



# CISA

A NOAA RISA TEAM

July 2019

## CISA & CoCoRaHS Condition Monitoring Newsletter

### This month's newsletter articles:

- The Importance of Condition Monitoring Reports to Document Current Drought in the Carolinas
- CoCoRaHS User Highlight: The North Carolina Climate Office
- Citizen Science Opportunity, GLOBE Observer: Clouds
- Southeast Regional Climate Update
- Consistent Observer Spotlight: Tom Arno

As always, please do not hesitate to reach out to us at [cisa@sc.edu](mailto:cisa@sc.edu) if you have any questions or comments.

### The Importance of Condition Monitoring Reports to Document Current Drought in the Carolinas

#### A Message from the NC and SC State Climate Offices

Summer in the Carolinas is known for its heat, humidity, and scattered afternoon thunderstorms, and this summer has been no exception. A few places, particularly along the coast, have seen a little more heat and a little less rain in recent months, leading to the development of Abnormally Dry conditions and Moderate Drought as classified by the [US Drought Monitor](#). Precipitation and temperature only tell part of the story when it comes to monitoring drought, and while datasets such as streamflow, groundwater, satellite-

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based estimates of vegetation health, and agricultural reports help fill in the details, we really need more on-the-ground reports to understand just how dry (or equally as important - not dry) local conditions are. This is where CoCoRaHS Condition Monitoring reports can play a vital role.

Because you're the expert on your own backyard and surroundings, you can tell when conditions are getting dry and impacts are emerging. CoCoRaHS Condition Monitoring reports offer a chance to submit your observations, which then become part of the drought monitoring process. The North Carolina Drought Management Advisory Council along with the South Carolina State Climatology Office weekly assess conditions across each state, and Condition Monitoring reports provide us with information about

- stress to perennial plants,
- impacts to lawns and gardens,
- wildlife activity,
- how smaller creeks and wetlands are faring,
- and other local changes.

Every report we receive helps us more confidently determine the states' drought status, and one area of the Carolinas where we really need more insight is along the coast. If you're a CoCoRaHS observer in these areas, you are considered to be our eyes and ears on the ground during dry times, and you can make a big impact on our drought assessment.

If you are considering submitting a Condition Monitoring report, please know that you have a ready audience, and your reports can and do make a difference!

To every observer who has ever submitted, and especially to those who submit every week, thank you for your time, insights, and expertise -- you truly are contributing to the process.

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## CoCoRaHS User Highlight: The North Carolina Climate Office

Wondering how CoCoRaHS reports get used? The North Carolina Climate Office regularly uses reports from CoCoRaHS to support their own observations. Because the NC Climate Office only has a limited number of automated weather stations, they must often deal with gaps in their coverage, especially during severe weather events. During Hurricane Florence, some automated weather stations in the Carolinas were unavailable due to power outages. Thankfully, the abundance of CoCoRaHS observers in the area allowed the NC Climate Office to make up for the lost coverage. In one

instance, a cable was accidentally damaged at an automated weather station near Wilmington just prior to the hurricane, but nearby CoCoRaHS observations provided crucial measurements to verify that the information was still correct. The supplemental coverage provided by CoCoRaHS also helped the Climate Office catch areas of localized extreme precipitation during Florence that might have otherwise been missed by their own station networks. Additionally, when meteorologists detect anomalous or extreme events, Condition Monitoring reports provide them with a way to corroborate their measurements and better understand what they're seeing. When severe weather strikes, CoCoRaHS serves as a critical support system for automated systems. According to meteorologist David Glenn, "so long as someone checks their CoCoRaHS rain gauge daily, they will forever become a part of history for extreme precipitation events like Hurricane Florence."

For more information,  
visit <https://climate.ncsu.edu/climateblog?id=280>

## **Citizen Scientist Opportunity GLOBE Observer: Clouds**

NASA and The GLOBE Project have partnered to create a citizen science project with a goal of helping scientist better understand the sky and clouds above us. Since NASA satellites only collect data from above the clouds, GLOBE needs your help with collecting data observed from the ground. To participate, simply download the app to begin submitting photos of cloud cover in your area, record observations of the sky, and compare your findings with images from NASA Satellites. More information about getting started can be found [here](#), as well as a video detailing the project below.



**GLOBE Observer Cloud Science**

# Southeast Regional Climate Update

The Southeast Regional Climate Center has released their [Monthly Climate Report](#) for June.

## Here's what you need to know:

**Temperature:** Temperatures across the Southeast and Puerto Rico fell within average ranges, as 40% of stations recorded temperatures within 1 degree F of normal. Florida, however, experienced above average temperatures in comparison to the rest of the Southeast. Three different stations throughout Florida (Plant City, Gainesville, and Miami) were recorded in the top 5 warmest Junes to date.

**Precipitation:** Precipitation levels fluctuated across the Southeast region in the month of June, which is not uncommon for summer months. Wetter areas included eastern Virginia, western NC, the southern half of SC, and Georgia. Drier areas included southern and coastal NC, the northern half of SC, select areas of Alabama, and south Florida.

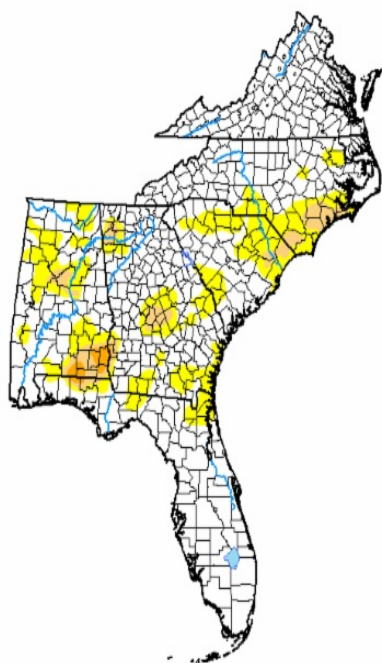
**Severe Weather:** 1,001 severe weather events were recorded across the region last month. Roughly 95% of these events were classified as strong thunderstorm winds, and about half of these occurred on June 20th alone. Columbia, SC experienced wind speeds of 79 miles per hour, resulting in one fatality.

**Drought:** Drought conditions last month subsided across the Southeast region. Moderate drought, or D1 conditions, decreased from 29.8% to 6.4% over the course of the month. Furthermore, abnormally dry (Do) conditions decreased to 15.5% of the region by the end of the month. In Puerto Rico, moderate drought conditions increased from 15.5% to 32.2% over the month of June.

The most recent [National Drought Monitor](#) report was released on July 18th, 2019. Currently, 23.92% of the Southeast is designated as Abnormally Dry (Do) and 4.9% of the region is in a state of Moderate Drought (D1).

**U.S. Drought Monitor  
Southeast**

**July 16, 2019**  
(Released Thursday, Jul. 18, 2019)  
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	76.08	23.92	4.90	0.79	0.00	0.00
Last Week 07-09-2019	73.31	26.69	6.43	0.66	0.00	0.00
3 Months Ago 04-16-2019	64.79	35.21	9.76	0.00	0.00	0.00
Start of Calendar Year 01-01-2019	93.87	6.13	4.43	0.00	0.00	0.00
Start of Water Year 09-25-2018	86.18	13.82	2.97	0.00	0.00	0.00
One Year Ago 07-17-2018	94.28	5.72	0.00	0.00	0.00	0.00

**Intensity**



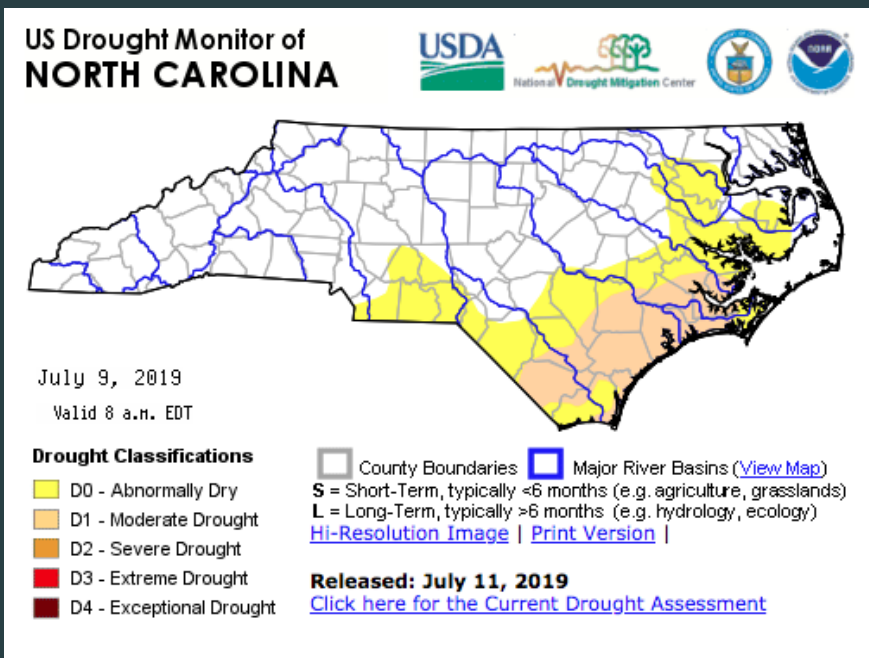
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

**Author:**  
Brad Rippey  
U.S. Department of Agriculture



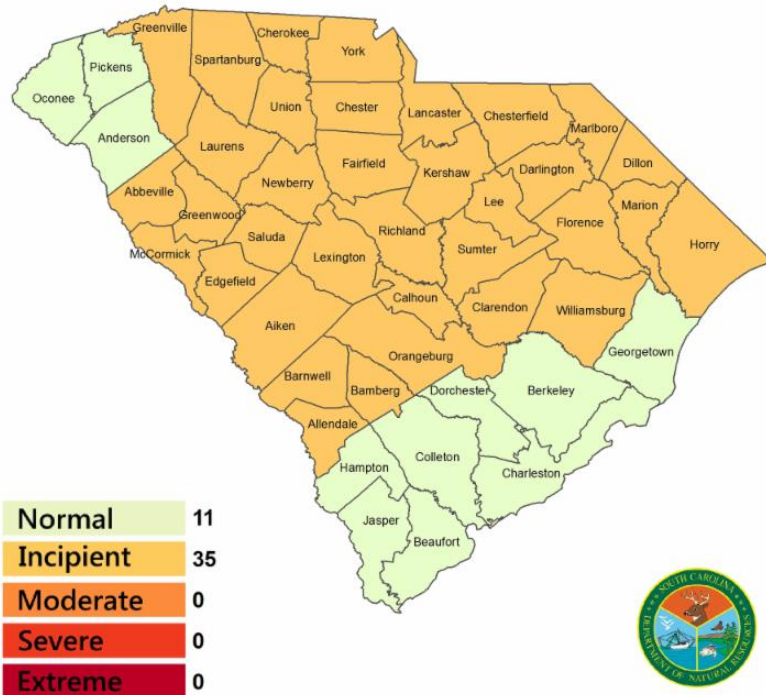
[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

The [North Carolina Drought Management Advisory Council](#) updated and released their drought status on July 11, 2019. At present, 18 North Carolina counties are experiencing abnormally dry (D0) conditions, and 11 counties are experiencing moderate drought (D1) conditions.



The [South Carolina Drought Response Committee](#) had their most recent meeting on Friday, July 12th. The Drought Committee declared that 35 South Carolina counties are in a state of Incipient Drought, and 11 counties are experiencing normal conditions.

## Drought Status: 07-12-2019



Number of counties in each category.



SC Department of Natural Resources  
State Climate Office

Remember, condition monitoring reports provide crucial data regardless of drought status. Consistency is key when it comes to being a great CoCoRaHS observer. CoCoRaHS condition monitoring reports help detect the early signs of drought, so remember to keep reporting!

## Consistent Observer Spotlight Tom Arno

Our spotlight observer for the month of July is Tom Arno, from Mt. Pleasant, South Carolina. Tom started weather reporting in the 2000's when he served as a radio weather forecaster and operational meteorologist in Pennsylvania. Tom's favorite places to make observations for condition monitoring reports are his yard and garden at home. His favorite condition monitoring memory was a year and a half ago when his station recorded over 28 inches of rain and his gauge had to be overflowed into a bucket to measure the accurate amount of rainfall.



Tom's advice to fellow observers is to "enjoy what you do", and adds that "everyone can contribute something" when it comes to condition monitoring.

Thanks to all of our Consistent Reporters for the month of June! The 28 observer stations are as follows:

#### SOUTH CAROLINA

SC-AK-75  
SC-AN-21  
SC-BF-10  
SC-BF-23  
SC-BF-50  
SC-DC-55  
SC-GV-105  
SC-GV-15  
SC-GV-60  
SC-RC-12  
SC-RC-88

#### NORTH CAROLINA

NC-BC-1  
NC-BC-150  
NC-BK-4  
NC-CM-42  
NC-DH-48  
NC-DH-6  
NC-GL-16  
NC-HK-3  
NC-MS-18  
NC-MS-5  
NC-PR-5  
NC-WK-185  
NC-WK-203  
NC-WK-6

Want to Join the Club of Consistent Reporters?  
We use a threshold of 20 reports over the last 12 months for a station to be considered "consistent." So, submitting a report about once every two weeks will help you reach this goal.

New to condition monitoring? Don't be discouraged! If you submit a report once a week, you can become a "Consistent

Station" in as little as five months. Remember - consistency is key for condition monitoring!

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Feel free to contact us with any questions.  
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