

PUBLISH DATE: MARCH 22, 2023

**EASTERN NORTH CAROLINA
MONTHLY CLIMATE REPORT**

FEBRUARY 2023

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

National Weather Service

NEWPORT/MOREHEAD CITY, NC

MONTHLY SUMMARY

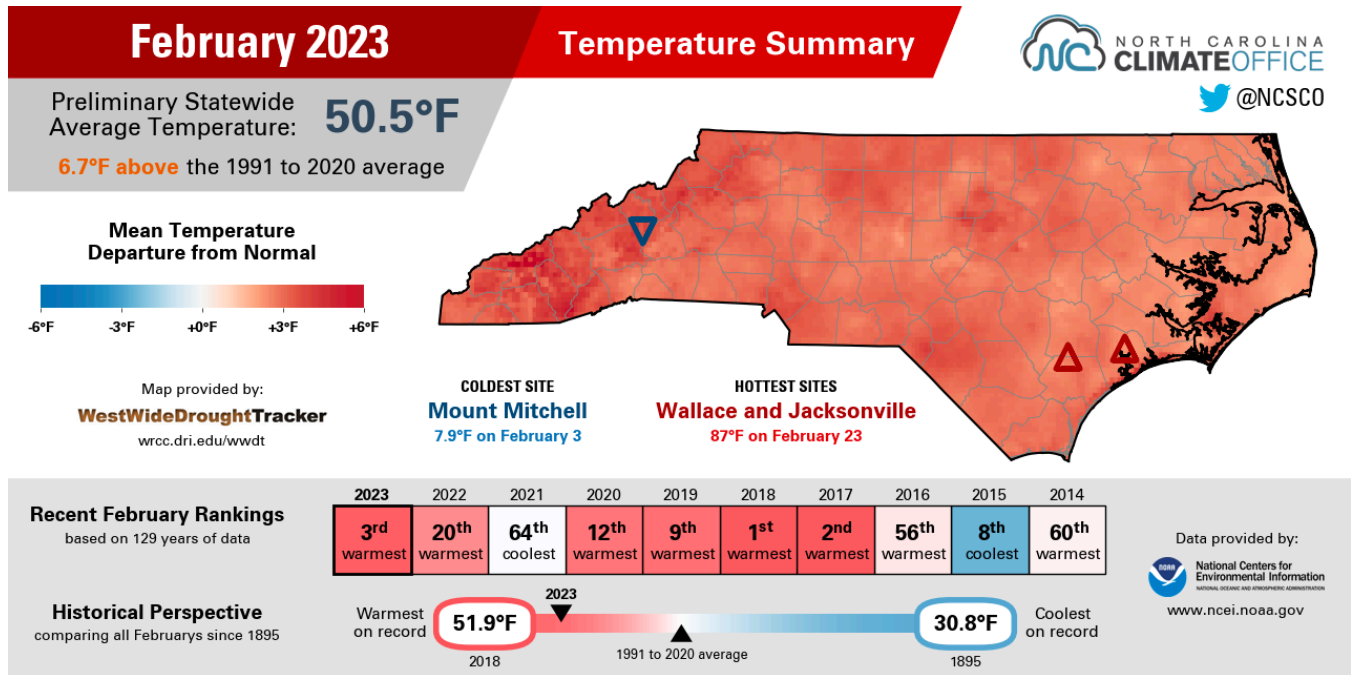
Warmer-than-average conditions remained the theme across Eastern North Carolina in February. Temperatures were at their warmest in the final week of the month, climbing to 12-15 degrees above average and bringing record warmth coinciding with record heat across much of the southeastern United States. Near-normal temperatures were only observed in the first week of February. Overall, temperatures across eastern NC were between 6 and 9 degrees above normal.

The first half of February was unsettled, with the biggest rainfall maker coming at the month's midway point with a passing coastal low. The second half of the month was considerably drier, and eastern NC ended up with near-normal precipitation. The Outer Banks fared modestly wetter than the coastal plain. Drought conditions further improved, with spotty, abnormally dry conditions lingering across the coastal plain.

The March 2023 report will be published around April 25th, 2023.

TEMPERATURES

2023 continued its warm streak across the entire state, based on analysis from the NC State Climate Office. The average temperature statewide for February was 50.5°F or a toasty 6.7°F above the 1991-2020 average. This was the 3rd warmest February statewide since records began in 1895, with 129 years of data.



February 2023 Temperature Summary | Source: NC State Climate Office

Eastern North Carolina temperatures were generally in line with the statewide average. **New Bern** and **Beaufort** recorded their 2nd warmest February on record, while **Cape Hatteras** recorded its 7th warmest. Additional observations can be found in Appendix A.

MHX Select Site Temperature Statistics: February 2023

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	63.3	45.9	54.6	48.2	6.4
Hatteras (KHSE)	61.2	46.3	53.8	49.1	4.7

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	66.0	42.8	54.4	47.1	7.3

Normals are based on a period from 1990-2020.

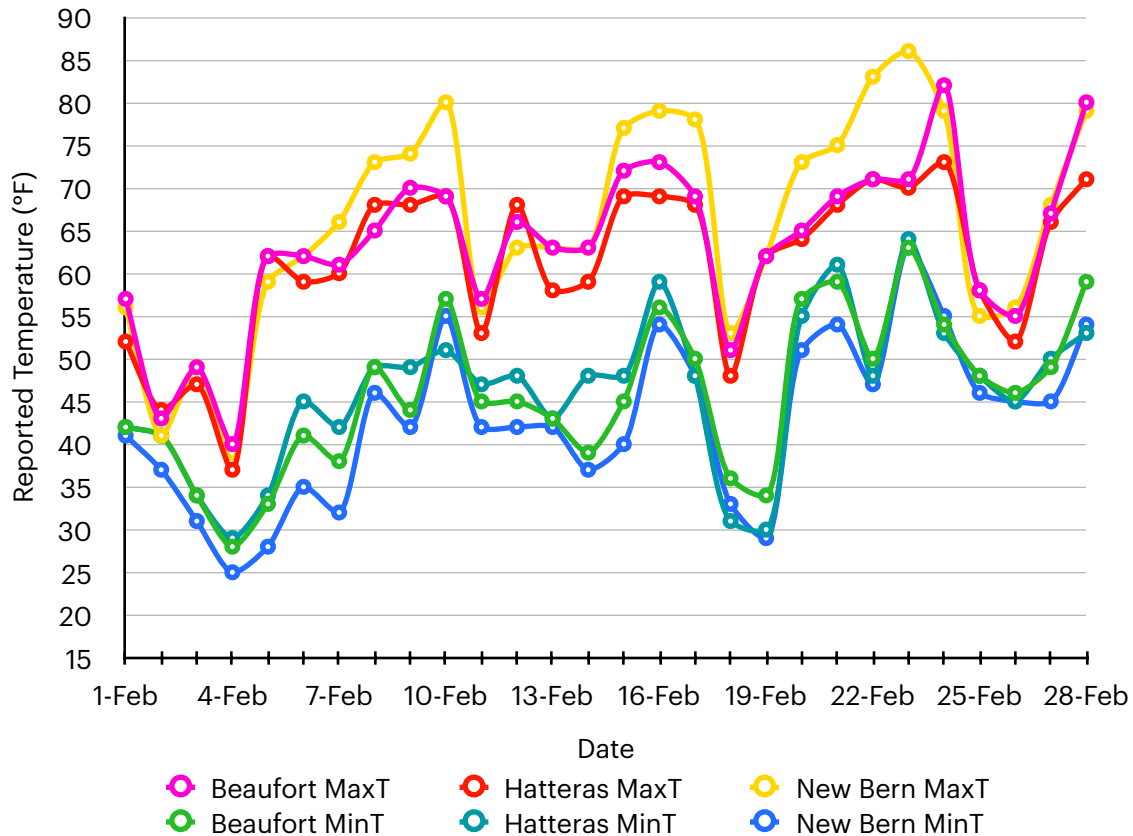
County-averaged statistics are presented in the following table. Note that mean temperature and anomaly calculations are based on a period of 1901-2000, rather than 1990-2020. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Temperature (°F)	Mean (°F)	Departure (°F)	Rank
Beaufort	53.2	44.4	8.8	3 W
Carteret	54.4	45.9	8.5	2 W
Craven	53.6	45.0	8.6	2 W
Dare	51.6	44.1	7.5	3 W
Duplin	53.7	45.0	8.7	3 W
Greene	52.5	43.7	8.8	3 W
Hyde	53.0	44.9	8.1	3 W
Jones	53.5	44.9	8.6	2 W
Lenoir	52.6	44.3	8.3	4 W
Martin	52.2	42.9	9.3	2 W
Onslow	54.5	45.8	8.7	3 W
Pamlico	53.8	45.4	8.4	2 W
Pitt	52.6	43.7	8.9	3 W
Tyrrell	52.3	43.8	8.5	2 W
Washington	52.7	43.3	9.4	2 W
Area Average	53.1	44.5	8.6	

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

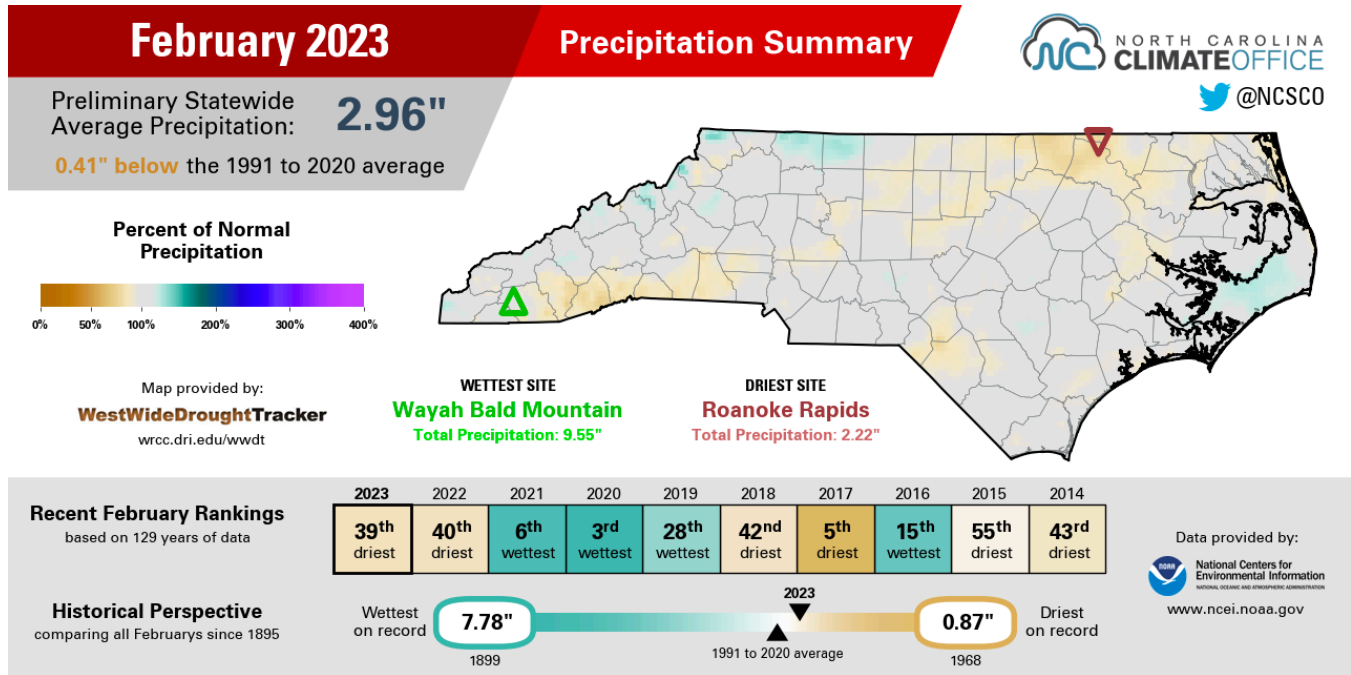
The first week of February was the only period where temperatures hovered close to normal before rising much above average for the rest of the month. The final week was the warmest, with record-high temperatures set across much of the southeastern U.S., including portions of North Carolina. **New Bern** tied or set records on three days - 80 on the 10th, tying the old record in 1959; 83 on the 22nd, breaking the old record of 82 in 2018; and 86 on the 23rd, breaking the cold record of 81 in 1962.

Daily Maximum and Minimum Temperatures



PRECIPITATION

Analysis conducted by the North Carolina State Climate Office showed modestly drier conditions than normal, with an average 2.96" in February - about 0.41" inches below average. This was the 39th driest February for the state since records began in 1895.



February 2023 Precipitation Summary | Source: NC State Climate Office

Eastern North Carolina saw near-normal precipitation, with slight deficits across the coastal plain but surpluses along the Outer Banks. Monthly rainfall totals ranged from 2.5 to 3 inches across the coastal plain to 3 to 3.5 inches closer to and along the Pamlico Sound.

MHX Select Site Precipitation Statistics: February 2023

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	3.55	3.33	0.22
Hatteras (KHSE)	4.91	4.34	0.57
New Bern (KEWN)	3.19	3.32	-0.13

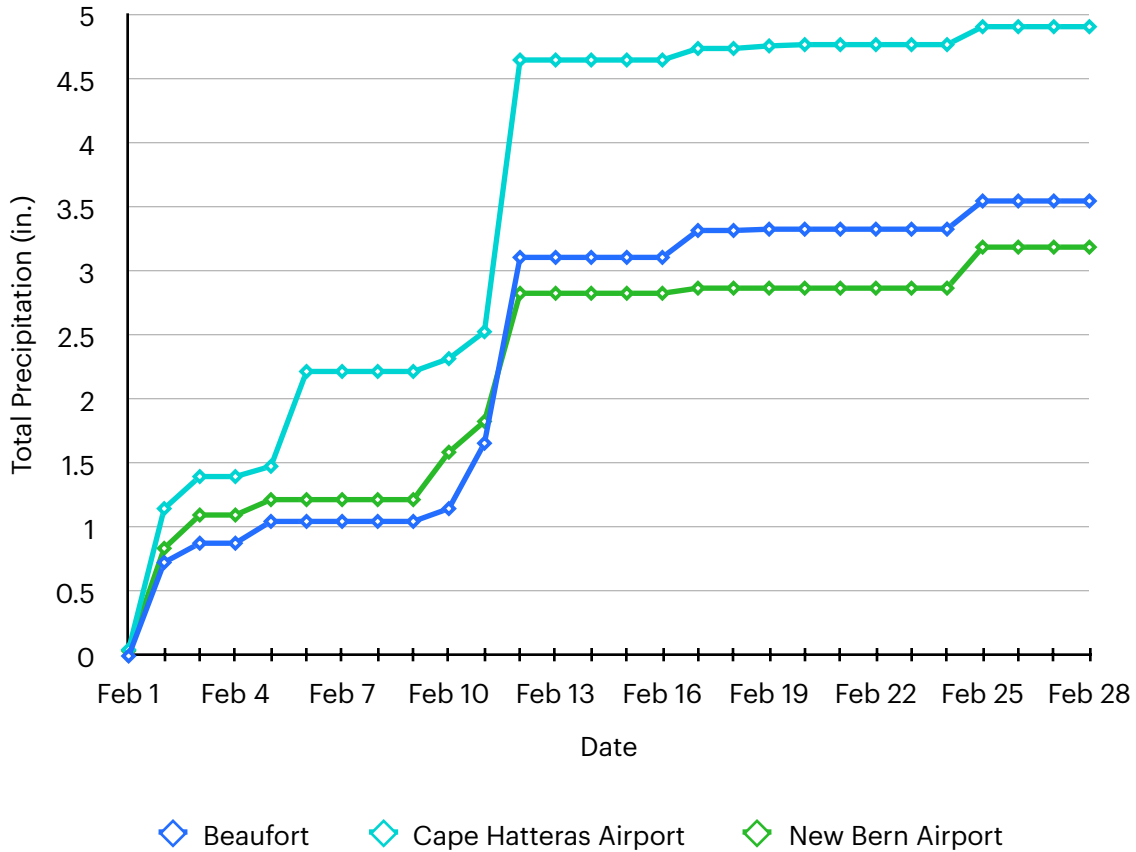
County-averaged statistics are presented in the following table. Like temperatures, mean and anomaly precipitation calculations are based on a period 1901-2000. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	2.91	3.72	-0.81	50 D
Carteret	3.54	4.00	-0.46	56 D
Craven	3.03	3.83	-0.8	48 D
Dare	3.22	3.85	-0.63	54 D
Duplin	2.62	3.61	-0.99	43 D
Greene	2.72	3.67	-0.95	44 D
Hyde	3.38	3.83	-0.45	56 D
Jones	2.85	3.80	-0.95	45 D
Lenoir	2.49	3.66	-1.17	39 D
Martin	2.85	3.69	-0.84	48 D
Onslow	2.94	3.84	-0.9	47 D
Pamlico	3.37	3.82	-0.45	57 D
Pitt	2.81	3.71	-0.9	47 D
Tyrrell	2.93	3.77	-0.84	48 D
Washington	2.78	3.72	-0.94	46 D
Area Average	2.96	3.77	-0.81	

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

The bulk of February’s precipitation fell in the first half of the month before much warmer and drier conditions set in. The heaviest rainfall was observed on the 11th and 12th as low pressure in the eastern Gulf of Mexico lifted along the southeastern coastline and gradually deepened.

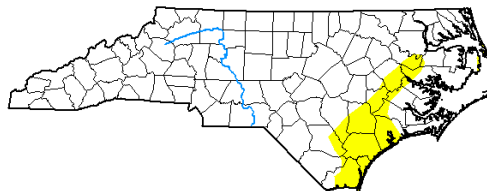
Monthly Accumulated Precipitation



Drought conditions further improved across eastern North Carolina in February. As of February 28, all moderate drought conditions were eliminated, with only abnormally dry conditions holding on across the coastal plain and Onslow County. Seasonal outlooks call for no expansion of drought conditions over the next three months.

U.S. Drought Monitor North Carolina

February 28, 2023
(Released Thursday, Mar. 2, 2023)
Valid 7 a.m. EST



	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	89.48	10.52	0.00	0.00	0.00	0.00
Last Week 02-21-2023	89.48	10.52	0.00	0.00	0.00	0.00
3 Months Ago 11-29-2022	42.95	57.05	22.72	2.50	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 03-01-2022	48.29	51.71	9.10	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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NCEI/NOAA



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: February 2023

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	64.0	43.0	53.5	45.9	7.6
Kinston	63.1	41.2	52.2	48.4	3.8
Williamston	62.3	41.7	52.0	45.2	6.8
Plymouth	64.7	43.7	54.2	46.3	7.9
Bayboro	64.1	42.3	53.2	46.3	6.9
Manteo	59.1	42.5	50.8	44.9	5.9

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

Maximum and Minimum Monthly Temperatures: February 2023

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	84	Feb 23	24	Feb 4
Hatteras (KHSE)	73	Feb 24	29	Feb 4
New Bern (KEWN)	86	Feb 23	25	Feb 4
Greenville	84	Feb 23	24	Feb 4
Kinston	84	Feb 24	23	Feb 4
Williamston	84	Feb 24	23	Feb 4-5
Plymouth	83	Feb 23	23	Feb 4
Bayboro	83	Feb 24	31	Feb 4-5
Manteo	81	Feb 24	25	Feb 5

APPENDIX B: ADDITIONAL PRECIPITATION DATA

Cooperative Observation Site Precipitation Statistics: February 2023

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Bayboro	3.47	3.53	-0.06
Greenville	2.96	3.35	-0.39
Kinston	3.06	3.20	-0.14
Plymouth	2.80	3.40	-0.60
Williamston	2.87	3.22	-0.35

Sites in red have missing data in their record.

CoCoRaHS Monthly Accumulated Precipitation: February 2023

Site	County	Amount (in.)
Pantego 0.4 WSW	Beaufort	3.11
Washington 1.0 SSW	Beaufort	2.65
Pine Knoll Shores 1.4 E	Carteret	4.28
Atlantic Beach 0.6 W	Carteret	4.16
Beaufort 5.3 N	Carteret	4.15
Beaufort 0.5 W	Carteret	4.12
Morehead City 1.0 W	Carteret	4.11
Morehead City 0.6 NW	Carteret	3.94
Newport 1.7 SSE	Carteret	3.91
Beaufort 3.4 NNW	Carteret	3.86
Morehead City 5.7 W	Carteret	3.77

Site	County	Amount (in.)
Morehead City 2.9 WNW	Carteret	3.76
Beaufort 12.1 N	Carteret	3.63
Cedar Island 0.3 SSE	Carteret	3.41
Cape Carteret 1.5 NE	Carteret	3.36
Swansboro 3.7 NNE	Carteret	3.36
Newport 0.2 SW	Carteret	3.29
Cape Carteret 1.0 NNW	Carteret	3.19
Cedar Point 0.4 WSW	Carteret	3.17
Emerald Isle 2.3 WSW	Carteret	3.02
Morehead City 6.0 WNW	Carteret	2.12
Trent Woods 1.2 ENE	Craven	3.97
Trent Woods 1.0 NNE	Craven	3.90
Trent Woods 1.3 SSE	Craven	3.87
New Bern 5.3 SW	Craven	3.83
New Bern 1.3 NNE	Craven	3.65
New Bern 5.2 SE	Craven	3.58
Havelock 1.9 SSE	Craven	3.22
New Bern 4.2 S	Craven	3.12
Buxton 0.3 ENE	Dare	4.68
Rodanthe 1.0 SSE	Dare	3.25
Southern Shores 0.5 NNE	Dare	3.07
Wallace 14.8 E	Duplin	3.56
Rose Hill 0.1 NNW	Duplin	2.88

Site	County	Amount (in.)
Snow Hill 3.1 NNE	Greene	3.40
Ayden 6.5 WNW	Greene	2.96
SQ Tower	Hyde	3.69
Kinston 4.4 WNW	Lenoir	3.99
Kinston 5.1 WNW	Lenoir	3.20
Pink Hill 2.5 NE	Lenoir	3.19
Kinston 7.0 SW	Lenoir	3.17
Jamesville 6.1 SW	Martin	2.83
Williamston 8.9 SSE	Martin	2.77
Jacksonville 1.0 NW	Onslow	3.49
Swansboro 3.3 NW	Onslow	3.46
Sneads Ferry 1.2 SSW	Onslow	3.41
Sneads Ferry 3.3 SW	Onslow	3.29
Jacksonville 4.5 NW	Onslow	3.27
Holly Ridge 3.7 E	Onslow	3.19
Jacksonville 5.4 WSW	Onslow	3.15
Swansboro 2.8 WSW	Onslow	2.98
Oriental 2.1 WSW	Pamlico	3.93
Oriental 1.9 WSW	Pamlico	3.74
Merritt 1.5 WSW	Pamlico	3.68
Oriental 4.3 NNW	Pamlico	3.57
Oriental 5.2 NE	Pamlico	3.56
Lowland 0.2 SE	Pamlico	3.42

Site	County	Amount (in.)
Winterville 1.0 ENE	Pitt	3.13
Greenville 4.6 W	Pitt	3.07
Winterville 3.5 W	Pitt	3.06
Fountain 0.1 NE	Pitt	2.96
Greenville 5.7 NW	Pitt	2.92
Greenville 5.0 SE	Pitt	2.92
Greenville 2.8 ESE	Pitt	2.90
Greenville 4.4 SSE	Pitt	2.70
Greenville 7.1 SSE	Pitt	2.62
Columbia 0.8 NNE	Tyrrell	3.29
Roper 2.4 NE	Washington	3.16

CoCoRaHS inclusion in this table is based on a complete 28-day liquid precipitation record. Thank you to all observers!