

PUBLISH DATE: JULY 14, 2024

**EASTERN NORTH CAROLINA
MONTHLY CLIMATE REPORT**

**MAY
2024**

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

National Weather Service

NEWPORT/MOREHEAD CITY, NC

MONTHLY SUMMARY

May in eastern North Carolina saw convective activity increase in earnest, resulting in highly variable precipitation patterns across the region. As is expected in warm season patterns, inland areas benefited the most while sea and sound breezes kept coastal areas comparatively dry. Cape Hatteras would end up being the driest spot in all of North Carolina, ringing up only 1.74" of rain for the month. Area average rainfall ended around four and a third inches, according to analysis from the National Center for Environmental Information (NCEI).

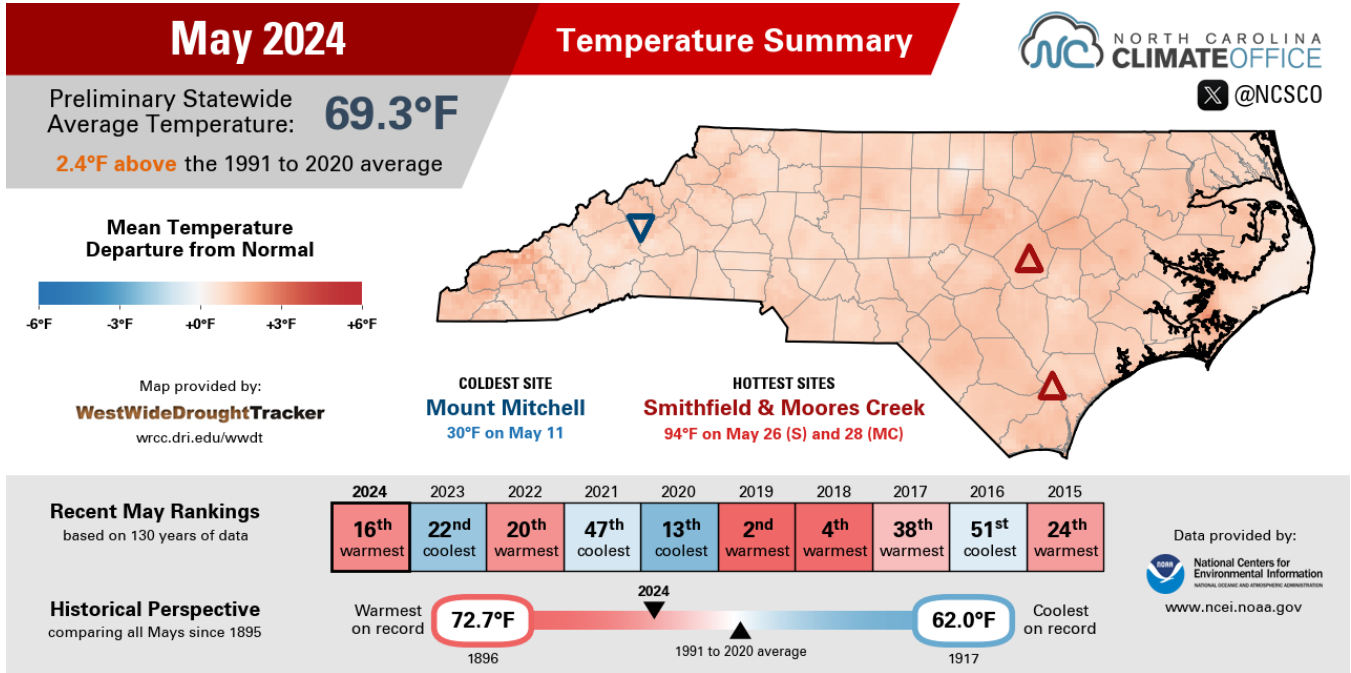
Temperatures remained above average for yet another month. The most climatologically anomalous temperatures occurred during the beginning of the month, tracking about 6-9 degrees above normal. As more active weather took hold in the middle of the month, temperatures returned closer to average. The area average temperature for the month was 71.3°F, with most areas ending between 3-6 degrees above average.

The increase in thunderstorm activity brought with it an uptick in severe weather. Our office issued 51 Local Storm Reports across 6 days in May, with the bulk occurring on the 10th, 15th, and 27th. Among those reports, 21 were for hail, 27 were for damaging winds, and 1 was for a tornado/waterspout in Onslow County.

The June 2024 report will be published around July 30th, 2024.

TEMPERATURES

Above-average temperatures persisted across North Carolina in May. The average temperature for the month was 69.3°F, or 2.4°F above the 1991-2020 average. This was the 16th warmest May since records began in 1895, with 130 years of data.



May 2024 Temperature Summary | Source: NC State Climate Office

Across Eastern North Carolina, temperatures were near or slightly above the statewide average and about 2.7 degrees above the 20th-century average. Since their respective records began, May 2024 was the 12th warmest at New Bern and the 34th warmest at Cape Hatteras. Additional observations can be found in Appendix A.

MHX Select Site Temperature Statistics: May 2024

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	80.2	66.8	73.5	70.1	3.4
Hatteras (KHSE)	76.0	62.3	69.2	69.7	-0.6

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	82.4	62.6	72.5	69.5	3.0

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).

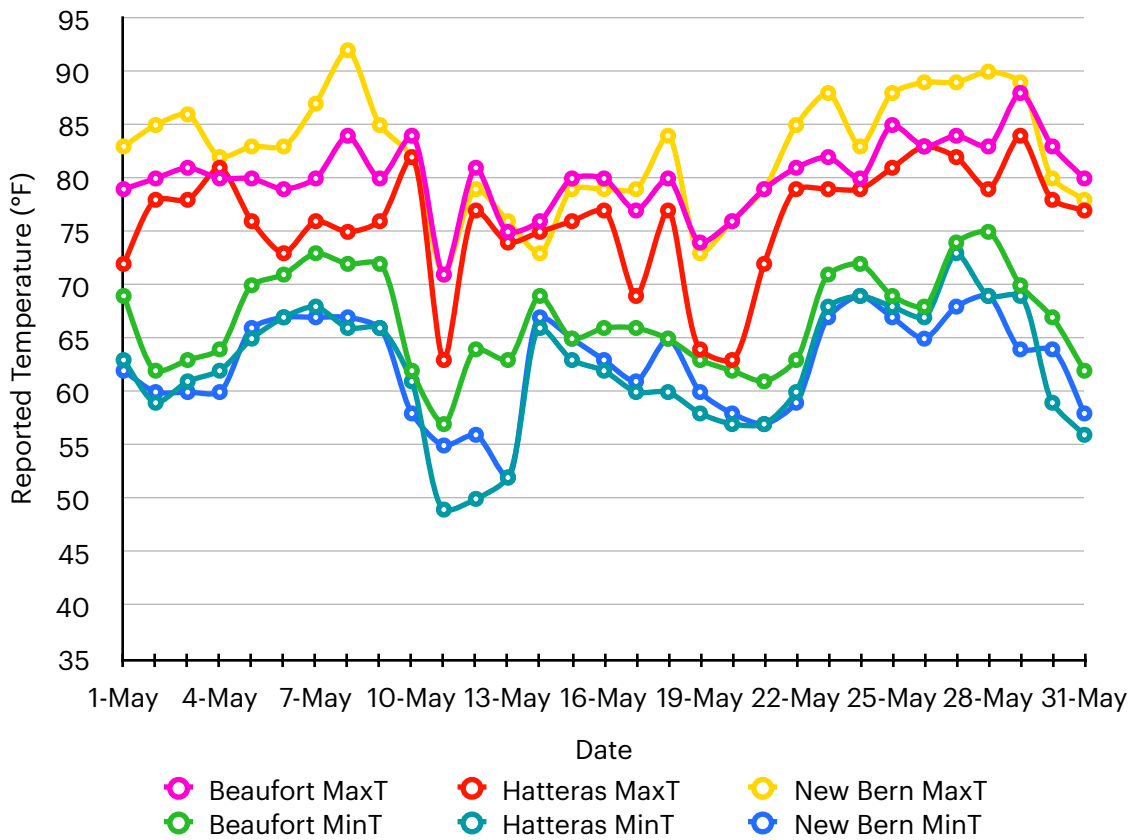
County	Avg. Temperature (°F)	Mean (°F)	Departure (°F)	Rank
Beaufort	71.4	68.5	2.9	18 W
Carteret	71.2	69.0	2.2	20 W
Craven	71.4	68.5	2.9	17 W
Dare	69.8	67.4	2.4	18 W
Duplin	71.2	68.5	2.7	18 W
Greene	71.5	68.5	3.0	15 W
Hyde	70.7	68.6	2.1	23 W
Jones	71.0	68.3	2.7	18 W
Lenoir	71.2	68.5	2.7	20 W
Martin	71.2	67.7	3.5	10 W
Onslow	71.1	68.6	2.5	20 W
Pamlico	71.3	69.0	2.3	24 W
Pitt	71.5	68.4	3.1	14 W
Tyrrell	70.6	67.7	2.9	17 W
Washington	70.8	67.6	3.2	16 W
Area Average	71.1	68.3	2.7	

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

The predominant upper air pattern for May favored prominent troughing over the western United States, while ridging sat over the east. This was interrupted mid-month as the upper trough shifted eastward, ushering in more mild and unsettled conditions. The start of May was the most anomalously warm period as temperatures climbed to 6-9 degrees above average, per the National Centers for Environmental Information (NCEI) analysis. While troughing sat overhead, temperatures were slightly below normal but within 3 degrees of average.

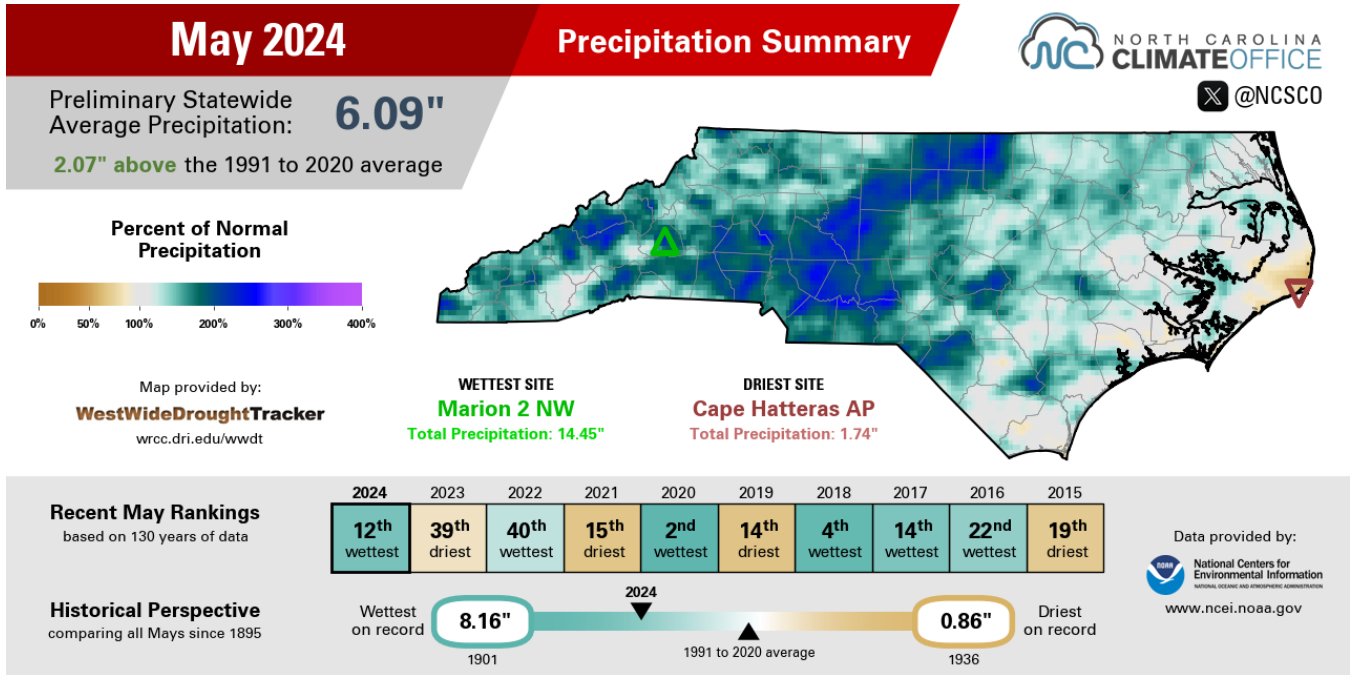
No temperature records were set at local climate stations in May.

Daily Maximum and Minimum Temperatures



PRECIPITATION

Analysis conducted by the North Carolina State Climate Office showed well above-average precipitation across North Carolina in May. Statewide, precipitation averaged 6.09", or 2.07" above the 30-year average. This was the 12th wettest May for the state since records began in 1895.



May 2024 Precipitation Summary | Source: NC State Climate Office

Eastern North Carolina saw highly variable precipitation, as is expected during convective seasons, but was still generally drier than the rest of the state. New Bern recorded its 41st driest April, while Cape Hatteras recorded its 28th. A quick note: Beaufort's rainfall data was partially augmented by the Morehead City COOP station due to instrument failure.

MHX Select Site Precipitation Statistics: May 2024

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	3.50	3.94	-0.44
Hatteras (KHSE)	1.74	4.37	-2.63
New Bern (KEWN)	3.92	4.25	-0.33

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).

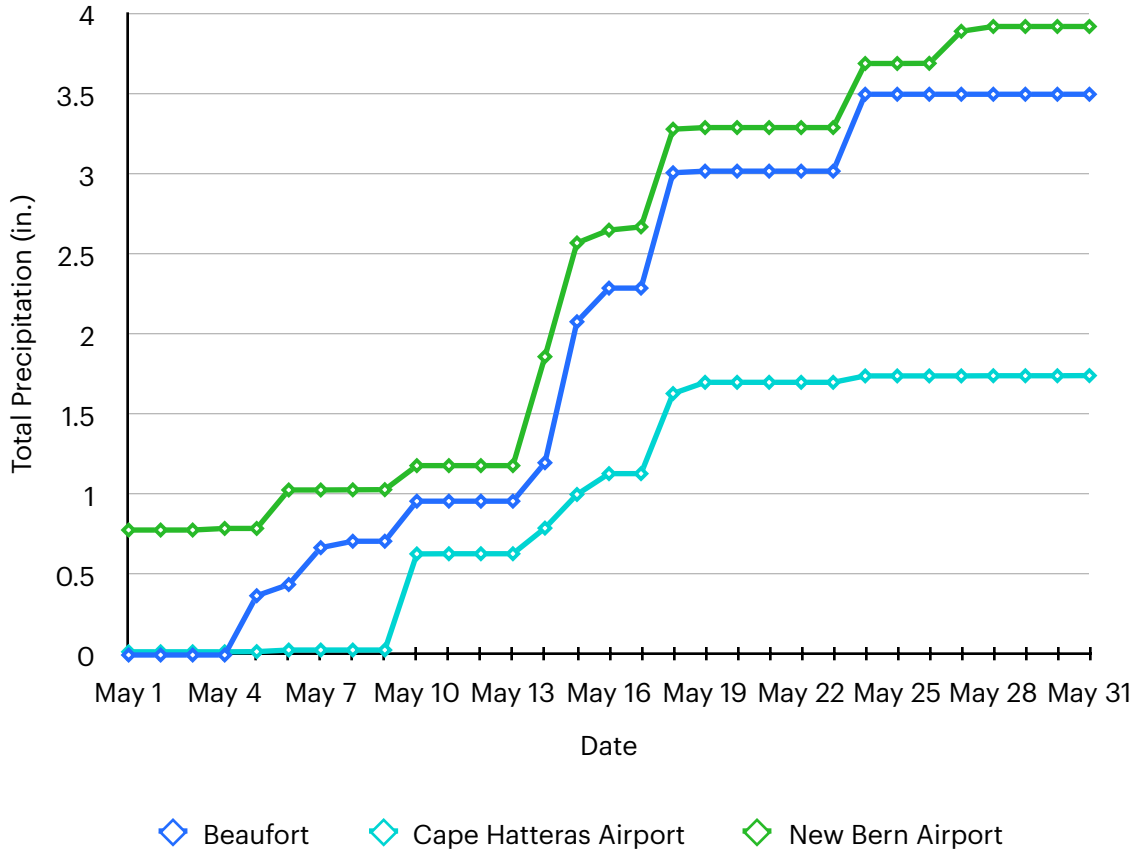
County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	3.84	3.99	-0.15	63 W
Carteret	4.05	4.09	-0.04	54 W
Craven	4.33	4.11	0.22	52 W
Dare	3.19	3.69	-0.5	54 D
Duplin	5.76	4.21	1.55	25 W
Greene	5.14	3.97	1.17	33 W
Hyde	3.17	3.94	-0.77	48 D
Jones	4.96	4.17	0.79	44 W
Lenoir	5.58	4.12	1.46	30 W
Martin	4.43	3.88	0.55	55 W
Onslow	5.26	4.24	1.02	35 W
Pamlico	3.87	4.12	-0.25	65 D
Pitt	4.26	3.87	0.39	57 W
Tyrrell	3.86	3.86	0	62 W
Washington	4.06	3.96	0.1	61 W
Area Average	4.38	4.01	0.37	

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

The most active period of precipitation coincided with the increasing mid-level troughing near the middle of the month. The heaviest rainfall fell around the period of May 14-15 as multiple waves of low pressure lifted across the southeastern United States and off the coast of the mid-Atlantic. The Outer Banks struggled to see meaningful rainfall as sea and sound breezes kept convection more focused over the mainland. Areawide, precipitation ranged from 50-100% of normal - or below to near average.

Cape Hatteras was the driest spot in North Carolina, picking up a mere 1.74" of rainfall in May.

Monthly Accumulated Precipitation

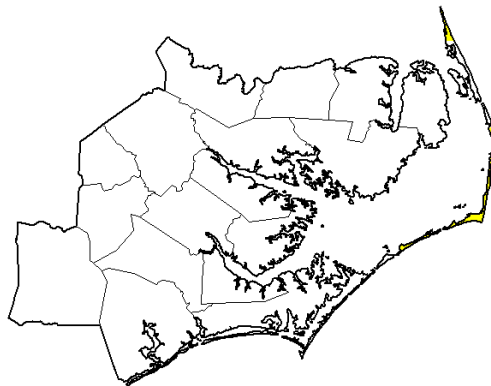


Drought conditions in eastern North Carolina improved modestly in May, although dryness over the Outer Banks continued to linger. By the beginning of June, just over half a percent of the Morehead City forecast area was in drought.

**U.S. Drought Monitor
Newport/Morehead
City, NC WFO**

June 4, 2024
(Released Thursday, Jun. 6, 2024)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	99.43	0.57	0.00	0.00	0.00	0.00
Last Week 05-28-2024	99.87	0.13	0.00	0.00	0.00	0.00
3 Months Ago 03-05-2024	30.99	69.01	13.49	0.00	0.00	0.00
Start of Calendar Year 01-02-2024	96.09	3.91	0.00	0.00	0.00	0.00
Start of Water Year 09-25-2023	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago 06-06-2023	80.93	19.07	0.00	0.00	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 2024

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	82.3	62.9	72.6	69.6	3.0
Kinston	82.8	62.7	72.8	70.7	2.1
Williamston	81.7	61.7	71.7	68.5	3.2
Plymouth	81.1	61.1	71.1	69.1	2.0
Bayboro	80.5	60.9	70.7	68.5	2.2
Manteo	77.3	62.2	69.8	67.4	2.4

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

Maximum and Minimum Monthly Temperatures: May 2024

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	88	May 29	57	May 11
Hatteras (KHSE)	84	May 29	49	May 11
New Bern (KEWN)	92	May 8	52	May 13
Greenville	91	May 26	52	May 13
Kinston	91	May 9	51	May 13
Williamston	92	May 9	50	May 13
Plymouth	90	May 8-9	48	May 13
Bayboro	91	May 9	50	May 13-14
Manteo	90	May 13	49	May 13

APPENDIX B: ADDITIONAL PRECIPITATION DATA

Cooperative Observation Site Precipitation Statistics: May 2024

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Greenville	3.44	4.04	-0.6
Kinston	6.52	3.92	2.6
Williamston	5.09	3.69	1.4
Plymouth	4.51	4.14	0.37
Bayboro	4.69	4.36	0.33

Sites in red have missing data in their record.

CoCoRaHS Monthly Accumulated Precipitation: May 2024

Site	County	Amount (in.)
Washington 1.0 SSW	Beaufort	5.38
Pantego 0.4 WSW	Beaufort	5.00
Emerald Isle 2.3 WSW	Carteret	6.06
Beaufort 0.5 W	Carteret	5.86
Emerald Isle 2.1 E	Carteret	5.46
Cape Carteret 1.0 NNW	Carteret	5.08
Cedar Point 0.9 WSW	Carteret	4.73
Beaufort 12.1 N	Carteret	4.64
Newport 7.1 ENE	Carteret	4.61
Cape Carteret 1.5 NE	Carteret	4.60
Cedar Point 0.4 WSW	Carteret	4.53

Site	County	Amount (in.)
Beaufort 5.3 N	Carteret	4.51
Beaufort 3.8 N	Carteret	4.22
Morehead City 6.0 WNW	Carteret	4.13
Morehead City 2.9 WNW	Carteret	3.83
Newport 0.2 SW	Carteret	3.82
Newport 1.0 N	Carteret	3.65
Newport 1.7 SSE	Carteret	3.40
Newport 2.3 SE	Carteret	3.21
Morehead City 0.6 NW	Carteret	2.76
New Bern 1.3 NNE	Craven	5.68
Bridgeton 0.3 SSE	Craven	4.99
New Bern 7.3 ESE	Craven	4.39
New Bern 5.3 SW	Craven	4.12
Trent Woods 1.3 SSE	Craven	3.92
New Bern 3.8 S	Craven	3.85
Trent Woods 1.0 NNE	Craven	3.82
Southern Shores 0.5 NNE	Dare	3.70
Buxton 0.3 ENE	Dare	1.63
Mount Olive 2.4 SW	Duplin	5.28
Albertson 1.2 WNW	Duplin	4.83
Ayden 6.5 WNW	Greene	3.02
SQ Tower	Hyde	5.78
Ocracoke 0.6 SW	Hyde	2.28

Site	County	Amount (in.)
Ocracoke 0.2 ESE	Hyde	2.12
Kinston 1.2 NW	Lenoir	7.17
Kinston 3.7 WNW	Lenoir	7.13
Kinston 5.1 WNW	Lenoir	6.88
Kinston 4.6 ESE	Lenoir	6.86
Kinston 4.6 ESE	Lenoir	6.86
Kinston 4.4 WNW	Lenoir	6.42
Pink Hill 2.5 NE	Lenoir	5.95
Jamesville 6.1 SW	Martin	4.74
Jacksonville 5.4 WSW	Onslow	7.33
Jacksonville 3.3 W	Onslow	6.71
Jacksonville 1.0 NW	Onslow	6.58
Swansboro 2.8 WSW	Onslow	5.92
Hubert 4.9 SE	Onslow	5.81
Jacksonville 2.4 NNE	Onslow	4.90
Sneads Ferry 1.2 SSW	Onslow	4.38
Holly Ridge 9.0 ENE	Onslow	3.95
Lowland 0.2 SE	Pamlico	5.09
Oriental 2.1 WSW	Pamlico	4.28
Oriental 4.3 NNW	Pamlico	4.15
Merritt 1.5 WSW	Pamlico	3.62
Oriental 5.2 NE	Pamlico	3.53
Winterville 1.0 ENE	Pitt	5.26

Site	County	Amount (in.)
Fountain 0.1 NE	Pitt	5.20
Greenville 7.1 SSE	Pitt	4.63
Greenville 5.0 SE	Pitt	4.46
Greenville 5.7 NW	Pitt	3.53
Winterville 2.5 NNW	Pitt	3.37
Winterville 3.5 W	Pitt	3.29

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