

PUBLISH DATE: OCTOBER 21, 2022

**EASTERN NORTH CAROLINA
MONTHLY CLIMATE REPORT**

SEPTEMBER 2022

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

National Weather Service

NEWPORT/MOREHEAD CITY, NC

MONTHLY SUMMARY

September in eastern North Carolina continued a trend of average temperatures, and below average precipitation across the coastal plain. Closer to shore, precipitation amounts were around or slightly above average thanks to end-of-month rainfall from Hurricane Ian. Most coastal areas picked up about 3-5 inches of rain from the storm, although a few isolated higher amounts were reported including 6-8 inches across Carteret County.

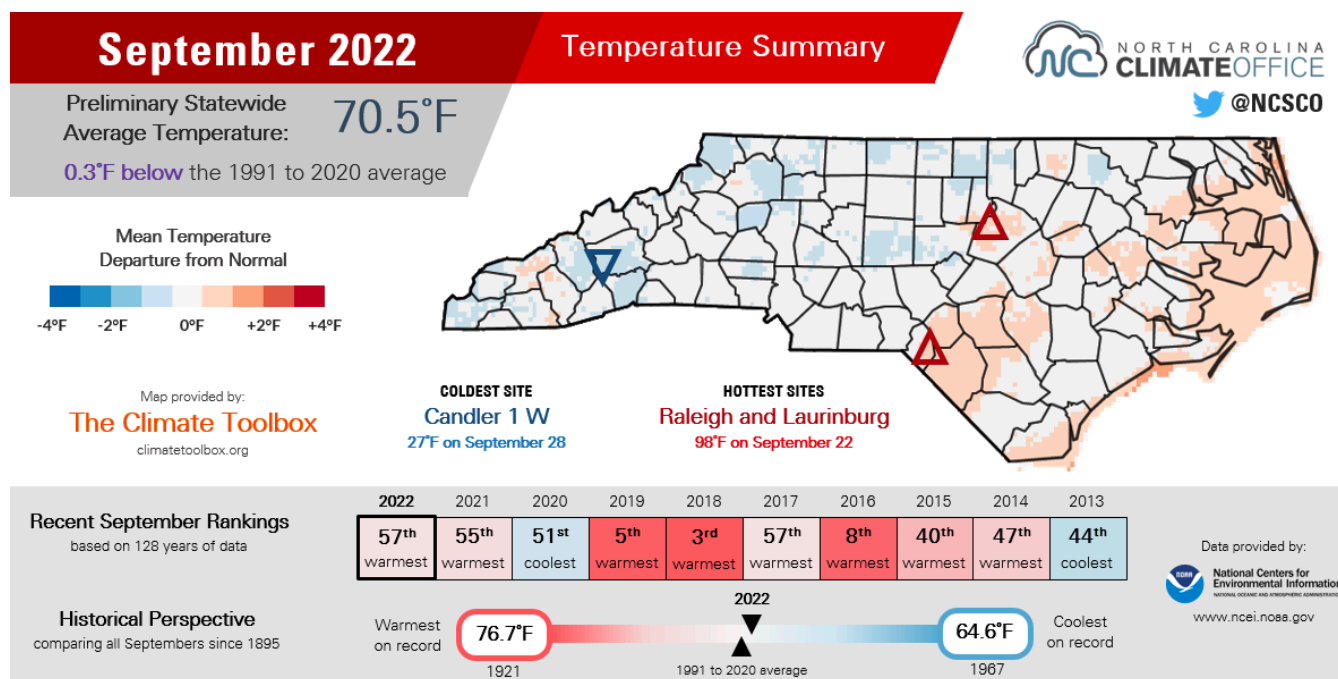
Despite the lack of rainfall across the coastal plain, no area in eastern North Carolina was in drought by the end of the month. Seasonal drought outlooks do not suggest any notable drought development through the rest of the calendar year. Monthly outlooks suggest equal chances of above, near-normal, or below normal temperatures for November, and equal chances of above, near-normal, or below precipitation for the same period.

For more details on impacts from Hurricane Ian on eastern North Carolina, see our [Post-Tropical Cyclone Report](#).

The October 2022 report will be published around November 20th, 2022.

TEMPERATURES

Temperatures continued to remain steadily around average for the second month in a row, based on analysis from the NC State Climate Office. The average temperature statewide for September was 70.5°F or 0.3°F below the 1991-2020 average. This was the 57th warmest September statewide since records began in 1895, with 128 years of data.



September 2022 Temperature Summary from the NC 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 of normal. Additional observations can be found in Appendix A.

MHX Select Site Temperature Statistics: September 2022

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	82.6	68.4	75.5	75.4	0.1
Hatteras (KHSE)	82.2	70.1	76.2	76.9	-0.8

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	83.9	64.9	74.4	74.2	0.2

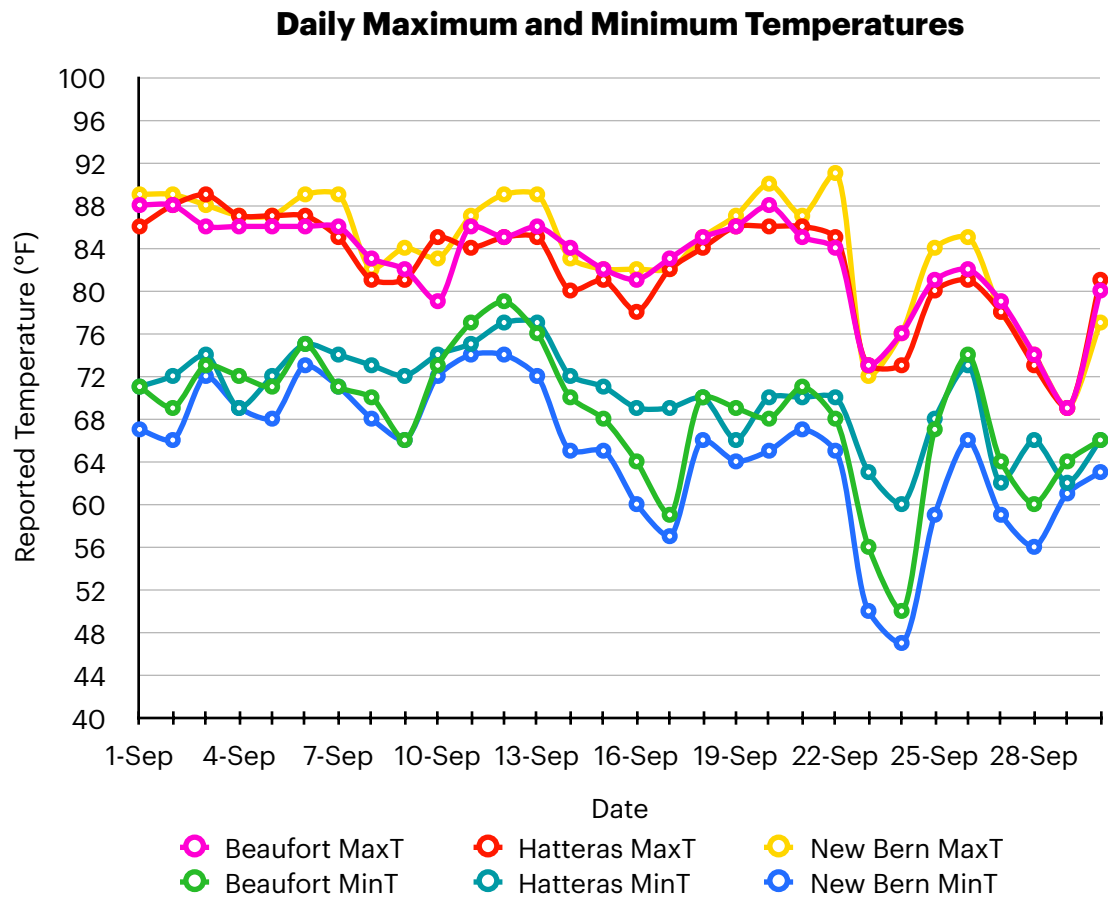
Normals are based on a period from 1990-2020.

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	73.0	72.8	0.2	62 W
Carteret	75.2	74.4	0.8	50 W
Craven	73.5	73.0	0.5	54 W
Dare	74.3	73.7	0.6	51 W
Duplin	73.0	72.6	0.4	54 W
Greene	72.0	72.3	-0.3	55 C
Hyde	74.2	73.7	0.5	59 W
Jones	73.1	72.6	0.5	58 W
Lenoir	72.3	72.5	-0.2	58 C
Martin	71.8	71.7	0.1	64 W
Onslow	74.0	73.2	0.8	49 W
Pamlico	74.2	73.9	0.3	60 W
Pitt	72.0	72.3	-0.3	53 C
Tyrrell	73.5	72.9	0.6	53 W
Washington	72.7	72.1	0.6	56 W
Area Average	73.3	72.9	0.3	

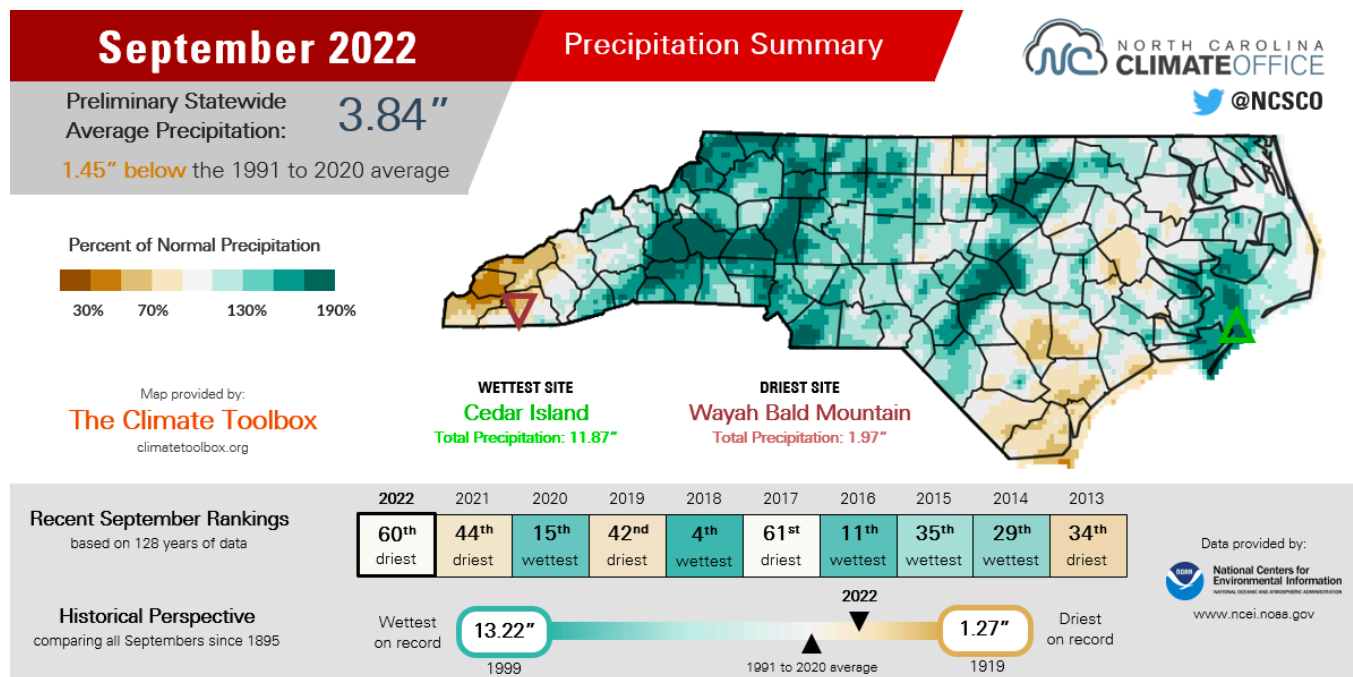
Means are based on a period from 1901-2000. For rankings, "C" designates coldest and "W" designates warmest.

Temperatures remained stable for the first two thirds of the month, but fell after a strong cold front pushed across the region on September 24, dipping many areas into the 40s. New Bern recorded its last 90 degree day on September 23 - if this holds, it is slightly later than the average September 16.



PRECIPITATION

Analysis conducted by the North Carolina State Climate Office indicated below average precipitation statewide, sitting at 3.84" for September, or about 1.45" inches below average. This was the 60th driest September for the state since records began in 1895.



September 2022 Precipitation Summary from the NC State Climate Office

Eastern North Carolina was wetter than the statewide average but saw considerable spread in precipitation totals. Coastal areas saw considerably higher amounts owing to precipitation associated with Hurricane Ian. The coastal plain was a regional dry spot.

MHX Select Site Precipitation Statistics: September 2022

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	10.00	8.46	1.54
Hatteras (KHSE)	7.75	7.63	0.12
New Bern (KEWN)	4.50	6.33	-1.83

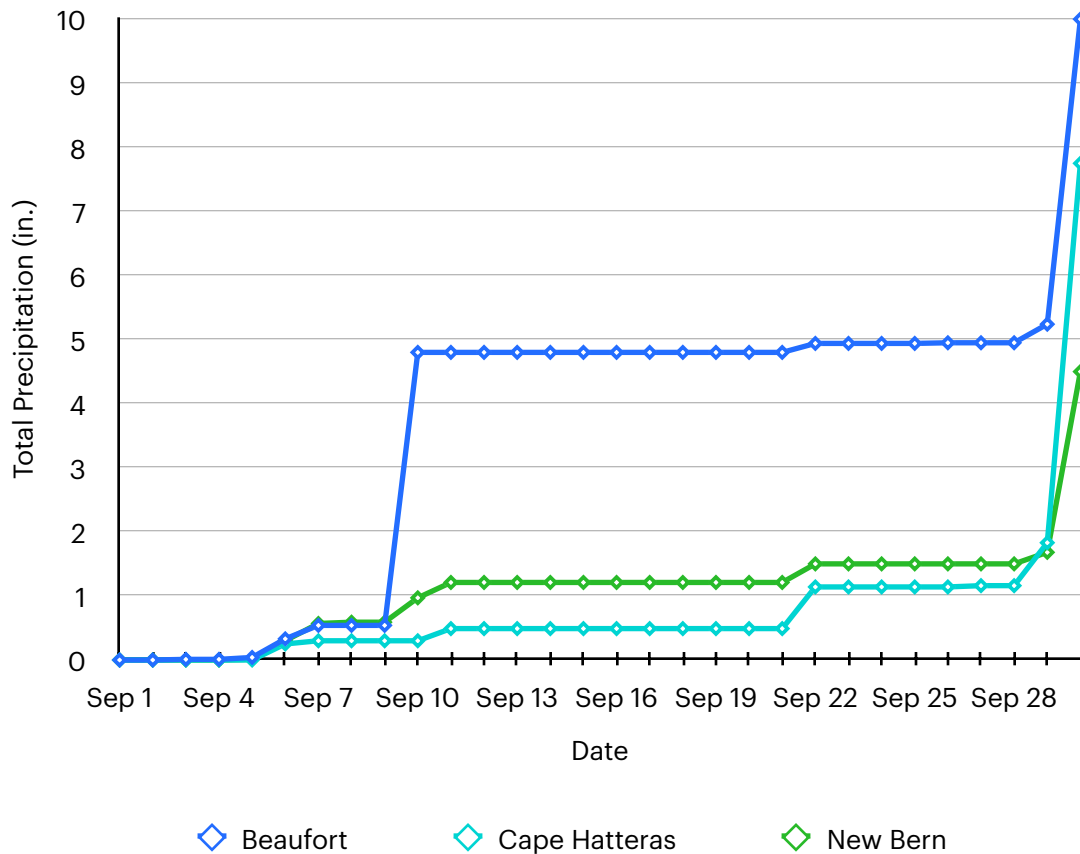
County-averaged statistics are presented in the following table. Like temperatures, mean and anomaly precipitation calculations are based on a period 1901-2000. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	4.18	5.17	-0.99	56 D
Carteret	5.44	5.88	-0.44	59 W
Craven	4.18	5.48	-1.3	55 D
Dare	4.34	4.94	-0.6	64 D
Duplin	3.88	5.03	-1.15	54 D
Greene	3.75	4.65	-0.9	57 D
Hyde	4.52	5.24	-0.72	64 D
Jones	3.90	5.47	-1.57	47 D
Lenoir	3.33	4.97	-1.64	43 D
Martin	3.42	4.56	-1.14	50 D
Onslow	4.87	5.71	-0.84	61 D
Pamlico	4.10	5.56	-1.46	47 D
Pitt	3.85	4.70	-0.85	59 D
Tyrrell	5.14	4.90	0.24	48 W
Washington	5.03	4.87	0.16	48 W
Area Average	4.26	5.14	-0.88	

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

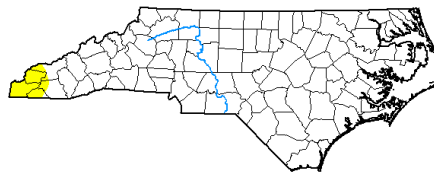
Outside of sparse convective episodes, the primary contributor to precipitation was Hurricane Ian at the end of the month. Local rain gauges through CoCoRaHs picked up 48-hour rainfall totals as high as 8 inches across Carteret County, but most areas recorded an average of 3-5 inches. Beaufort’s totals were boosted by an early morning storm on September 10.

Monthly Accumulated Precipitation



The prolonged dry periods in September drove a temporary redevelopment of drought across eastern North Carolina, particularly across the northern coastal plain. Hurricane Ian's rainfall reversed that trend, and by the beginning of the month no areas across the region were abnormally dry. Seasonal drought outlooks do not call for drought redevelopment through the end of the calendar year.

U.S. Drought Monitor North Carolina



October 4, 2022
 (Released Thursday, Oct. 6, 2022)
 Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	97.55	2.45	0.00	0.00	0.00	0.00
Last Week 09-27-2022	38.94	61.06	15.04	0.00	0.00	0.00
3 Months Ago 07-05-2022	4.95	95.05	53.27	14.14	0.00	0.00
Start of Calendar Year 01-01-2022	2.84	97.16	60.20	2.76	0.00	0.00
Start of Water Year 09-01-2022	38.94	61.06	15.04	0.00	0.00	0.00
One Year Ago 10-05-2021	51.56	48.44	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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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: September 2022

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	83.7	62.6	73.2	73.6	-0.5
Kinston	84.6	62.1	73.4	74.0	-0.7
Williamston	84.0	61.1	72.6	73.0	-0.5
Plymouth	83.5	63.3	73.4	73.3	0.1
Bayboro	83.7	60.8	72.3	73.1	-0.9
Manteo	82.7	69.4	76.1	73.9	2.2

Normals are based on a period from 1990-2020. Sites in red have missing data.

Maximum and Minimum Monthly Temperatures: September 2022

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	88	Sept 1-2, Sept 20	50	Sept 24
Hatteras (KHSE)	89	Sept 3	60	Sept 24
New Bern (KEWN)	91	Sept 22	47	Sept 24
Greenville	93	Sept 22	47	Sept 24
Kinston	94	Sept 23	44	Sept 24
Williamston	93	Sept 23	46	Sept 24
Plymouth	91	Sept 22	44	Sept 24
Bayboro	90	Sept 23	42	Sept 24
Manteo	92	Sept 23, Sept 25	61	Sept 24

APPENDIX B: ADDITIONAL PRECIPITATION DATA

Cooperative Observation Site Precipitation Statistics: September 2022

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Bayboro	2.90	7.14	-4.24
Greenville	4.58	7.33	-2.75
Kinston	2.49	6.64	-4.15
Plymouth	6.22	6.13	0.09
Williamston	1.87	6.92	-5.05

Sites in red have missing data in their record.

CoCoRaHS Monthly Accumulated Precipitation: September 2022

Site	County	Amount (in.)
Pantego 0.4 WSW	Beaufort	1.70
Bath 6.6 ESE	Beaufort	4.93
Beaufort 15.1 N	Carteret	4.95
Beaufort 12.2 N	Carteret	5.89
Beaufort 5.3 N	Carteret	6.18
Beaufort 3.8 N	Carteret	6.99
Beaufort 3.4 NNW	Carteret	6.66
Beaufort 0.5 W	Carteret	5.33
Newport 1.0 N	Carteret	5.17
Newport 0.2 SW	Carteret	4.61
Newport 1.7 SSE	Carteret	4.19

Site	County	Amount (in.)
Newport 10.3 SW	Carteret	3.73
Morehead City 5.7 W	Carteret	2.77
Morehead City 6.0 WNW	Carteret	1.82
Morehead City 2.9 WNW	Carteret	3.88
Morehead City 0.6 NW	Carteret	3.82
Pine Knoll Shores 1.4 E	Carteret	3.45
Indian Beach 0.0 W	Carteret	2.40
Emerald Isle 2.3 WSW	Carteret	2.50
Cedar Point 0.4 WSW	Carteret	3.46
Cedar Point 0.9 WSW	Carteret	2.28
Cape Carteret 1.0 NNW	Carteret	3.85
Swansboro 3.7 NNE	Carteret	3.23
Havelock 1.9 SSE	Craven	4.19
New Bern 1.3 NNE	Craven	4.52
New Bern 5.3 SW	Craven	4.50
New Bern 4.2 S	Craven	3.45
Trent Woods 1.3 SSE	Craven	3.36
Trent Woods 1.2 ENE	Craven	3.38
Trent Woods 1.0 NNE	Craven	3.87
River Bend 0.8 ENE	Craven	4.64
Duck 0.7 SSE	Dare	1.19
Southern Shores 0.5 NNE	Dare	1.52
Manteo 2.8 NW	Dare	3.11

Site	County	Amount (in.)
Rodanthe 1.0 SSE	Dare	2.30
Buxton 0.3 ENE	Dare	2.80
Wallace 14.8 E	Duplin	5.53
Rose Hill 0.1 NNW	Duplin	1.41
Albertson 1.2 NNW	Duplin	4.80
Mount Olive 6.0 SE	Duplin	5.05
Mount Olive 2.4 SW	Duplin	4.03
Snow Hill 3.1 NNE	Greene	2.46
Ayden 6.5 WNW	Greene	1.65
SQ Tower	Hyde	4.96
Engelhard 0.8 NW	Hyde	1.92
Ocracoke 0.2 ESE	Hyde	4.35
Pink Hill 2.5 NE	Lenoir	2.92
Kinston 7.0 SW	Lenoir	3.05
Kinston 4.4 WNW	Lenoir	5.17
Kinston 5.1 WNW	Lenoir	4.01
Williamston 8.9 SSE	Martin	1.66
Jamesville 6.1 SW	Martin	1.52
Swansboro 2.8 WSW	Onslow	2.76
Swansboro 3.3 NW	Onslow	3.61
Holly Ridge 9.0 ENE	Onslow	5.50
Sneads Ferry 3.3 SW	Onslow	5.13
Sneads Ferry 1.2 SSW	Onslow	4.01

Site	County	Amount (in.)
Jacksonville 5.4 WSW	Onslow	4.75
Jacksonville 1.0 NW	Onslow	4.39
Jacksonville 2.4 NNE	Onslow	4.99
Lowland 0.2 SE	Pamlico	3.51
Oriental 5.2 NE	Pamlico	3.94
Oriental 4.3 NNW	Pamlico	2.64
Oriental 1.9 WSW	Pamlico	3.76
Oriental 2.1 WSW	Pamlico	3.94
Merritt 1.5 WSW	Pamlico	2.21
Fountain 0.1 NE	Pitt	2.14
Greenville 4.6 W	Pitt	2.82
Greenville 5.0 SE	Pitt	1.59
Greenville 7.1 SSE	Pitt	2.46
Winterville 3.5 W	Pitt	1.71
Winterville 2.5 NNW	Pitt	2.16
Winterville 1.0 ENE	Pitt	1.97
Columbia 0.8 NNE	Tyrrell	1.85

CoCoRaHS inclusion in this table is based on a complete 30-day liquid precipitation record. Thank you to all observers!