



# Wyoming CoCoRaHS

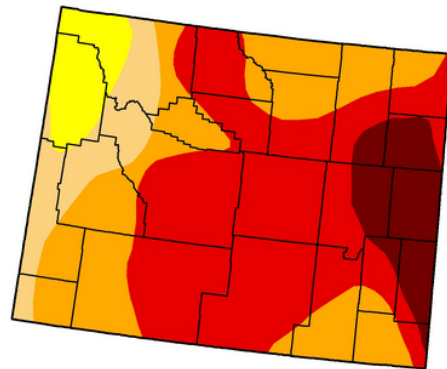
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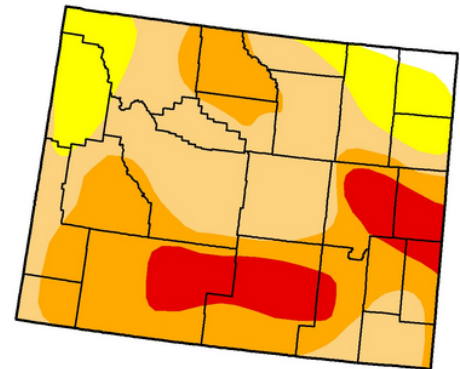
Apr-Jun 2013

Volume 2, Issue 2

## Rain, Snow, Hail, and Drought



April 2, 2013



June 25, 2013

Week	Nothing	D0-D4	D1-D4	D2-D4	D3-D4	D4
April 2, 2013	0.00	100.00	93.56	83.69	54.87	10.10
June 25, 2013	1.24	98.76	85.60	46.90	12.71	0.00

Rain, Snow, Hail, and Drought...and that was just what happened on Thursday!

The 2nd quarter of 2013 saw quite a variety of weather conditions across the state. In April much of the state started getting some decent snows which brought a fairly mediocre snowpack up to very near normal.

The last major snow storm of the season occurred right at the end of April and lasted into the very first part of May. The third highest number of snow reports were entered on May 1st with the highest and second highest being Apr 9th and Apr 17th.

Shortly after the snow stopped, the rains began and May saw no days fully without precipitation (there were two trace reports on the 13th)

Beginning around the middle of May there were numerous hail reports submitted by CoCoRaHS observers in Wyoming. Sheridan, Johnson, Laramie, Goshen, and Washakie counties saw the largest amounts reported with stones up to 2" being reported on May 26th near Story.

In June there were two conditions for the state. Wet or dry. The northern part, especially the northeast area of Wyoming, received several large rain events which helped to ease the drought there. D0 (Abnormally Dry) was introduced to a sliver along the MT border in Sheridan, Campbell, and Crook counties in early June. This area was expanded in the final week of June and for the first time in 10 months, a portion of Wyoming had no drought category assigned to it.

Unfortunately, the opposite occurred in the south and southwest part of the state. As a consequence, D3 (Extreme Drought) was expanded in the south central part of Wyoming, covering more of Sweetwater, Carbon, and Albany counties.

Looking at the two maps above, the left shows the drought depiction for the state at the start of the 2nd quarter of 2013 and the right shows the conditions from the last week of the quarter. The effects of the precipitation this quarter can be seen in that drought conditions in Wyoming have improved in many areas. A few areas (the western 20% or so) have

*(continued next page)*

## Wyoming CoCoRaHS

### 2nd Quarter 2013

- ◆ Most observations in a day:  
219 Reports on May 1st and May 29th
- ◆ Greatest Amount: 2.67" on May 31st, near Hulett
- ◆ 3 days with no precipitation statewide
- ◆ 7 days with a trace or less statewide
- ◆ 16,950 daily reports submitted
- ◆ 281 active observers



## Rain, Snow, Hail, and Drought (continued)

remained unchanged. With continued dryness expected in many regions, expect conditions to deteriorate.

Your observations are a crucial element when I provide input to these drought maps.

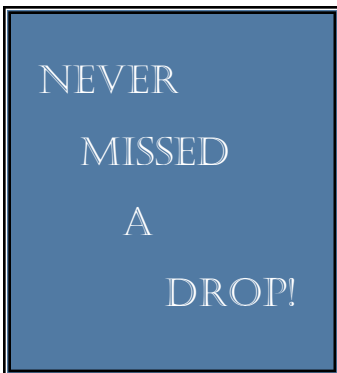
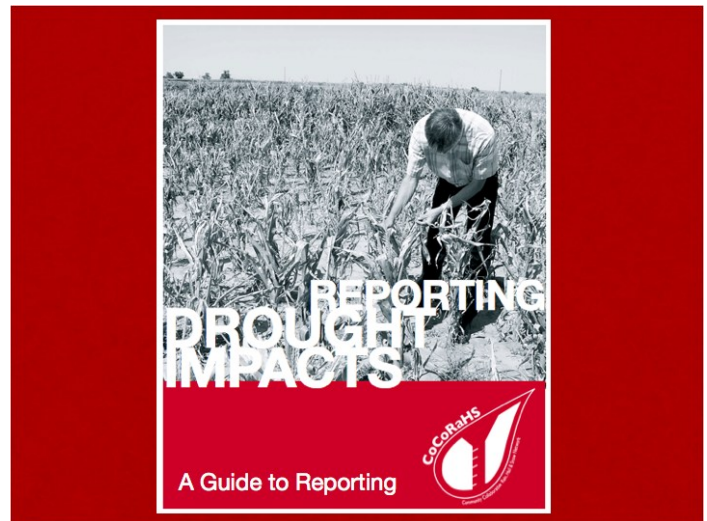
If you have information beyond just how much precipitation there was (or wasn't) there is also the Drought Impact Report Form that you can use. This form is accessible by clicking the My **Data** link at the top and then selecting **Drought Impact Report** on the left under the **Enter My New Reports**

heading.

The form is quite simple, it includes a date and a place for you to enter the description of whatever impact you think is worthy of reporting.

You may also indicate a category of impact (Agriculture, Tourism, Water Supply, Business, etc) and, optionally, the dollar amount of the impact.

There is a guide/instructions for the form that is found here: [http://www.cocorahs.org/DroughtImpactsGuide\\_Final\\_2-2010.html](http://www.cocorahs.org/DroughtImpactsGuide_Final_2-2010.html)



## 44 Stations reporting every day 01 Apr thru 30 Jun

WY-AB-1	WY-CK-6	WY-LM-38	WY-PK-18	WY-SH-24
WY-AB-8	WY-FM-21	WY-LM-102	WY-PK-19	WY-SL-2
WY-AB-41	WY-GS-7	WY-LM-106	WY-PT-14	WY-SW-19
WY-BH-10	WY-GS-9	WY-LM-112	WY-PT-23	WY-WH-1
WY-CM-16	WY-GS-16	WY-LM-121	WY-SH-7	
WY-CM-20	WY-GS-20	WY-LM-126	WY-SH-9	
WY-CR-4	WY-LM-5	WY-LN-17	WY-SH-10	
WY-CR-5	WY-LM-21	WY-NT-24	WY-SH-14	
WY-CV-11	WY-LM-23	WY-PK-8	WY-SH-17	
WY-CV-12	WY-LM-36	WY-PK-11	WY-SH-22	

## 10 Years and Counting!

The end of the 2nd quarter of 2013 marked the end of the first decade of CoCoRaHS in Wyoming. Wyoming was the second state to join the network and the original intent was to expand the program (started in 1998 in northern Colorado) into the southeastern part of our state. Recognizing the value of such a network in Wyoming, I wasn't content to confine it to only a portion of Wyoming and almost immediately began plans to have it operational across the entire state.

It was a slow start and by the end of 2003 there were 5 of us reporting. Of the observers who signed up during that first year, 18 are still active! In December of 2004 there were 52 observers who reported and that number more than doubled when 114 observers reported in December of 2005. By 2007 we were averaging about 170-180 active observers a month with the average number of daily reports being around 130.

This level of participation continued for several years but increased again around the middle of 2012 with the number of daily reports submitted going up to about 145 and the active observers per month jumping to about 190.

2013 continued this increase such that by the end of our first decade in the network, there were about 260 active observers per month and over 180 reports being entered per day.

I don't see this so much being the end of the first decade but rather the start of the second. My thanks to each and every one of you for making Wyoming CoCoRaHS what it is!

## Welcome!

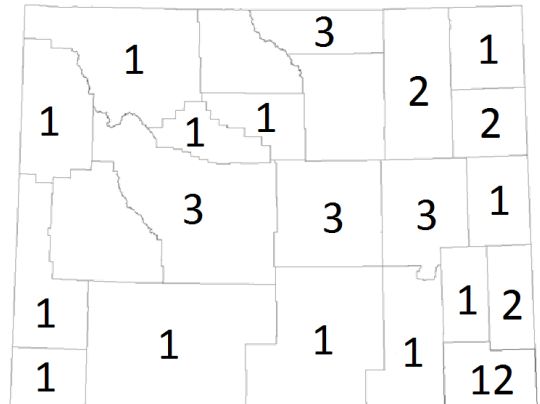
WY-CK-19	WY-LM-140	WY-PK-29
WY-CM-24	WY-LM-141	WY-PT-24
WY-CM-25	WY-LM-142	WY-SH-28
WY-CR-14	WY-LM-143	WY-SH-29
WY-CV-18	WY-LM-144	WY-SH-30
WY-CV-19	WY-LM-145	WY-SW-26
WY-CV-20	WY-LM-146	WY-TT-26
WY-FM-33	WY-LM-147	WY-UN-14
WY-FM-34	WY-LM-148	WY-WH-13
WY-FM-35	WY-LM-149	WY-WS-15
WY-GS-26	WY-LN-20	WY-WS-16
WY-GS-27	WY-NB-17	
WY-HS-13	WY-NT-55	
WY-LM-138	WY-NT-56	
WY-LM-139	WY-NT-57	

## Welcome new volunteers!

Wyoming CoCoRaHS had over 40 new volunteers join its ranks during the second quarter of 2013. The new observers are in Albany, Crook, Campbell, Carbon, Converse, Fremont, Goshen, Hot Springs, Laramie, Lincoln, Niobrara, Natrona, Park, Platte, Sheridan, Sweetwater, Teton, Uinta, Washakie, and Weston counties. It may have been easier to indicate which counties did not have new volunteers since new observers represent 20 of our 23 counties!

Of the 42 new volunteers, 30 are already set up and reporting as I write this. If any of you are having trouble getting set up or have questions on how to report, please contact me and I can help you get started.

New Observers in 2nd Quarter 2013



## Are you (still) Equipped?

Sometimes when there is a large number of observers signing up in a short period of time, a station may slip through the cracks and I may not have been able to follow up with your application. If that has happened to you, please contact me. On rare occasion things get lost in the mail, too, though I can count the times this has happened (that I know of) on one hand.

If you have not received a gauge please contact me. Sometimes it seems like I've read the inner cylinder so many times that my eyeballs must have worn the numbers down but, in reality, studies show that wear from repeated readings amounts to only micrometers per year. There is, however, other wear that can happen to a gauge, especially for those of you who have been reading day after day, year in and year out.

The dedication that so many of you have to CoCoRaHS means that, inevitably, your gauges will see some wear and tear. The plastic can break down after years in the sun. Repeated freezing and thawing can take their toll, too. Perhaps you've busted off one of the tabs on the bracket when you were trying to unstick a frozen gauge. Gauges have been destroyed by heavy hail, wild winds, or even curious cows. (I would have said Wild Wyoming Winds, but that seemed a little redundant!)

If any parts are too worn to continue to use, please let me know since I have spares of almost everything and will be happy to send whatever part you need if possible.

During the summer your gauge can get a buildup of dirt, especially in the bottom of the inner cylinder. I've been asked a few times if the dishwasher is a good way to clean the gauge and the answer is **NO**. One method that works fairly well is to put some warm water and a gentle liquid soap into the cylinder and let it set for a few minutes. Then, take a soft towel and spin it into the cylinder all the way so that it touches the bottom. Twist it around a few times and this should loosen most of the dirt and grime. Rinse out the gauge and repeat if necessary.



## State Coordinator

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<http://www.facebook.com/pages/Wyoming-CoCoRaHS/230236620324909>

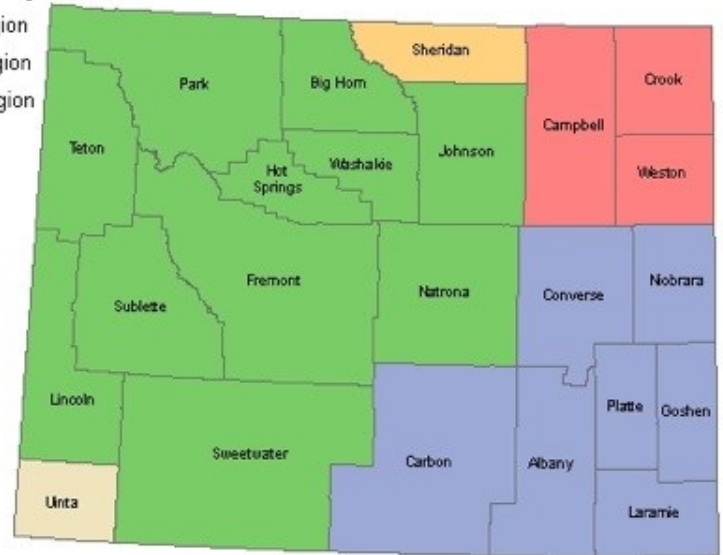
<http://cocorahs.org>

<http://www.wrds.uwyo.edu>

## Wyoming Regions

- West-Central Region
- North-Central Region
- Northeast Region
- Southeast Region
- Southwest Region

## Wyoming CoCoRaHS Regions



## Wyoming Regional Coordinators

### Northeast

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## We Need You!

If you are not a CoCoRaHS observer and would like to take part joining is simple.

Just go to <http://cocorahs.org> and click on the **Join CoCoRaHS** link on the left side of the page.

Participation requires only a few minutes a day, an internet connection, and an interest in measuring and reporting rainfall.

Your observations will appear each day on a map and you can see how much you received compared to your neighbors, neighboring counties, and neighboring states.

Meanwhile, your data are used by various entities throughout the

country such as the National Weather Service, the National Drought Mitigation Center, researchers, and those who are just curious about how much rain fell where.

CoCoRaHS helps to fill in holes in places where there are no observers for other networks. CoCoRaHS is a high-density network which allows us to see the variations in precipitation across the country **and** across town.

If you are interested in joining or have any questions, please contact Tony Bergantino at:

[antonius@uwyo.edu](mailto:antonius@uwyo.edu)



Lenticular Clouds seen from Libby Flats, Snowy Range ,10 Nov 2011  
Photo by Tony Bergantino