	Aug 13
Hatteras (KHSE)	89	Aug 6-7	67	Aug 16
New Bern (KEWN)	96	Aug 3, Aug 10	62	Aug 18
Greenville	96	Aug 10	61	Aug 14, Aug 18
Kinston	97	Aug 11	59	Aug 14
Williamston	95	Aug 11	60	Aug 14, Aug 18
Plymouth	94	Aug 10	59	Aug 14, Aug 18
Bayboro	94	Aug 4	57	Aug 14-15
Manteo	95	Aug 5, Aug 10	64	Aug 14

APPENDIX B: ADDITIONAL PRECIPITATION DATA

Cooperative Observation Site Precipitation Statistics: August 2022

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Bayboro	4.06	7.85	-3.79
Greenville	2.75	6.01	-3.26
Kinston	4.94	6.36	-1.42
Plymouth	8.90	6.60	2.30
Williamston	5.22	5.70	-0.48

Sites in red have missing data in their record.

CoCoRaHS Monthly Accumulated Precipitation: August 2022

Site	County	Amount (in.)
Bath 0.7 N	Beaufort	4.32
Bath 1.6 SSE	Beaufort	3.24
Bath 6.6 ESE	Beaufort	3.22
Pantego 0.4 WSW	Beaufort	2.91
Beaufort 15.1 N	Carteret	8.84
Atlantic Beach 0.6 W	Carteret	5.42
Newport 1.0 N	Carteret	5.04
Emerald Isle 2.1 E	Carteret	4.93
Indian Beach 0.0 W	Carteret	4.85
Newport 0.2 SW	Carteret	4.82
Morehead City 2.9 WNW	Carteret	4.69

Site	County	Amount (in.)
Cedar Point 0.9 WSW	Carteret	4.53
Cape Carteret 1.0 NNW	Carteret	4.52
Pine Knoll Shores 1.4 E	Carteret	4.43
Emerald Isle 2.3 WSW	Carteret	4.41
Cape Carteret 0.8 NE	Carteret	4.40
Beaufort 12.2 N	Carteret	4.36
Swansboro 2.7 NE	Carteret	4.36
Newport 10.3 SW	Carteret	4.26
Morehead City 0.6 NW	Carteret	4.09
Newport 1.7 SSE	Carteret	4.01
Beaufort 3.8 N	Carteret	3.97
Newport 2.5 W	Carteret	3.92
Beaufort 1.5 NNW	Carteret	3.67
Beaufort 0.5 W	Carteret	3.65
Morehead City 6.0 WNW	Carteret	3.54
Beaufort 5.3 N	Carteret	3.52
Havelock 1.9 SSE	Craven	7.63
Trent Woods 1.2 ENE	Craven	5.85
New Bern 5.2 SE	Craven	5.30
New Bern 7.3 ESE	Craven	5.07
Trent Woods 0.9 WNW	Craven	4.98
New Bern 4.2 S	Craven	4.89
Trent Woods 1.3 SSE	Craven	4.58

Site	County	Amount (in.)
River Bend 0.8 ENE	Craven	4.58
New Bern 1.3 NNE	Craven	4.34
Southern Shores 0.5 NNE	Dare	6.09
Manteo 2.8 NW	Dare	5.64
Rodanthe 1.0 SSE	Dare	4.54
Albertson 1.8 SE	Duplin	5.50
Mount Olive 2.4 SW	Duplin	5.12
Rose Hill 0.1 NNW	Duplin	4.99
Albertson 1.2 WNW	Duplin	3.80
Hookerton 0.5 ESE	Greene	7.37
Ayden 6.5 WNW	Greene	6.25
Snow Hill 3.1 NNE	Greene	5.22
Engelhard 0.5 NW	Hyde	6.13
SQ Tower	Hyde	5.51
Ocracoke 0.2 ESE	Hyde	2.57
Kinston 7.0 SW	Lenoir	8.09
Kinston 5.1 WNW	Lenoir	5.90
Kinston 3.7 WNW	Lenoir	5.08
Kinston 4.7 ESE	Lenoir	4.80
Kinston 1.2 NW	Lenoir	4.22
Jamesville 6.1 SW	Martin	7.29
Williamston 8.9 SSE	Martin	6.03
Jacksonville 2.4 NNE	Onslow	6.53

Site	County	Amount (in.)
Jacksonville 3.3 W	Onslow	6.37
Jacksonville 5.4 WSW	Onslow	6.11
Holly Ridge 9.0 ENE	Onslow	5.46
Sneads Ferry 3.3 SW	Onslow	4.75
Hubert 4.9 SE	Onslow	4.64
Swansboro 2.8 WSW	Onslow	4.56
Sneads Ferry 1.2 SSW	Onslow	3.77
Lowland 0.2 SE	Pamlico	5.44
Oriental 1.9 WSW	Pamlico	5.09
Merritt 1.5 WSW	Pamlico	3.62
Oriental 4.3 NNW	Pamlico	3.53
Greenville 7.1 SSE	Pitt	7.73
Winterville 1.0 ENE	Pitt	7.36
Greenville 2.8 ESE	Pitt	6.69
Greenville 5.0 SE	Pitt	6.36
Winterville 3.5 W	Pitt	6.19
Greenville 4.6 W	Pitt	5.45
Winterville 2.5 NNW	Pitt	5.00
Fountain 0.1 NE	Pitt	4.92
Greenville 5.7 NW	Pitt	3.91
Columbia 0.8 NNE	Tyrrell	4.59

CoCoRaHS inclusion in this table is based on a complete 31-day liquid precipitation record. Thank you to all observers!

