

PUBLISH DATE: FEBRUARY 24, 2023

**EASTERN NORTH CAROLINA
MONTHLY CLIMATE REPORT**

JANUARY 2023

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

National Weather Service

NEWPORT/MOREHEAD CITY, NC

MONTHLY SUMMARY

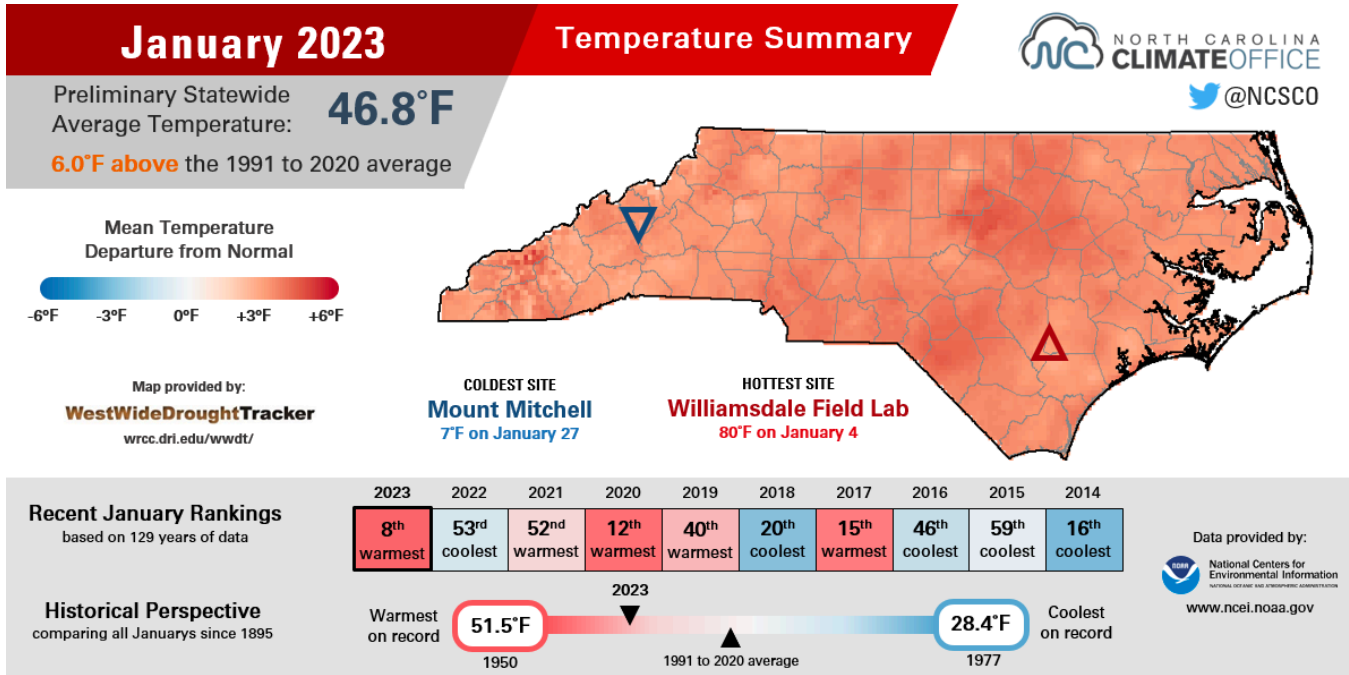
After the remarkable cold outbreak around Christmas of last year, winter took a hiatus to start 2023. Temperatures soared, particularly in the first week of the month, climbing to 15+ degrees above normal, with many spots rising well into the 70s. More normal air masses tried to take control for the remainder of the month, although highs would routinely spike above average for a few days before giving way. Overall, the entire month's temperatures were much above average, around 3-6 degrees, with locally warmer spots.

Dry weather remained in control for the first three weeks, with most spots struggling to get more than an inch of rain. A pattern shift late steered more storms towards the region, and by month's end, precipitation amounts across eastern North Carolina were generally between 75-125% of normal. Drought conditions modestly improved but still lingered across much of the region.

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

TEMPERATURES

2023 got off to an anomalously warm start, based on analysis from the NC State Climate Office. The average temperature statewide for January was 46.8°F or a whopping 6.0°F above the 1991-2020 average. This was the 8th warmest January statewide since records began in 1895, with 129 years of data.



January 2023 Temperature Summary | Source: NC State Climate Office

Eastern North Carolina temperatures were generally in line with or slightly lower than the statewide average. Temperatures at the three primary climate sites in the forecast area were between 3 to 6 degrees above normal. Additional observations can be found in Appendix A.

MHX Select Site Temperature Statistics: January 2023

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	60.7	42.7	51.7	46.2	5.5
Hatteras (KHSE)	59.2	42.9	51.1	48.0	3.1

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	62.7	39.1	50.9	44.5	6.4

Normals are based on a period from 1990-2020.

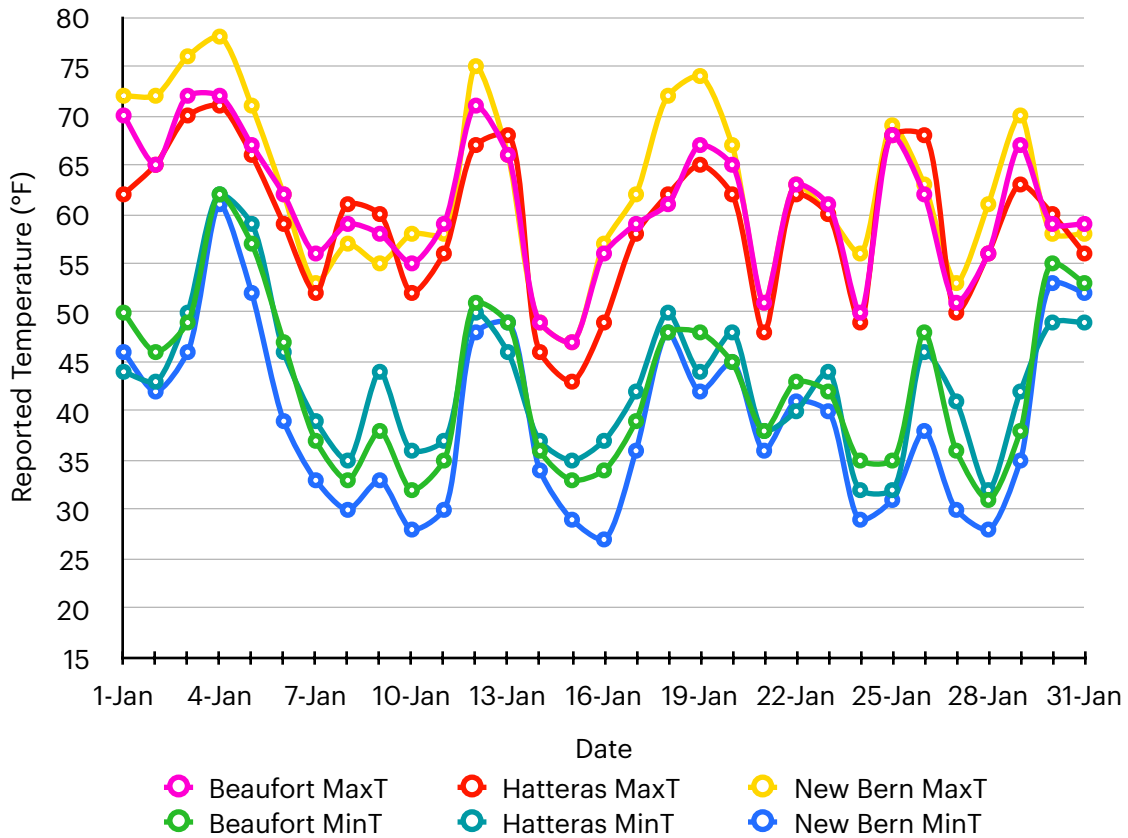
County-averaged statistics are presented in the following table. Note that mean temperature and anomaly calculations are based on a period of 1901-2000, rather than 1990-2020. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Temperature (°F)	Mean (°F)	Departure (°F)	Rank
Beaufort	49.9	43.1	6.8	8 W
Carteret	51.2	45.3	5.9	12 W
Craven	50.0	43.7	6.3	10 W
Dare	50.3	43.5	6.8	7 W
Duplin	49.6	43.3	6.3	9 W
Greene	49.0	42.0	7.0	8 W
Hyde	50.6	44.1	6.5	9 W
Jones	49.8	43.4	6.4	10 W
Lenoir	49.2	42.6	6.6	10 W
Martin	48.8	41.3	7.5	6 W
Onslow	50.6	44.4	6.2	11 W
Pamlico	50.5	44.5	6	10 W
Pitt	49.1	42.0	7.1	8 W
Tyrrell	50.1	42.7	7.4	6 W
Washington	49.8	41.9	7.9	6 W
Area Average	49.9	43.2	6.7	

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

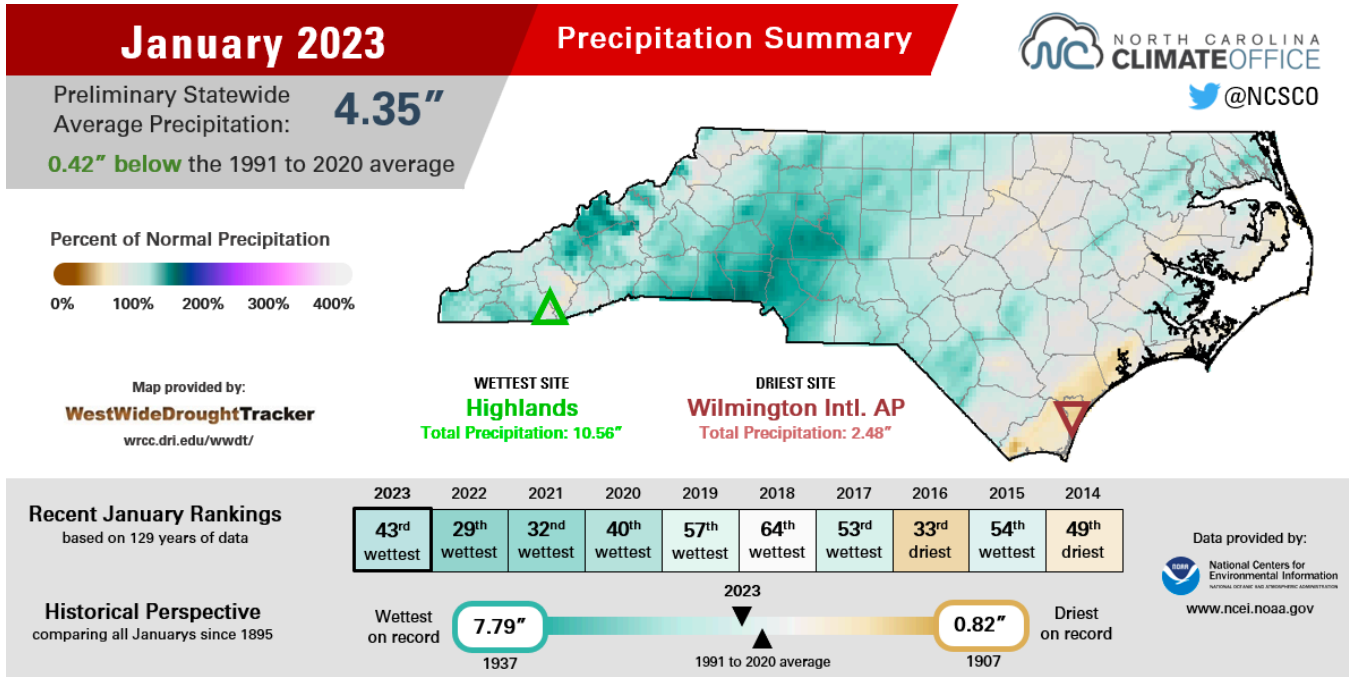
The first week of January was by far the warmest, with well above-average temperatures overspreading much of the eastern United States as a ridge sat overhead. Most of North Carolina saw temperature departures up to 15 degrees above average, and some records were tied. **New Bern** hit a high of 78 on the 4th, tying the old record in 2004. Mid-January was closer to average before the month closed out on another warm note, about 3-6 degrees above average.

Daily Maximum and Minimum Temperatures



PRECIPITATION

Analysis conducted by the North Carolina State Climate Office indicated slightly wetter conditions than normal, with an average 4.35" in January - about 0.42" inches above average. This was the 43rd wettest December for the state since records began in 1895.



January 2023 Precipitation Summary | Source: NC State Climate Office

Eastern North Carolina had some of the driest spots in the state, although variations across the region were considerable. Near the mouths of the Neuse and Pamlico Rivers, precipitation was closer to average. That being said, most counties picked up an average of about 3.5" of rainfall to start the year.

MHX Select Site Precipitation Statistics: January 2023

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	4.34	4.17	0.17
Hatteras (KHSE)	3.76	4.91	-1.15
New Bern (KEWN)	3.56	3.89	-0.33

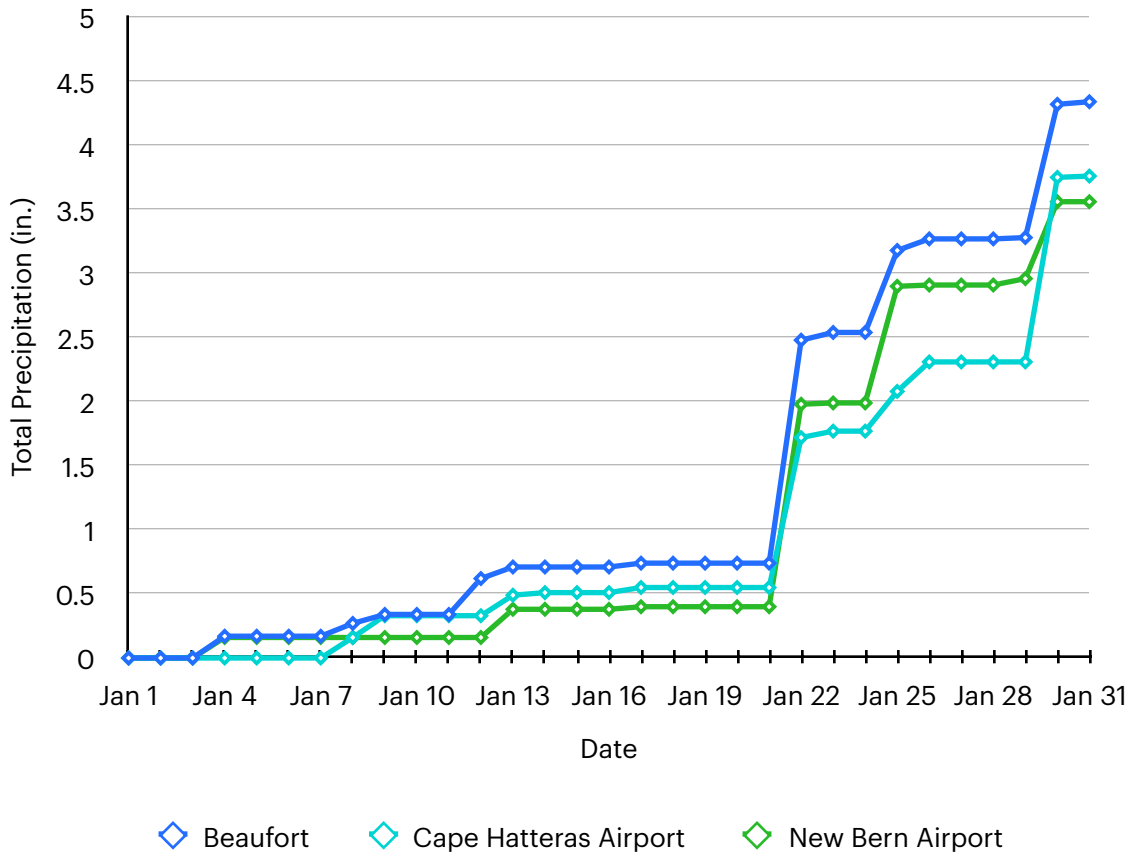
County-averaged statistics are presented in the following table. Like temperatures, mean and anomaly precipitation calculations are based on a period 1901-2000. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	3.91	3.89	0.02	55 W
Carteret	3.72	4.13	-0.41	62 D
Craven	3.64	3.92	-0.28	64 W
Dare	3.59	4.03	-0.44	64 D
Duplin	3.21	3.74	-0.53	56 D
Greene	3.67	3.73	-0.06	59 W
Hyde	3.88	4.00	-0.12	58 W
Jones	3.41	3.89	-0.48	55 D
Lenoir	3.60	3.77	-0.17	63 W
Martin	3.72	3.76	-0.04	58 W
Onslow	2.89	3.92	-1.03	45 D
Pamlico	4.08	4.00	0.08	54 W
Pitt	3.74	3.77	-0.03	58 W
Tyrrell	3.65	4.01	-0.36	62 D
Washington	3.52	3.94	-0.42	62 D
Area Average	3.62	3.90	-0.28	

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

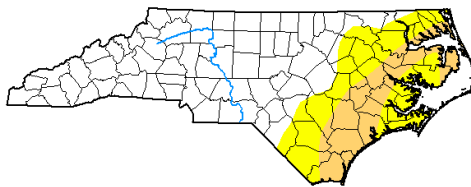
January started very dryly, with the first two-thirds of the month recording less than an inch of rain for the three primary climate sites or anywhere from 10-75% of normal. That changed with an abrupt pattern shift to close out the month. Our wettest day, January 22nd, was courtesy of a developing coastal system and eventual Nor’easter that dropped between 1-2 inches of rain. Overall, the latter third of January saw precipitation of about 150-200% of normal.

Monthly Accumulated Precipitation



Drought conditions eased slightly across eastern North Carolina in January. As of January 31, moderate drought conditions were in place across portions of the coastal plain and the Albemarle-Pamlico Peninsula. Abnormally dry conditions continue across the remainder of the region. Seasonal outlooks call for drought conditions to eventually be eliminated over the next 3 months.

U.S. Drought Monitor North Carolina



January 31, 2023
(Released Thursday, Feb. 2, 2023)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	63.40	36.60	14.97	0.00	0.00	0.00
Last Week 01-24-2023	56.85	43.15	25.79	0.00	0.00	0.00
3 Months Ago 11-01-2022	16.29	83.71	19.46	1.79	0.00	0.00
Start of Calendar Year 01-01-2023	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 02-01-2022	33.44	66.56	14.22	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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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: January 2023

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	60.1	38.7	49.4	43.1	6.3
Kinston	61.2	37.8	49.5	45.7	3.8
Williamston	59.7	37.5	48.6	42.5	6.1
Plymouth	60.5	40.2	50.4	43.8	6.6
Bayboro	61.5	38.6	50.1	44.6	5.5
Manteo	57.0	39.5	48.3	43.1	5.2

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

Maximum and Minimum Monthly Temperatures: January 2023

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	72	Jan 3-4	31	Jan 28
Hatteras (KHSE)	71	Jan 4	32	Jan 24-25, Jan 28
New Bern (KEWN)	78	Jan 4	27	Jan 16
Greenville	77	Jan 4	25	Jan 16
Kinston	77	Jan 5	26	Jan 16
Williamston	77	Jan 5	28	Jan 16
Plymouth	76	Jan 4	27	Jan 10
Bayboro	74	Jan 5	30	Jan 10-11
Manteo	71	Jan 5, Jan 30	18	Jan 30

APPENDIX B: ADDITIONAL PRECIPITATION DATA

Cooperative Observation Site Precipitation Statistics: January 2023

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Bayboro	4.58	4.01	0.57
Greenville	3.77	3.91	-0.14
Kinston	3.78	3.74	0.04
Plymouth	3.22	3.95	-0.73
Williamston	4.08	3.69	0.39

Sites in red have missing data in their record.

CoCoRaHS Monthly Accumulated Precipitation: January 2023

Site	County	Amount (in.)
Pantego 0.4 WSW	Beaufort	4.20
Stella 2.5 SE	Carteret	5.27
Swansboro 3.7 NNE	Carteret	4.74
Beaufort 0.5 W	Carteret	4.71
Atlantic Beach 0.6 W	Carteret	4.15
Newport 1.7 SSE	Carteret	4.07
Beaufort 12.1 N	Carteret	4.03
Beaufort 3.8 N	Carteret	4.00
Beaufort 3.4 N	Carteret	3.99
Pine Knoll Shores 1.4 E	Carteret	3.92
Morehead City 5.7 W	Carteret	3.79

Site	County	Amount (in.)
Newport 0.2 SW	Carteret	3.78
Morehead City 2.9 WNW	Carteret	3.75
Beaufort 5.3 N	Carteret	3.73
Morehead City 0.6 NW	Carteret	3.70
Ocean 0.5 S	Carteret	3.66
Pine Knoll Shores 0.3 NE	Carteret	3.56
Cedar Point 0.9 WSW	Carteret	3.43
Newport 2.5 W	Carteret	3.42
Morehead City 6.0 WNW	Carteret	3.39
New Bern 5.3 SW	Craven	4.81
New Bern 1.3 NNE	Craven	4.77
Trent Woods 1.0 NNE	Craven	4.72
Havelock 1.9 SSE	Craven	4.64
Trent Woods 1.2 ENE	Craven	4.54
Trent Woods 1.3 SSE	Craven	4.20
New Bern 3.8 S	Craven	4.15
New Bern 7.3 ESE	Craven	4.06
New Bern 4.2 S	Craven	3.55
New Bern 8.8 W	Craven	3.53
Buxton 0.3 ENE	Dare	4.24
Duck 0.7 SSE	Dare	3.97
Rodanthe 1.0 SSE	Dare	3.62
Manteo 2.8 NW	Dare	2.99

Site	County	Amount (in.)
Mount Olive 6.0 SE	Duplin	4.18
Rose Hill 0.1 NNW	Duplin	3.61
Albertson 1.2 WNW	Duplin	3.51
Ayden 6.5 WNW	Greene	4.23
SQ Tower	Hyde	3.99
Engelhard 0.8 NW	Hyde	3.65
Kinston 4.4 WNW	Lenoir	3.59
Kinston 5.1 WNW	Lenoir	3.58
Pink Hill 2.5 NE	Lenoir	3.56
Williamston 8.9 SSE	Martin	3.57
Jamesville 6.1 SW	Martin	3.47
Swansboro 3.3 NW	Onslow	4.04
Sneads Ferry 1.2 SSW	Onslow	3.35
Holly Ridge 9.0 ENE	Onslow	3.28
Jacksonville 1.0 NW	Onslow	2.78
Holly Ridge 3.7 E	Onslow	2.74
Jacksonville 5.4 WSW	Onslow	2.67
Jacksonville 2.4 NNE	Onslow	2.17
Sneads Ferry 3.3 SW	Onslow	1.53
Oriental 2.1 WSW	Pamlico	5.00
Oriental 4.3 NNW	Pamlico	4.48
Merritt 1.5 WSW	Pamlico	4.39
Oriental 1.9 WSW	Pamlico	3.88

Site	County	Amount (in.)
Greenville 4.6 W	Pitt	5.75
Fountain 0.1 NE	Pitt	5.39
Winterville 2.8 WNW	Pitt	4.87
Greenville 5.7 NW	Pitt	3.97
Greenville 5.0 SE	Pitt	3.74
Greenville 7.1 SSE	Pitt	3.71
Winterville 1.0 ENE	Pitt	3.20

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