

**PUBLISH DATE: NOVEMBER 22, 2024**

**EASTERN NORTH CAROLINA  
MONTHLY CLIMATE REPORT**

# **OCTOBER 2024**

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

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# National Weather Service

## NEWPORT/MOREHEAD CITY, NC

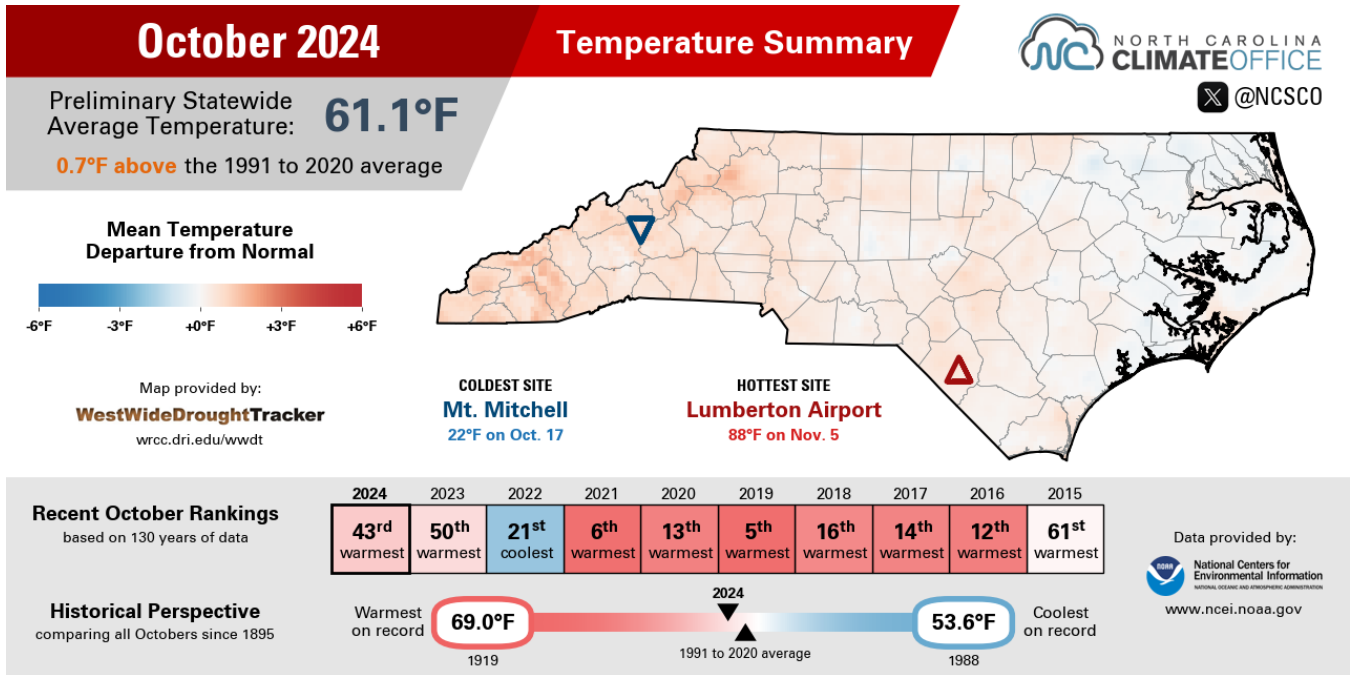
# MONTHLY SUMMARY

**A**fter three months of above-average rainfall, weather patterns switched abruptly and ushered in an exceptionally dry October. The first half of the month saw almost no precipitation, and even with a robust cold front mid-month, any precipitation that fell was meager. It was the 3rd driest October in North Carolina since record-keeping began; New Bern saw its 4th driest October on record. No climate sites saw more than an inch of rain. On average, our region saw around 0.93" of rain, ranging from 10-50% of normal. The long dry stretches promoted drought expansion, and by the beginning of November, all of eastern NC was considered abnormally dry per the U.S. Drought Monitor.

Temperatures held near average in October. The most pronounced warm period was in the first half of the month as high pressure dominated across much of the United States. The mid-month cold front knocked temperatures down considerably (as much as 10 degrees below average in some spots), before rebounding slightly as we approached November. The average temperature across the region was 63.6°F, or about a degree above the 20th century average.

# TEMPERATURES

Temperatures in North Carolina were modestly above average in October. The average temperature for the month was 61.1°F, or 0.7°F above the 1991-2020 average. This was the 43rd warmest October since records began in 1895, with 130 years of data.



October 2024 Temperature Summary | Source: NC State Climate Office

Across Eastern North Carolina, temperatures were close to the statewide average and about 1.0°F above the 20th-century average. Since their respective records began, October 2024 was the 41st warmest at New Bern and the 61st warmest at Cape Hatteras. Additional observations can be found in Appendix A.

## MHX Select Site Temperature Statistics: October 2024

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	76.3	58.8	67.6	66.0	1.6
Hatteras (KHSE)	73.3	60.1	66.7	68.2	-1.5

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	75.9	53.5	64.7	64.2	0.5

Normals are based on a period from 1990-2020.

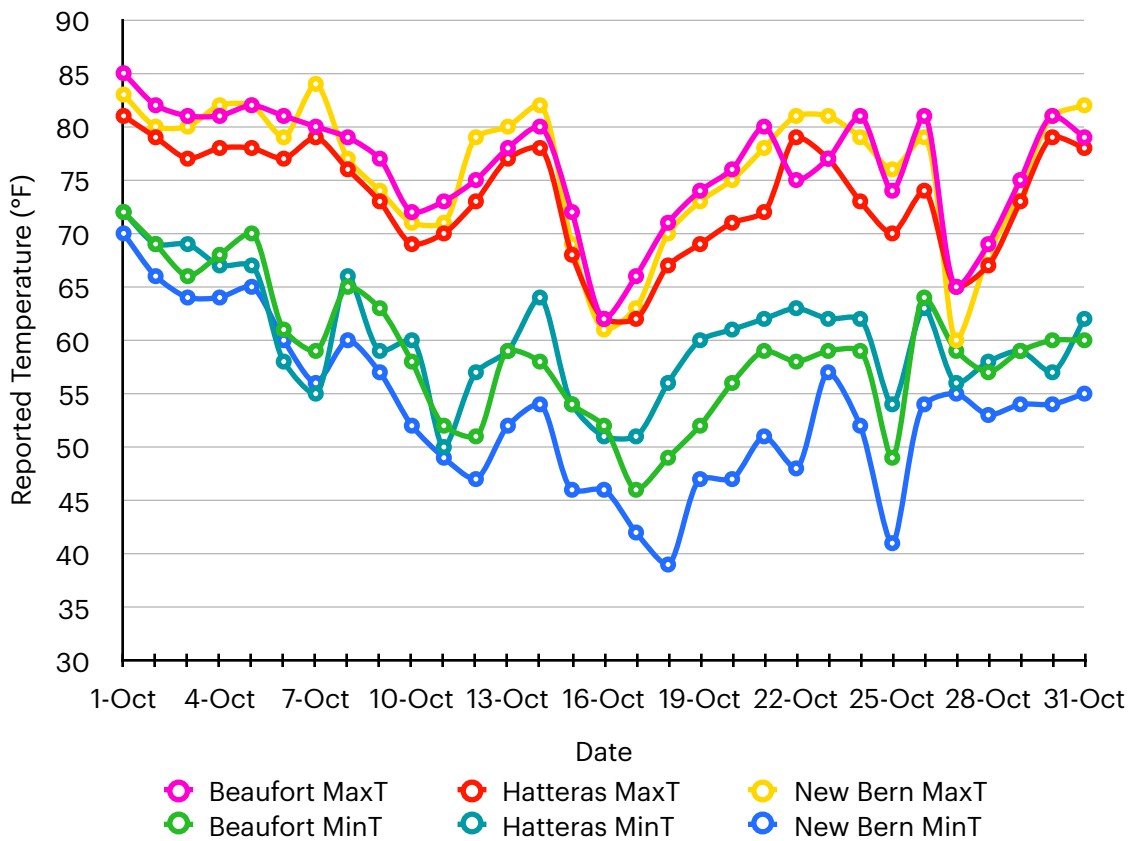
County-averaged statistics are presented in the following table. Note that mean temperature and anomaly calculations are based on a period of 1901-2000, rather than 1990-2020. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Temperature (°F)	Mean (°F)	Departure (°F)	Rank
Beaufort	63.7	62.5	1.2	49 W
Carteret	66.0	64.7	1.3	46 W
Craven	63.8	62.8	1.0	55 W
Dare	65.0	64.0	1.0	53 W
Duplin	62.0	62.0	0.0	64 C
Greene	62.2	61.5	0.7	59 W
Hyde	64.8	63.8	1.0	50 W
Jones	63.0	62.2	0.8	56 W
Lenoir	62.0	61.8	0.2	62 C
Martin	62.6	61.0	1.6	43 W
Onslow	63.8	63.0	0.8	51 W
Pamlico	64.8	63.8	1.0	53 W
Pitt	62.6	61.7	0.9	54 W
Tyrrell	64.3	62.7	1.6	39 W
Washington	63.3	61.6	1.7	42 W
<b>Area Average</b>	<b>63.6</b>	<b>62.6</b>	<b>1.0</b>	

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

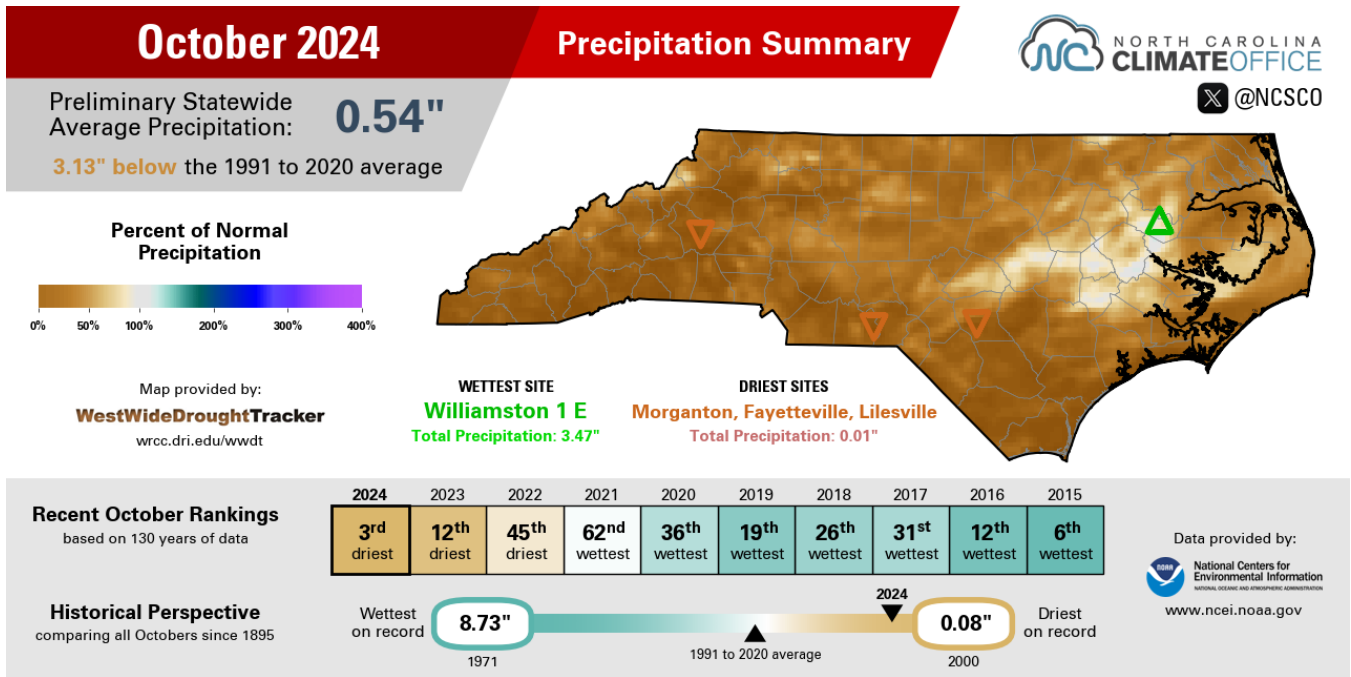
Upper-level ridging prevailed over much of the United States to start October, including the Carolinas, allowing for a period of near to slightly above-average temperatures. The pattern flipped in the middle of the month as brief but strong troughing set up over the country's eastern half. Regional temperatures fell accordingly, with highs as much as 10 degrees below average at their coolest. By the end of the month, ridging began to return and temperatures, on average, recovered. **Cape Hatteras** reached a high of 79°F on October 30, tying the old record set in 1918. Overall, average temperatures in October were within 3 degrees of normal.

### Daily Maximum and Minimum Temperatures



# PRECIPITATION

After three months of above-average precipitation, October saw the spigot abruptly turned off. Statewide, precipitation averaged a measly 0.54", or 3.13" below the 30-year average. This was the 3rd driest observed October for the state since records began in 1895.



October 2024 Precipitation Summary | Source: NC State Climate Office

Eastern North Carolina was modestly wetter than the rest of the state but still drier than the 30-year average. New Bern recorded its 4th driest October, while Cape Hatteras recorded its 11th driest. Average accumulation across the MHX forecast area was 0.93", or roughly 2.3" inches below the 20th-century average.

## MHX Select Site Precipitation Statistics: October 2024

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	0.13	4.14	-4.01
Hatteras (KHSE)	0.87	5.59	-4.72
New Bern (KEWN)	0.23	3.56	-3.33

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).

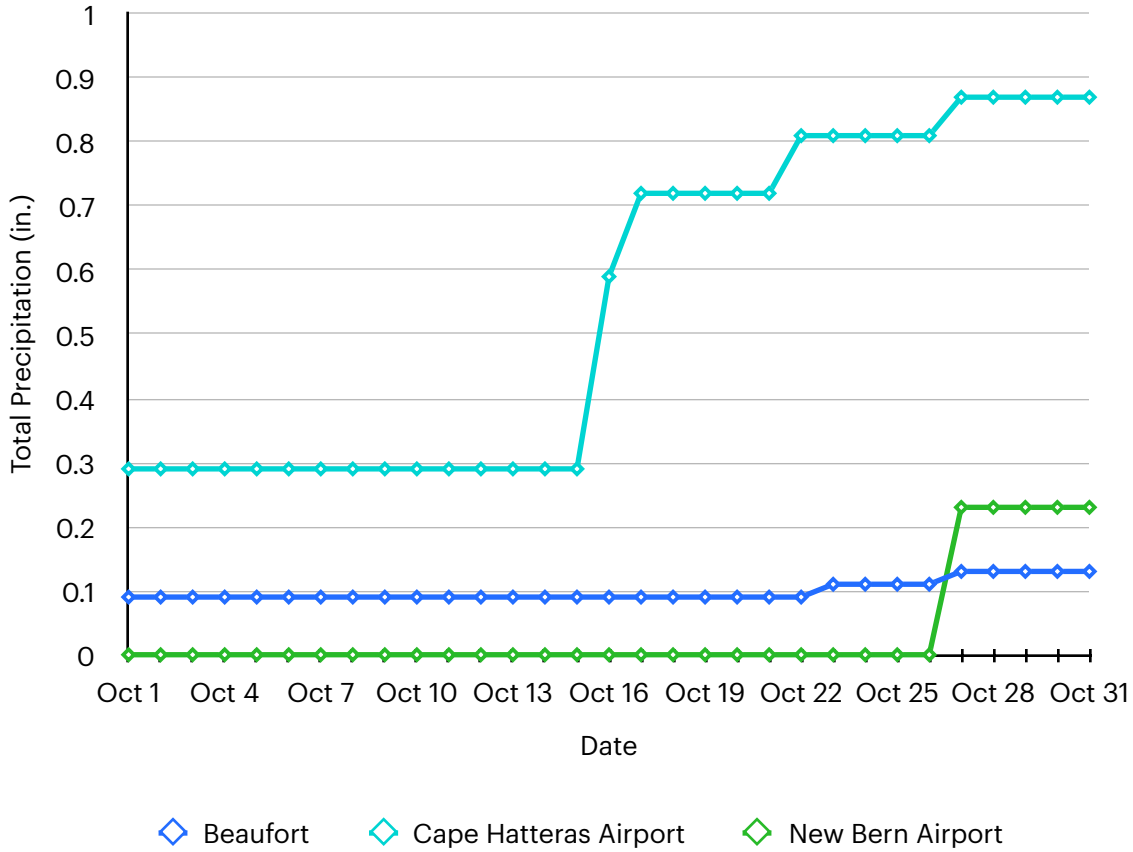
County	Avg. Accum. (in.)	Mean (in.)	Departure (in.)	Rank
Beaufort	1.07	3.22	-2.15	14 D
Carteret	0.72	3.73	-3.01	7 D
Craven	0.83	3.22	-2.39	12 D
Dare	0.56	3.66	-3.1	5 D
Duplin	0.53	2.88	-2.35	8 D
Greene	1.00	2.87	-1.87	18 D
Hyde	0.80	3.50	-2.70	7 D
Jones	0.89	3.09	-2.2	16 D
Lenoir	1.18	2.87	-1.69	24 D
Martin	1.75	3.02	-1.27	40 D
Onslow	0.66	3.19	-2.53	8 D
Pamlico	0.87	3.46	-2.59	10 D
Pitt	1.06	2.95	-1.89	18 D
Tyrrell	0.85	3.37	-2.52	8 D
Washington	1.19	3.19	-2	18 D
<b>Area Average</b>	<b>0.93</b>	<b>3.21</b>	<b>-2.28</b>	

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

There were three waves of precipitation in October. The first was a remnant stalled frontal boundary during the first of the month, followed by 2 weeks of dry high pressure. The strong mid-month cold front brought another round of modest rainfall, followed by another dry period before a series of weaker fronts quickly crossed the region just before Halloween. No precipitation records were set in October. Areawide, precipitation ranged from 10-50% of normal.

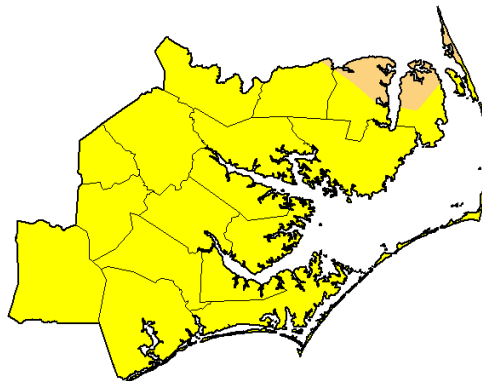


### Monthly Accumulated Precipitation



The prolonged dry periods in October allowed drought conditions to make a comeback. By the end of the month, all of the MHX forecast area was abnormally dry, with around 4% of the area in Moderate (D1) drought, focused around the Albemarle Sound.

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



**October 29, 2024**  
(Released Thursday, Oct. 31, 2024)  
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	4.05	0.00	0.00	0.00
Last Week 10-22-2024	81.29	18.71	0.00	0.00	0.00	0.00
3 Months Ago 07-30-2024	81.38	18.62	0.00	0.00	0.00	0.00
Start of Calendar Year 01-01-2024	96.09	3.91	0.00	0.00	0.00	0.00
Start of Water Year 10-01-2024	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago 10-31-2023	34.38	65.62	3.97	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](http://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: October 2024

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	74.6	51.7	63.2	63.0	0.2
Kinston	75.1	51.0	63.1	64.6	-1.6
Williamston	74.5	51.9	63.2	62.6	0.6
Plymouth	74.9	51.4	63.2	63.5	-0.4
Bayboro	76.8	51.5	64.2	63.1	1.1
Manteo	71.7	58.8	65.3	64.8	0.5

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

### Maximum and Minimum Monthly Temperatures: October 2024

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	85	Oct 1	46	Oct 17
Hatteras (KHSE)	81	Oct 1	50	Oct 11
New Bern (KEWN)	84	Oct 7	39	Oct 18
Greenville	83	Oct 5,7	39	Oct 18
Kinston	84	Oct 1,8	39	Oct 18
Williamston	83	Oct 1,6	41	Oct 18,25
Plymouth	82	Oct 6	38	Oct 18
Bayboro	90	Oct 1	39	Oct 18
Manteo	83	Oct 8	49	Oct 17

## APPENDIX B: ADDITIONAL PRECIPITATION DATA

### Cooperative Observation Site Precipitation Statistics: October 2024

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Greenville	0.18	3.57	-3.39
Kinston	1.81	3.56	-1.75
Williamston	3.47	4.29	-0.82
Plymouth	1.22	4.14	-2.92
Bayboro	1.35	4.19	-2.84

Sites in red have missing data in their record.

### CoCoRaHS Monthly Accumulated Precipitation: October 2024

Site	County	Amount (in.)
Aurora 4.8 NE	Beaufort	1.16
Pantego 0.4 WSW	Beaufort	0.63
Beaufort 12.1 N	Carteret	1.08
Beaufort 3.8 N	Carteret	0.60
Beaufort 5.3 N	Carteret	0.57
Cedar Island 0.3 SSE	Carteret	0.43
Newport 7.1 ENE	Carteret	0.31
Beaufort 0.5 W	Carteret	0.24
Cedar Point 0.7 NNE	Carteret	0.20
Cape Carteret 1.5 NE	Carteret	0.18
Newport 1.0 N	Carteret	0.17

Site	County	Amount (in.)
Swansboro 2.7 NE	Carteret	0.16
Newport 2.5 W	Carteret	0.12
Newport 0.2 SW	Carteret	0.10
Cape Carteret 0.8 NE	Carteret	0.10
Pine Knoll Shores 1.4 E	Carteret	0.07
Cedar Point 0.9 WSW	Carteret	0.07
Emerald Isle 2.3 WSW	Carteret	0.06
Morehead City 2.9 WNW	Carteret	0.05
Newport 2.3 SE	Carteret	0.05
Ocean 0.5 S	Carteret	0.05
Emerald Isle 2.1 E	Carteret	0.04
Newport 1.7 SSE	Carteret	0.04
Indian Beach 0.0W	Carteret	0.03
Bridgeton 0.3 SSE	Craven	1.73
New Bern 1.3 NNE	Craven	1.38
Trent Woods 1.3 WNW	Craven	1.06
New Bern 5.3 SW	Craven	0.93
New Bern 2.6 SW	Craven	0.84
Trent Woods 1.0 NNE	Craven	0.83
Trent Woods 1.2 ENE	Craven	0.79
Trent Woods 1.3 SSE	Craven	0.57
New Bern 7.3 ESE	Craven	0.37
James City 2.0 S	Craven	0.28

Site	County	Amount (in.)
Southern Shores 1.9 NNW	Dare	2.23
Rodanthe 1.0 SSE	Dare	1.47
Kenansville 1.1 SW	Duplin	1.05
Rose Hill 0.1 NNW	Duplin	0.23
Mount Olive 2.4 SW	Duplin	0.09
Ayden 6.5 WNW	Greene	2.68
SQ Tower	Hyde	2.04
Ocracoke 0.2 ESE	Hyde	0.32
Ocracoke 0.6 SW	Hyde	0.30
Pink Hill 2.5 NE	Lenior	0.37
Grifton 1.8 WNW	Lenoir	3.58
Kinston 7.0 SW	Lenoir	3.13
Kinston 4.6 ESE	Lenoir	3.10
Kinston 5.1 WNW	Lenoir	2.27
Kinston 1.2 NW	Lenoir	2.05
Pink Hill 2.5 NE	Lenior	0.37
Williamston 8.9 SSE	Martin	4.24
Jamesville 6.1 SW	Martin	3.37
Jacksonville 5.4 WSW	Onslow	0.76
Jacksonville 3.3 W	Onslow	0.59
Jacksonville 4.5 NW	Onslow	0.37
Jacksonville 2.4 NNE	Onslow	0.36
Hubert 4.9 SE	Onslow	0.07

Site	County	Amount (in.)
Swansboro 2.8 WSW	Onslow	0.04
Holly Ridge 5.0 E	Onslow	0.02
Sneads Ferry 1.2 SSW	Onslow	T
Sneads Ferry 3.3 SW	Onslow	0.00
Lowland 0.2 SE	Pamlico	2.21
Merritt 1.5 WSW	Pamlico	0.50
Oriental 4.3 NNW	Pamlico	0.48
Oriental 1.7 WNW	Pamlico	0.29
Fountain 0.1 NE	Pitt	3.15
Greenville 4.4 SSE	Pitt	2.52
Winterville 3.5 W	Pitt	2.30
Greenville 5.0 SE	Pitt	2.26
Greenville 7.1 SSE	Pitt	2.24
Greenville 4.6 W	Pitt	1.87
Greenville 5.7 NW	Pitt	1.78
Greenville 2.8 ESE	Pitt	1.26
Roper 2.4 NE	Washington	0.86

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