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October 2017

# CISA & CoCoRaHS Condition Monitoring Newsletter

This month's newsletter includes:

- Creepy Climate and Weather Facts
- NEW CoCoRaHS Journal Article
- A Southeast Regional Climate Update
- CoCoRaHS Observer Call Recap
- Condition Monitoring Reports Highlight: Hurricane Irma and Maria
- Observer Spotlights

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

The CISA Team - Amanda, Ellie, Kirsten, and Kerry

## Creepy Climate and Weather Facts



In celebration of the upcoming Halloween festivities, we found a few fun facts about how weather and climate can make things seem even spookier at this time of year. Be sure to share in your condition monitoring

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reports if you see any signs of these creepy weather phenomena in your area this week!

- Mild weather and drought can cause [houseflies to emerge](#) earlier. - University of California
- Warming climates and droughts are [killing bats](#); they experience dehydration more easily than other species. - BBC
- [Sea mist](#) occurs when mild air moves over the sea, which is cooler. It can be particularly spooky when sea mist comes in during the day and visibility is drastically reduced. The spooky nature of sea mist is used by Bram Stoker to announce the mysterious arrival of Count Dracula onto the shores. -Metoffice UK

## NEW Article about Condition Monitoring

A new article about the Carolinas pilot condition monitoring program has been accepted and will be published in the Bulletin of the American Meteorological Society (BAMS) in the near future. The article is titled "[CoCoRaHS Observers Contribute to "Condition Monitoring" in the Carolinas: A New Initiative Addresses Needs for Drought Impacts Information.](#)" The article is authored by CISA's Kirsten Lackstrom, Amanda Farris, and former graduate student David Eckhardt as well as [CoCoRaHS](#) team members Nolan Doesken, Henry Reges and Julian Turner, Kelly Smith from the [National Drought Mitigation Center](#) and Rebecca Ward from the [State Climate Office of North Carolina](#).

## SE Regional Climate Update

The NOAA National Centers for Environmental Information has released the [September National State of the Climate Report](#) . Here are some highlights:

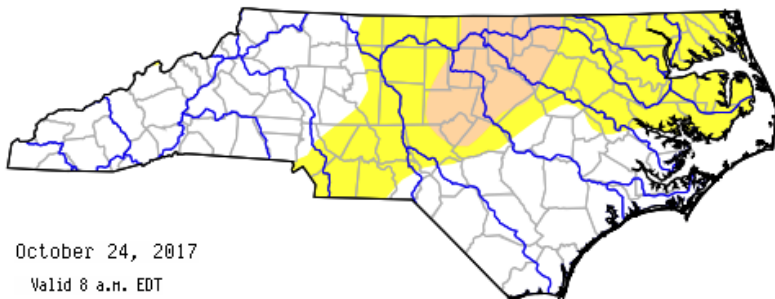
- The September national average temperature was 66.3°F, 1.4°F above the 20th century average, and ranked among the warmest third of the historical record. The average maximum (daytime) temperature during September was 78.8°F, 1.0F above the 20th century average, the 41th warmest on record but coolest since 2014. The contiguous U.S. average minimum (nighttime) temperature during September was 53.8°F, 1.9°F above the 20th century average, the 16th warmest on record.

- The national precipitation total was 2.22 inches, 0.27 inch below average, and ranked among the driest third of the historical record.
- According to the October 3rd U.S. Drought Monitor report, 14.4 percent of the contiguous U.S. is in drought, up nearly 2.6 percent when compared to the end of August.

Is there drought where you live? [Submit a Condition Monitoring Report](#) and let us know what drought looks like in your area!

The [North Carolina Drought Management Advisory Council](#) updated their drought status as of October 24, 2017. There are currently 36 counties with abnormally dry (D0) conditions and 12 counties with Moderate Drought (D1) conditions.

**US Drought Monitor of NORTH CAROLINA**



October 24, 2017  
Valid 8 a.m. EDT

**Drought Classifications**

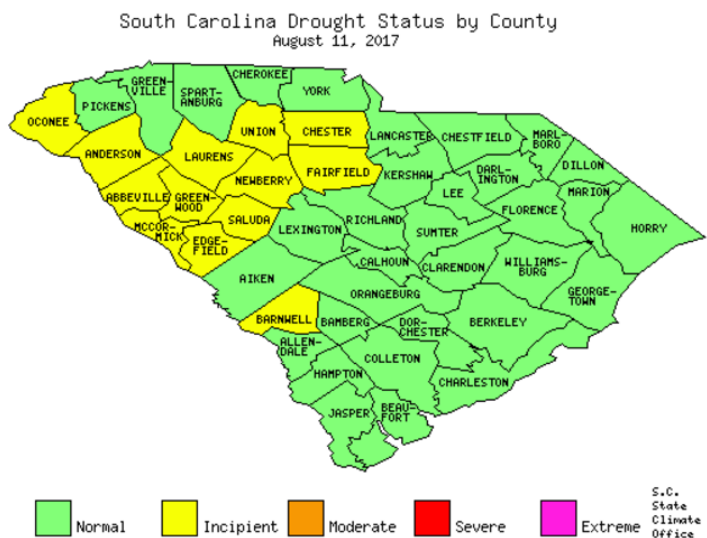
- D0 - Abnormally Dry
- D1 - Moderate Drought
- D2 - Severe Drought
- D3 - Extreme Drought
- D4 - Exceptional Drought

County Boundaries  Major River Basins ([View Map](#))  
**S** = Short-Term, typically <6 months (e.g. agriculture, grasslands)  
**L** = Long-Term, typically >6 months (e.g. hydrology, ecology)  
[Hi-Resolution Image](#) | [Print Version](#) |

Map released by the North Carolina D.M.A.C. on October 17, 2017.

The [South Carolina Drought Response Committee](#) has not updated their map since August 11, 2017. There are currently 13 counties in the state with an incipient drought status while the rest of the state remains under normal conditions. An update is expected soon.

**Summer rains have eliminated drought status for five counties**



**CoCoRaHS Observer Call Recap**

On October 18th, we had a great observer call about condition monitoring in the Carolinas! There were ten observers from North Carolina and four observers from South Carolina on the call. Rebecca Ward from the NC State Climatologist Office joined us as well.

We were especially honored to have the one and only Nolan Doesken, executive director of CoCoRaHS, join us as well. Now that condition monitoring is available to all CoCoRaHS observers nationally, the CISA team is beginning to wrap up the Carolinas pilot project that started it all. Nolan joined the call to give a special Thanks! to the Carolinas CoCoRaHS observers who helped start condition monitoring back in 2013.

From the more local perspective Rebecca, who has been a test users of condition monitoring reports during the pilot project, emphasized how valuable condition monitoring reports are even if observers are unsure about the "correct" scale bar value to check. She says she reads every report submitted in North Carolina and they help determine North Carolina's weekly drought map. In South Carolina, the National Weather Service and Drought Response Committee use the reports to complete the drought picture for the state. Concerns about the subjectivity of condition monitoring reports were brought up as well, based on feedback you shared in the most recent online survey. Nolan explained that observers are "the experts in your own area" and end-users are looking for the more subjective details, not just numbers, in these reports. It's ok to be a little subjective in your reports!

Still not sure what you should be reporting? The [Condition Monitoring Web Map](#) shows reports from all over the United States, Canada, and the Bahamas if you are looking for ideas. We also created a [Condition Monitoring Animation](#) that gives examples of subjects to report on such as wildlife, local streams, and your garden.

Finally, the CISA team noted that, as the Carolinas pilot project comes to an end, you will continue to receive communications from CISA such as this newsletter. If there is something you really like about our communications (or have suggestions for improvements) be sure to let us know at [CISA@sc.edu](mailto:CISA@sc.edu).

## Condition Monitoring Reports Highlight: Hurricane Irma and Hurricane Maria

Hurricane Irma was the first Category 5 hurricane of the 2017 Atlantic hurricane season and made landfall in Florida on September 10, 2017. Hurricane Maria was the second category 5 hurricane of the season. Maria struck Puerto Rico as a Category 4 on September 20, 2017. Here are some observer condition monitoring reports concerning the Hurricanes. If you'd like to read more, you will find the reports on the [Condition Monitoring Web Map](#)!



Hurricane Irma-AP Images

### Hurricane Irma

**FL-SM-18 (9/11/17):** While my official report of 6.11 inches for hurricane Irma was what I had in my gauge, a neighbor down the street got 10.56 inches in his gauge. Mine is fairly close to



some tall trees so I believe that the 10.56 may be a more representative figure.

**SC-BF-10 (9/11/17):** Conditions near normal. Preparing for Irma yesterday, which hit with full force this morning - tropical winds. 04:00 the real impact started. At 07:00, I reported 1.00" As of 9:30 a. there appears to be another 2 1/2 to 3" of rain in the rain gauge. There are sustained winds of approximate 40 mph with gusts much higher. This is expected to last for many hours today. Hurricane shutters up, did not evacuate. Instead, we became an evacuation center for our family from SAV, GA who live on one of the islands. We still have power, although many outside our community do not. I can see flooding in the streets and between the yards. No emergency response occurring at this time.

**FL-PS-51 (9/13/17):** After hurricane Irma ground is saturated with lots of wind damage! Power remains out for many of us, gas is hard to find and only a few places open for a hot meal.

**FL-PS-51 (9/17/17):** Finally, power was restored six days after Hurricane Irma! We were the last folks in our area to get power back on. Steamy hot days and totally sweltering nights. Wow the tempers we flaring, most folks were helping out everyone but the angry folks stood out! Out of work, no money already, hungry for a hot meal or a shower, traffic lights out, just so many reasons to be Hot!

### **Hurricane Maria**

**SC-BF-23 (9/25/17):** We've only gotten 0.02" of rain in almost two weeks so things are drying out and the roads are dusting up nicely. With all the hurricane's and such tourism is down. Very little business or traffic. Tides are running higher than normal due to the presence of Hurricane "MARIA" passing to the east of us as we cyber speak. No direct wind threats but for high surf and rip current warnings along the beaches. Not here.. mostly about Tybee Isl. Ga. That's within sight right across the sound to the south of us. It's hurting their business because Highway 80 E. ends on Tybee Isl. GA and that road can be closed on these high tides due to saltwater coming over it. They close the beach because rip currents suddenly grabs you and whisks you right out into the ocean and somebody has to go out and bring you back. For several days these high waters have passed over what little is left of our new sand dunes and pushed them into the trees. And as I've mentioned before, our new beach is two-hundred feet further in than it was and full of dead and dying trees. It's really awesome to see and downright dangerous to even get close to. We have to wonder how all this is going to play out? I'll till my garden today and plant a nice 10x10 patch of garlic. Followed by greens, cabbage, kale, broccoli, etc.etc.etc. We just love our winter garden... Still lots of wings flapping with

the fall birds and butterflies migrating. Fall is a very exciting time it is. Cheers mates... Daufuskie Dundee.

## Observer Spotlights

In honor of the launch of our national condition monitoring web map, we have decided to start including spotlights of observers from around the country as well as our Carolina observers. This month, we have Carol Parron from North Carolina and Cathy Roberts from Maine. They are both frequent reporters and we appreciate their participation!

### Carol Parron from Johnston County, North Carolina

Carol uses rainfall, water level in her 15-acre pond, and the condition of both plants in her vegetable garden and wild plants on their property as condition monitoring indicators. She says, "Unfortunately, they don't always tell the same story, sometimes making an overall assessment challenging."



When asked about her favorite memory of condition monitoring, Carol said "I enjoyed documenting the progression of spring; when various deciduous trees leafed out or bloomed; when wildlife nested or was first spotted. Hopefully it will be interesting to see how these events correspond to like ones in the future."

Carol offered a few words of advice and motivation for other observers, "[Making observations not only has hopefully helped CISA, but made me more aware of my environment.](#)"

### Cathy Roberts from Waldo County, Maine

Cathy's favorite condition monitoring indicator to report on is her organic garden. She has been gardening for 30 years so she feels like she can make comparisons from many years of experience and observations.

When asked about her favorite place for condition monitoring, Cathy said, "My property abuts a blueberry barren that sits on the top of an 800' mountain. I hike to the top regularly and observe the noticeable changes in each season. The view is spectacular and I can usually see the fall foliage gradually change to a hue of beautiful colors. Unfortunately, due to excessive dry conditions that we have had over the last several weeks, I reported that the foliage this year was disappointingly muted. What is normally a patchwork of bright reds and yellows, this year the colors are dull and

mostly brown. This remains one of my favorite viewing spots, even though some of my observations are disturbing changes."

Cathy's advice and motivation for other observers was, "By being a part of the monitoring community, I feel like my anecdotal observations have some value to the scientific community. As a citizen, I feel like these general observations have an important role in evaluating climate change. I can see the importance of having all US regions well represented to get a good sampling of noticeable changes."



Cathy also said she is very excited to be connected now that CoCoRaHS Condition Monitoring is national!

Feel free to contact us with any questions.

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