



# Nevada CoCoRaHS Newsletter

Because every drop counts even in the driest state!

Summer 2015

## Nevada's Wet Spring and Start To Summer

After another dry and mild winter in the Silver State, it seemed as though the ongoing drought was only going to become significantly worse as we moved into the normally drier spring and summer months.

However, this spring and so far summer have featured a surprisingly wet twist. From late April through early July an active weather pattern has resulted in numerous storm systems impacting the Silver State from north to south. This was especially true during the month of May. Officially, Reno recorded the wettest May since 1996 with 1.01 inch falling at the Reno-Tahoe International Airport. The total in May 1996 was 1.07 inch. Even more impressive was the 3.49 inches logged in Elko. This was the highest precipitation total in Elko since May



**Snow coats a lilac bush in Elko on May 7, 2015.  
Photo Credit: NWS Elko.**

1971 when 4.09 inches fell and ranks as the third wettest May ever in Elko. While the May total in Las Vegas of 0.24 inch at McCarran International Airport was not nearly as grand, it still ranked as the wettest May for Las Vegas since 1989 when 0.64 inch fell. CoCoRaHS totals from May in Nevada included 4.38 inches 20 miles north-northwest of Tuscarora (NV-EL-18), 2.63 inches 4 miles northwest of Spring Creek (NV-EL-23), 1.95 inch 4.5 miles south of Reno (NV-WH-35) and 0.29 inch 4.7 miles northeast of Henderson (NV-CK-29).

Wet weather continued into June for much of the state. Officially, Reno measured 0.93 inch in June, which is almost double the normal precipitation of 0.51 inch. June was a drier than normal month for Elko with 0.47 inch falling officially compared to the normal of 0.76 inch. In Las Vegas, June is normally the driest month of the year. Although the normal June precipitation is 0.07 inch, this June only totaled a trace of precipitation. However, there were 3 days with a trace and this June was the first to feature any rain at all at McCarran International Airport since 2010. One of the more unusual periods of the month was between June 9<sup>th</sup> and 14<sup>th</sup> when moisture associated with the remnants of what was once Pacific Hurricane Blanca moved north into the

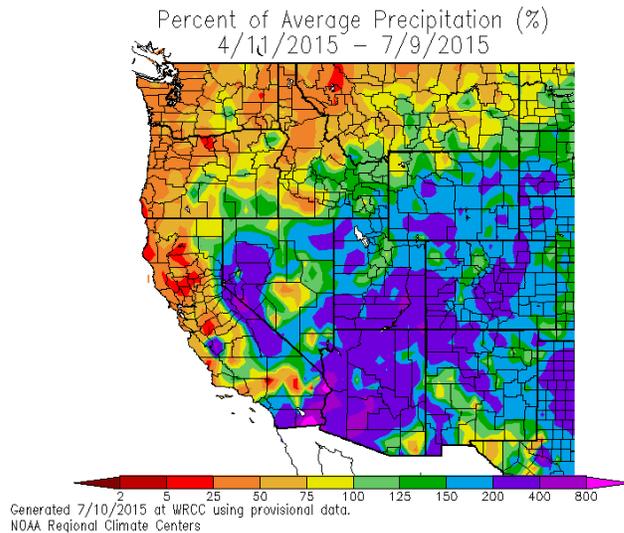
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Silver State triggering showers and thunderstorms. This marked the earliest in the season the remnants of a Pacific tropical system have impacted the Silver State since June of 1990 when the remnants of Pacific Hurricane Boris moved north and triggered scattered showers and thunderstorms.

So far, the 2015 Monsoon Season has again featured generous precipitation for many areas of the Silver State. The 2014 Monsoon Season was active enough in parts of southern and eastern Nevada to help ease the drought; however it largely spared northwestern Nevada. This year, though, northwestern Nevada has had an exceptionally wet start to July courtesy of monsoon moisture. Seven of the first ten days of July had thunder reported at the Reno-Tahoe International Airport. The normal number of days with thunder in Reno for all of July is three. Precipitation also fell at Reno officially on nine of the first ten days in July. Three reports of hail were received in early July from CoCoRaHS observers in the Reno-Sparks area. Hail was reported near Sparks by observer NV-WH-17 on July 1<sup>st</sup>. On July 7<sup>th</sup> hail up to penny size fell 1.4 mile north-northeast of Reno and was reported by observer NV-WH-2. Lastly on July 8<sup>th</sup>,

observer NV-WH-11 reported hail up to 5/8<sup>th</sup> of an inch in diameter 2.4 miles south-southwest of Reno. Thank you for adding these valuable hail reports along with your routine observations!



**Most of Nevada saw a wet period during the last 90 days as this map of the percent of normal precipitation shows. Purples, blues and greens indicate above normal precipitation for the period. Map courtesy Western Region Climate Center/WRCC.**

The 2015 Monsoon also started active in Las Vegas. Officially a record seven days had a trace or more of precipitation at McCarran International Airport during the first ten days of July. This broke the old record of six days set in 2011. A thunderstorm dropped hefty rainfall in parts of the Las Vegas Valley on the evening of July 6<sup>th</sup> with flash flooding reported in central parts of the valley. This triggered nearly a dozen swiftwater rescues. CoCoRaHS observer NV-CK-39, located just west of Interstate 15 in the central part of the valley measured a storm total of 1.38 inch, with 0.92 inch falling in just 30 minutes. The official total

that day was only 0.05 inch at McCarran International Airport. These totals help to supplement our climate record and again prove the value of our CoCoRaHS observers!

Why did most of Nevada see such a wet pattern for much of this spring and the early part of this summer but have such a dry winter? The answer simply relies on the main weather pattern. This past winter once again we saw high pressure aloft dominate. High pressure acts as a block to storm systems deflecting them away from an area. As a result, the winter storm track was generally suppressed to the south of California and favored storms coming up across far southern California or northwest Mexico and then moving northeast. This did result in generous precipitation at times for southern Nevada. Meanwhile other storms that moved across the Pacific Northwest often stayed just far enough to spare northern Nevada. In mid to late April, the

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pattern finally changed with high pressure shifting away from the region allowing storm systems from the Pacific to move in and directly impact the state. Although high pressure returned in mid to late June bringing a stretch of exceptionally hot weather to Nevada, it retreated far enough east by early July to allow for an influx of monsoon moisture to spread north triggering showers and thunderstorms for many areas.

## Please Fill Out Your Zeros!

This past winter, a record-setter for snow in parts of the northeastern United States, piqued many people's curiosity in snow totals. In early March, the staff at a website in Syracuse, New York ([syracuse.com](http://syracuse.com)) conducted an interesting research project to conduct a study of just who up until that point had received the most snow in the United States that winter.

The authors of the article used only official observations collected by National Weather Service climate stations, cooperative weather observers for the National Weather Service and CoCoRaHS observers. Out of the nearly 20,000 national observation sites collected and analyzed by the staff, only 1,957 were considered in the rankings. Although the authors opted to exclude stations that reported no snow or only had a trace amount, many observing sites that do get snow were left out of the rankings. One reason was the staff wanted to only include locations that missed five or fewer days of measurements between July 1, 2014 (the start of the snow season) and March 6, 2015. One of the leading reasons for missing observations besides not measuring snow at a location was the fact that many sites do not enter zeros on days when no snow fell or no precipitation occurs. While observers are not required to do this each day, this shows a great example of how any doubt cast to the completeness of a record could lead to data being excluded.



Measuring snow on a snowboard with a snowstick.  
Photo Credit: NWS Las Vegas.

In Nevada, several CoCoRaHS observers were included in this ranking and we want to thank you for having a thorough and complete snowfall record. This is a volunteer effort and shows your outstanding effort to provide exceptionally high quality reports. These locations included Elko 0.9 SE (NV-EL-9), Las Vegas 7.5 WSW (NV-CK-49), Reno 1.4 NNE (NV-WH-2) and Yerrington 3.4 SSW (NV-LY-3). Nationally less than 10 percent of the observing sites that measure snow were ranked. Although some sites are clearly excluded based on their lack of snow, these rankings still show only a small sample of locations nationally achieved the ability to be ranked in a survey with rigid standards.

If you want to check out the rankings, go to:

[http://www.syracuse.com/news/index.ssf/2015/03/us\\_snow\\_totals\\_for\\_winter\\_who\\_has\\_the\\_most\\_snow\\_search\\_any\\_state.html](http://www.syracuse.com/news/index.ssf/2015/03/us_snow_totals_for_winter_who_has_the_most_snow_search_any_state.html)

## **Weather Wonder: What Is The Snow Level?**

The snow level is the level, or elevation, at which snow is falling above and rain is falling below.



Snow on the White Mountains of California and Nevada in June 2015. Photo Credit: Chris Stachelski.

### **CoCoRaHS Nevada Resources**

<http://www.cocorahs.org/state.aspx?state=nv>

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