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**EASTERN NORTH CAROLINA
MONTHLY CLIMATE REPORT**

**JULY
2022**

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

National Weather Service

NEWPORT/MOREHEAD CITY, NC

MONTHLY SUMMARY

It seems July 2022 was determined to not be a replica of its dismally dry June cousin, and it certainly did not disappoint across eastern North Carolina. Although precipitation across the state as a whole was only slightly above average, convective activity resulted in some significant deviations - none more than in Carteret County, which officially logged the highest rainfall total in North Carolina at 16.57" inches. Most areas in the region still saw greatly beneficial rainfall, and drought conditions were either significantly depressed or outright eliminated. Temperatures were generally within a degree or two of average, despite a prolonged hot streak in the second half of the month.

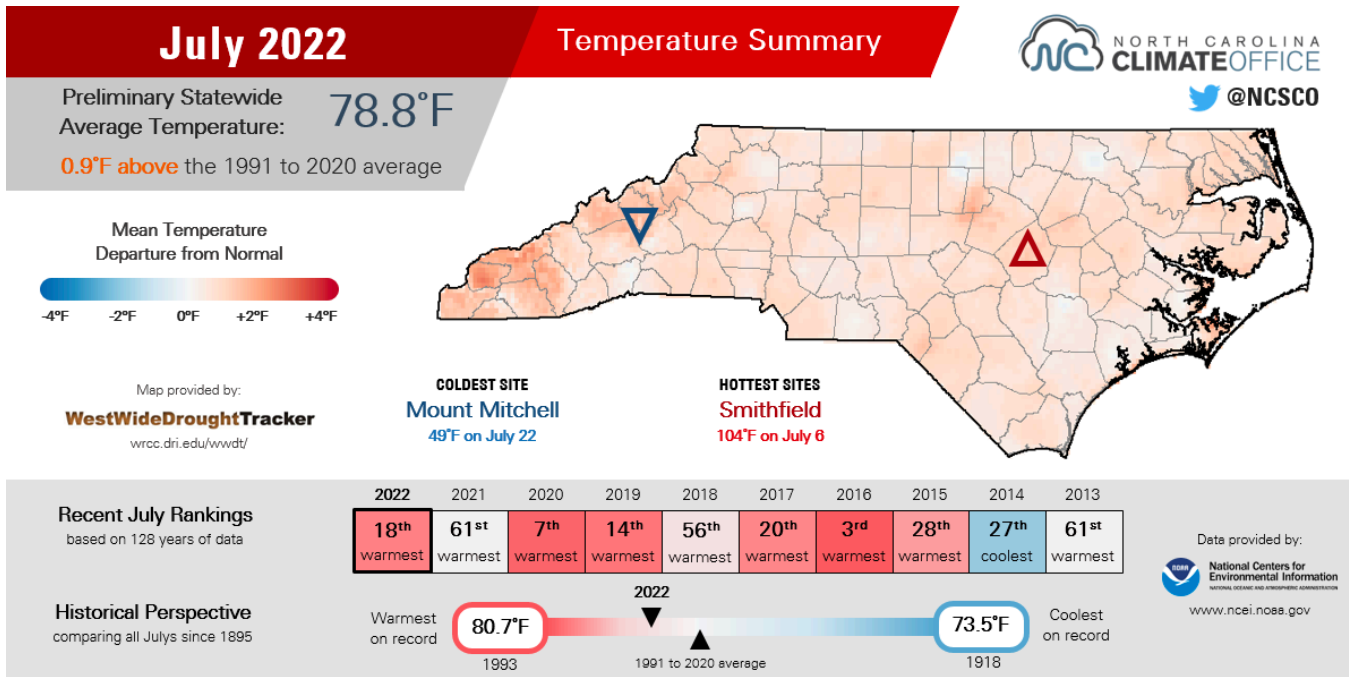
The Atlantic Basin produced near-average tropical activity during July, with two tropical storms - Bonnie and Colin. Tropical Storm Colin was the primary storm of interest for us, a short-lived system early in the month that produced brief periods of tropical storm conditions over offshore waters but otherwise produced minimal impacts to the region.

Seasonal drought outlooks continue to indicate drought removal through the next few months. Seasonal CPC outlooks slightly favor above-average temperatures (40-50%) and above-average precipitation (33-40%) through the fall.

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

TEMPERATURES

The warm season continued to be slightly warmer than average, according to an analysis by the North Carolina State Climate Office. The average temperature statewide for July was 78.8°F or 0.9°F above the 1991-2020 average. This was the 18th warmest July statewide since records began in 1895, with 128 years of data.



July 2022 Temperature Summary from the NC State Climate Office

Eastern North Carolina was close to or slightly cooler than the statewide average. The three main climate sites in the CWA were within a degree or two of average based on 1991-2020 normals. Additional observations can be found in Appendix A.

MHX Select Site Temperature Statistics: July 2022

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	86.8	77.3	82.1	80.6	1.5
Hatteras (KHSE)	85.7	76.6	81.2	81.3	-0.2

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	89.7	73.2	81.5	80.4	1.1

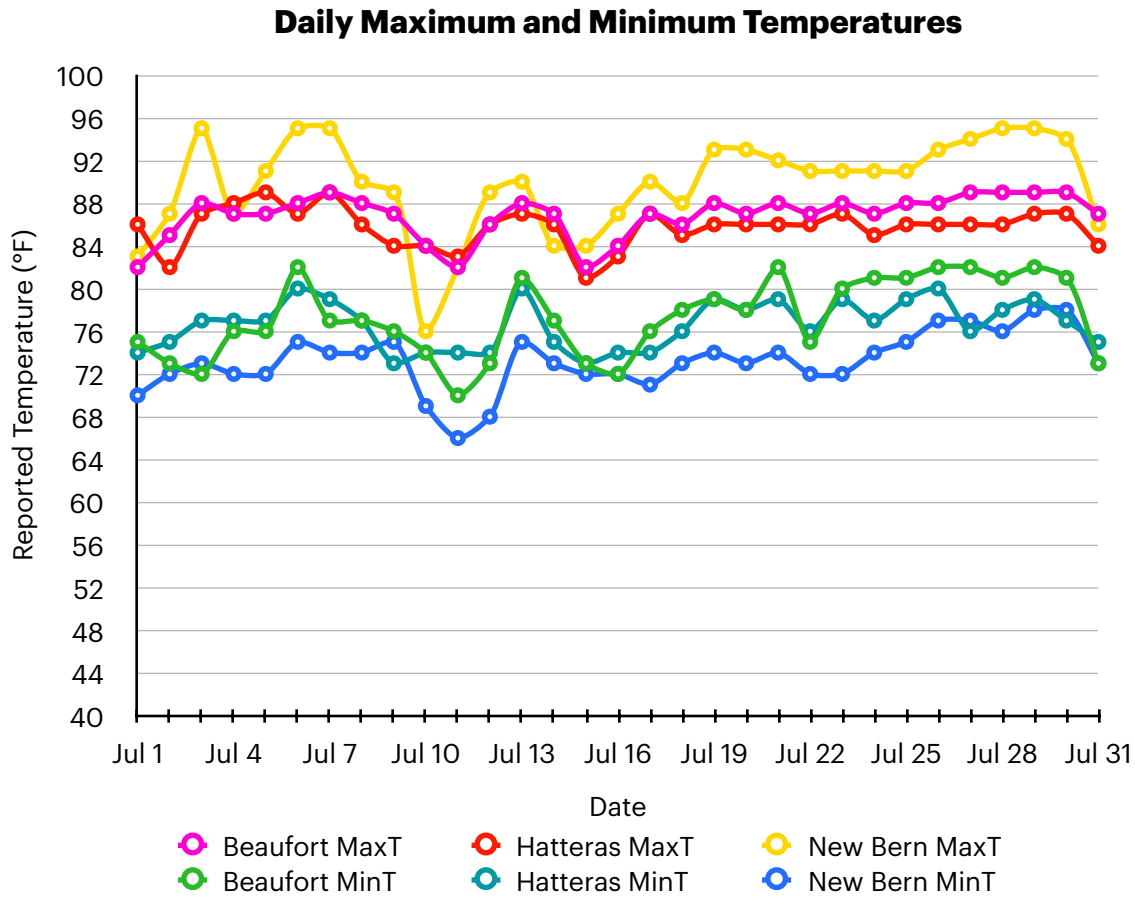
Normals are based on a period from 1990-2020.

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	72.3	69.5	2.8	8 W
Carteret	73.8	71.2	2.6	9 W
Craven	71.9	69.3	2.6	8 W
Dare	74.5	71.4	3.1	5 W
Duplin	71.7	68.4	3.3	4 W
Greene	71.4	68.8	2.6	10 W
Hyde	73.7	71.0	2.7	9 W
Jones	71.1	68.4	2.7	8 W
Lenoir	71.4	68.7	2.7	8 W
Martin	70.9	68.1	2.8	9 W
Onslow	72.4	69.2	3.2	5 W
Pamlico	73.3	70.8	2.5	10 W
Pitt	71.2	68.8	2.4	13 W
Tyrrell	72.9	70.0	2.9	6 W
Washington	71.6	68.8	2.8	11 W
Area Average	72.3	69.5	2.8	

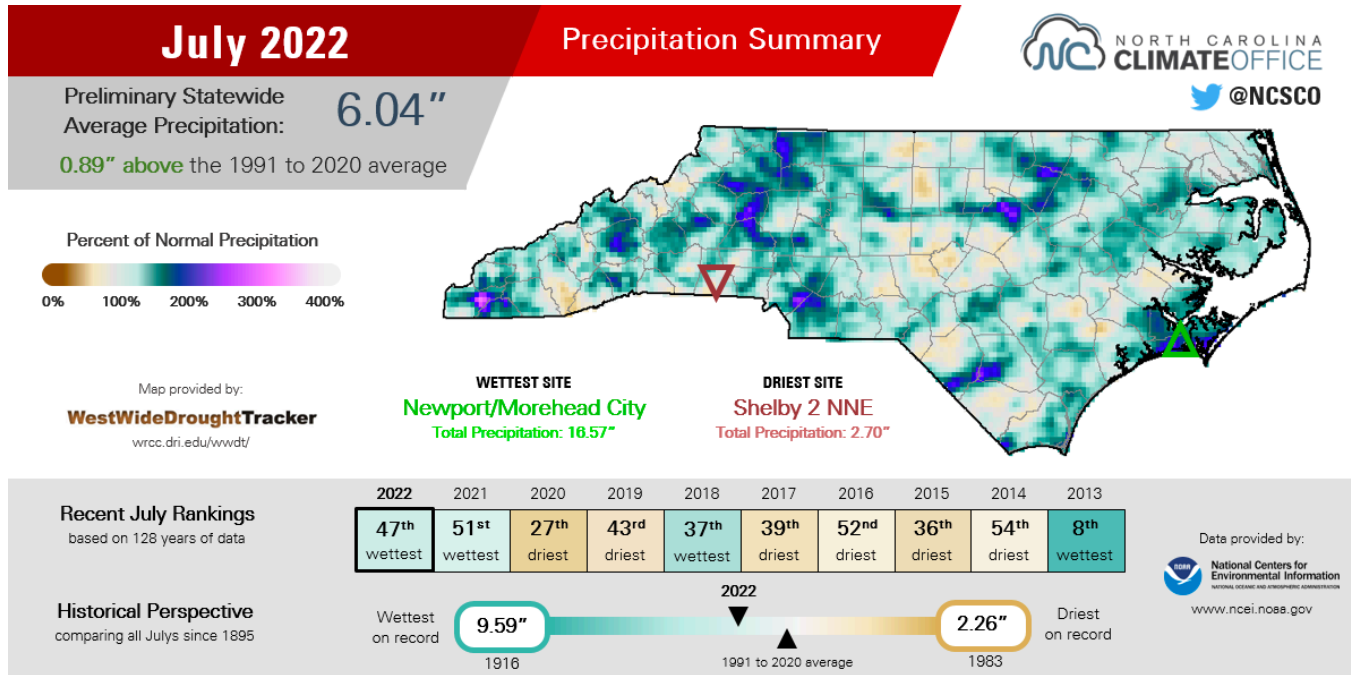
Means are based on a period from 1901-2000. For rankings, "C" designates coldest and "W" designates warmest.

Area-wide, temperatures were around 3 degrees above the 20th century average. Steady and unrelenting heat dominated the latter half of the month, with New Bern hitting at or above 90 degrees 12 days in a row. This tied for the 17th-longest run of 90+ degree days since records began in 1933.



PRECIPITATION

Analysis conducted by the North Carolina State Climate Office indicated average statewide precipitation was 6.04" for July, or about 0.89" inches above average. This ended up being the 47th wettest July for the state since records began in 1895.



July 2022 Precipitation Summary from the NC State Climate Office

Eastern North Carolina was generally close to or slightly above the statewide average, although observation spread was significant due to convective episodes. The wettest areas by far were along the Crystal Coast in Carteret County, with locally drier spots in Lenoir and Washington counties.

MHX Select Site Precipitation Statistics: July 2022

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	15.77	5.81	9.96
Hatteras (KHSE)	7.59	5.39	2.2
New Bern (KEWN)	11.58	6.26	5.32

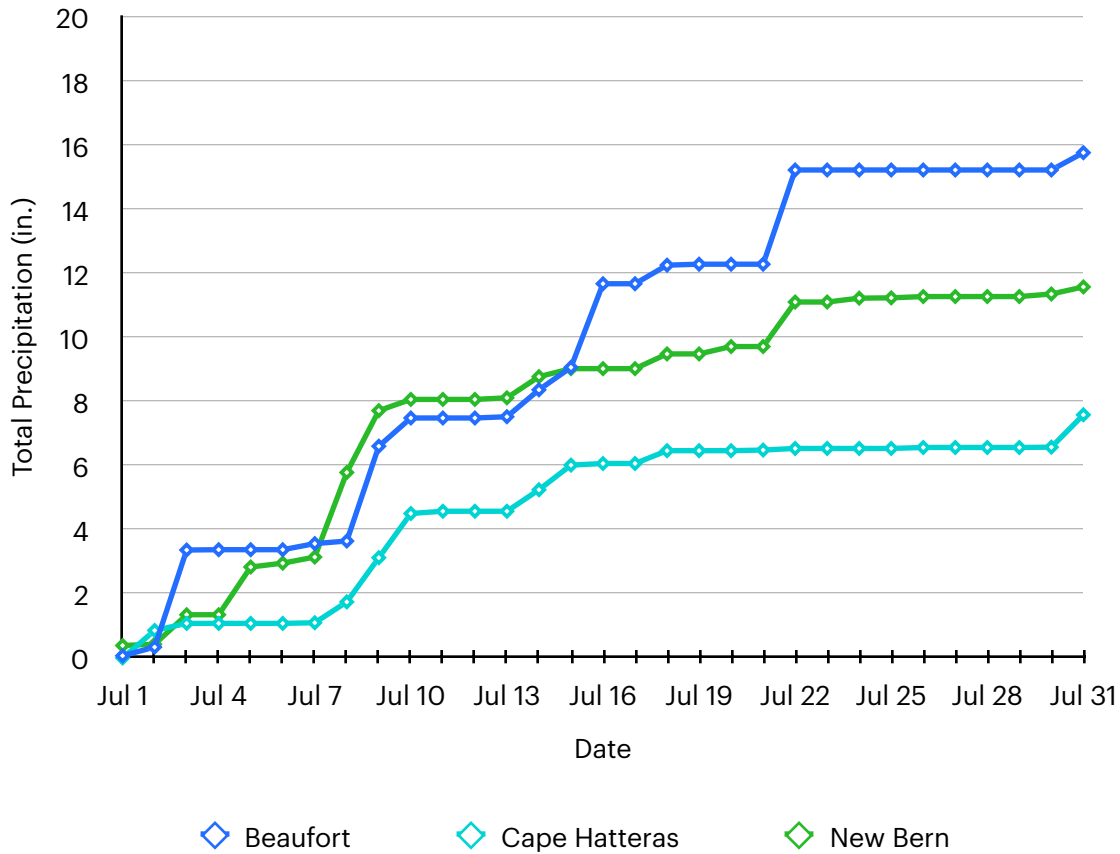
County-averaged statistics are presented in the following table. Like temperatures, mean and anomaly precipitation calculations are based on a period 1901-2000. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	8.09	6.71	1.38	31 W
Carteret	9.05	7.09	1.96	23 W
Craven	8.66	7.14	1.52	30 W
Dare	7.00	6.04	0.96	38 W
Duplin	7.84	7.03	0.81	41 W
Greene	6.42	6.21	0.21	52 W
Hyde	8.38	6.42	1.96	27 W
Jones	8.86	7.17	1.69	30 W
Lenoir	6.42	6.64	-0.22	60 W
Martin	6.64	6.15	0.49	46 W
Onslow	10.30	7.42	2.88	16 W
Pamlico	9.11	7.09	2.02	23 W
Pitt	7.29	6.23	1.06	35 W
Tyrrell	6.38	6.30	0.08	52 W
Washington	6.30	6.41	-0.11	62 W
Area Average	7.78	6.67	1.11	

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

Coastal Carteret County was the big winner for precip across the forecast area, owing to significant rainfall over a 3 day period from July 8-10. The highest single rainfall totals fell here on the morning of July 22, where the local NWS office measured 4.64”. Overall, the office was officially the wettest part of the state picking up 16.57” of precip for the month. Unofficial CoCoRaHS observations recorded close to 20 inches in the same area.

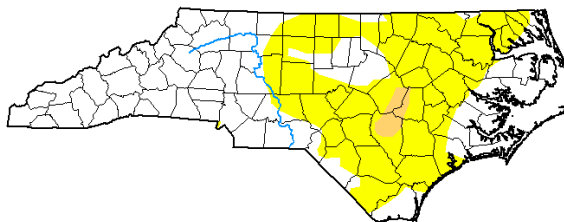
Monthly Accumulated Precipitation



Although some areas fared better than others, drought conditions still drastically improved across all of eastern North Carolina. Any D2 (Severe Drought) was quickly replaced with either D0 (Abnormally Dry) or no drought at all. The exception is a sliver of northwestern Duplin County in D1 (Moderate Drought). Seasonal outlooks call for further drought removal through the end of November

U.S. Drought Monitor North Carolina

August 2, 2022
(Released Thursday, Aug. 4, 2022)
Valid 8 a.m. EDT



- Intensity:**
- None
 - D0 Abnormally Dry
 - D1 Moderate Drought
 - D2 Severe Drought
 - D3 Extreme 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>

Author:
Curtis Riganti
National Drought Mitigation Center



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: July 2022

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	90.4	72.7	81.6	80.8	0.8
Kinston	90.5	73.0	81.8	81.0	0.8
Williamston	90.4	72.1	81.3	79.9	1.4
Plymouth	89.5	71.4	80.5	79.8	0.7
Bayboro	87.7	71.5	79.6	79.4	0.2
Manteo	88.5	76.0	82.3	79.5	2.8

Normals are based on a period from 1990-2020.

Maximum and Minimum Monthly Temperatures: July 2022

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	89	Jul 7, 27-30	70	Jul 11
Hatteras (KHSE)	89	Jul 5, Jul 7	73	Jul 9, Jul 15
New Bern (KEWN)	95	Jul 3, 6-7, 28-29	66	Jul 11
Greenville	98	Jul 6	63	Jul 12
Kinston	98	Jul 29-30	64	Jul 11
Williamston	97	Jul 7	64	Jul 11
Plymouth	95	Jul 29-30	64	Jul 11
Bayboro	94	Jul 4	64	Jul 1
Manteo	96	Jul 30	69	Jul 1

APPENDIX B: ADDITIONAL PRECIPITATION DATA

Cooperative Observation Site Precipitation Statistics: July 2022

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Bayboro	9.85	6.79	3.06
Greenville	9.60	5.87	3.73
Kinston	4.84	5.79	-0.95
Plymouth	6.04	5.70	0.34
Williamston	6.60	5.75	0.85

Sites in red have missing data in their record.

CoCoRaHS Monthly Accumulated Precipitation: July 2022

Site	County	Amount (in.)
Pantego 0.4 WSW	Beaufort	8.01
Bath 1.6 SSE	Beaufort	6.77
Washington 1.0 SSW	Beaufort	6.17
Bath 4.1 NNW	Beaufort	5.08
Bath 6.6 ESE	Beaufort	4.83
Newport 0.2 SW	Carteret	20.02
Newport 1.0 N	Carteret	19.49
Beaufort 0.5 W	Carteret	16.70
Newport 2.5 W	Carteret	15.70
Newport 1.7 SSE	Carteret	14.92
Beaufort 5.3 N	Carteret	14.23

Site	County	Amount (in.)
Beaufort 3.8 N	Carteret	14.08
Cape Carteret 1.5 NE	Carteret	13.83
Morehead City 2.9 WNW	Carteret	13.50
Cape Carteret 0.8 NE	Carteret	13.35
Newport 10.3 SW	Carteret	13.15
Beaufort 3.4 NNW	Carteret	13.11
Atlantic Beach 0.6 W	Carteret	12.82
Cape Carteret 1.0 NNW	Carteret	12.46
Morehead City 0.6 W	Carteret	11.88
Swansboro 2.7 NE	Carteret	11.76
Swansboro 3.7 NNE	Carteret	11.33
Morehead City 6.0 WNW	Carteret	10.80
Cedar Point 0.9 WSW	Carteret	10.27
Pine Knoll Shores 0.3 N	Carteret	9.87
Beaufort 15.1 N	Carteret	9.78
Cedar Island 0.3 SSE	Carteret	7.34
Emerald Isle 2.3 WSW	Carteret	7.05
New Bern 3.8 S	Craven	14.94
Trent Woods 1.3 SSE	Craven	13.91
Trent Woods 1.0 NNE	Craven	12.99
Trent Woods 1.2 ENE	Craven	12.55
Trent Woods 0.9 WNW	Craven	11.46
New Bern 5.2 SE	Craven	10.94

Site	County	Amount (in.)
New Bern 1.3 NNE	Craven	6.15
Southern Shores 0.5 NNE	Dare	8.89
Rodanthe 1.0 SSE	Dare	8.35
Wallace 14.8 E	Duplin	10.30
Rose Hill 0.1 NNW	Duplin	7.95
Albertson 1.2 WNW	Duplin	3.29
Snow Hill 3.1 NNE	Greene	7.57
Ayden 6.5 WNW	Greene	6.39
Ocracoke 0.2 ESE	Hyde	9.61
SQ Tower	Hyde	7.83
Kinston 4.4 WNW	Lenoir	6.08
Kinston 3.7 WNW	Lenoir	5.48
Kinston 5.1 WNW	Lenoir	5.06
Kinston 1.2 NW	Lenoir	4.85
Robersonville 0.0 NNW	Martin	8.76
Williamston 8.9 SSE	Martin	8.65
Jamesville 6.1 SW	Martin	8.01
Swansboro 2.8 WSW	Onslow	12.65
Swansboro 3.3 NW	Onslow	9.08
Jacksonville 5.4 WSW	Onslow	8.79
Jacksonville 3.3 W	Onslow	6.70
Sneads Ferry 1.2 SSW	Onslow	5.78
Holly Ridge 9.0 ENE	Onslow	5.55

Site	County	Amount (in.)
Sneads Ferry 3.3 SW	Onslow	5.06
Oriental 4.3 NNW	Pamlico	11.82
Merritt 1.5 WSW	Pamlico	10.48
Oriental 1.9 WSW	Pamlico	9.31
Lowland 0.2 SE	Pamlico	8.22
Greenville 2.8 ESE	Pitt	9.71
Winterville 3.5 W	Pitt	8.71
Winterville 2.8 WNW	Pitt	8.40
Greenville 4.6 W	Pitt	7.92
Greenville 5.7 NW	Pitt	7.69
Greenville 5.0 SE	Pitt	5.38
Fountain 0.1 NE	Pitt	5.12
Columbia 0.8 NNE	Tyrrell	9.16

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