

Winter 2014 |

# New Mexico CoCoRaHS News

## A Message from the State Coordinator

It is hard to believe that 2013 is at an end and we're starting another year. It has been a successful year and we're thankful for your hard work and partnership in creating a valuable climate dataset for New Mexico. We have a number of observers who have been continuously collecting data for more than 8 years. The number of uses of your observations and its significance in the climate community also continues to amaze me. I counted about 424 new observers joining in 2013 from all over the state. Our spring recruitment blitz (or "March Madness") was successful as we gained 40 observers just in March; our state was ranked number 7 in the US for the most new members. I'm personally looking forward to moving up in the rankings for 2014! Thanks to all who also participated in the Field Photo Weekend project. If you have any interesting weather pictures you'd like to share with NM CoCoRaHS community, please email [cocorahs@nmsu.edu](mailto:cocorahs@nmsu.edu).

This past year's weather has been interesting, spanning from extreme drought to flooding. The hottest topic (pun intended) of the year was the drought. We appreciate your perseverance by entering your "zeros." The drought intensity peaked in late June, with over 98% of the state's land area in severe drought or worse and 44% of the area categorized in exceptional drought. The first half of 2013 was the 7<sup>th</sup> driest on record dating back to 1895. The monsoon provided some relief to most of NM and was the first above normal precipitation month since December 2012; July was the 17<sup>th</sup> wettest on record. The record breaking September storm dumped much needed rain to New Mexico and Colorado. For NM it was the 2<sup>nd</sup> wettest September on record. The precipitation over the Silver Fire burned areas brought flooding concerns downstream as discussed later in this newsletter. Even with the September rains, the state remained locked in drought as moderate to extreme drought still covered nearly 75% of the state. By the end of November, state-wide precipitation was at 107% of the 20<sup>th</sup> century average but more than 75% of the state remains in moderate drought or worse.

In 2014 the NM CoCoRaHS program will be working on expanding its reach into Mexico. We now have some materials translated into Spanish and will continue to work on more this year. Our web page contains these and other promotional materials. <http://weather.nmsu.edu/cocorahs/>. The national office has also been promoting observations of evapotranspiration using the ETGage. We have two observers in NM collecting this so far. Let me know if you are interested in this. Again, thanks for your hard work and attention to details and if you have any questions feel free to contact myself, a regional or county coordinator.

Sincerely,  
Dave DuBois

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## Contents

Special Interest Articles	
State Coordinator's Message	1
Wildfire and Rain Impacts	2
Reporting Winter Precipitation	2
September Rain Event	3
Individual Highlights	
By the Numbers	2
Observer Comments	3



Percha Creek on September 16, 2013. Photo by Russ Bowen.

## Wildfire and Rain Impacts

While both monsoon rains and wildfires can have positive natural impacts, sometimes they can come together in inconvenient ways for people. As an example, the combination of the Silver Fire and two rain events this summer brought flooding fears to Percha Creek in Sierra County near Hillsboro.

Two rain events—one on August 4<sup>th</sup> and then the September storm—brought rainfall debris down the creek. Russ Bowen (a CoCoRaHS

observer since 2012 and a National Weather Service Coop observer since 2004) said that “the Percha stayed within its banks, thankfully. No damage in Hillsboro, and not as high as in the 1999 flood but still impressive.” Russ will assure you that this year has been wet, as the amount of precipitation in 2011, 2012 and the first half of 2013 almost equals the amount received in the second half of 2013.

It’s likely your station saw similar numbers as a result of the rain event in September. For more, see page 3.

*To get a week-by-week look at the status of the drought in your county, go to the New Mexico Climate Center website at [weather.nmsu.edu/products/drought](http://weather.nmsu.edu/products/drought).*

## By the Numbers

**21**—days in November when at least a trace of precipitation was reported by a CoCoRaHS observer in New Mexico

**22**—days in December when at least a trace of precipitation was reported by a CoCoRaHS observer in New Mexico

**5<sup>th</sup>, 6<sup>th</sup>, 21<sup>st</sup> & 22<sup>nd</sup>**—days in December with the most numbers of stations reporting snowfall

**11"**—most new snow reported in a 24 hour period; reported on 12/6/13 in Taos County

## How to Report Winter Precipitation

Freezing rain, sleet, fluffy snow, snow flurries...the winter months bring many different forms of precipitation. Whatever type you observe in your backyard, remember that there are several different numbers to report and it's easy to mix them up. Here is a quick review of three important measurements:

1. Rain and melted snow that has fallen in the past 24 hours. Remember to remove the funnel and inner cylinder when the temperature falls below freezing and snow is expected. Bring the gauge indoors to melt the snow.
2. Accumulation of new snowfall, measured to the nearest tenth of an inch, ideally using a snow board (a piece of plywood measuring at least 16" x16" and painted white).
3. Total accumulation of snow and ice (new and old), measured to the nearest tenth of an inch.

Some days you need only report the first two numbers. Because we have so many different types of terrain in New Mexico and such a variety of precipitation this time of year, you might run into an interesting situation or one that you think needs further explanation. If that's the case, think about adding a comment if you have a moment. Comments can sometimes add important context to the information you provide.

For further instructions, including when you might choose to take a core sample and what to do in special snow situations, see the CoCoRaHS snow training series on YouTube :

[http://www.youtube.com/watch?v=sj37JQnArX4&list=PLS0EU9SKRY0\\_liw4Z60q\\_zodgCz-etYB5](http://www.youtube.com/watch?v=sj37JQnArX4&list=PLS0EU9SKRY0_liw4Z60q_zodgCz-etYB5)



An arroyo in Las Cruces filled with running water during the September rain event with the Organ Mountains shrouded in clouds as a backdrop.

## September's Record-Breaking Rainfall

A record-breaking rain event hit New Mexico in September 2013. September 10-18<sup>th</sup> brought rain that damaged homes, forced towns to be evacuated, closed major highways, washed out roads, and overflowed rivers and creeks, leading to disaster declarations in 12 counties, four cities and towns, and 4 pueblos across the state.

According to the National Weather Service, rainfall amounts averaged 3 to 6 inches over the eight days of the event, but some areas received just over 10. The rainfall occurred differently across the state. The 10<sup>th</sup> and the 12<sup>th</sup> saw heavy rain in the southern and eastern part of the state; in fact, much of Eastern New Mexico experienced record rain and flooding. Central and Western New Mexico experienced heavy rains on the 13<sup>th</sup> through 14<sup>th</sup>. The 16<sup>th</sup> through the 18<sup>th</sup> saw heavy rainfall over smaller areas of the state.

CoCoRaHS observers made valuable contributions to the record of this event by recording the rainfall at their locations and by providing comments about the local conditions, reporting on rainfall totals over the days when the rain was at its heaviest, road washouts, overflowing creeks and rivers, running arroyos and lightning activity. Many made comments such as "wow" or "goodness" or "simply staggering," expressing how many in the state were feeling. Many observers also made note of the fact that they were seeing record 24-hour totals at their locations. The map on the next page shows rainfall totals for CoCoRaHS stations for the month of September.

According to information from the New Mexico Climate Center, National Weather Service Coop Stations also reported extraordinary totals for the month: 9.54" in Cloudcroft, 8.79" in Los Alamos, and 8.57" in Santa Fe. [Click here](#) to see more of those totals.



Mammatus clouds over Las Cruces

## Observer Comments

While you do not need to add comments to your daily observations, they can add interesting context to your observations, especially with winter precipitation and weather conditions. Here is a sampling of interesting comments from this month:

"Leaf drop on large ornamental mulberry finished."—from Alamogordo on 12/11/13

"Freezing fog made ice fingers of all tree branches, & the cholla cactus has fractal ice spines!"—from Tijeras on 12/7/13

"Above freezing...melting snow, puddles, no ice. Snow light and fluffy."—from Corrales on 12/5/2013

"Registered an average of 4" snow across open areas. Still snowing at that point and most of the day."—from Santa Fe on 12/5/2013

"Some cloud/fog, temperatures have dropped 10 degrees in a couple of hours."—from Tucumcari on 12/4/2013

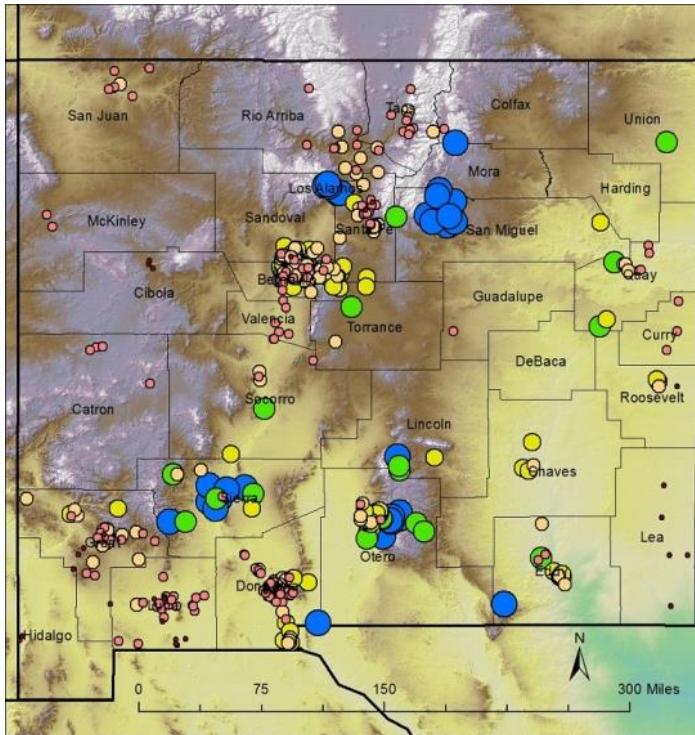
## NM CoCoRaHS News

*Because Every Drop Counts*

Find us on the Web:

[cocorahs.org](http://cocorahs.org)  
[cocorahs.blogspot.com](http://cocorahs.blogspot.com)

New Mexico Climate Center  
[weather.nmsu.edu](http://weather.nmsu.edu)



Rainfall totals in New Mexico for the period from September 9<sup>th</sup> through the 17<sup>th</sup>, 2013, as reported by CoCoRaHS observers.