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EASTERN NORTH CAROLINA
MONTHLY CLIMATE REPORT

MARCH 2025

WEATHER FORECAST OFFICE
NEWPORT/MOREHEAD CITY, NC

National Weather Service
NEWPORT/MOREHEAD CITY, NC

MONTHLY SUMMARY

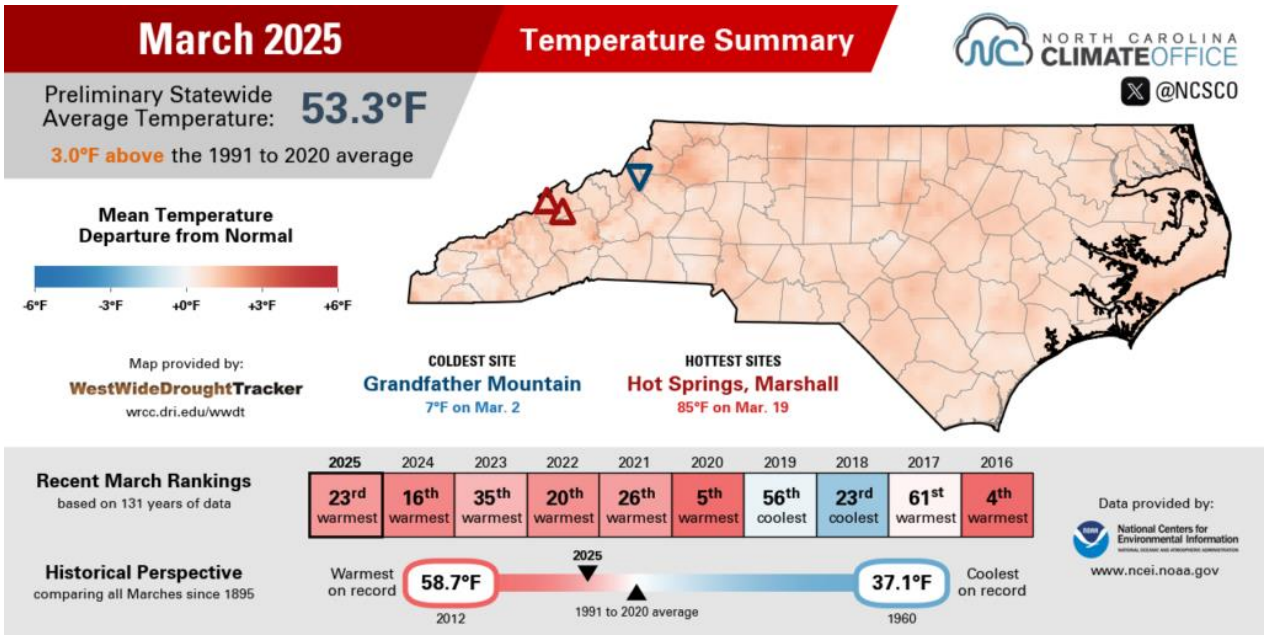
A Warm and dry end to winter across eastern North Carolina extended into a warm and mostly dry start to spring as above-average temperatures persisted over the region and rainfall fell unevenly over the state. Precipitation across the region was closer to average compared to statewide, but most precipitation fell along the Pamlico Sound and left the inner coastal plain in a rainfall deficit. The average rainfall across our counties was 2.90", roughly an inch below the 30-year normal or about 75% of normal. Drought conditions improved modestly compared to February, but nearly 75% of the region remained in Moderate (D1) drought.

March saw well above-average temperatures statewide, and eastern North Carolina was warmer still. The average temperature across the region was 56.8°F, or 4.4°F above the 1991-2020 climatological normal. Over half of our counties saw a March average temperature place among their top 10 warmest; Carteret placed among its top 5.

County average temperature and precipitation anomalies are based on the 1991-2020 normals instead of the 20th century average.

TEMPERATURES

Temperatures remained elevated across North Carolina in March, continuing a trend from February according to the North Carolina State Climate Office. The average temperature statewide for March was 53.3°F or 3.0°F above the 1991-2020 average. This was the 23rd warmest March statewide since records began in 1895, with 131 years of data.



March 2025 Temperature Summary | Source: NC State Climate Office

Eastern North Carolina experienced modestly higher anomalies compared to the rest of the state, with temperatures across our 15 counties 4.4°F above the 1991-2020 average. Since their respective records began, March 2025 was the 13th warmest for Cape Hatteras and 12th warmest for New Bern. Additional observations can be found in Appendix A.

MHX Select Site Temperature Statistics: March 2025

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	67.2	50.4	58.8	54.0	4.8
Hatteras (KHSE)	64.8	49.1	57.0	53.8	3.2
New Bern (KEWN)	70.4	45.5	58.0	53.2	4.8

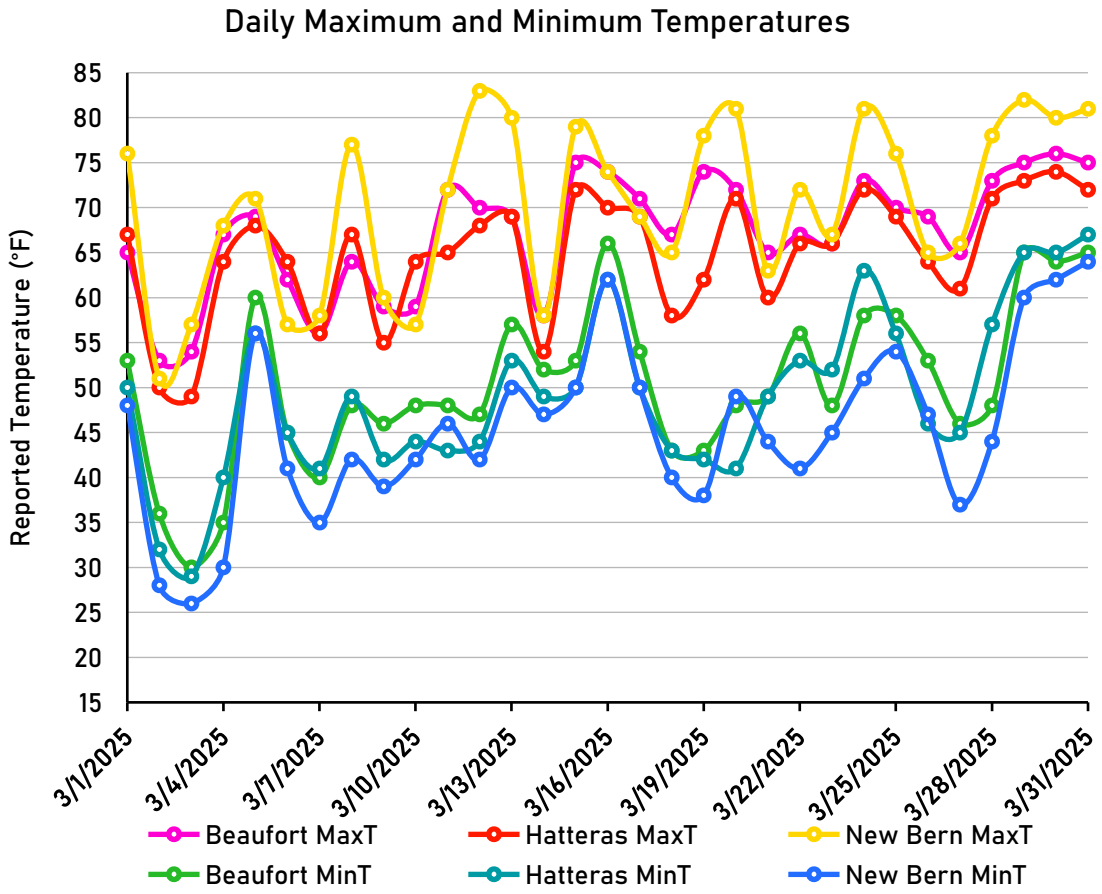
Normals are based on a period from 1990-2020.

County-averaged statistics are presented in the following table. **Mean and departure calculations are based on the 1991-2020 climate normals.** Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Temperature (°F)	Mean (°F)	Departure (°F)	Rank
Beaufort	56.7	52.6	4.1	12 W
Carteret	59.3	53.8	5.5	4 W
Craven	57.8	53.0	4.8	6 W
Dare	55.9	51.2	4.7	10 W
Duplin	56.9	52.7	4.2	12 W
Greene	56.0	52.0	4.0	13 W
Hyde	57.0	52.7	4.3	10 W
Jones	57.3	52.8	4.5	9 W
Lenoir	56.1	52.4	3.7	14 W
Martin	55.2	51.3	3.9	15 W
Onslow	58.3	53.3	5.0	7 W
Pamlico	58.1	53.5	4.6	6 W
Pitt	55.9	51.9	4.0	13 W
Tyrrell	56.1	51.7	4.4	10 W
Washington	55.8	51.7	4.1	12 W
Area Average	56.8	52.4	4.4	

Means are based on a period from 1991-2020. For rankings, "C" designates coldest and "W" designates warmest.

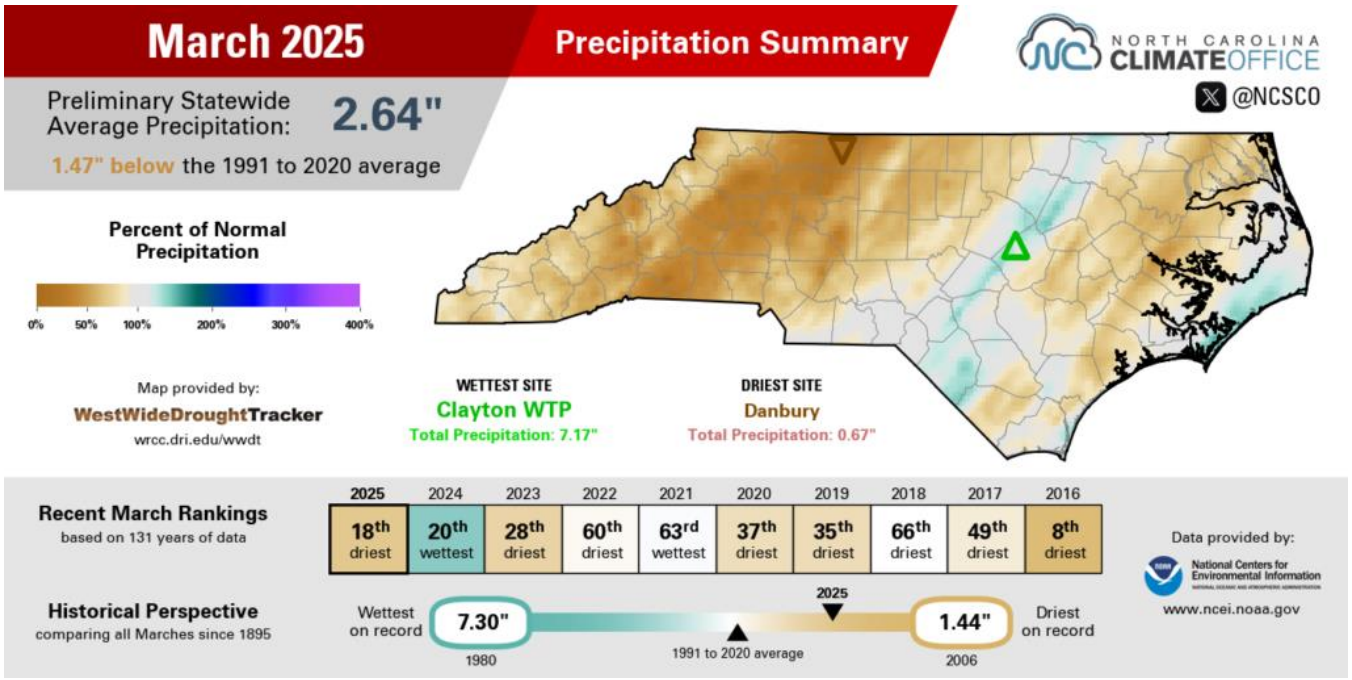
The upper level pattern across the United States in March was highly variable and did allow for any one particular regime to lock in over the Carolinas. Temperatures across the region, per analysis from the National Centers for Environmental Information (NCEI) reached up to 3-6 degrees above the 20th-century average in March. The coolest period occurred during the first week of the month when troughing over the eastern U.S. was at its strongest, but even then anomalies were within 3 degrees of normal. The warmest period was the 2nd week of March, coinciding with the highest mid-level height anomalies.



No temperature records were set at New Bern and Cape Hatteras in March. Eight of our fifteen area counties saw their average March temperature place among their top ten warmest, none more so than Carteret County which experienced its 4th warmest March on record, per NCEI.

PRECIPITATION

Analysis conducted by the North Carolina State Climate Office indicated average statewide precipitation was 2.64” for March, or 1.47” inches below average. This ended up being the 18th driest March for the state since records began in 1895.



February 2025 Precipitation Summary | Source: NC State Climate Office

Eastern North Carolina was a bit wetter than the rest of the state with areas along the Pamlico Sound seeing near to slightly above average rainfall. Cape Hatteras recorded its 67th driest February, while New Bern experienced its 12th driest. The average accumulation across the MHX forecast area was 2.90”, or 1.01” below the 1991-2020 average.

MHX Select Site Precipitation Statistics: March 2025

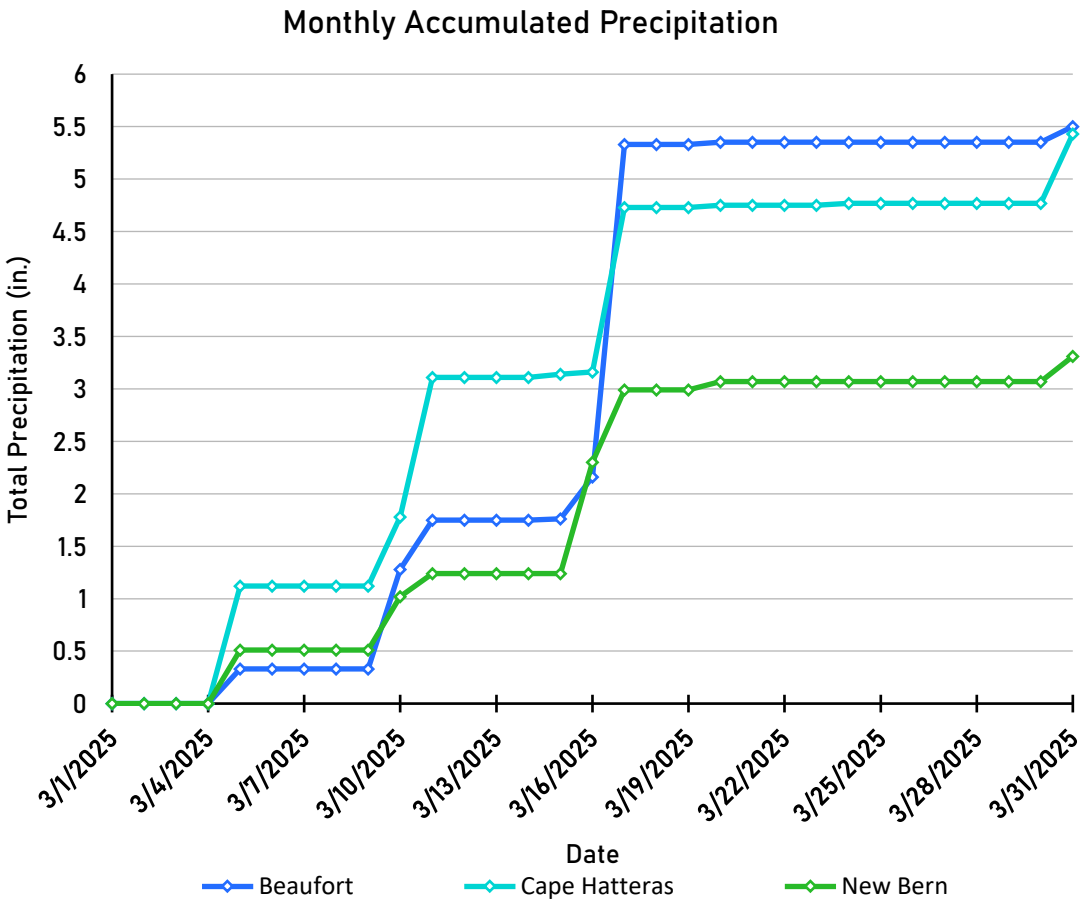
Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	5.50	3.31	2.19
Hatteras (KHSE)	5.43	4.43	1.00
New Bern (KEWN)	3.31	3.85	-0.54

County-averaged statistics are presented in the following table. Mean and departure calculations are based on the 1991-2020 climate normals. Data courtesy of the National Centers for Environmental Information (NCEI).

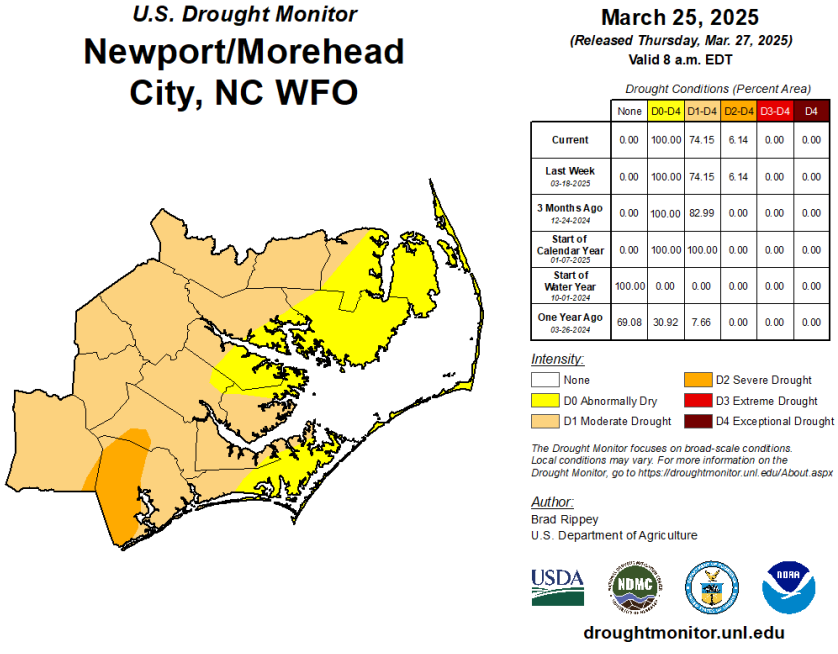
County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	2.67	3.90	-1.23	23 D
Carteret	4.59	3.74	0.85	42 W
Craven	3.21	3.79	-0.58	47 D
Dare	3.58	3.89	-0.31	65 D
Duplin	2.59	3.87	-1.28	31 D
Greene	1.93	4.02	-2.09	11 D
Hyde	3.67	3.89	-0.22	52 D
Jones	2.78	3.86	-1.08	31 D
Lenoir	1.79	3.93	-2.14	11 D
Martin	2.21	4.05	-1.84	16 D
Onslow	3.10	3.89	-0.79	44 D
Pamlico	3.97	3.75	0.22	51 W
Pitt	2.21	4.05	-1.84	15 D
Tyrrell	2.80	3.93	-1.13	35 D
Washington	2.34	3.99	-1.65	15 D
Area Average	2.90	3.90	-1.01	

Means are based on a period from 1991-2020. For rankings, "W" designates wettest and "D" designates driest.

The first half of March was the wettest for the Carolinas, giving way to more persistent dry conditions leading into April per analysis from NCEI. There were two relative maxima of precipitation over North Carolina, one focused roughly along the I-95 corridor and the second aforementioned band along the Pamlico Sound. Pamlico and Carteret counties were the only two with above average rainfall in March. Overall, precipitation across eastern NC were 25-75% of the 20th century normal. Cape Hatteras broke a daily rainfall record on March 5th (1.12", old record 1.06"/1925).



Drought conditions improved slightly along and east of Highway 17 in March, while across the inner coastal plain conditions remained unchanged. 74.2% of the region was in Moderate (D1) drought, down from 100% a month prior. 6.1% of the region was in Severe (D2) drought, down from 19.6% in February.



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=mhx

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: March 2025

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	68.2	44.8	56.5	52.6	3.9
Kinston	68.4	42.8	55.6	54.5	1.1
Williamston	67.4	42.7	55.1	51.8	3.3
Plymouth	70.2	42.8	56.5	52.5	4.0
Bayboro	70.0	43.1	56.6	52.2	4.3
Manteo	64.6	50.1	57.3	52.3	5.0

Normals are based on a period from 1991-2020.

Maximum and Minimum Monthly Temperatures: March 2025

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	76	Mar 30	30	Mar 3
Hatteras (KHSE)	74	Mar 30	29	Mar 3
New Bern (KEWN)	83	Mar 12	26	Mar 3
Greenville	81	Mar 12, 30	26	Mar 3
Kinston	80	Mar 13, 21	25	Mar 3
Williamston	81	Mar 13-14, 31	28	Mar 3
Plymouth	80	Mar 12-13, 30-31	24	Mar 3
Bayboro	81	Mar 13, 30	27	Mar 3-4
Manteo	77	Mar 30	30	Mar 3

APPENDIX B: ADDITIONAL PRECIPITATION DATA

Cooperative Observation Site Precipitation Statistics: March 2025

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Greenville	2.69	4.22	-1.53
Kinston	1.84	3.84	-2.00
Williamston	2.00	4.13	-2.13
Plymouth	2.38	4.16	-1.78
Bayboro	4.22	3.70	0.52

Sites in red have missing data in their record.

CoCoRaHS Monthly Accumulated Precipitation: March 2025

Site	County	Amount (in.)
Pantego 0.4 WSW	Beaufort	2.21
Aurora 4.8 NE	Beaufort	2.66
Swansboro 3.7 NNE	Carteret	3.53
Swansboro 2.7 NE	Carteret	3.07
Cedar Point 0.7 NNE	Carteret	3.37
Cedar Point 0.9 WSW	Carteret	3.02
Emerald Isle 2.3 WSW	Carteret	3.44
Emerald Isle 0.4 SW	Carteret	3.84
Cape Carteret 1.5 NE	Carteret	4.45
Newport 2.5 W	Carteret	3.37
Newport 1.0 N	Carteret	4.25

CoCoRaHS Monthly Accumulated Precipitation: March 2025

Site	County	Amount (in.)
Newport 0.2 SW	Carteret	3.50
Newport 1.7 SSE	Carteret	3.56
Newport 2.3 SE	Carteret	4.22
Morehead City 6.0 WNW	Carteret	4.07
Pine Knoll Shores 0.3 NE	Carteret	4.30
Morehead City 0.6 NW	Carteret	3.23
Beaufort 0.5 W	Carteret	5.70
Beaufort 5.3 N	Carteret	4.27
Cedar Island 0.3 SSE	Carteret	5.54
New Bern 1.3 NNE	Craven	2.70
Bridgeton 0.3 SSE	Craven	2.61
New Bern 7.3 ESE	Craven	3.44
New Bern 5.3 SW	Craven	2.76
Trent Woods 1.3 WNW	Craven	2.77
Trent Woods 1.0 NNE	Craven	3.64
Trent Woods 1.2 ENE	Craven	3.03
New Bern 2.9 SSE	Craven	3.35
Brice Creek 0.9 WNW	Craven	3.24
Trent Woods 1.3 SSE	Craven	3.64
New Bern 3.8 S	Craven	4.06
Southern Shores 1.9 NNW	Dare	4.29

CoCoRaHS Monthly Accumulated Precipitation: March 2025

Site	County	Amount (in.)
Southern Shores 0.5 NNE	Dare	4.73
Manteo 2.8 NW	Dare	4.72
Rodanthe 1.0 SSE	Dare	3.81
Faison 3.3 SSE	Duplin	3.53
Rose Hill 0.1 NNW	Duplin	3.23
Wallace 14.8 E	Duplin	2.12
Ayden 6.5 WNW	Greene	2.34
SQ Tower	Hyde	2.41
Ocracoke 0.6 SW	Hyde	6.21
Kinston 5.1 WNW	Lenoir	2.12
Kinston 3.1 W	Lenoir	2.67
Kinston 1.2 NW	Lenoir	1.25
Kinston 4.6 ESE	Lenoir	2.58
Kinston 7.0 SW	Lenoir	2.32
Pink Hill 2.5 NE	Lenoir	2.81
Williamston 8.9 SSE	Martin	2.42
Jamesville 6.1 SW	Martin	2.38
Jacksonville 1.0 NW	Onslow	2.91
Holly Ridge 3.7 E	Onslow	3.36
Holly Ridge 5.0 E	Onslow	3.80
Sneads Ferry 3.3 SW	Onslow	3.42

CoCoRaHS Monthly Accumulated Precipitation: March 2025

Site	County	Amount (in.)
Hubert 4.9 SE	Onslow	3.50
Swansboro 2.8 WSW	Onslow	3.40
Lowland 0.2 SE	Pamlico	3.41
Grantsboro 4.6 SSW	Pamlico	3.43
Merritt 1.5 WSW	Pamlico	3.61
Oriental 4.3 NNW	Pamlico	3.54
Oriental 5.2 NE	Pamlico	2.84
Fountain 0.1 NE	Pitt	2.99
Greenville 5.7 NW	Pitt	2.46
Winterville 3.5 W	Pitt	2.00
Greenville 4.4 SSE	Pitt	1.31
Greenville 5.0 SE	Pitt	1.50
Greenville 7.1 SSE	Pitt	2.40
Columbia 0.8 NNE	Tyrrell	2.44

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