

**PUBLISH DATE: OCTOBER 25, 2024**

**EASTERN NORTH CAROLINA  
MONTHLY CLIMATE REPORT**

# **AUGUST 2024**

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

---

# National Weather Service

## NEWPORT/MOREHEAD CITY, NC

# MONTHLY SUMMARY

**A**ugust in eastern North Carolina continued the trend of above-average precipitation from July, especially for locations along and south of Highway 70. Most rainfall was associated with Tropical Storm Debby (previously a hurricane in the Gulf of Mexico), dropping a widespread 3-10 inches across the region. The NWS office in Newport recorded the highest precipitation total statewide, at 14.79". Average rainfall across our fifteen counties was 8.30", or 2.19" over the 20th century average.

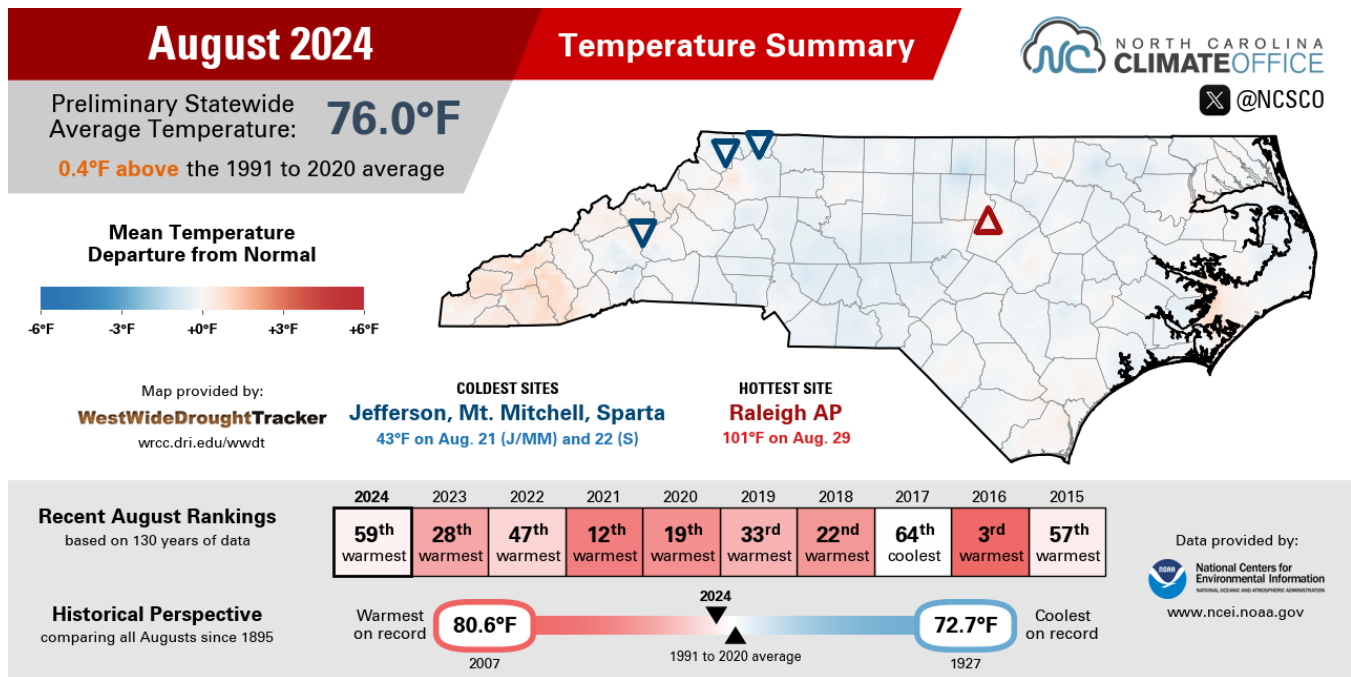
Temperatures returned to near average in August. The month was bookended by above-average periods of warmth, which were offset by a brief but potent cool snap following a cold front in the third week. Both Cape Hatteras and New Bern set low temperature records on August 22nd. The area's average temperature for the month was 77.8°F, with most regions ending within 3 degrees of the 30-year average.

Drought conditions continued to improve. According to the U.S. Drought Monitor, by the beginning of September, no areas in eastern North Carolina were experiencing any level of drought.

For more information on Debby and its impacts on eastern North Carolina, please visit [weather.gov/mhx/TropicalEventSummary](https://www.weather.gov/mhx/TropicalEventSummary).

# TEMPERATURES

Temperatures returned to near-normal levels across North Carolina in August after a prolonged extent of abnormal warmth. The average temperature for the month was 76.0°F, only 0.4°F above the 1991-2020 average. This was the 59th warmest August since records began in 1895, with 130 years of data.



August 2024 Temperature Summary | Source: NC State Climate Office

Across Eastern North Carolina, temperatures were generally near average and almost exactly in line with the 20th-century average. Since their respective records began, August 2024 was the 38th coolest at New Bern and the 50th warmest at Cape Hatteras. Additional observations can be found in Appendix A.

## MHX Select Site Temperature Statistics: August 2024

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Beaufort (KMRH)	86.3	74.3	80.3	79.5	0.8
Hatteras (KHSE)	84.7	73.8	79.3	80.7	-1.5

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
New Bern (KEWN)	87.3	70.4	78.9	78.9	-0.1

Normals are based on a period from 1990-2020.

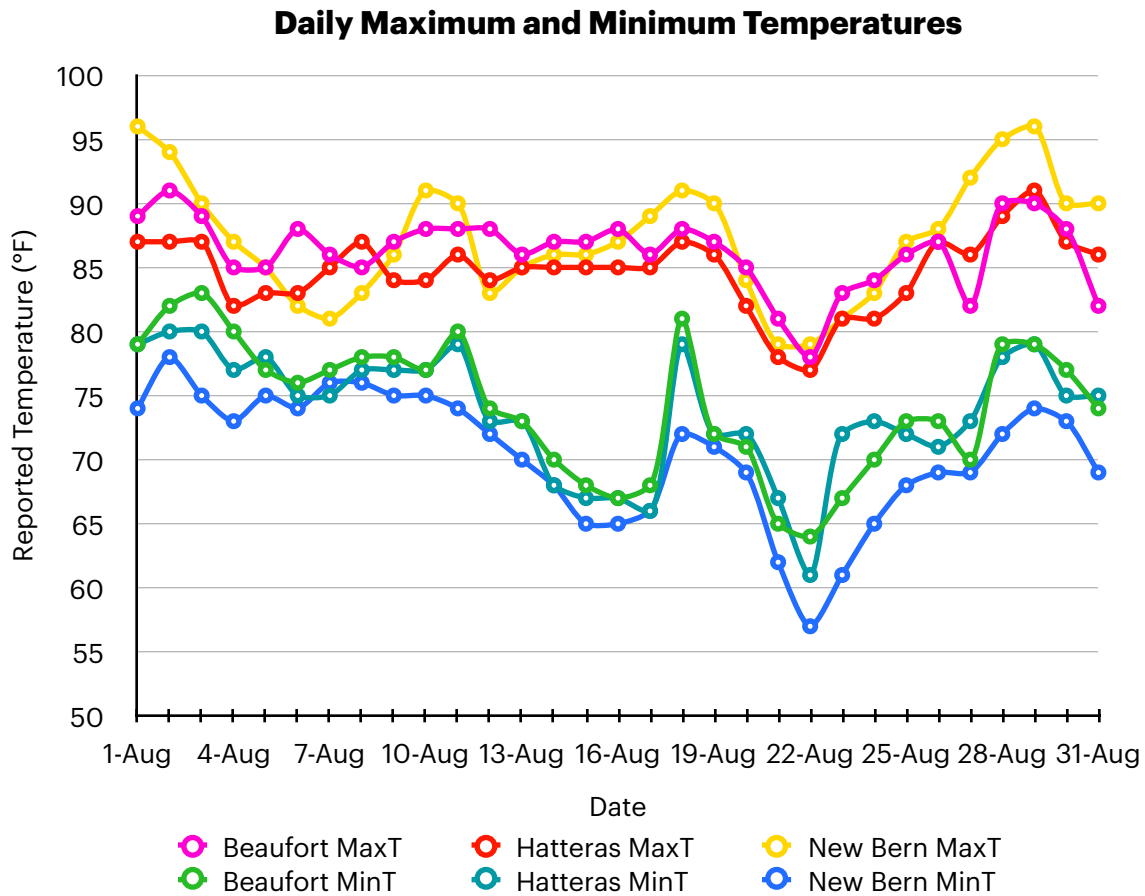
County-averaged statistics are presented in the following table. Note that mean temperature and anomaly calculations are based on a period of 1901-2000, rather than 1990-2020. Data courtesy of the National Centers for Environmental Information (NCEI).

County	Avg. Temperature (°F)	Mean (°F)	Departure (°F)	Rank
Beaufort	77.7	77.8	-0.1	47 C
Carteret	78.1	78.7	-0.6	37 C
Craven	77.6	77.8	-0.2	44 C
Dare	78.5	78.2	0.3	63 C
Duplin	77.6	77.6	0.0	57 C
Greene	77.8	77.6	0.2	57 C
Hyde	78.4	78.5	-0.1	52 C
Jones	77.4	77.5	-0.1	50 C
Lenoir	77.7	77.7	0.0	56 C
Martin	77.5	77	0.5	63 W
Onslow	77.7	77.8	-0.1	53 C
Pamlico	77.6	78.5	-0.9	28 C
Pitt	77.6	77.6	0.0	51 C
Tyrrell	78.2	77.7	0.5	61 W
Washington	77.7	77.2	0.5	61 W
<b>Area Average</b>	<b>77.8</b>	<b>77.8</b>	<b>-0.0</b>	

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

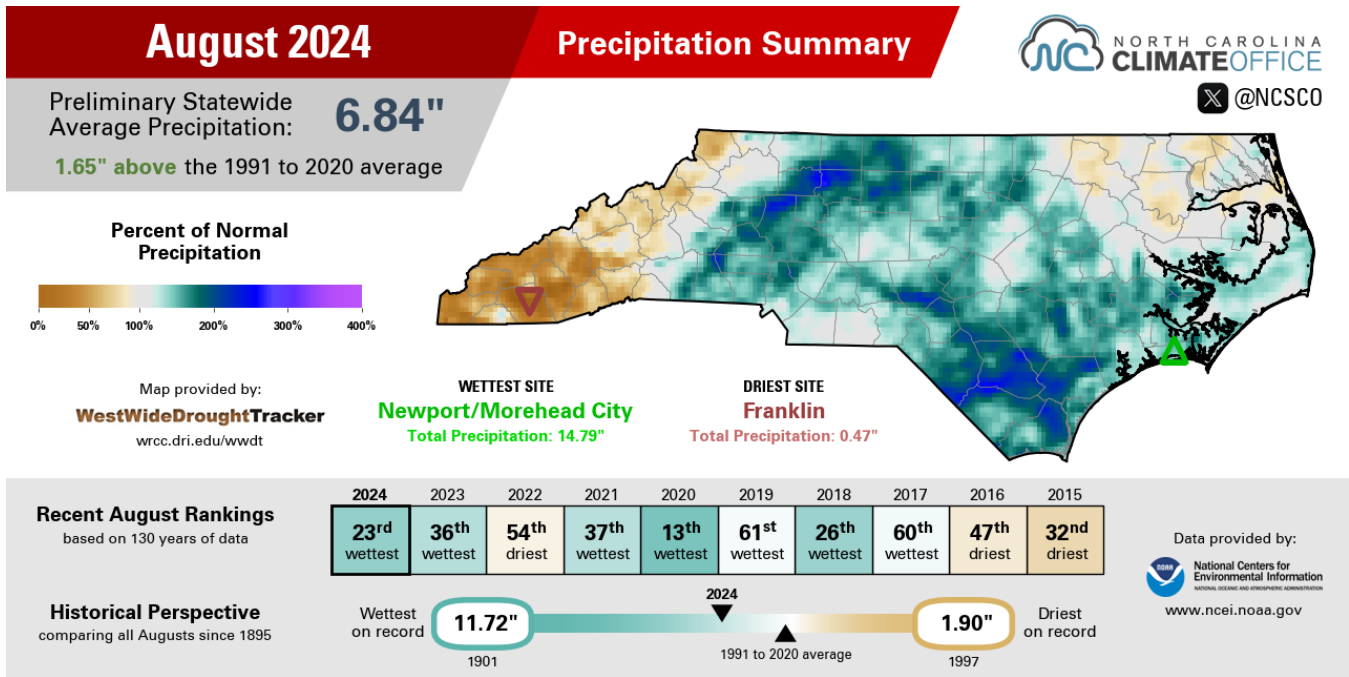
On average, the upper air pattern in August was characterized by ridging over the central United States while troughing held strong along the east and west coasts. Eastern NC saw average temperatures vary throughout the month, ranging from 3-6 degrees above average at the beginning and end of August to 3-6 degrees below average in the 3rd week. August 22nd was the coldest night of the month for many locations and broke low-temperature records. In **New Bern**, a low of 57°F broke the previous record of 60°F set in 1969. At **Cape Hatteras**, a low of 61°F broke the prior record of 62°F set in 1998.

Overall, temperatures area-wide averaged out to within 3 degrees of average for August.



# PRECIPITATION

Analysis conducted by the North Carolina State Climate Office showed a continuation of anomalously wet conditions across the state. Statewide, precipitation averaged 6.84", or 1.65" above the 30-year average. This was the 23rd wettest observed August for the state since records began in 1895.



August 2024 Precipitation Summary | Source: NC State Climate Office

Eastern North Carolina saw a highly variable precipitation pattern, with above-average rainfall along and south of Highway 70 but near normal farther north. New Bern recorded its 3rd wettest August, while Cape Hatteras recorded its 52nd. The Newport WFO was the wettest site in the state, recording 14.79" over the month. Overall, eastern NC was roughly 2 inches above the 20th-century average.

## MHX Select Site Precipitation Statistics: August 2024

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Beaufort (KMRH)	7.37	7.29	0.08
Hatteras (KHSE)	6.48	6.73	-0.25
New Bern (KEWN)	13.04	6.81	6.23

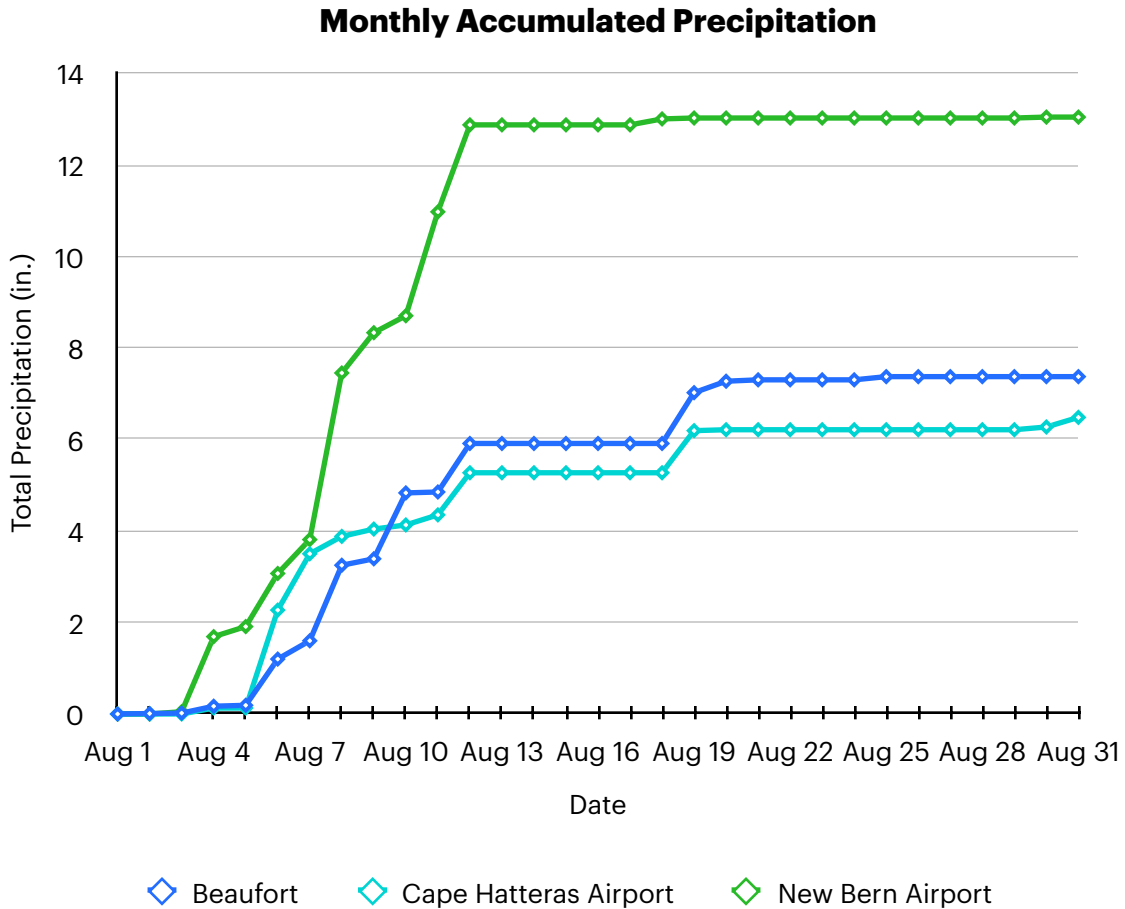
County-averaged statistics are presented in the following table. Like temperatures, mean and anomaly precipitation calculations are based on a period 1901-2000. Data courtesy of the National Centers for Environmental Information (NCEI).

<b>County</b>	<b>Avg. Accum. (in.)</b>	<b>Mean (in.)</b>	<b>Departure (in.)</b>	<b>Rank</b>
<b>Beaufort</b>	7.46	6.18	<b>1.28</b>	31 W
<b>Carteret</b>	11.11	6.87	<b>4.24</b>	14 W
<b>Craven</b>	10.25	6.47	<b>3.78</b>	11 W
<b>Dare</b>	6.48	5.78	<b>0.7</b>	46 W
<b>Duplin</b>	9.2	5.86	<b>3.34</b>	12 W
<b>Greene</b>	8.31	5.47	<b>2.84</b>	21 W
<b>Hyde</b>	7.04	6.19	<b>0.85</b>	45 W
<b>Jones</b>	10.19	6.33	<b>3.86</b>	9 W
<b>Lenoir</b>	8.76	5.73	<b>3.03</b>	15 W
<b>Martin</b>	5.4	5.58	<b>-0.18</b>	59 W
<b>Onslow</b>	10.25	6.57	<b>3.68</b>	11 W
<b>Pamlico</b>	9.89	6.69	<b>3.2</b>	17 W
<b>Pitt</b>	7.46	6.18	<b>1.28</b>	31 W
<b>Tyrrell</b>	6.79	5.9	<b>0.89</b>	38 W
<b>Washington</b>	5.95	5.82	<b>0.13</b>	58 W
<b>Area Average</b>	<b>8.30</b>	<b>6.11</b>	<b>2.19</b>	

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

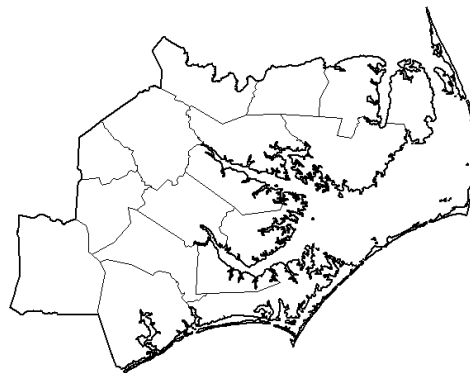
The overwhelming bulk of precipitation was associated with Hurricane Debby, which made landfall as a Category 1 hurricane along the Big Bend of Florida on Aug. 5, followed by a second landfall as a tropical storm along central South Carolina on Aug. 8. The precursor rainfall event, as well as precipitation directly associated with the cyclone, resulted in several inches of rain over the course of a week. New Bern set a daily rainfall record of 1.64” on Aug. 4, edging out the old record of 1.61” set in 2014. Overall,

precipitation ranged from near-average north of Highway 70 to nearly 200% above average south.



Heavy rainfall continued to erode drought conditions across eastern North Carolina. According to the U.S. Drought Monitor, by the beginning of September, none of the Morehead City forecast area was at any level of drought.

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



**September 3, 2024**  
(Released Thursday, Sep. 5, 2024)  
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	100.00	0.00	0.00	0.00	0.00	0.00
<b>Last Week</b> 08-27-2024	100.00	0.00	0.00	0.00	0.00	0.00
<b>3 Months Ago</b> 06-04-2024	99.43	0.57	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> 01-02-2024	98.09	3.91	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> 09-26-2023	100.00	0.00	0.00	0.00	0.00	0.00
<b>One Year Ago</b> 08-05-2023	76.55	23.45	0.00	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>

Author:  
Lindsay Johnson  
National Drought Mitigation Center



[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: August 2024

Site	Avg. High (°F)	Avg. Low (°F)	Avg. Temp (°F)	Normal (°F)	Departure (°F)
Greenville	87.6	69.5	78.6	79.0	-0.5
Kinston	87.5	69.1	78.3	79.2	-0.9
Williamston	87.2	69.4	78.3	78.4	-0.1
Plymouth	86.2	68.5	77.4	78.3	-1.0
Bayboro	85.7	68.4	77.1	77.9	-0.9
Manteo	85.7	73.2	79.5	78.2	1.3

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

### Maximum and Minimum Monthly Temperatures: August 2024

Site	Max High (°F)	Date Observed	Min Low (°F)	Date Observed
Beaufort (KMRH)	91	Aug 2	64	Aug 22
Hatteras (KHSE)	91	Aug 29	61	Aug 22
New Bern (KEWN)	96	Aug 1, 29	57	Aug 22
Greenville	97	Aug 29	55	Aug 22
Kinston	96	Aug 2, 29-30	54	Aug 22
Williamston	96	Aug 30	58	Aug 22
Plymouth	96	Aug 29	53	Aug 22
Bayboro	95	Aug 30	55	Aug 22-23
Manteo	94	Aug 3,10	66	Aug 14-15

## APPENDIX B: ADDITIONAL PRECIPITATION DATA

### Cooperative Observation Site Precipitation Statistics: August 2024

Site	Total Precipitation (in.)	Normal (in.)	Departure (in.)
Greenville	7.56	6.01	1.55
Kinston	10.18	6.36	3.82
Williamston	3.52	5.7	-2.18
Plymouth	7.71	6.6	1.11
Bayboro	9.58	7.85	1.73

Sites in red have missing data in their record.

### CoCoRaHS Monthly Accumulated Precipitation: August 2024

Site	County	Amount (in.)
Pantego 0.4 WSW	Beaufort	8.32
Newport 0.2 SW	Carteret	16.88
Beaufort 12.1 N	Carteret	16.54
Newport 2.5 W	Carteret	16.17
Beaufort 5.3 N	Carteret	14.5
Newport 1.0 N	Carteret	14.42
Beaufort 3.8 N	Carteret	13.53
Cedar Island 0.3 SSE	Carteret	13.04
Newport 1.7 SSE	Carteret	12.94
Emerald Isle 2.3 WSW	Carteret	12.83
Morehead City 6.0 WNW	Carteret	11.67

Site	County	Amount (in.)
Cape Carteret 0.8 NE	Carteret	10.72
Newport 7.1 ENE	Carteret	10.6
Newport 2.3 SE	Carteret	10.59
Swansboro 3.7 NNE	Carteret	10.42
Cape Carteret 1.5 NE	Carteret	10.28
Cedar Island 0.7 NNE	Carteret	9.76
Cedar Point 0.4 WSW	Carteret	9.58
Cedar Point 0.9 WSW	Carteret	9.25
Emerald Isle 2.1 E	Carteret	9.17
Pine Knoll Shores 0.3 NE	Carteret	8.81
Indian Beach 0.0 W	Carteret	8.63
Morehead City 0.6 NW	Carteret	8.34
Beaufort 0.5 W	Carteret	7.49
New Bern 2.9 SSE	Craven	13.56
New Bern 3.8 S	Craven	10.93
New Bern 1.5 NW	Craven	10.9
Brice Creek 0.9 WNW	Craven	10.74
Trent Woods 1.2 ENE	Craven	10.48
New Bern 5.3 SW	Craven	10.36
Trent Woods 1.3 SSE	Craven	10.3
New Bern 1.3 NNE	Craven	10.29
Bridgeton 0.3 SSE	Craven	9.89
tTrent Woods 1.0 NNE	Craven	9.78

Site	County	Amount (in.)
Rodanthe 1.0 SSE	Dare	11.1
Buxton 0.3 ENE	Dare	7.92
Manteo 2.8 NW	Dare	5.74
Southern Shores 0.5 NNE	Dare	3.32
Mount Olive 6.0 SE	Duplin	13.56
Rose Hill 0.1 NNW	Duplin	13.14
Mount Olive 2.4 SW	Duplin	9.12
Ayden 6.5 WNW	Greene	7.05
SQ Tower	Hyde	11
Ocracoke 0.2 ESE	Hyde	8.39
Englehard 0.8 NW	Hyde	7.87
Ocracoke 0.6 SW	Hyde	7.28
Pink Hill 2.5 NE	Lenoir	13.3
Kinston 4.6 ESE	Lenoir	12.8
Kinston 1.2 NW	Lenoir	8.73
Grifton 1.8 WNW	Lenoir	8.72
Kinston 4.4 WNW	Lenoir	8.48
Kinston 5.1 WNW	Lenoir	8.29
Williamston 8.9 SSE	Martin	6.68
Jamesville 6.1 SW	Martin	5.59
Jacksonville 5.4 WSW	Onslow	13.57
Jacksonville 3.3 W	Onslow	12.23
Jacksonville 4.5 NW	Onslow	12

**AUGUST 2024 REPORT**

<b>Site</b>	<b>County</b>	<b>Amount (in.)</b>
<b>Sneads Ferry 1.2 SSW</b>	Onslow	10.07
<b>Swansboro 2.8 WSW</b>	Onslow	9.84
<b>Jacksonville 1.0 NW</b>	Onslow	9.67
<b>Hubert 4.9 SE</b>	Onslow	9.65
<b>Sneads Ferry 3.3 SW</b>	Onslow	8.78
<b>Jacksonville 2.4 NNE</b>	Onslow	7.66
<b>Lowland 0.2 SE</b>	Pamlico	12.19
<b>Oriental 2.1 WSW</b>	Pamlico	10.29
<b>Merritt 1.5 WSW</b>	Pamlico	10.13
<b>Oriental 4.3 NNW</b>	Pamlico	10.06
<b>Oriental 1.7 WNW</b>	Pamlico	8.9
<b>Winterville 2.5 NNW</b>	Pitt	11.8
<b>Winterville 3.5 W</b>	Pitt	10.21
<b>Fountain 0.1 NE</b>	Pitt	9.85
<b>Winterville 1.0 ENE</b>	Pitt	9.55
<b>Greenville 4.6 W</b>	Pitt	9.43
<b>Greenville 2.8 ESE</b>	Pitt	7.27
<b>Greenville 5.37</b>	Pitt	5.37
<b>Columbia 0.8 NNE</b>	Tyrell	6.18
<b>Roper 2.4 NE</b>	Washington	7.22

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