YOUR NATIONAL WEATHER SERVICE SPOKANE QUARTERLY REPORT

VOL XIII, ISSUE 4
DECEMBER 2009

The Weather Watcher

of the Inland Northwest

www.weather.gov/Spokane

Bracing for Winter!

After receiving our first inch of snow late this fall, I heard many residents begin to groan and complain about the coming winter. The sentiments were similar, “It’s too soon for snow," or “I can’t handle shoveling again.” Unless you were a ski or snowboard buff, folks were not ready for winter. Now with frigid cold gripping the region, the question remains. What will this winter be like?

El Nino conditions are expected to strengthen to moderate levels and persist through the winter season. Typical El Nino impacts for winter weather are above average temperatures and below average snowfall for the Pacific Northwest and Northern Rockies. Meanwhile, wet and cool weather is anticipated across California, to Texas and Florida.

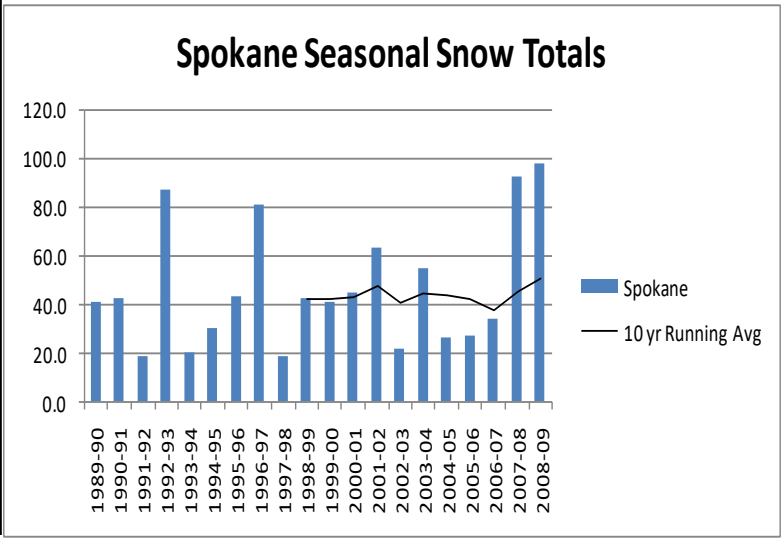
Remember, the term El Nino refers the shift in the atmospheric flow patterns due to a change in the ocean temperatures in the equatorial Pacific. During El Nino, the ocean temperatures off the coast of Peru are warmer than normal. During La Nino conditions, the ocean temperatures are cooler than normal.

A local study indicated that the Spokane area received higher than average snow totals under neutral to weak La Nina conditions—similar to the past two winter seasons. Under El Nino conditions, Spokane tends to experience lower than average snow amounts. Some significant past El Nino winter seasons include: 2006-07, 2002-03, 1997-98, and 1994-95 where seasonal snowfall totals were below 35 inches. The 10 year running snow total average is about 46 inches. The graph below displays Spokane’s seasonal snow totals over the past two decades.

Many of our studies tend to be Spokane-centric, so we took a look at seasonal snow totals from several of our cooperative observer stations. It appears that the trend still holds true— below normal snow totals during moderate to strong El Nino events. From Wenatchee to Plain and LaCrosse, Moscow to Sandpoint, yearly snow totals run 20% to 40% below average across the Inland Northwest.

According the National Weather Service’s Climate Prediction Center, the winter and early spring of 2010 looks to be milder and drier with a better chance of above normal temperatures and below normal precipitation across the Inland Northwest. For updates on the latest long range forecast and El Nino, please visit http://www.cpc.noaa.gov

Despite the mild and dry long range outlook, don’t think winter won’t arrive in the Inland Northwest. Typically our most active winter weather occurs during late December into early January. ☼ *Robin Fox*



Frosty tree at the NWS Spokane office March 2009.

INSIDE THIS ISSUE:

Editor’s Notes

The little bit of snow and abrupt cold snap in early December has gotten most residents winter ready. But winter doesn’t officially start for a couple weeks. The winter solstice occurs at 9:47 am on Monday, December 21. This marks the shortest day of the year when the sun rises at 7:35 and sets at 4:00 pm.

We have made a change to the newsletter distribution. Since each newsletter issue is available online, we have limited mailing paper copies only to those who request it or do not have email. If you would like a paper copy, please contact us and we will keep you on the mailing list. For any questions or comments on the newsletter, please contact Robin at (509) 244-0110 or email nws.spokane@ noaa.gov.

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

All articles are written by the NWS staff. A special thanks to Jon Fox,, Bob Bonner, & Ron Miller for their contributions.

The Latest Cooperative Observer Awards

The awards given to cooperative weather observers, by the National Weather Service, are a way of recognizing observers for their achievements. Yet the awards are a small token of appreciation compared to the amount of work done by these special people. In eastern Washington, two cooperative observers were awarded the most prestigious cooperative observer awards, based not only on length of service but merit.

Mrs. Nancy Taylor of LaCrosse, Washington received the John Campanius Holm Award. The award is named after a Reverend Holm who is recognized as the first person to take climatic observations in the American colonies in 1644 and 1645. No more than 25 Holm Awards are given annually. Mrs. Taylor has taken weather observations in LaCrosse since September 1, 1974 and continues to do so today.

Mrs. Jean Moore of Plain, Washington received the Thomas Jefferson Award, after having received the Holm Award in 2004. This is the highest award the National Weather Service presents to volunteer observers. To be eligible for the Jefferson award, an observer must have received the Holm award at least five years previously. Mrs. Moore began observations April 1, 1968 and continues to do so. No more than five Jefferson awards are given annually.

Congratulations to Mrs. Taylor and Mrs. Moore for their dedication and service in weather observations over the past several decades. A big THANK YOU to all NWS observers and volunteers; we appreciate your reports! ☼ *Bob Bonner*

Autumn Weather Statistics

Wenatchee Water Plant	Sep	Oct	Nov	Total
Avg High Temp	80.9	57.5	48.9	62.4
Departure from Norm	+3.2	-6.2	+3.0	0.0
Avg Low Temp	52.6	48.3	33.3	44.7
Departure from Norm	+1.4	-1.7	+1.1	+0.3
Total Precip	0.28	1.22	0.76	2.26
Departure from Norm	-0.12	+0.73	-0.60	+0.01
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	0.0	0.0	-2.4	-2.4
Lewiston Airport	**Sep**	**Oct**	**Nov**	**Total**
Avg High Temp	83.1	58.6	49.0	63.6
Departure from Norm	+6.4	-3.3	+2.2	+1.8
Avg Low Temp	53.2	38.5	33.8	41.8
Departure from Norm	+2.3	-2.7	-0.3	-0.2
Total Precip	0.09	0.76	0.71	1.56
Departure from Norm	-0.72	-0.20	-0.50	-1.42
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	0.0	0.0	T	T
Spokane Airport	**Sep**	**Oct**	**Nov**	**Total**
Avg High Temp	77.0	52.2	43.4	58.5
Departure from Norm	+4.5	-6.3	+2.3	+0.1
Avg Low Temp	50.8	34.3	30.4	38.5
Departure from Norm	+4.9	-1.5	+1.7	+1.7
Total Precip	0.49	2.31	1.31	5.11
Departure from Norm	-0.27	+1.25	-0.93	+0.05
Total snowfall	0.0	T	4.7	4.7
Departure from Norm	0.0	-0.3	-1.7	-2.0

Answer: 70% based on the data from National Climatic Data Center from 1988-2005

CoCoRaHS Notes

Have that ruler handy? How about your snow board? I'm sure your rain gauge is ready for winter with the inner tube sitting safely inside. That's right, measuring snow for the CoCoRaHS network takes a few more steps and a little more time, but the reports are well appreciated!

We have conducted a couple CoCoRaHS winter weather refresher courses late this fall. If you missed the opportunity to join us online and you're a little rusty on the measuring techniques, you can view a training slideshow on the web page, http://www.cocorahs.org.

Besides the daily precipitation measurement, there are four other winter precipitation measurements.

- Daily precipitation: take your snow-filled gauge in the house, melt down the snow and measure in the inner tube.
- New Snowfall: measured from your snow board or designated area. It's the new snow in the last 24 hours. Try to measure it as soon as the snow ends to avoid settling.
- Melted value of new snowfall: only if you don't trust your gauge catch. Cut a "cookie" from your snowboard.
- Total Snow on the Ground: New snow plus old snow equals snow depth. Taken from the ground up. Try to include this measurement everyday—even if you received no precipitation.
- Melted value of total snow: used to determine the snow water equivalent (SWE) of the snow. Primarily important during the later part of the snow season. Cut a "cookie" or core sample from the total snow depth and melt it.

Have you taken a look at the country-wide CoCoRaHS map lately? Every state in the country is participating! Congratulations to the CoCoRaHS program and the observers. Keep up the great work! ☼ *Robin Fox*

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

Autumn 2009 in Review

September started off the season with beautiful weather. After a rather hot Labor Day weekend, the weather turned cooler as a Pacific front moved through the area on the 6th. A few severe thunderstorms developed over parts of northeast Washington and north Idaho. Penny-sized hail fell at Reardan and nickel-sized hail fell near Ione, while strong thunderstorm winds caused damage at Chewelah, Usk, Metaline, and Priest Lake. Winds gusted to 50 mph in many locations from Omak and Lake Chelan to the Spokane area. Temperatures quickly rebounded by the middle of the month. Omak, Wenatchee and Winthrop set record high temperatures on the 13th with readings in the mid-90s. After another quick cool spell, which brought the majority of the rain for the month, temperatures once again were soaring to near record readings by the 23rd. Pullman reached 93 degrees to tie their record for the day. For the month, temperatures on average were warmer than normal.

The summer-like warmth of September gave way to much colder weather in **October**. The month started seasonable with temperatures in the 50s and 60s. But on the 9th a cold Canadian front brought much colder air into the area. Temperatures plummeted with readings on the 11th and 12th remaining below 40 degrees in many areas. Nighttime lows were cold even by mid-winter standards. Bayview, Idaho had a low of 8 degrees on the 10th, breaking its old record by 13 degrees! The mercury read 10 degrees at the NWS office in Spokane. On the 11th the temperature at Pullman was 8 degrees, breaking its old record by 12 degrees. The effect on the agricultural industry was significant, with many farmers having to pick apples and grapes early to avoid the extreme temperatures. The cold snap ended on the 14th as a Pacific front brought warmer and wetter weather to the area. By the 17th temperatures were back into the upper 60s and lower 70s. It didn't last though, and readings dropped back to more normal values. The weather pattern also became rather wet. Some years see the dry weather of summer extend into October. This wasn't the case in 2009. Two wet fronts on the 23rd and 26th each brought up to an inch of rain to many locations. Some towns in the Idaho panhandle received just over 2" of rain from each storm. 2009 was the wettest October in Wenatchee since 1997 and was the 15th wettest since 1925. Halloween ended the month with a windy cold front. Wind gusts as high as 53 miles per hour were observed in the Cascades.

November weather was fairly close to average. Temperatures generally ranged in the 40s and 50s throughout the month. A cold front on the 13th brought the first measurable snow of the season to many lowland locations. While most sites only saw around an inch, a few spots picked up 3 or 4 inches of the white stuff. Temperatures on that day also stayed below freezing for the first time of the season in some spots. The lowland snow didn't last, as warmer temperatures and rain moved in by the middle of the month. A somewhat stronger snow event occurred on the 22nd. Anatone in southeast Washington received 7" of snow, and Viola in the southern Panhandle picked up 9.5". Another cold front brought widespread rain to the region, with just about everyone picking up at least a quarter of an inch. Overall, though, the month was a dry one, with only about 60% the normal amount of precipitation. ☼ *Ron Miller*

SPOTTER REPORTS: 509- 244-0435

Mrs. Nancy Taylor receiving her Holm Award from Meteorologist In Charge, John Livingston

Staff News from NWS Spokane

New faces will be arriving to the Spokane National Weather Service in the coming new year, to fill the spots of our departed comrades. Anthony Cavallucci accepted the position of Warning Coordination Meteorologist (WCM), taking over for Kerry Jones. Anthony and his family will be moving from Memphis where he was a senior forecaster. He plans to start in the Spokane office by late January.

Meanwhile, Katherine Rowden accepted the position of Service Hydrologist, taking over for Royce Fontenot. Katherine is a Spokane native with experience in engineering and storm water planning. She plans to start in the Spokane office this spring. We wish Anthony and Katherine good luck in their moves and welcome aboard!

Regretfully, we have news that one of Spokane NWS family recently passed away. Lyle Hammer and his wife were escaping the cold in Arizona, when Lyle suffered a heart attack. He retired 5 years ago after a long career in the National Weather Service. Our condolences to Lyle's family. ☼ *Robin Fox*

Remember your Winter Spotter Checklist

Snow:
2"+ valleys and 4"+ mountains

Strong Winds:
30 mph+ or damage

Reduced Visibility:
under a mile due to rain, dust, fog, snow, etc.

Any Flooding

Hail: pea size or larger

Heavy Rain:
Showery: 1/2" + in 1 hr
Steady Rain: 1"+ in 12 hrs
or 1.5"+ in 24 hrs

Any mixed precipitation

Travel Problems or
Any Damage: due to severe or hazardous weather.

SKYWARN Recognition Day

Starting during the afternoon of Friday, December 4th, amateur radio SKYWARN spotters converged on the local NWS offices, like in Spokane. This was for the 11th annual SKYWARN Recognition Day. It is day that celebrates the contributions volunteer SKYWARN amateur radio operators make to the National Weather Service. During the 24-hour period, SKYWARN operators visit NWS offices and contact other radio operators across the world. The event was headed by Mary Qualtieri, AA7RT.

Reports from this year's event were terrific, thanks in part to cold but relatively benign weather. The group of "ham" radio operators were able to make a total of 450 contacts, with the furthest away location was Japan.

Thanks to Spokane "ham" radio group for taking the time and working an extended shift at NWS Spokane. We appreciate your efforts! ☼ *Robin Fox*

Open House Review

On Saturday, October 3rd, the Spokane NWS office hosted an Open House. Our valuable observers and spotters were invited to a special presentation and tour during mid-morning, where door prizes were awarded. Mitch Killebrew won a new rain gauge. Curtis Gillespie won a new NOAA Weather Radio. Ed Tulloch won a snow board. Then the event was open to the general public. Overall, the turn-out was very good, thanks in part to the dry weather although the winds were brisk. Over 500 people were able to tour our facility. If you were able to come to the event, thanks for stopping by and visiting with us! ☼ *Robin Fox*

Are You Prepared?

Traveling increases during the holiday season as we go to grandma's house, see our friends and even visit the ski slopes. But before you hit the road, remember to plan for a safe, winter-weather trip.

- Pack your winter survival kit in your vehicle.
- Check the latest forecast, NWS or other source.
- Check the road conditions by dialing 511 on your phone, http://www.wsdot.wa.gov/traffic/ or http://511.idaho.gov/
- Let someone know where you are going.

The Weather Watcher
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NWS Spokane wishes you a Safe and Happy Holiday Season!

Trivia: What are the chances for a White Christmas in Spokane?