

PUBLISH DATE: MAY 20, 2023

**EASTERN NORTH CAROLINA
MONTHLY CLIMATE REPORT**

**APRIL
2023**

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

National Weather Service

NEWPORT/MOREHEAD CITY, NC

MONTHLY SUMMARY

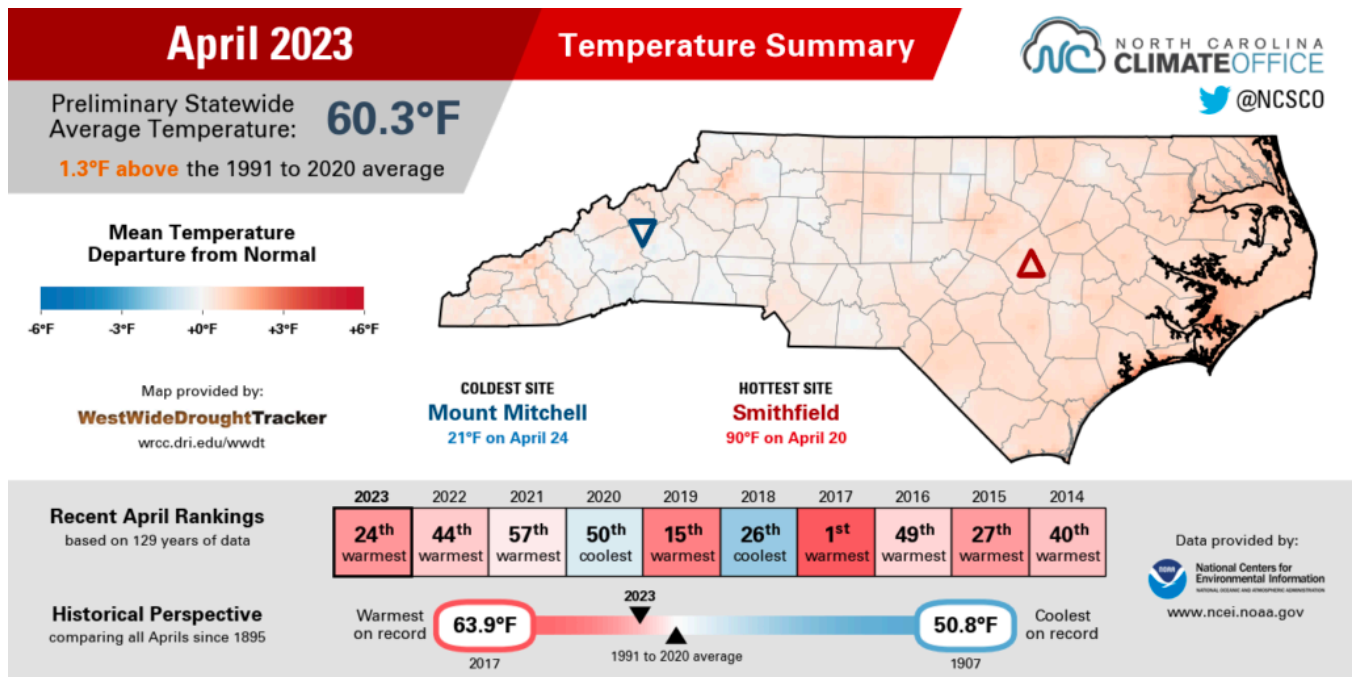
Above-average warmth continued in April, although not nearly as severe as in March. The warmest period, according to analysis from the National Centers for Environmental Information (NCEI), was from April 1-8. Average temperatures climbed 6-9 degrees above average before a strong cold front and late-season wedge helped flood much cooler air into the area for a few days. Modestly warmer temperatures returned to kick off the second half of the month before a series of fronts helped cool the region down by month's end. Overall, average temperature departures were within 3 degrees of normal across the area.

The bigger story in April was plentiful precipitation, with a widespread 4-6 inches of rain falling over eastern North Carolina in April but a regional dry spot along the Albemarle Sound. The aforementioned cold front, end-of-month frontal boundary, and eventual coastal storm were the main contributors to rainfall being up to 150% of normal. This wiped out drought conditions across our area and the rest of the state. Drought conditions are not forecast to redevelop through at least August.

The May 2023 report will be published around June 20th, 2023.

TEMPERATURES

Above-average temperatures continued across North Carolina in April, although anomalies continued to moderate. The average temperature statewide for April was 60.3°F or 1.3°F above the 1991-2020 average. This was the 24th warmest March statewide since records began in 1895, with 129 years of data.



April 2023 Temperature Summary | Source: NC State Climate Office

Eastern North Carolina temperatures were slightly higher than the statewide average. New Bern clocked it its 16th warmest April on record, tying that of 1941. Hatteras saw its 9th warmest, tying April of 1995. Additional observations can be found in Appendix A.

MHX Select Site Temperature Statistics: April 2023

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	72.7	57.5	65.1	62.1	3.0
Hatteras (KHSE)	69.9	57.2	63.6	61.8	1.8

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	75.8	53.0	64.4	61.8	2.6

Normals are based on a period from 1990-2020.

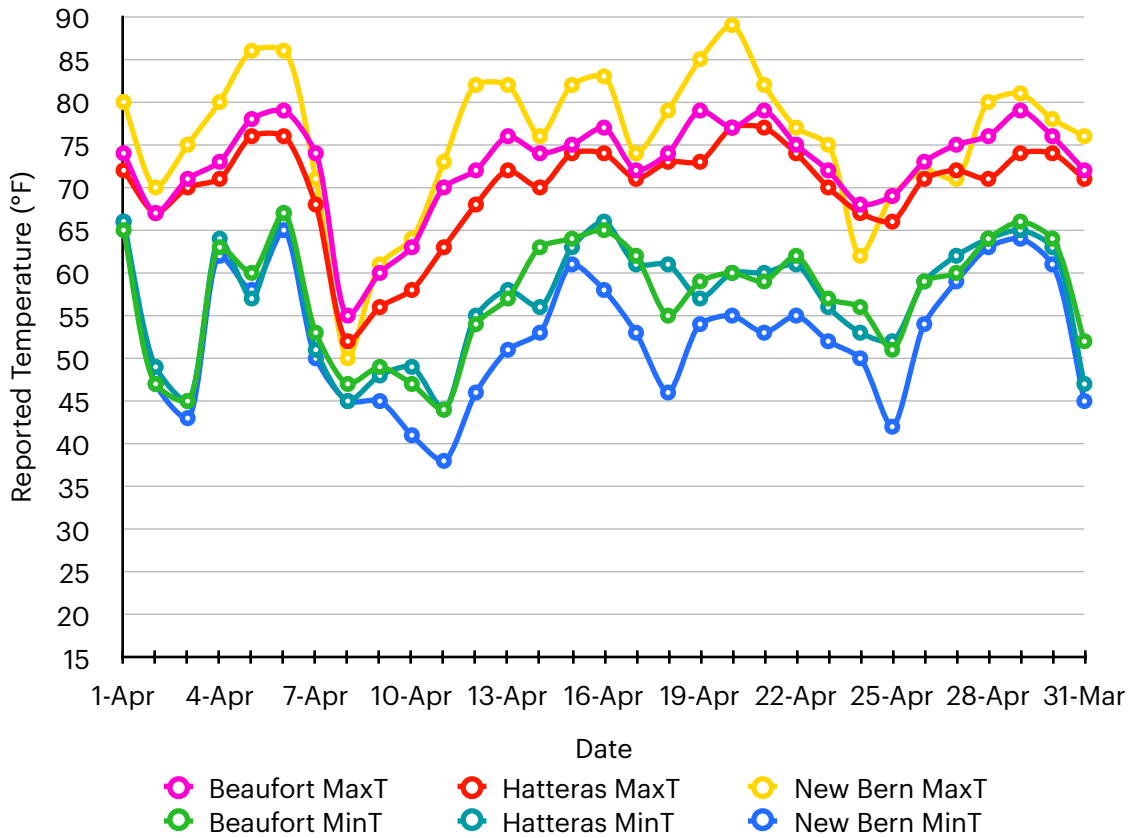
County-averaged statistics are presented in the following table. Note that mean temperature and anomaly calculations are based on a period of 1901-2000, rather than 1990-2020. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Temperature (°F)	Mean (°F)	Departure (°F)	Rank
Beaufort	63.1	59.9	3.2	19 W
Carteret	64.0	60.5	3.5	8 W
Craven	63.4	60.1	3.3	13 W
Dare	62.1	58.7	3.4	14 W
Duplin	63.1	60.3	2.8	18 W
Greene	62.6	59.8	2.8	19 W
Hyde	63.3	59.9	3.4	14 W
Jones	63.0	60.0	3.0	16 W
Lenoir	62.3	60.0	2.3	23 W
Martin	62.2	58.9	3.3	15 W
Onslow	64.0	60.6	3.4	7 W
Pamlico	63.5	60.5	3	16 W
Pitt	62.8	59.7	3.1	16 W
Tyrrell	62.8	59.0	3.8	10 W
Washington	62.7	58.9	3.8	10 W
Area Average	63.0	59.8	3.2	

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

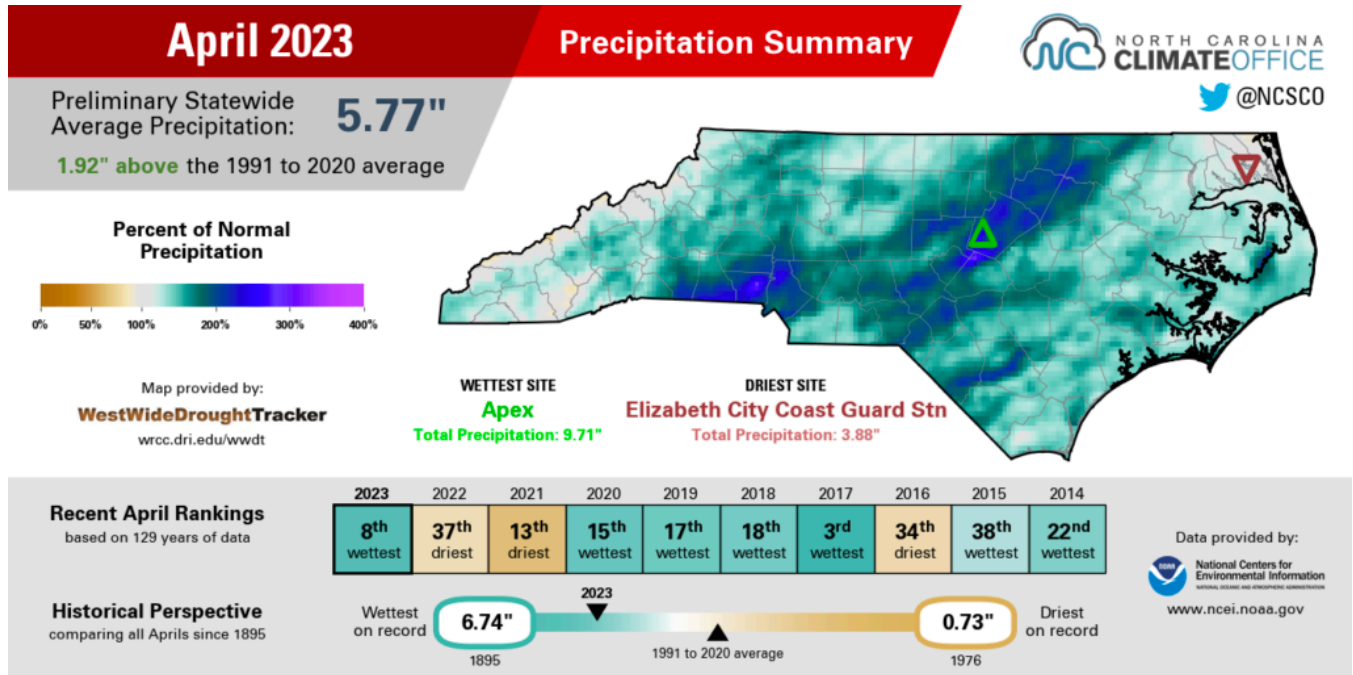
April 2023 temperatures generally ran above average through the month, with the warmest temperatures occurring in the first and third weeks. Two shots of cooler weather punctuated the warmth, the most impressive occurring at the start of the second week as a powerful cold front crossed the area and polar high pressure wedged over the Carolinas. The second, more modest drop occurred roughly April 23-25 as multiple fronts pushed offshore. No new temperature records were set at the two official climate sites.

Daily Maximum and Minimum Temperatures



PRECIPITATION

Analysis conducted by the North Carolina State Climate Office indicated wetter conditions made a welcome return, with statewide average precipitation of 5.77", or 1.92" above normal. This was the 8th driest April for the state since records began in 1895.



April 2023 Precipitation Summary | Source: NC State Climate Office

Eastern North Carolina was generally wetter than the statewide average, although northeastern NC was comparatively drier. Observations of over half a foot were not uncommon, with a regional average of around 4-6 inches. Both New Bern and Hatteras saw their 6th wettest Aprils on record.

MHX Select Site Precipitation Statistics: April 2023

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	6.10	3.39	2.71
Hatteras (KHSE)	8.03	3.92	4.11
New Bern (KEWN)	6.20	3.18	3.02

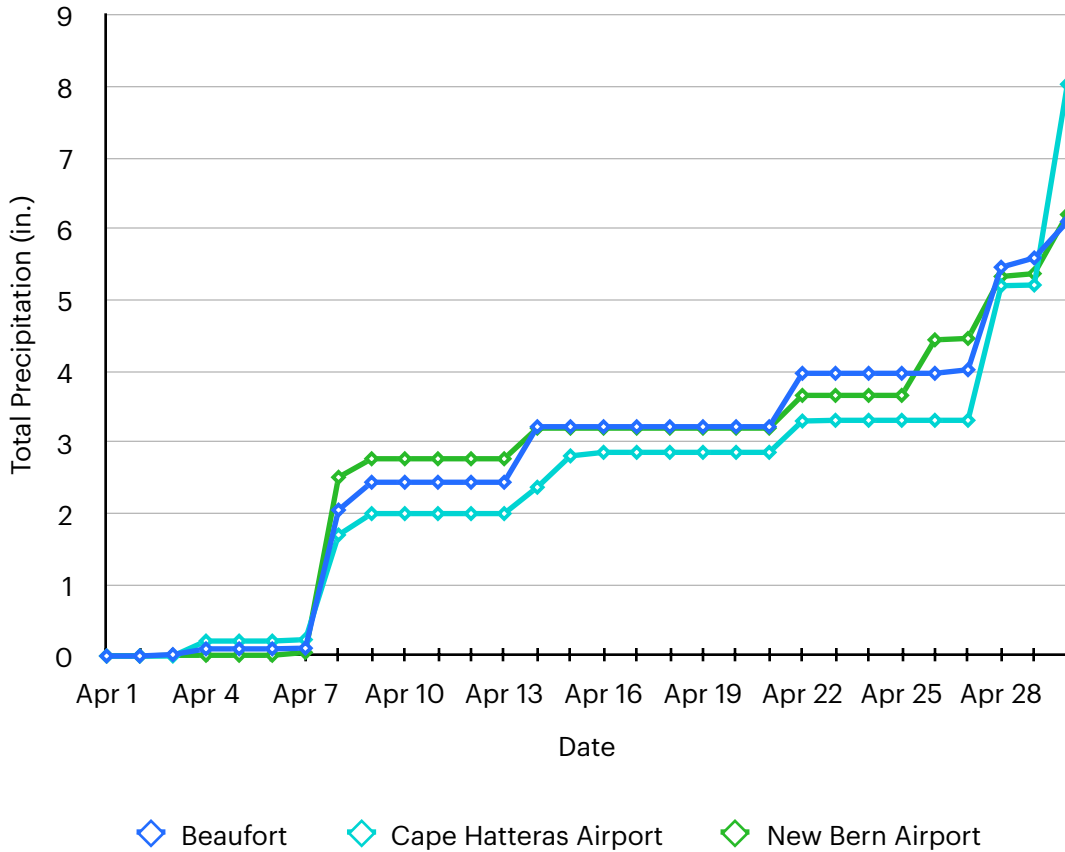
County-averaged statistics are presented in the following table. Like temperatures, mean and anomaly precipitation calculations are based on a period 1901-2000. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	4.90	3.34	1.56	22 W
Carteret	5.51	3.19	2.32	14 W
Craven	5.48	3.21	2.27	15 W
Dare	4.99	3.26	1.73	18 W
Duplin	5.61	3.08	2.53	10 W
Greene	4.96	3.38	1.58	19 W
Hyde	5.01	3.37	1.64	19 W
Jones	5.39	3.16	2.23	16 W
Lenoir	5.20	3.31	1.89	18 W
Martin	4.44	3.40	1.04	38 W
Onslow	5.21	3.01	2.2	16 W
Pamlico	5.38	3.28	2.1	15 W
Pitt	5.03	3.38	1.65	20 W
Tyrrell	4.21	3.34	0.87	33 W
Washington	3.86	3.38	0.48	46 W
Area Average	5.01	3.27	1.74	

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

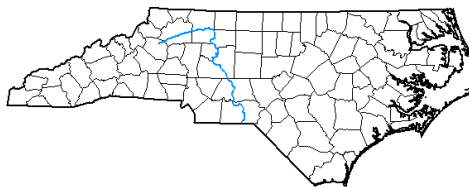
Any rain seemingly only wanted to fall on the weekends, while most weekdays were dry. The two wettest periods were on April 8th ahead of the cold front that brought the stark cold snap, and at the end of the month with an unsettled pattern characterized by a stalled frontal boundary, bookended with a complex coastal low developed over the southeast and lifted across the Carolinas. New Bern set a daily rainfall record on April 8th, picking up 2.46” and breaking the old record of 2.2” set in 1964.

Monthly Accumulated Precipitation



Drought conditions greatly improved through April given the abundant rainfall, and the May 2nd drought monitor report recorded no abnormally dry conditions across the entire state. Seasonal forecasts call for abnormal dryness to stay at bay through at least the end of August.

U.S. Drought Monitor North Carolina



May 2, 2023
(Released Thursday, May 4, 2023)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week 04-25-2023	88.88	11.12	2.96	0.00	0.00	0.00
3 Months Ago 01-31-2023	63.40	36.60	14.97	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 05-03-2022	54.16	45.84	26.62	11.02	0.00	0.00

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>

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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: April 2023

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	75.5	52.8	64.2	61.8	2.4
Kinston	75.2	51.8	63.5	63.4	0.1
Williamston	74.5	50.9	62.7	60.8	1.9
Plymouth	75.4	52.4	63.9	61.6	2.3
Bayboro	73.3	50.9	62.1	60.2	1.9
Manteo	69.8	53.5	61.7	59.6	2.1

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

Maximum and Minimum Monthly Temperatures: April 2023

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	79	Apr 6, 19, 21, 29	44	Apr 11
Hatteras (KHSE)	77	Apr 20-21	44	Apr 11
New Bern (KEWN)	89	Apr 20	38	Apr 11
Greenville	88	Apr 20	35	Apr 11
Kinston	87	Apr 21	35	Apr 11
Williamston	87	Apr 21-22, 28	35	Apr 11
Plymouth	87	Apr 20-21	32	Apr 11
Bayboro	85	Apr 21	37	Apr 11-12
Manteo	81	Apr 22	37	Apr 12, 19

APPENDIX B: ADDITIONAL PRECIPITATION DATA

Cooperative Observation Site Precipitation Statistics: April 2023

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Bayboro	5.34	3.81	1.53
Greenville	5.18	3.53	1.65
Kinston	4.41	3.72	0.69
Plymouth	4.71	3.74	0.97
Williamston	5.46	3.76	1.7

Sites in red have missing data in their record.

CoCoRaHS Monthly Accumulated Precipitation: April 2023

Site	County	Amount (in.)
Bath 1.6 SSE	Beaufort	4.18
Atlantic Beach 0.6 W	Carteret	7.14
Pine Knoll Shores 1.4 E	Carteret	6.95
Pine Knoll Shores 0.3 NE	Carteret	6.63
Cedar Point 0.9 WSW	Carteret	5.78
Morehead City 2.9 WNW	Carteret	5.61
Morehead City 6.0 WNW	Carteret	5.54
Swansboro 3.7 NNE	Carteret	5.44
Beaufort 3.8 N	Carteret	5.43
Cedar Island 0.3 SSE	Carteret	5.40
Newport 2.5 W	Carteret	5.22

Site	County	Amount (in.)
Morehead City 0.6 NW	Carteret	5.21
Newport 0.2 SW	Carteret	4.99
Newport 1.0 N	Carteret	4.81
Newport 1.7 SSE	Carteret	4.81
Cape Carteret 1.0 NNW	Carteret	4.78
Emerald Isle 2.3 WSW	Carteret	4.64
Beaufort 12.1 N	Carteret	4.07
Trent Woods 1.3 SSE	Craven	6.21
New Bern 5.2 SE	Craven	6.17
New Bern 1.5 NW	Craven	6.08
New Bern 4.2 S	Craven	5.80
New Bern 1.3 NNE	Craven	5.62
Bridgeton 0.3 SSE	Craven	5.46
Havelock 1.9 SSE	Craven	2.39
Rodanthe 1.0 SSE	Dare	4.74
Manteo 2.8 NW	Dare	4.71
Southern Shores 0.5 NNE	Dare	3.54
Wallace 14.8 E	Duplin	4.78
Rose Hill 0.1 NNW	Duplin	4.58
Mount Olive 6.0 SE	Duplin	4.55
Mount Olive 2.4 SW	Duplin	4.50
Snow Hill 3.1 NNE	Greene	4.44
Ayden 6.5 WNW	Greene	4.21

Site	County	Amount (in.)
Ocracoke 0.2 ESE	Hyde	6.20
Engelhard 0.8 NW	Hyde	6.16
SQ Tower	Hyde	4.74
Pink Hill 2.5 NE	Lenoir	5.77
Kinston 1.2 NW	Lenoir	5.25
Kinston 7.0 SW	Lenoir	5.09
Kinston 4.4 WNW	Lenoir	5.00
Kinston 5.1 WNW	Lenoir	4.77
Williamston 8.9 SSE	Martin	5.79
Jamesville 6.1 SW	Martin	5.58
Hubert 4.9 SE	Onslow	5.83
Swansboro 3.3 NW	Onslow	5.14
Holly Ridge 9.0 ENE	Onslow	5.02
Swansboro 2.8 WSW	Onslow	5.01
Sneads Ferry 3.3 SW	Onslow	4.78
Jacksonville 5.4 WSW	Onslow	4.75
Jacksonville 2.4 NNE	Onslow	4.73
Sneads Ferry 1.2 SSW	Onslow	4.57
Lowland 0.2 SE	Pamlico	5.38
Oriental 2.1 WSW	Pamlico	5.25
Oriental 4.3 NNW	Pamlico	4.68
Oriental 1.9 WSW	Pamlico	4.24
Oriental 5.2 NE	Pamlico	4.06

Site	County	Amount (in.)
Greenville 2.8 ESE	Pitt	7.47
Greenville 5.0 SE	Pitt	5.11
Greenville 7.1 SSE	Pitt	5.05
Greenville 4.6 W	Pitt	4.97
Winterville 2.8 WNW	Pitt	4.96
Winterville 3.5 W	Pitt	4.75
Greenville 4.4 SSE	Pitt	4.74
Greenville 5.7 NW	Pitt	4.17
Fountain 0.1 NE	Pitt	4.02
Columbia 0.8 NNE	Tyrrell	5.92

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