

A close-up photograph of a light-colored, textured wall, possibly made of vinyl or plastic siding. The wall has a hole and is covered with many small, scattered green leaves and debris. The background shows a cloudy sky and a white, textured surface, possibly snow or a large pile of debris.

PUBLISH DATE: JULY 2, 2023

**EASTERN NORTH CAROLINA
MONTHLY CLIMATE REPORT**

**MAY
2023**

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

National Weather Service

NEWPORT/MOREHEAD CITY, NC

MONTHLY SUMMARY

Below-average temperatures and precipitation for May have made for a subtle and delayed transition into the typical sultry eastern North Carolina June. Although North Carolina's mean precipitation was below average, drought conditions improved across the eastern part of the state. It was a busy month for convection and severe storms, with some locations receiving severe hail on more than one occasion.

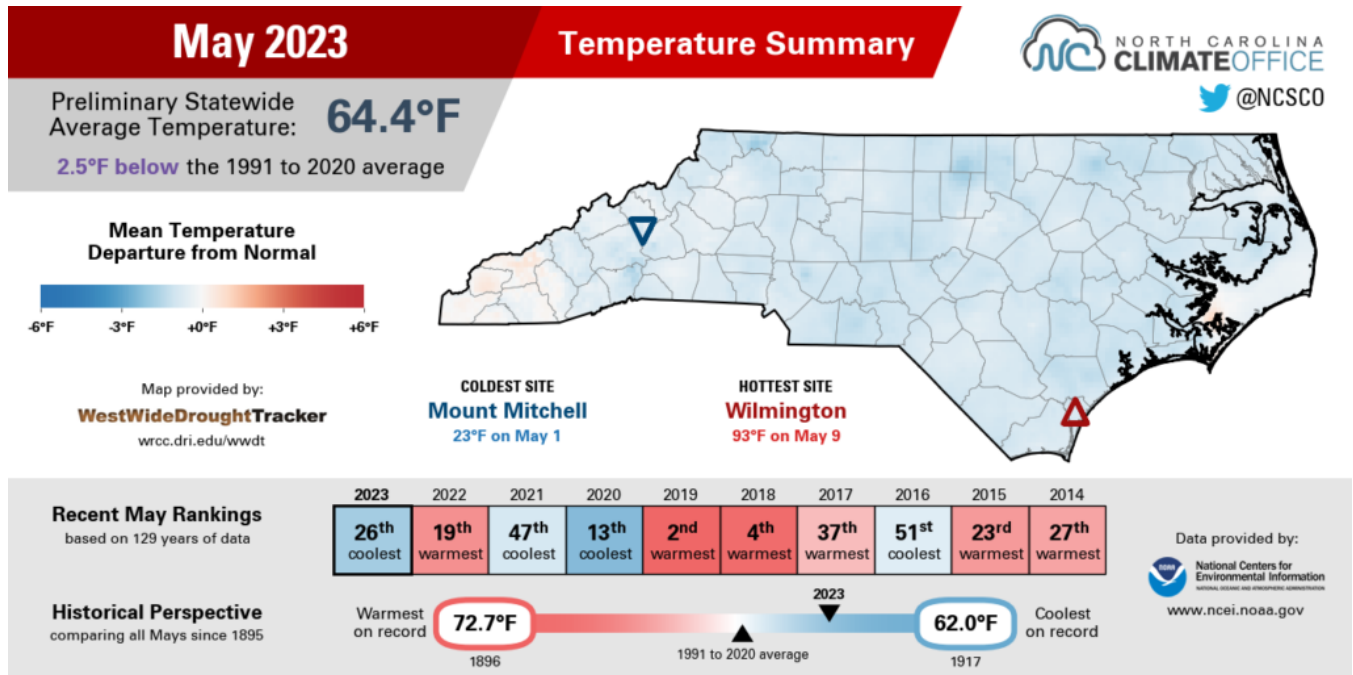
The National Hurricane Center forecasts a near-normal Atlantic Basin hurricane season for 2023 (12 to 17 named storms, 5 to 9 hurricanes, and 1 to 4 major hurricanes). La Niña had been prominent during the past three hurricane seasons, and although El Niño has now developed, Atlantic basin sea surface temperatures are still above average.

Seasonal drought outlooks indicate drought removal through the next few months. Seasonal CPC outlooks favor above-average temperatures (50-60% chance) and equal chances for above or below-normal precipitation.

The June 2023 report will be published around July 25th, 2023.

TEMPERATURES

The average May statewide temperature was 64.4°F, or 2.5°F below the 1991-2020 average. This was a change from the above-average statewide temperature in April thanks to persistent periods of northeasterly winds. May 2023 was the 26th coolest May since record-keeping began in 1895.



May 2023 Temperature Summary | Source: NC State Climate Office

Temperatures in eastern North Carolina were a few degrees cooler than the statewide average. This was the 9th coolest May for New Bern and the 35th coolest for Cape Hatteras. Additional observations can be found in Appendix A.

MHX Select Site Temperature Statistics: May 2023

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	74.4	60.6	67.5	70.1	-2.6
Hatteras (KHSE)	72.6	60.6	66.6	69.7	-3.1

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	76.3	57.0	66.7	69.5	-2.9

Normals are based on a period from 1990-2020. Red sites have missing data.

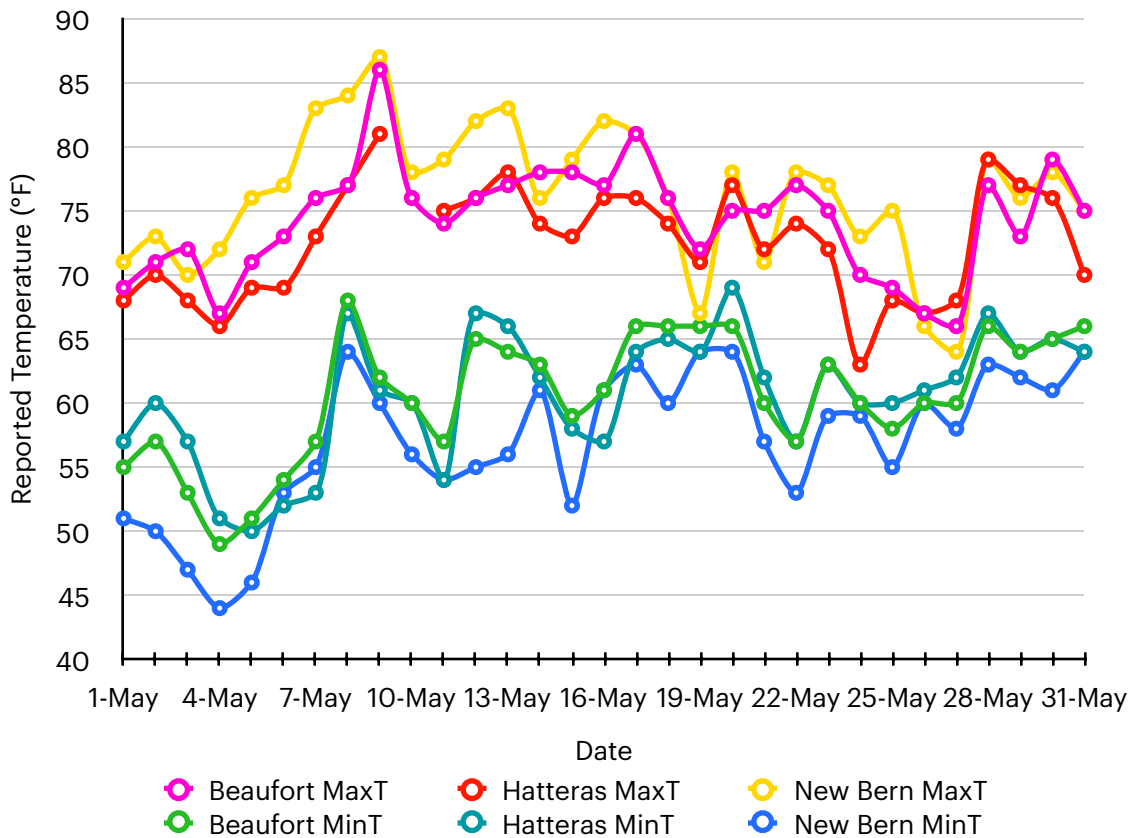
County-averaged statistics are presented in the following table. Note that mean temperature and anomaly calculations are based on a period of 1901-2000, rather than 1990-2020. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Temperature (°F)	Mean (°F)	Departure (°F)	Rank
Beaufort	65.7	68.5	-2.8	11 C
Carteret	66.6	69.0	-2.4	13 C
Craven	66.0	68.5	-2.5	14 C
Dare	65.4	67.4	-2	22 C
Duplin	66.0	68.5	-2.5	15 C
Greene	66.1	68.5	-2.4	19 C
Hyde	66.1	68.6	-2.5	13 C
Jones	65.8	68.3	-2.5	14 C
Lenoir	66.0	68.5	-2.5	16 C
Martin	65.3	67.7	-2.4	18 C
Onslow	66.6	68.6	-2	19 C
Pamlico	65.9	69.0	-3.1	8 C
Pitt	65.7	68.4	-2.7	14 C
Tyrrell	65.7	67.7	-2	20 C
Washington	65.4	67.6	-2.2	18 C
Area Average	65.9	68.3	-2.4	

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

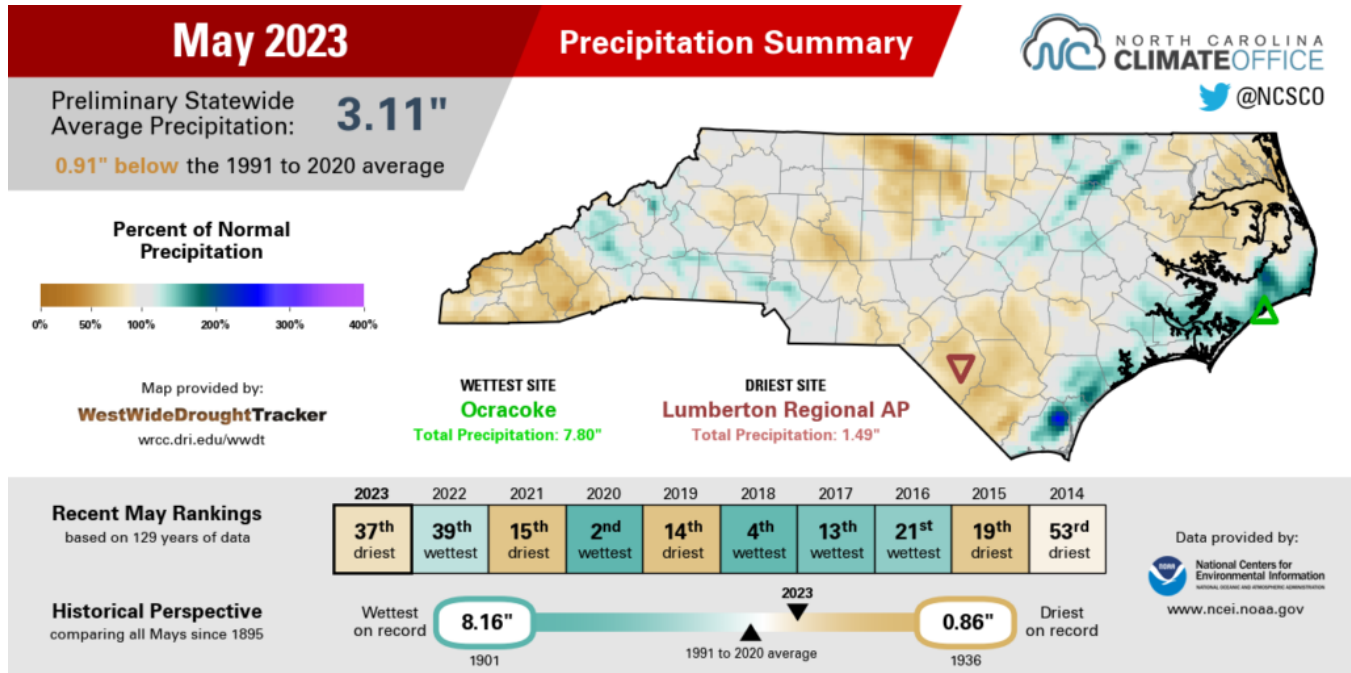
The coolest temperatures fell on the first and final weeks of the month, with temperatures these weeks running an average of 6 to 9 degrees below normal. The first cold shot was behind a series of strong fronts, while the final week was due to a very late-season cold air dam setting up on the north side of a strong offshore low. The middle of the month ran close to climatological norms. Neither climate site hit record high or low temperatures in May.

Daily Maximum and Minimum Temperatures



PRECIPITATION

Analysis conducted by the North Carolina State Climate Office indicated generally drier conditions across the state in May. The statewide average precipitation was 3.11", or 0.91" below normal. This was the 37th driest May for the state since records began in 1895.



May 2023 Precipitation Summary | Source: NC State Climate Office

Eastern North Carolina saw considerable variability in precipitation, with above-average amounts along the coast but near or slightly below totals for the coastal plain and the Albemarle-Pamlico Peninsula. Ocracoke recorded the highest total in the state, picking up around 8 inches. Hatteras tied 1923 for the 54th wettest May, while New Bern recorded its 33rd wettest.

MHX Select Site Precipitation Statistics: May 2023

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	5.28	3.94	1.34
Hatteras (KHSE)	4.13	4.37	-0.24
New Bern (KEWN)	4.59	4.25	0.34

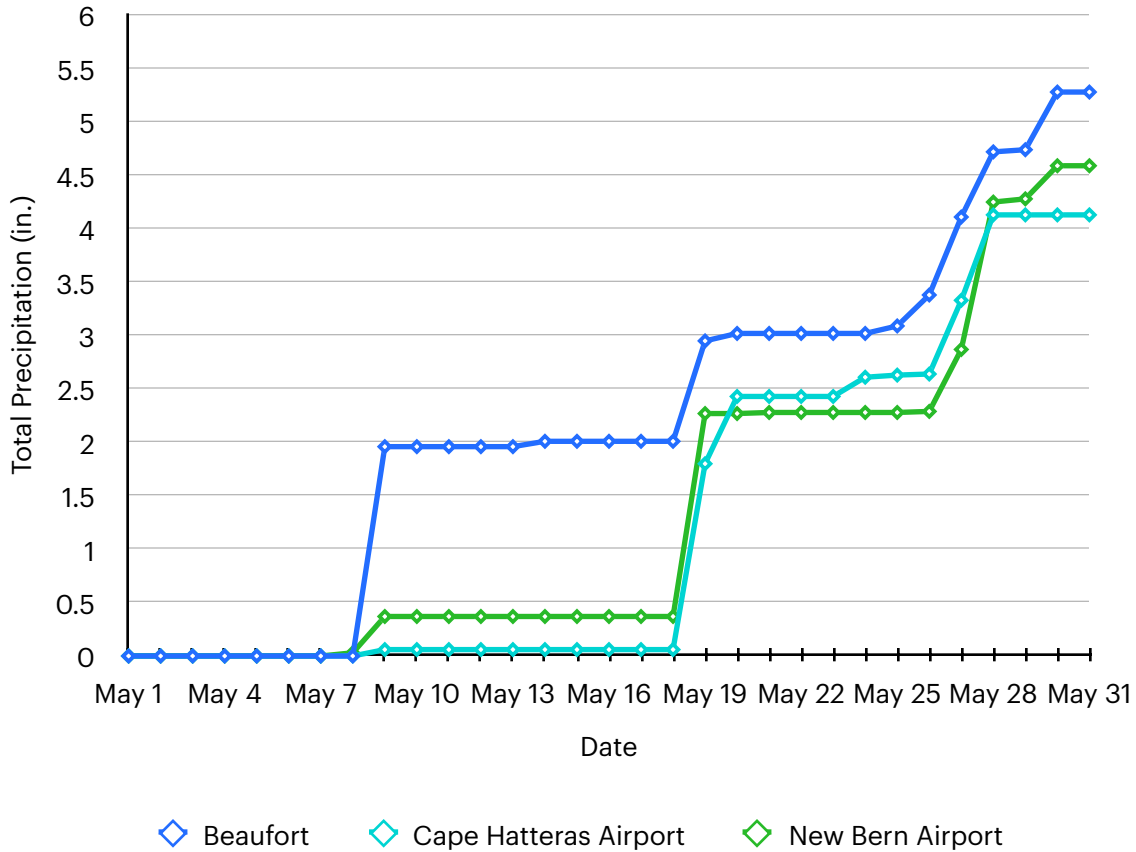
County-averaged statistics are presented in the following table. Like temperatures, mean and anomaly precipitation calculations are based on a period 1901-2000. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	3.12	3.99	-0.87	45 D
Carteret	5.47	4.09	1.38	30 W
Craven	4.31	4.11	0.2	52 W
Dare	2.33	3.69	-1.36	30 W
Duplin	3.39	4.21	-0.82	47 D
Greene	3.02	3.97	-0.95	35 D
Hyde	3.70	3.94	-0.24	65 W
Jones	4.39	4.17	0.22	54 W
Lenoir	3.48	4.12	-0.64	45 D
Martin	2.65	3.88	-1.23	34 D
Onslow	5.03	4.24	0.79	44 W
Pamlico	4.85	4.12	0.73	40 W
Pitt	2.86	3.87	-1.01	39 D
Tyrrell	2.18	3.86	-1.68	24 D
Washington	2.11	3.96	-1.85	24 D
Area Average	3.53	4.01	-0.49	

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

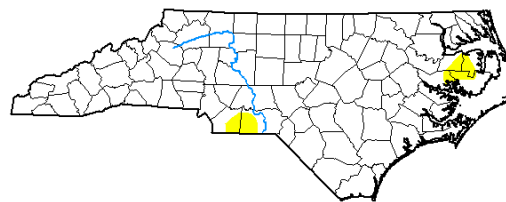
Apart from spotty thunderstorm activity (responsible for Beaufort recording nearly 2 inches on the 9th), the first two weeks of May remained largely dry. Only during the second half of the month did a pattern switch, characterized by more pronounced troughing over the eastern CONUS, did rainfall become more frequent. The heaviest rainfall fell around Memorial Day weekend as a strong late season coastal low sat off the coast of the Carolinas.

Monthly Accumulated Precipitation



Drought conditions largely remained at bay through May, although some pockets of abnormal dryness were located on the Albemarle-Pamlico Peninsula. Seasonal forecasts continue to suggest no drought conditions will develop over the next three months.

U.S. Drought Monitor North Carolina



May 30, 2023
(Released Thursday, Jun. 1, 2023)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	97.53	2.47	0.00	0.00	0.00	0.00
Last Week 05-23-2023	96.04	3.96	0.00	0.00	0.00	0.00
3 Months Ago 03-28-2023	89.48	10.52	0.00	0.00	0.00	0.00
Start of Calendar Year 01-03-2023	56.06	43.94	24.97	0.00	0.00	0.00
Start of Water Year 09-27-2022	38.94	61.06	15.04	0.00	0.00	0.00
One Year Ago 05-31-2022	60.56	39.44	25.77	11.52	0.00	0.00

Intensity:
 None (white) D2 Severe Drought (orange)
 D0 Abnormally Dry (yellow) D3 Extreme Drought (red)
 D1 Moderate Drought (light orange) D4 Exceptional Drought (dark red)

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: May 2023

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	75.9	56.9	66.4	69.6	-3.2
Kinston	76.5	56.7	66.6	70.7	-4.1
Williamston	75.4	55.9	65.7	68.5	-2.9
Plymouth	75.5	56.1	65.8	69.1	-3.3
Bayboro	74.1	55.4	64.8	68.5	-3.8
Manteo	72.7	58.1	65.4	67.4	-2.0

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

Maximum and Minimum Monthly Temperatures: May 2023

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	86	May 9	49	May 4
Hatteras (KHSE)	81	May 9	50	May 5
New Bern (KEWN)	87	May 9	44	May 4
Greenville	85	May 9, May 13	46	May 4
Kinston	87	May 10	44	May 4
Williamston	84	May 14	44	May 4
Plymouth	87	May 9	44	May 5
Bayboro	84	May 10	44	May 4-5
Manteo	82	May 14, May 22	46	May 6, May 22

APPENDIX B: ADDITIONAL PRECIPITATION DATA

Cooperative Observation Site Precipitation Statistics: May 2023

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Bayboro	2.68	4.04	-1.36
Greenville	3.68	3.92	-0.24
Kinston	2.98	3.69	-0.71
Plymouth	2.19	4.14	-1.95
Williamston	5.54	4.36	1.18

Sites in red have missing data in their record.

CoCoRaHS Monthly Accumulated Precipitation: May 2023

Site	County	Amount (in.)
Pantego 0.4 WSW	Beaufort	2.67
Cedar Island 0.3 SSE	Carteret	6.09
Beaufort 12.1 N	Carteret	5.96
Pine Knoll Shores 1.4 E	Carteret	5.62
Beaufort 3.8 N	Carteret	5.55
Swansboro 3.7 NNE	Carteret	5.20
Newport 1.7 SSE	Carteret	5.11
Pine Knoll Shores 0.3 NE	Carteret	5.10
Newport 1.0 N	Carteret	5.06
Cape Carteret 1.5 NE	Carteret	4.97
Stella 2.5 SE	Carteret	4.92

Site	County	Amount (in.)
Cedar Point 0.4 WSW	Carteret	4.78
Beaufort 0.5 W	Carteret	4.56
Morehead City 2.9 WNW	Carteret	4.55
Swansboro 2.7 NE	Carteret	4.51
Morehead City 0.6 NW	Carteret	4.51
Beaufort 5.3 N	Carteret	4.50
Emerald Isle 0.2 ENE	Carteret	4.43
Newport 0.2 SW	Carteret	4.36
Morehead City 6.0 WNW	Carteret	3.00
New Bern 7.3 ESE	Craven	6.58
New Bern 4.2 S	Craven	6.34
New Bern 3.8 S	Craven	6.09
Trent Woods 1.3 SSE	Craven	5.99
River Bend 0.8 ENE	Craven	5.98
Trent Woods 1.2 ENE	Craven	5.52
Trent Woods 1.0 NNE	Craven	5.43
New Bern 1.3 NNE	Craven	5.37
New Bern 5.2 SE	Craven	4.85
Rodanthe 1.0 SSE	Dare	5.46
Manteo 2.8 NW	Dare	3.91
Southern Shores 0.5 NNE	Dare	1.73
Wallace 14.8 E	Duplin	4.31
Albertson 1.2 WNW	Duplin	3.36

Site	County	Amount (in.)
Rose Hill 0.1 NNW	Duplin	3.08
Mount Olive 2.4 SW	Duplin	2.46
Mount Olive 6.0 SE	Duplin	0.68
Ayden 6.5 WNW	Greene	3.00
Ocracoke 0.2 ESE	Hyde	8.80
Engelhard 0.8 NW	Hyde	6.46
SQ Tower	Hyde	3.69
Kinston 5.1 WNW	Lenoir	4.26
Pink Hill 2.5 NE	Lenoir	3.87
Kinston 4.4 WNW	Lenoir	3.70
Kinston 7.0 SW	Lenoir	3.34
Jamesville 6.1 SW	Martin	2.92
Jacksonville 5.4 WSW	Onslow	5.88
Jacksonville 2.4 NNE	Onslow	5.84
Jacksonville 3.3 W	Onslow	5.68
Holly Ridge 9.0 ENE	Onslow	5.52
Swansboro 2.8 WSW	Onslow	5.51
Jacksonville 1.0 NW	Onslow	5.27
Hubert 4.9 SE	Onslow	4.99
Swansboro 3.3 NW	Onslow	4.55
Oriental 2.1 WSW	Pamlico	6.86
Oriental 1.9 WSW	Pamlico	6.78
Merritt 1.5 WSW	Pamlico	6.56

Site	County	Amount (in.)
Oriental 4.3 NNW	Pamlico	6.14
Lowland 0.2 SE	Pamlico	4.70
Fountain 0.1 NE	Pitt	4.95
Greenville 2.8 ESE	Pitt	4.58
Winterville 1.0 ENE	Pitt	3.85
Greenville 7.1 SSE	Pitt	3.61
Greenville 5.0 SE	Pitt	3.54
Greenville 5.7 NW	Pitt	3.41
Columbia 0.8 NNE	Tyrell	3.27
Roper 2.4 NE	Washington	2.22

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