YOUR NATIONAL WEATHER SERVICE SPOKANE QUARTERLY REPORT

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The Weather Watcher

of the Inland Northwest

www.weather.gov/Spokane

INSIDE THIS ISSUE:

CoCoRaHS Corner– It's Recruitment Time!

The Community Collaborative Rain, Hail and Snow Network– CoCoRaHS is celebrating it's March Madness! It's a friendly recruiting contest among all 50 states to see who can recruit the most new precipitation-observers during the 31 days of March.

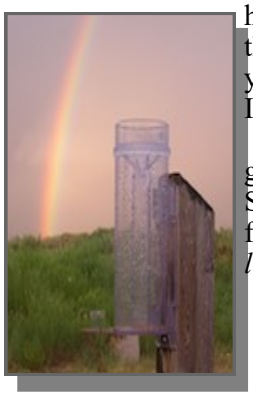
There is always a need for a greater number of observations. Due to the variability of precipitation, amounts measured can be quite different only a block or two away. Help fill in the gaps by recruiting a friend or relative during our contest. The contest is broken down into two categories: the "Traditional Count" or "Per Capita" or population weighted count. The winning state in each category receives the "CoCoRaHS Cup" to keep and exhibit for a year until next year's contest, similar in the tradition of the NHL's Stanley Cup. Interested in measuring rain and snow? Spread the word on CoCoRaHS and join the network at www.cocorahs.org

Since the beginning of 2013 we have welcomed the following new observers!

We welcomed our first CoCoRaHS ob-

WA-GR-12	WA-SP-37	ID-KT-12
WA-OK-20	WA-SP-38	ID-KT-13
WA-AS-1	WA-WM-9	WA-SP-13
ID-BR-20	WA-OK-21	WA-OK-22

server from Asotin County. We now have an observer in every county of the Spokane NWS forecast area. The last 2 observers count toward our March Madness total. We have gotten off to a great start to this year's challenge. We will keep you informed as to where WA and ID finish in the contest.



If you need help setting up your gauge or can't remember what SWE is, see CoCoRaHS web page for training videos and tips. ☼ *Ellie Kelch & Robin Fox*

Outlook for Spring Runoff

While ENSO Neutral winters generally bring us near-average snowfall, the dry spell in January & February stunted our snowpack growth in the Inland Northwest. Our first Atmospheric River event or "Pineapple Express" of the winter, which usually brings copious amounts of snow or rain to the mountains, didn't arrive until the very end of February and deposited the bulk of the moisture to the north of us.

Currently, the mountain snowpack is about 85% of average in the central Idaho Panhandle, eastern Washington and southeastern Washington. The snow pack is very close to average in the East Cascades and the northern Idaho Panhandle. It's actually above average in north central Washington. While the last two years brought the Inland Northwest record wet springs that continued to build the mountain snowpack well into April, May, and even June, it would be improbable to see that again for a 3rd year in a row, so it's unlikely that we will see big gains in the snowpack from here on out.

With the snow pack we have now, there is a low risk of spring snowmelt flooding. The short- and long-term river forecasts are updated every day to account for current snow pack, river flow, soil moisture conditions and weather forecasts. You can monitor these forecasts at www://water.weather.gov (7-day river forecasts) and at www.nwrfc.noaa.gov/peak (3-month peak flow probability forecast). Overall, the 2013 water year, which began on October 1st and runs through September 30th, has seen near-average precipitation despite the last two dry months, thanks to the wet fall we had. ☼ *Katherine Rowden*

Editor's Notes

Days are getting longer and the grass is greening up with the coming of spring. But don't be fooled, we are not quite done with the snow yet. Spring in the Inland Northwest can bring crazy weather with snow in the morning and thunderstorms by afternoon. It's important to be prepared for rapidly changing weather more than ever. Remember when thunder roars, go indoors and stay safe.

Beside the threat of thunderstorms, area rivers will be on the rise. As mountain snowpack melts, runoff will increase leading to higher river flows.

We are always looking for new ideas, pictures and stories for our publication. If you have any to share, please contact us at (509) 244-0110 or email nws.spokane@ noaa.gov.

This newsletter and past issues are available online on our NWS Spokane web page. If you would like a paper copy, please contact us and we will put you on the mailing list.

The main purpose of this publication is to keep our readers informed about NWS services and programs, and recognize those who help us with our mission, including weather spotters, observers, media, emergency managers, and government agencies.

All articles are written by the NWS staff. A special thanks goes to Ellie Kelch, Jon Fox, Ron Miller, Katherine Rowden, & Mark Turner for their help.

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Cooperative Weather Observer Awards

Hank Odegard—Prichard, ID

Winter Weather Statistics

Wenatchee Water Plant	Dec	Jan	Feb	Total
Avg High Temp	38.5	32.5	47.5	39.5
Departure from Norm	+3.7	-3.4	+4.1	+1.5
Avg Low Temp	30.0	24.2	28.3	27.5
Departure from Norm	+4.8	-1.2	+0.6	+1.4
Total Precip	1.94	0.36	0.04	2.34
Departure from Norm	+0.41	-0.97	-0.96	-1.52
Total Snowfall	7.7	1.3	0.0	9.0
Departure from Norm	1.0	-2.7	-2.7	-4.4
Lewiston Airport	**Dec**	**Jan**	**Feb**	**Total**
Avg High Temp	43.4	39.5	48.8	43.9
Departure from Norm	+3.9	-2.1	+2.3	+3.4
Avg Low Temp	32.8	27.3	32.9	31.0
Departure from Norm	+4.9	-2.3	+2.0	+1.5
Total Precip	0.86	0.90	0.68	2.44
Departure from Norm	-0.11	-0.18	-0.10	-0.39
Total Snowfall	0.3	2.3	T	2.6
Departure from Norm	-3.2	-0.1	-2.1	-5.4
Spokane Airport	**Dec**	**Jan**	**Feb**	**Total**
Avg High Temp	35.8	30.8	39.8	35.4
Departure from Norm	+3.6	-3.6	+0.2	+0.2
Avg Low Temp	26.7	18.6	27.7	24.3
Departure from Norm	+4.2	-6.1	+1.3	-0.2
Total Precip	2.58	1.63	0.74	4.95
Departure from Norm	+0.28	-0.16	-0.59	-0.47
Total snowfall	18.1	14.2	4.4	36.7
Departure from Norm	+3.5	+2.8	-2.4	+3.9

Mr. Hank Odegard was the most recent recipient of the NWS John Campanius Holm Award. This award was named in honor of John Campanius Holm, a Lutheran minister who was the first person recognized to have taken systematic weather observations in the American Colonies (1644-1645). Hank was one of only three observers in Western Region to receive this award in 2012.

Hank has put forth outstanding service in reporting precipitation and river levels from Prichard, Idaho for over 22 years. His observations are a valuable resource for the National Weather Service's mission of protecting lives and property through timely flood warnings. His award presentation at the Sprag Pole Inn in Murray, ID was attended by representatives of county and state government. Pictured L-R to the left includes; Sid Smith (Sen. Risch), Shoshone County Sheriff Mitch Alexander, NWS Meteorologist-In-Charge John Livingston, Hank Odegard, Vicki Fulton (Sen. Risch) and Aaron Calkins (Rep. Labrador). ☼ *Mark Turner*

William & Alice Hofmann—Rosalia, WA

Bill and Alice Hofmann were the most recent recipients of the NWS Thomas Jefferson Award. This award was named in honor of Thomas Jefferson, our third President, who kept an almost unbroken series of weather records from 1776 to 1816. The Thomas Jefferson Award is the most prestigious award for the cooperative observer. Five cooperative observers nationwide are honored each year with the Jefferson Award for outstanding and distinctive achievements.

The Hofmanns received this award for exemplary reporting of meteorological observations from Rosalia, Washington. Their highly accurate and detailed temperature and precipitation records are a valuable resource to the Nation's climate and weather programs. Their extraordinary public service for 43 years will make a lasting contribution to the communities who work to advance agriculture, transportation, and commerce. Pictured above is NWS Meteorologist-In-Charge John Livingston with William and Alice Hofmann. ☼ *Mark Turner*

Winter in Review

Answer: Wenatchee, Moses Lake, Lewiston—April 22
Omak, Ritzville, Spokane/Coeur d'Alene, Pullman—May 14
Winthrop, Republic, Colville, Sandpoint, Kellogg—May 21

December was one of those strange winter months where you can have above average temperatures, near-normal precipitation, but still have above average snow. It just reminds us that snowfall in many cases is dependent on a number of factors, and just 1 degree or 1 hour can mean the difference between white versus just wet. The Cascade valleys did especially well in this pattern, creating an impressive snow pack. December started off stormy, but very mild. Temperatures were 10° to 15° above normal with rain on most days, while a storm system off the coast kept sending warm waves of precipitation from the south. As the storm finally moved onshore, the rain changed to snow for some low elevation sites on the 7th. Leavenworth received 7.5" of snow while Clark Fork, ID picked up 9". In some ways, this marked the beginning of winter: many valleys now had snow on the ground that will likely be there until spring, and high temperatures now struggled to make it above freezing during the day. Temperatures remained on the cold side through the middle of the month as weak storm systems continued to bring light precipitation in the form of rain or snow. One such system on the 15th brought 4" of snow to the Waterville Plateau, the Deer Park area, and Rosalia. A stronger system on the morning of the 17th yielded 10 or more inches for northeast Washington and the northern Panhandle, including 15" at Bonners Ferry. Wenatchee and the surrounding Cascades also picked up heavy snow, with 15.5" at Leavenworth! Strong winds behind this storm blew a tree onto a house in south Spokane. The wind gusted to 64 mph in Pullman and 58 mph at Spokane and Coeur d'Alene. A heavy snow storm occurred on the 20th just north of Spokane, with 1 to 2 feet of snow falling overnight. One last chance at a white Christmas arrived just in time as snow fell on the 23rd, bringing 2 to 5" to the Spokane metro area. The month finished out on a quiet note as high pressure brought fog and low clouds to the entire region. While Spokane Airport recorded 18.1" of snow, it snowed on 23 of the 31 days.

January— had little in common, weather-wise with December. It started off with a decent snow storm on the 6th-7th. For some locations, this was the biggest storm of the season. Spokane Airport officially measured 6.9" of snow, and Grand Coulee picked up 4.6". But after this storm, the weather pattern changed markedly. High pressure became firmly established over the western U.S. Usually this would mean widespread fog and low clouds for our area, but very dry air moved into the area with this high pressure. As a result, skies stayed sunny during the day, which was pleasant. But the clear skies at night coupled with fresh snow on the ground created the coldest period of the winter. Nighttime temperatures in the teens and single digits were common for the middle of the month, with daytime temperatures in the 20s. Some outlying areas saw below-zero readings. Winthrop, Chewelah, and Wellpinit all reached -6°F on the morning of the 13th. Then a few weak weather systems were able to move through the region, bringing generally light amounts of snow. One storm on the 11th slipped in from the south and brought 13.5" of snow to Winchester, ID. More storms came from the northwest during the 12th-14th. Kamiah, ID received 2" while Kellogg picked up 3.5" over two days. The high pressure eased toward the latter half of the month. Temperatures warmed back to normal values for late January, with snow changing to rain on the 25th and 26th bringing some much needed moisture. A push of warm air brought mild temperatures to some locations at the end of the month. Lewiston and Moses Lake both reached 55°F on the 30th.

February continued the weather pattern of high pressure and infrequent storms. The first half of the month was largely dry. A weak storm on the 8th brought some rain and mountain snow to the Panhandle. Another weak system produced a widespread inch of snow for many locations on the 19th. The strongest system of the month moved through on the 22nd. While only producing modest amounts of rain and snow, it was one of the windier storms. Winds gusted to 48 mph near Genesee, ID and Pomeroy, WA, as well as 41 mph at Pullman/Moscow airport. A rainstorm on the last day of the month kept locations such as Wenatchee and Winthrop from having their driest February ever. The dry weather in January and February was somewhat offset by our wet November. Thus, by the end of February, most of the Inland Northwest was near-normal for the winter precipitation, with the Wenatchee and Moses Lake area having the largest deficit. ☼ *Ron Miller*

A view from Mount Spokane in February 2013

Want to report precipitation? Check out CoCoRaHS at *http://www.cocorahs.org*

Remember your Spring Spotter Checklist

Tornado or **Funnel Cloud**
Hail: pea size or larger
Strong Winds: 30mph+ or damage
Reduced Visibility: under a mile due to rain, dust...
Heavy Rain: Showery: 1/2" + in 1 hr Steady Rain: 1"+ in 12 hrs or 1.5"+ in 24 hrs
Snow: 2"+ valleys & 4"+ mountains
Any Flooding
Any Mixed Precipitation!
Travel Problems or Any Damage: due to severe or hazardous weather.

On March 6, a line of thunderstorms moved northward from Lewiston and Pullman and through the Spokane/Coeur d'Alene area producing heavy snow pellets, graupel, lightning, and wind gusts to 30mph. The first thunder day of 2013! ☼ *Jon Fox*

Spring Outlook

The Climate Prediction Center Spring Outlook calls for better chance of below normal temperatures and a better chance for near normal precipitation for the Inland Northwest in the months of March, April and May. ☼

Spotter Training!

Hi weather spotters! With the arrival of spring, the National Weather Service will be busy scheduling spotter training sessions across eastern Washington and north Idaho. We plan to post the dates on the top of the NWS Spokane web page and send emails out to our spotters with current email addresses.

Just a reminder, if you have moved recently, changed your phone or email, please keep us current so we can update our office database and keep you in the loop!

Spring is notorious for being extreme. It's time to watch the skies for thunderstorms. Reports of hail, graupel, gusty winds, flooding, reduced visibility, and yes even snow, are all important weather elements that the NWS would appreciate.

A big THANKS to all the spotters who provided us with valuable reports this winter. We recognize the time you took to measure the snow and send in the reports either by phone or online. Your timely reports help us keep our forecasts on track and our warnings current. ☼ *Robin Fox*

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Trivia: What is the average date for the last spring freeze?