



# Wyoming CoCoRaHS

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Jul-Sep 2014

Volume 3, Issue 3

## End of Water Year 2014

September 30th marked the end of the 2014 Water Year. The water year runs from October 1st to September 30th of the following year. This reckoning of the year was established since, especially in the West, October 1 is a good breakpoint and the snow that accumulates from that date onward would go toward replenishing streamflow in the spring.

Streamflow in the spring and summer is heavily dependent upon the snowpack that begins to form in the last months of the preceding year so this date was chosen to restart the tallying of precipitation.

What does that mean for us as observers? Each year (each Water Year, that is) a Water Year Summary is created for all CoCoRaHS stations. This summary is generated a few times in October.

Now is a good time to look through your

observations online and see if you've missed any reports. The more complete the observation record is for a station, the more meaningful its Water Year Total is. This is especially the case when researchers are looking across a county or even the entire state. A station that has only 40 reports for the year would have too much uncertainty to be used in an annual comparison.

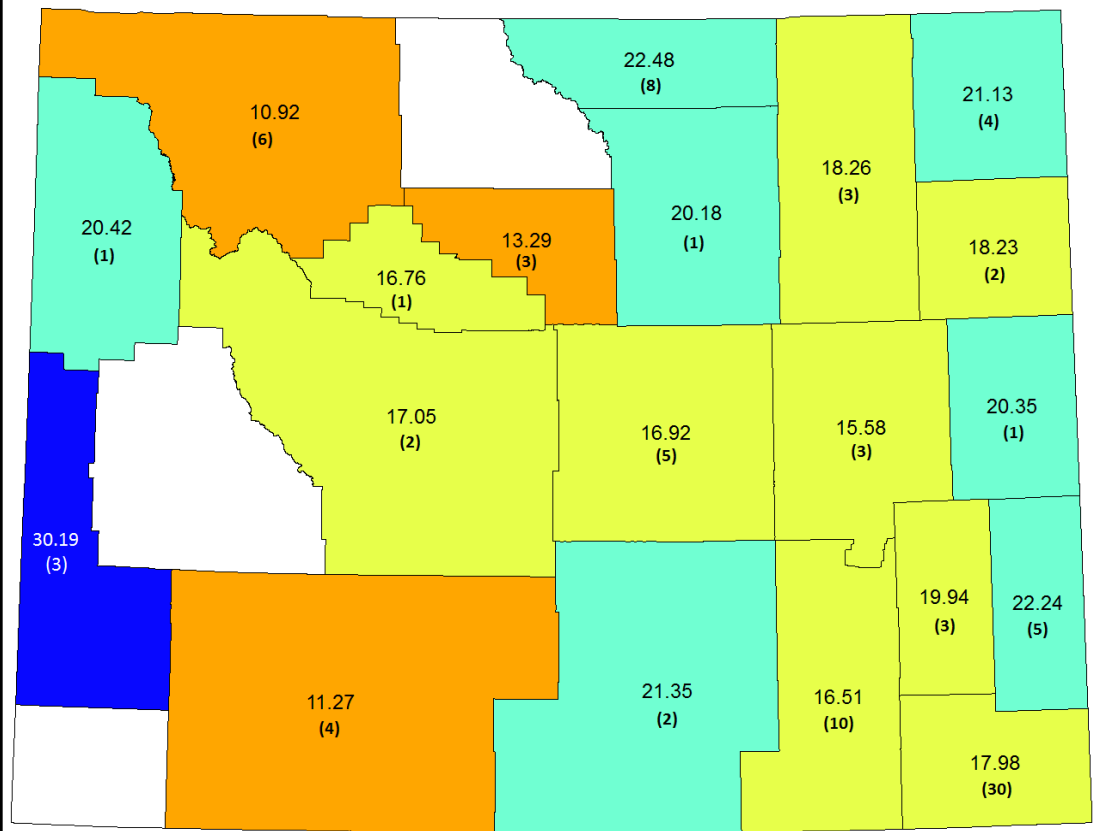
There may have only been 40 days when precipitation fell but the people using the data have no way of knowing whether the total represents the entire amount of observed precipitation or just 40 particular days when reports were entered. This is why submitting a report when no precipitation fell is just as important as when there was rain or snow.

To check the completeness of your observations, go to the **Station Precipitation**

*(continued next page)*

## Wyoming CoCoRaHS 3rd Quarter 2014

- ◆ Most observations in a day: 241 Reports on September 29th
- ◆ Greatest Amount: 2.76" on July 30th in Laramie
- ◆ One day (Sep 26th) with no precipitation statewide
- ◆ Two days with a trace or less statewide
- ◆ 18,315 daily reports submitted (1.8% of the total for All US and Canada!)
- ◆ 301 active observers
- ◆ Average of 199 reports per



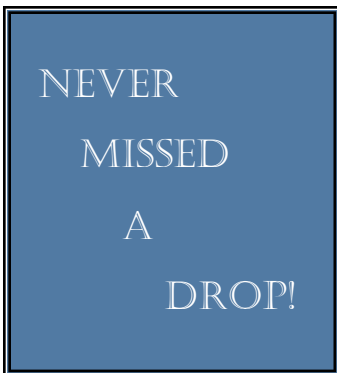
## End of Water Year 2014 (continued)

**Summary Report** on the **View Data** page. Enter your Station ID and then select 10/1/2013 as a start date and 9/30/2014 as an end date and click the **Get Summary** button. Dates with “- -” in the Precipitation column are ones for which no observations were recorded. These numbers will likely change as people fill in missing reports, but there were eight stations (in Teton, Sheridan, and Lincoln counties) which received over 30 inches of precipitation for the water year (one of those was over 40 inches, even). Three of those stations

received over 200 inches of snowfall, too. The lowest total for precipitation for Water Year 2014 was from Park County at 7.20” There were just over a 100 other stations that had totals less than that, but the completeness of reports for those stations was generally under 50% which means the actual totals could be significantly higher when the missing days are factored in. This is just one example of the importance of reporting as often as possible. The map on Page 1 shows the total precipitation by county for Water Year 2014. The

totals for each county are an average of the stations having 90% or more of the observations entered. The number in parenthesis below each total is the number of

stations in each county used. The counties in white are those where no stations had a complete enough record to calculate a total for the water year.



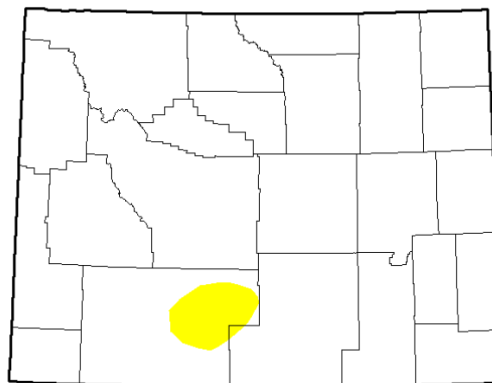
## Stations reporting every day 01 Jul thru 30 Sep 2014

WY-AB-8	WY-FM-21	WY-LM-96	WY-LN-2	WY-SH-10
WY-AB-40	WY-GS-7	WY-LM-102	WY-LN-14	WY-SH-14
WY-CM-16	WY-GS-8	WY-LM-106	WY-LN-19	WY-SH-17
WY-CM-20	WY-GS-9	WY-LM-107	WY-NT-24	WY-SH-22
WY-CR-4	WY-GS-20	WY-LM-112	WY-NT-35	WY-SH-29
WY-CR-5	WY-JN-13	WY-LM-113	WY-PK-11	WY-SH-33
WY-CR-18	WY-LM-21	WY-LM-125	WY-PK-18	WY-SH-36
WY-CV-11	WY-LM-36	WY-LM-129	WY-PK-26	WY-WH-1
WY-CV-12	WY-LM-59	WY-LM-141	WY-PT-14	WY-WH-13
WY-CK-6	WY-LM-63	WY-LM-148	WY-PT-18	WY-WS-16

## Drought

During the 3rd quarter of 2014, drought conditions have continued to improve such that as of September 30th, only a small area classified as Abnormally Dry existed in Wyoming. Conditions have been helped by the fairly widespread precipitation seen during the last three months. There were only two days during the last quarter where there was no measurable precipitation statewide and only one day with no precipitation at all. There were 26 days during this period where at least one observer reported an inch or more precipitation. There were also seven days where at least one observer reported two or more inches.

### U.S. Drought Monitor Wyoming



September 30, 2014

(Released Thursday, Oct. 2, 2014)  
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	97.56	2.44	0.00	0.00	0.00	0.00
<b>Last Week</b> 9/23/2014	95.87	4.13	0.65	0.00	0.00	0.00
<b>3 Months Ago</b> 7/1/2014	90.64	9.36	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> 1/2/2013	45.84	54.16	6.18	0.00	0.00	0.00
<b>Start of Water Year</b> 10/1/2013	15.72	84.28	57.27	22.14	2.85	0.00
<b>One Year Ago</b> 10/1/2013	15.72	84.28	57.27	22.14	2.85	0.00

*Intensity:*

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

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

**Author:**  
Richard Heim  
NCDC/NOAA



<http://droughtmonitor.unl.edu/>

## 16 New Observers Joined in 3rd Quarter 2014 and Winter Preparations

### Welcome!

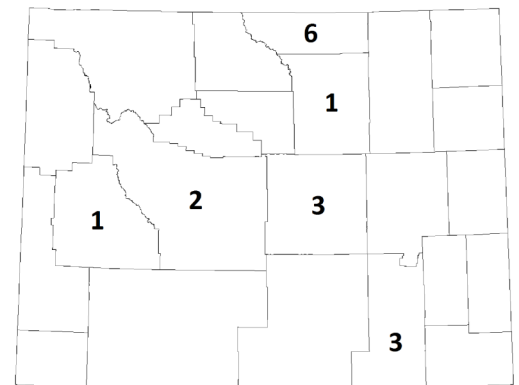
WY-AB-128	WY-NT-72	WY-SH-41
WY-AB-129	WY-NT-73	WY-SH-42
WY-AB-130	WY-NT-74	WY-SH-43
WY-FM-42	WY-SH-38	WY-SL-11
WY-FM-43	WY-SH-39	
WY-JN-29	WY-SH-40	

We had 16 new observers join our ranks in the 3rd quarter of 2014 and 6 of them have begun to report already. We're glad to have you taking part and please let me know if you have any questions or need anything. And that goes for all our volunteers, as well. I still have some spare parts that I can send out if you are missing anything.

At this time you should be carefully keeping an eye on the expected low temperatures for your area and if it is expected to dip down to the freezing point or below, take your inner cylinder and funnel inside since they do not react well with freezing temperatures.

The last few precipitation events I've had have been either snow or rain mixed with snow so I have already removed all but the large outer cylinder.

I've had numerous questions regarding measuring snow related to whether or not the snow counts or just the rain with it. Precipitation is both rain and the water content of the snow. When precipitation is in the form of rain it is easy (usually!). Simply measure the water in the cylinder. But, when you have rain and snow or just snow, the snow must first be melted before you can measure the amount of water it contained. This can be done either by letting the snow melt naturally (cover the large tube while the snow inside melts so you don't lose any to evaporation) and then pour it into the inner cylinder like you would with rain. The other way is quicker and you just pour some warm water into the inner (smaller) cylinder and measure it, then pour that into the snow in the large tube and let the warm water melt the snow. Once the snow is melted, pour the water back into the inner cylinder with the help of the funnel and measure it. Then subtract the amount of warm water you used. You may have more water in the large tube than will fit in the small cylinder. In that case, record how much is in the inner cylinder, dump it out, and then continue filling from the larger and add the two amounts together.



## 2015 CoCoRaHS Rain Gauge Calendar (and 2016?)

The 2015 CoCoRaHS Rain Gauge Calendar has been published and is available for ordering. These make great gifts and may be previewed and ordered here: <http://www.cocorahs.org/Content.aspx?page=calendar15>

The photos used in the calendar all come from volunteers showing their own gauge during a specific season. CoCoRaHS Headquarters may produce another calendar for 2016 so keep your camera ready incase your gauge presents a photo-worthy opportunity. This could be a in the form of ice accumulating on the gauge or perhaps some animal visiting the gauge (take necessary precautions depending upon what particular type of animal pays a visit!).

From the CoCoRaHS site:

These artistic photos should be high-resolution (greater than 1MB and jpeg format). Too many great shots were of low resolution, which we could not use this year. The photos should be of "the gauge" only and should not include people in them. Close-up shots of the gauge are best. Also make sure that they are well lit . . . better in sunlight than in a shadow. They can be creative. You may email in more than one set of photos. We will archive your shots and put them into the pool for our next calendar. We'll let you know if your photo is chosen.

Please e-mail your photos to Henry Reges at: [hreges@atmos.colostate.edu](mailto:hreges@atmos.colostate.edu) with the words "Autumn Rain Gauge Photos" in the subject line. Please include the name of the photographer for credit purposes, as well as the location - city, state - of the gauge (ex- Tony Bergantino: Laramie, WY Fryeburg, ME). Finally be sure to include in the text of your message that "I give CoCoRaHS permission to publish the photo and use it for other possible CoCoRaHS promotions".



## State Coordinator

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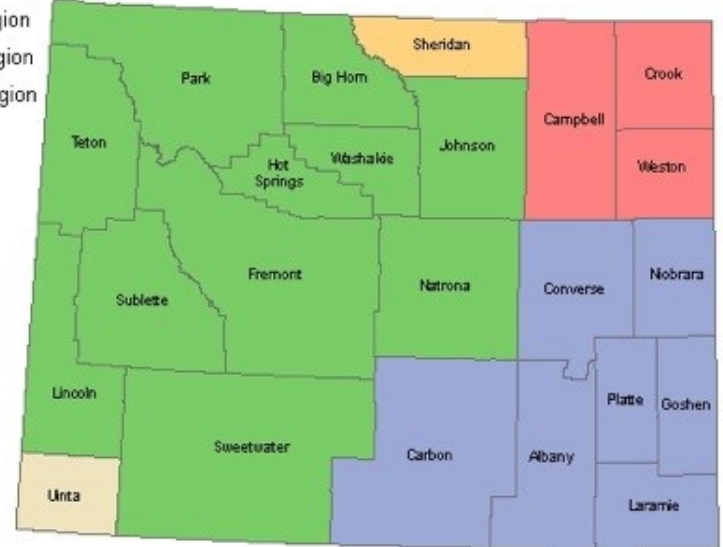
<https://www.facebook.com/WyomingCoCoRaHS>

<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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### West-Central

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Late July Hail Storm in Laramie  
Photo by Tony Bergantino

## 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)