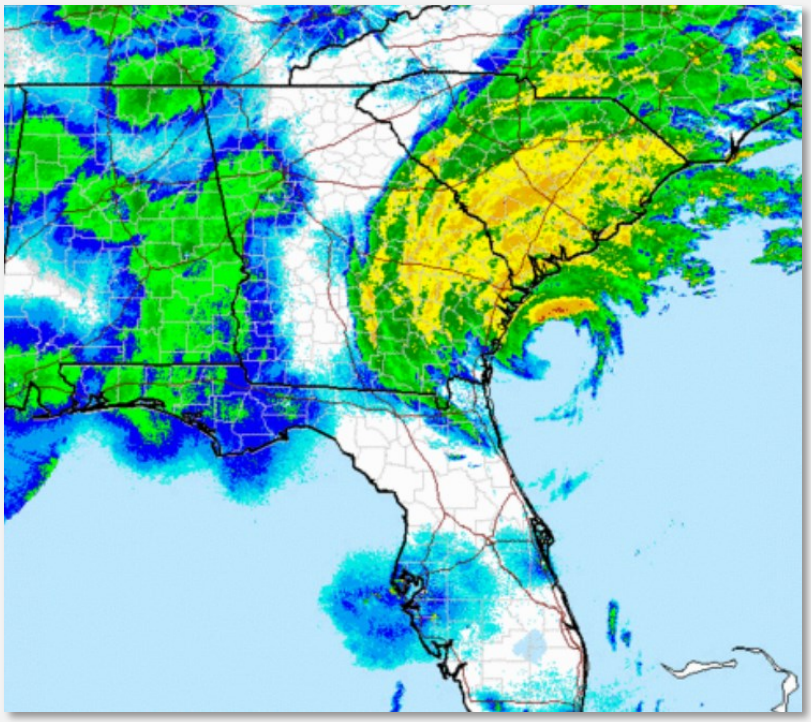
Carolina CoCoRaHS

SUMMER 2017

Hurricane Matthew in South Carolina



Hurricane Matthew was the first South Carolina hurricane landfall since Hurricane Charley and Gaston came ashore in 2004. It made landfall on the South Carolina coast, near McClellanville, on October 8th , 2016, at 10:45 AM EDT, as a Category 1 hurricane with 75 mph winds.

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Impact of Hurricane Matthew

Hurricane Matthew developed into a rare 160 mph Category 5 hurricane in the central Caribbean during the first week of October. Moving north out of the Caribbean, Hurricane Matthew decimated portions of Haiti and the Bahamas with torrential rains and 145 mph winds. In the days just prior to landfall Matthew battered the east coast of Florida and Georgia as the hurricane tracked northwards towards South Carolina.

The approach of Hurricane Matthew triggered the **evacuation of the entire South Carolina coast** and the first successful complete lane reversal of Interstate 26 from Charleston to Columbia. **Seventy-seven emergency shelters were opened across the State to support the coastal evacuation.**

Matthew caused severe beach erosion and hurricane force gusts downed thousands of trees along the coast and well inland. The remnants of Matthew dumped **10-17 inches of rain** from Savannah, Georgia, through Florence South Carolina and into a wide area of eastern North Carolina. The heavy rain forced rivers in eastern South Carolina and North Carolina above major flood stage.

The **highest rainfall recorded** at a station in South Carolina from Hurricane Matthew was **17.22 inches** at the Dillon site, which **exceeded the 1000 Year mark for a 48 hour rainfall.** The most wide-spread heavy rain fell in the Pee Dee Basin and on into North Carolina, where major flooding occurred.

Many coastal plain rivers in the Pee Dee basin experienced major flooding. The town of **Nichols, South Carolina sits near the Lumber River, just upstream of the confluence of the Little Pee Dee. The town suffered from significant flooding**, as you can see in the imagery above.

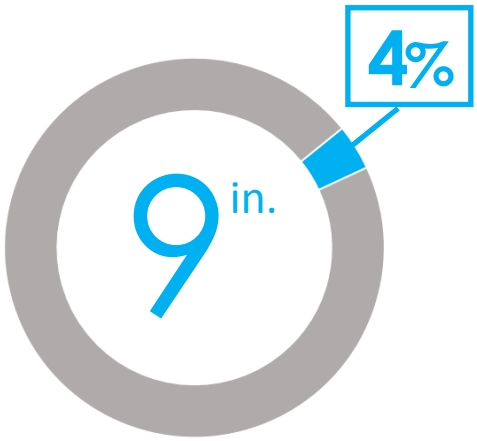
Check out the report at http://www.dnr.sc.gov/climate/sco/

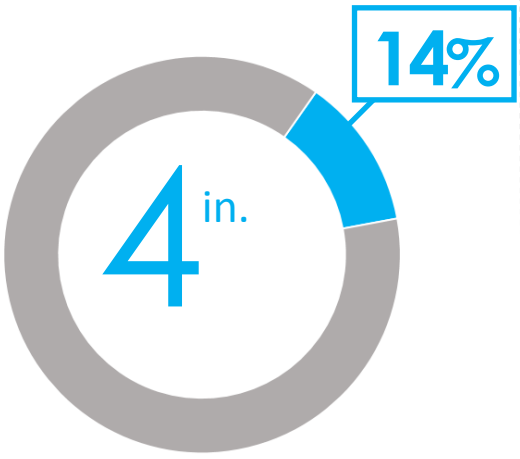
CoCoRaHS Activity During Hurricane Matthew

936 Daily Reports Were Recorded In South Carolina Between 10/8/2016 and 10/10/2016

Distribution Of Observations Over Three Day Event Period

Recorded Values Greater Or Equal To





Highest Recorded Value

16.56 in.
Hilton Head Island 4.0 N
10/08/2016

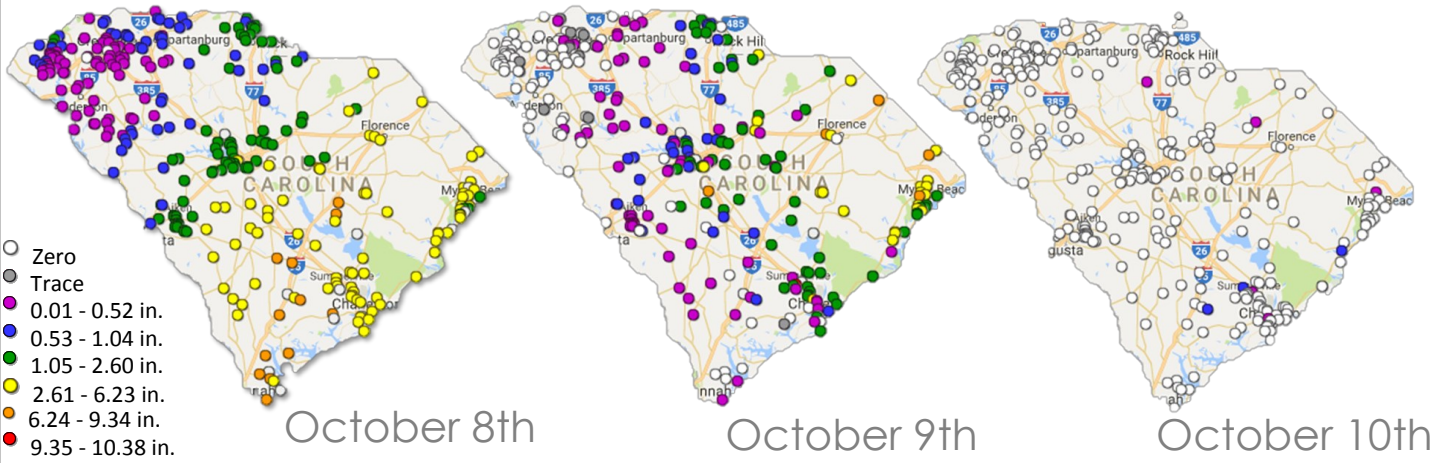
10.38 in.
Summerville 0.9 NNW
10/09/2016

0.07 in.
Oak Grove 1.4 N
10/10/2016

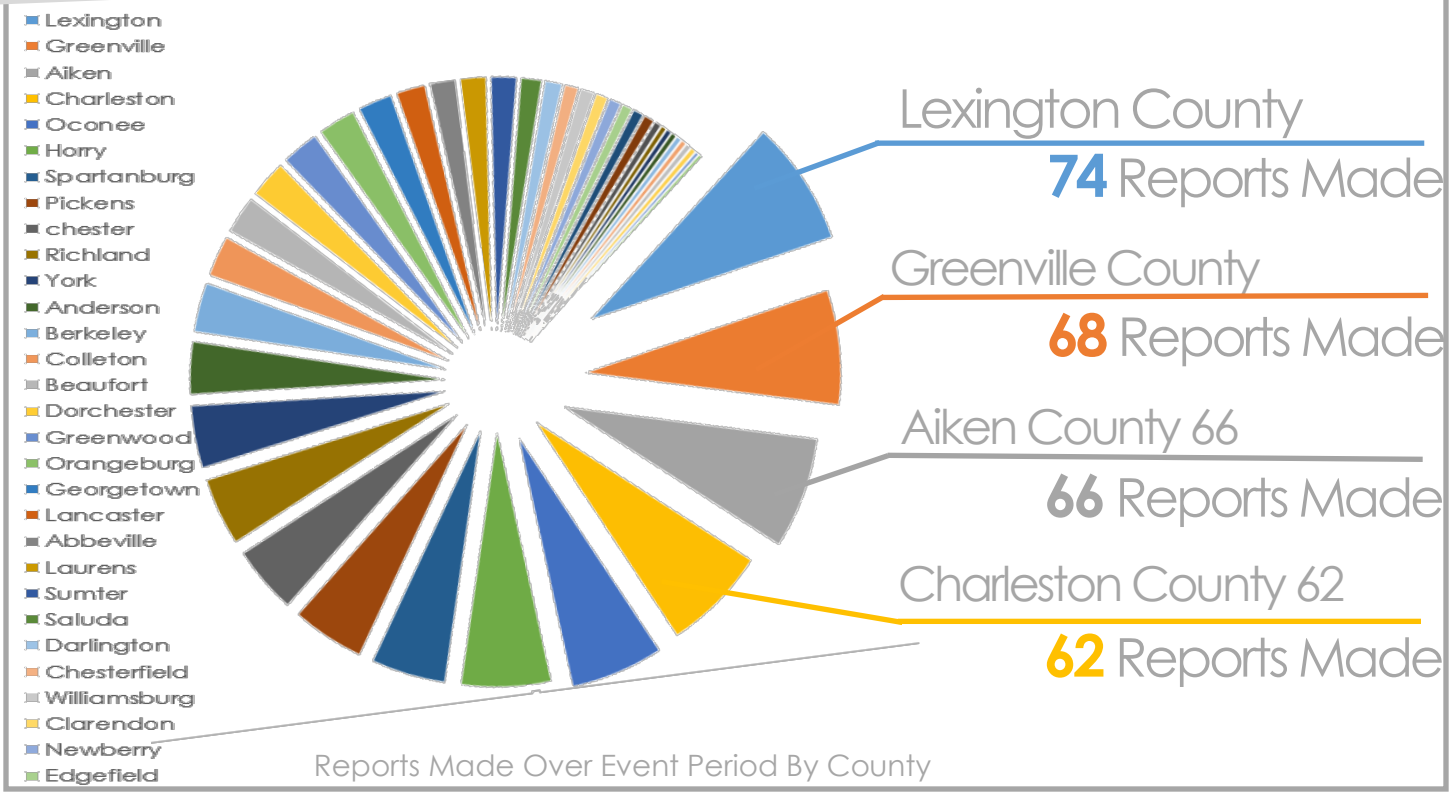
Check Out The Full Report at http://www.dnr.sc.gov/climate/sco/

Hurricane Matthew In South Carolina

CoCoRaHS Precipitation Map



South Carolina Climate Office would like to thank all CoCoRaHS members who made observations during this event! Without CoCoRaHS, we would not have been able to accurately document the extreme range in rainfall values.



Have you seen the Carolinas Condition Monitoring web map lately?

Why should you care about CoCoRaHS condition monitoring reports ?

Carolinas Integrated Sciences and Assessments
A NOAA RISA TEAM

The web map displays reports submitted by CoCoRaHS citizen science volunteers describing conditions that have been affected by drought, recent weather events, or seasonal changes. The Carolinas Integrated Sciences & Assessments (CISA) team initially developed the web map, in collaboration with CoCoRaHS, to enhance the reporting and communication of drought impacts.

These reports are only supposed to document drought conditions, right? Wrong!

CoCoRaHS observers give us much more information than just whether or not things are dry in their area. And you can see all of these reports on the Carolinas condition monitoring web map!

CoCoRaHS condition monitoring reports provide valuable information about the impacts of extreme events we've experienced over the last year including those leading up to and in the aftermath of Hurricane Matthew, the late freeze this spring, and the extent of air quality impacts from wildfires last fall.

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CoCoRaHS condition monitoring reports also share great information about the transition from normal to dry or wet conditions.

CISA Wants To Hear From You About How You Use CoCoRaHS condition Monitoring Reports!

The CISA team will reach out this fall to ask for feedback on how these reports (and the web map) have been useful to you and other decision makers in the region.

Check out the map to see what information observers are recording. The feedback you provide will help us determine if and how condition monitoring is valuable and if we should continue to ask our CoCoRaHS observers to submit these reports in addition to their daily precipitation measurements. We want to make an informed decision about our recommendations for the project as it becomes a national initiative. Hearing from you is a very important part of that process.

As always, thank you for your help in evaluating this process.

Best,

The CISA Team

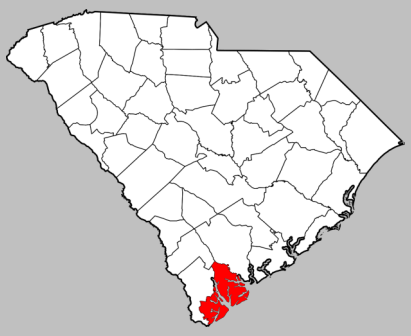
~Amanda, Ellie, Kerry, Kirsten, and Meghan

Check out the map at www.cisa.sc.edu/map

2008-2017 CoCoRaHS Observers In Review

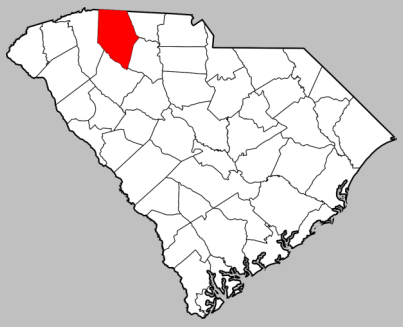
Notable Members

Hilton Head Island 4.0



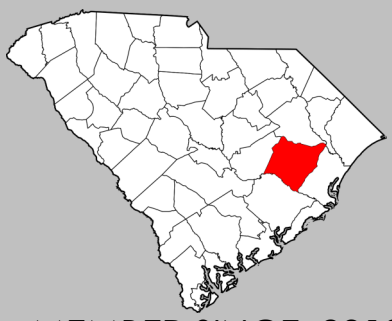
MEMBER SINCE: **2008**
DAYS MISSED: **30**

Lyman 5.3 WNW



MEMBER SINCE: **2009**
DAYS MISSED: **1**

Kingstree 7.9 NW



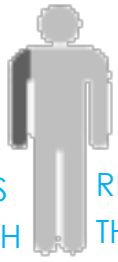
MEMBER SINCE: **2010**
DAYS MISSED: **3**

Out of 1520 Who Have Ever Signed Up

66% HAVE MADE REPORTS

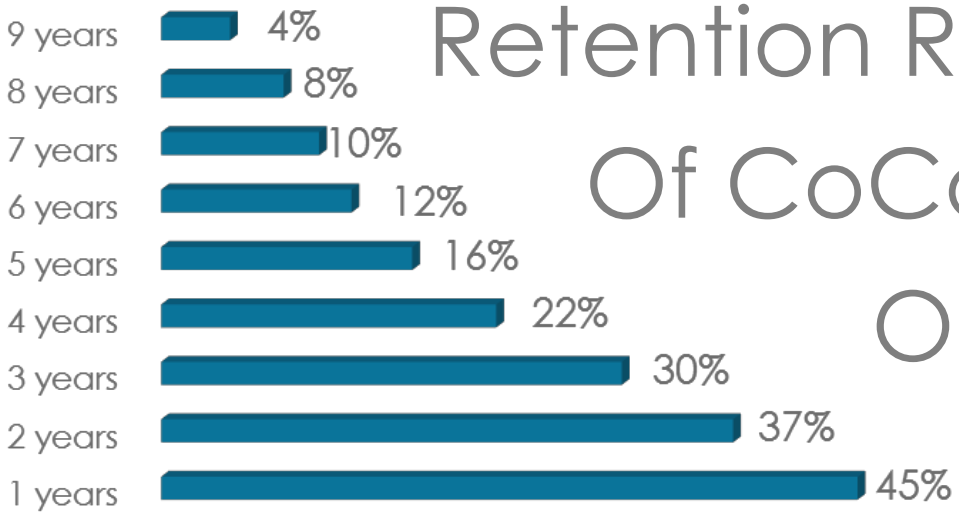
34% NEVER MADE A REPORT

4% REPORTED LESS THAN 1 MONTH



3% REPORTED LESS THAN 2 MONTHS

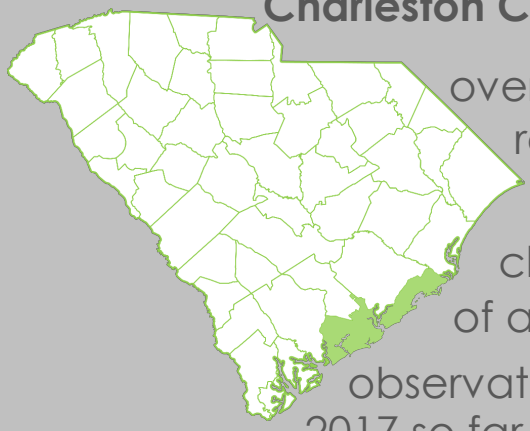
Retention Rate Of CoCoRaHS Observers



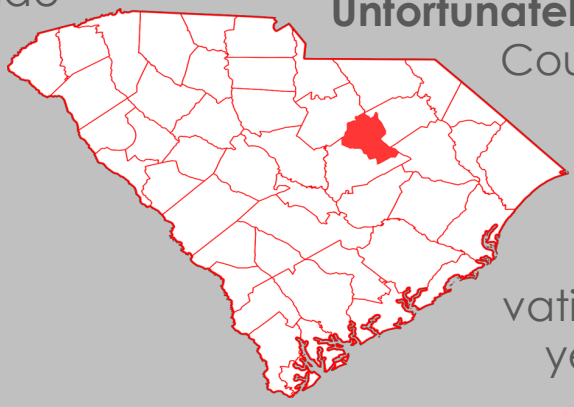
2017 In Review

Since January 1st 2017

Number of Observations Made	**70,708**
Number of Individual Stations That Made Reports	**515**
Greatest Total Precip(in.) Recorded	Beaufort 4.0 W **7.72** in-4/6/2017



Charleston County has made over **6,000** reports this year. That's close to **10%** of all observations made in 2017 so far.



Unfortunately, Lee County has not made a single obser-vation this year.

Statewide 2017 Overview

Significant Weather Reports	58
Daily Comments	5,062
Hail Reports	32 **Largest:** 1 3/4" golf ball size on 03/21/2017 Taylor 6.1 NNW
5 Counties with Highest Number of Active Observers	Charleston, Lexington, Oconee, Greenville, Spartanburg
Counties with Under 2 Active Observers	Allendale, Barnwell, Calhoun, Chesterfield, Jasper, Marlboro, Dillon, Fairfield, Marion, McCormick, Union

Help Us Recruit New Observers!

It Only Takes 4 Simple Steps

Register

View Online Training Slideshow

Acquire Rain Gauge

Record and Report Observations!

Visit http://www.cocorahs.org/ For More Information

CoCoRaHS Summer 2017 Contributors

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