YOUR NATIONAL WEATHER SERVICE SPOKANE QUARTERLY REPORT

VOL XXI, ISSUE 4
DECEMBER 2016

The Weather Watcher

of the Inland Northwest

www.weather.gov/Spokane

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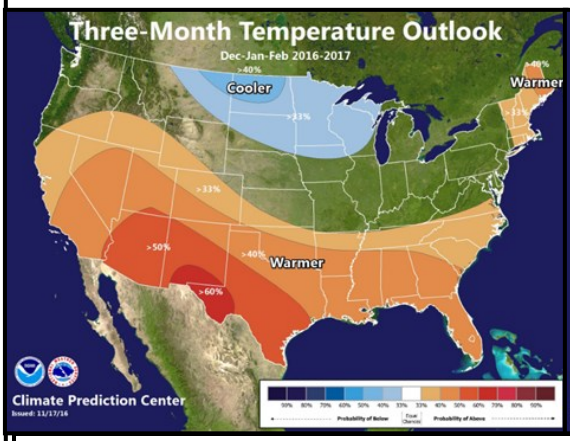
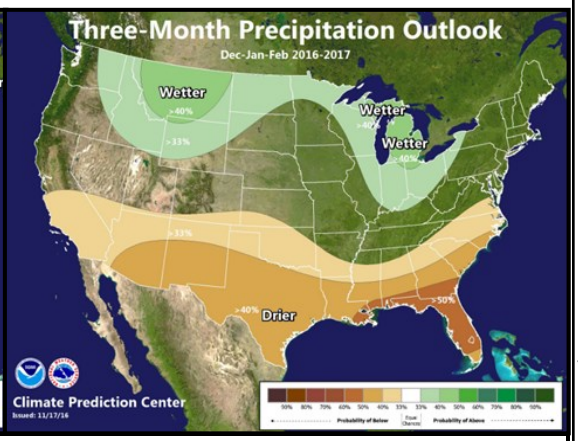
Predictions? —Winter Outlook 2016-2017

For this winter, the Climate Prediction Center is favoring a weak La Niña. What does this mean for the Inland NW? Often La Niña winters bring cooler and snowier conditions, but with this year being a marginally weak La Niña, it's hard to have a lot of confidence in the precise outcome of this winter. Looking back at past weak La Niña years, temperatures most often ended near or below normal while precipitation showed a lot of variability.

This December is going to start off on a cold note as very cold air over Alaska and western Canada drops south into the area. Some of the longer range models suggest this cold air may stick around with possible reinforcing shots of cold air. In addition, there are indications an active Pacific jet stream may become aimed towards the region resulting in an opportunity for a snowy weather pattern. However, where the cold air and moisture meet varies for each system so there is a lot of uncertainty with just how much snow will fall and where the heaviest snow sets up. Here are the latest winter outlooks from the Climate Prediction Center for December, January, and February. ☼

Jeremy Wolf





The outlooks show no strong probabilities in any one direction for both temperatures and precipitation which agrees with our assessment with a lot of uncertainty in this winter forecast.

The End of an Era

December 23rd will mark the last day for Meteorologist In Charge John Livingston at NWS Spokane. He will retire after over 30 years of federal service. John arrived in Spokane over 22 years ago with the construction of the new NWS office and the installation of the Doppler Weather Radar. He supervised the weather office from Ice Storm to "Snowmageddon" to the recent Wind Storm, and oversaw various wild fire, flooding and severe weather events across the Inland NW. Before settling in Spokane, John worked in several weather offices across the country, from Washington DC and Salt Lake City, to Melbourne, FL and Houston, TX. John plans to stay locally, for now, and spend more time with his family. Good Luck John! You will be missed! ☼

Follow NWS Spokane on Facebook and Twitter!

Editor's Notes

Being aware of the weather conditions when traveling is crucial to ensuring a safe journey. Besides checking weather and road conditions, it's important to have your vehicles winterized and a winter weather emergency kit packed & ready to go.

The Winter Solstice or the first day of Winter is December 21 2:44 am. This marks the longest night of the year for the northern Hemisphere.

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

This newsletter and past issues are available @ www.weather.gov/Spokane

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 Jeremy Wolf, Jon Fox, Mark Turner, and Andrew Kalin for their help.

100 Yrs of Weather Observations in Lind, WA

The WSU Dryland Research Station in Lind Washington has been reporting weather observations to the NWS for 100 years. To recognize this achievement, the Lind staff was awarded a *100 Year Honored Institution Award.*

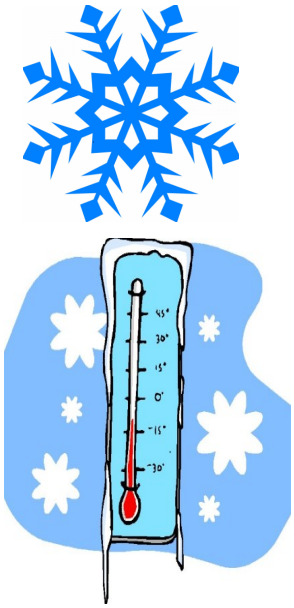
The weather station was initially set up in May 24, 1897 within the town of Lind. The thermometer shelter at that time was located "4 feet above ground on NW corner of house", and the time of observation was listed as "nearest sunset".

The observational responsibility and equipment moved to the "Adams Branch Experiment Statnio" and the site became an official Weather Bureau site in February of 1916. The "precise" coordinates of the equipment was recorded as "Latitude: 47th Parallel, Longitude: About 118° 35' ". The station was located "…in a small orchard, the orchard clean cultivated; no tall objects near…" What an amazing accomplishment!

☼ *Mark Turner*

Pictured are Co-Operative Weather Observers Samantha Crow and Brian Fode

ANSWER:
-30°F Spokane—1/16/1881
-23°F Lewiston—12/13/1919
-21°F Wenatchee—12/30/1968
-37°F Sandpoint—12/30/1968
-26°F Lind—1/26/1957



Spotter and Observer Corner

Did you recently move? Did you get a new cell number? What about your email, is it current? NWS Spokane has been going through the their files and updating contact data on weather spotters, observers and partner agencies. We may call you or email you for updates. If you know of a change, please let us know. You can email us at nws.spokane@noaa.gov or call us on the spotter line!

We appreciate all of your reports, especially the recent ones on snow. Just a reminder, when you call please provide your spotter ID, including the County Name & Number. If you can't remember that, your name will work. That helps the NWS identify you easily.

Have you heard of *mPing*? It's an app you can get with your smart phone that allows you to report what type of precipitation you are receiving. The *mPing* reports are funneled to our office and are used in real time with the plotting based geo-location. It identifies if it's rain, snow or freezing rain, but not amounts. So if you do use it, we would still like a call or email report on your snow & precipitation amounts. ☼ *Robin Fox*

2016 Fire Season in Review

Going into the 2016 fire season, there were questions as to whether or not it would be as catastrophic as the 2015 season. Last winter and spring delivered abundant precipitation as well as fairly warm temperatures. However with those warm temperatures came an unusually quick melt of the snowpack. Many mountain locations in the Inland Northwest lost their entire snowpack between April and early May, which was the fastest on record for some sites. So although it was wetter than the previous year, we expected to see a much quicker than normal green up followed by an earlier than normal curing of the fuels. Fortunately, the wetter conditions prevailed and it was a much quieter fire season that we have become accustomed to.

Small fires were reported as early as May with additional small fires through much of July. The fire season began with the two largest or most impactful fires being the Hart-Cayuse Mountain fires near Wellpinit, WA and the Spokane Complex fires near and southeast of Spokane. For the year, there were only 841 fires reported across the region which burned nearly 75,000 acres. This was a far cry from the 1,372 fires and 913,430 acres the year before. From an acreage standpoint, this was the most subdued fire season since 2011. ☼ *Jon Fox*

SPOTTER REPORTS: (509) 244-0435

Autumn in Review

This fall sure provided a several swings in the weather. **September** lived up to its reputation as being a quiet month weather wise with just a few noteworthy events. Scattered showers and thunderstorms occurred on the 8th which produced a 42 mph wind gust in Spokane. For most of the region rain was below normal for the month except near the Cascade crest and Idaho Panhandle where a round of heavy rain on the 17th brought one to two inches. One last stretch of summer like temperatures arrived from the 26th through the 30th with widespread highs in the 80s and Lewiston even reaching 91° on the 26th.

After a quiet September, some were hoping that **October** would provide more of the same as mild October sunny days are not uncommon in the Inland Northwest. This October however was just the opposite with lots of cloudy and rainy days setting new October rainfall records at most locations. Spokane even recorded its wettest month ever with 6.23 inches with measurable rain recorded on 22 days. The cloudy skies resulted in cooler than normal high temperatures but warmer than normal low temperatures. Freezing temperatures were uncommon, except on the 11th and 12th with a brief cool spell. Here is a table of the monthly records that were set during the month of October.

October 2016 Record Rainfall Totals

Site	Rain total (inches)	Previous record (year)
Priest River, ID	10.64”	8.31” (1947)
St. Maries, ID	9.19”	6.31” (1955)
Kellogg, ID	8.79”	7.23” (1950)
Boundary Dam, WA	8.76”	3.97” (1968)
Bonners Ferry, ID	7.99”	7.64” (1947)
Spokane Airport, WA	6.23”	5.41” (1947)
Moscow, ID	6.17”	4.51” (1994)
Potlatch, ID	6.07”	5.25” (1955)
Rosalia, WA	5.90”	4.42” (1951)
Colville, WA	5.82”	4.81” (1947)
Pullman 2 NW, WA	5.69”	4.29” (1950)
Davenport, WA	5.06”	3.94” (1947)
Republic, WA	4.87”	4.27” (1950)
Ritzville, WA	4.86”	3.94” (1947)
Grand Coulee Dam, WA	3.98”	2.95” (1947)
Chief Joseph Dam, WA	3.80”	2.04” (1956)
Winthrop, WA	3.72”	3.13” (2003)
Waterville, WA	3.47”	2.94” (1947)
Ephrata, WA	2.52”	1.92” (1950)
Priest Rapids Dam, WA	2.22”	1.92” (1957)
Wenatchee Airport, WA	2.03”	1.72” (1962)

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

Autumn Weather Statistics

Wenatchee Water Plant	Sep	Oct	Nov	Total
Avg High Temp	76.9	59.5	53.8	63.4
Departure from Norm	-1.4	-4.0	+7.3	+0.6
Avg Low Temp	51.2	43.1	40.1	44.8
Departure from Norm	-0.5	+1.9	+7.9	+3.1
Total Precip	0.04	2.02	0.39	2.45
Departure from Norm	-0.26	+1.50	-0.99	+0.25
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	0.0	0.0	-2.9	-1.9
Lewiston Airport	**Sep**	**Oct**	**Nov**	**Total**
Avg High Temp	76.6	61.1	54.8	64.2
Departure from Norm	-1.6	-1.5	+6.6	+1.2
Avg Low Temp	52.0	46.0	39.4	45.8
Departure from Norm	+1.0	+4.9	+5.3	+3.7
Total Precip	0.55	2.66	0.63	3.84
Departure from Norm	-0.12	+1.70	-0.55	+1.03
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	0.0	0.0	-1.8	-1.8
Spokane Airport	**Sep**	**Oct**	**Nov**	**Total**
Avg High Temp	71.8	54.8	49.7	58.8
Departure from Norm	-1.1	-3.2	+8.1	+1.3
Avg Low Temp	47.6	41.9	37.2	42.2
Departure from Norm	+0.2	+4.7	+7.4	+4.1
Total Precip	0.21	6.23	1.57	8.01
Departure from Norm	-0.46	+5.05	-0.73	+3.86
Total snowfall	0.0	0.0	3.3	3.3
Departure from Norm	0.0	-0.1	-4.1	-4.2

After a record wet October, the weather pattern changed in **November**. The first half of the month was much warmer and drier than normal with high temperatures in the 50s to mid 60s common with below freezing temperatures at night still hard to find. The pattern then turned cooler and wetter although temperatures still remained slightly above normal for most locations through the rest of the month. The month as a whole in terms of average temperatures finished the warmest on record in Ephrata, Wenatchee, Mazama, Ritzville, Chewelah, and Bonners Ferry. Lewiston came in 3rd warmest, and Spokane 4th warmest. Lewiston finally recorded its first freeze of the season on Nov 16th which was the 3rd latest first freeze on record. The cooler and wetter pattern was good news for ski resorts with several opening near or just after Thanksgiving. ☼ *Jeremy Wolf*

Remember your Winter Spotter Checklist

Snow:
2"+ valleys & 4"+ mountains

Strong Winds:
30mph+ or damage

Hail: pea size or larger

Reduced Visibility:
under a mile due to smoke, dust...

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

Any Flooding

Any **Mixed Precipitation**

Travel Problems or Damage:
due to severe/hazardous weather

New Weather Satellite

On November 19th, the newest weather satellite, GOES-R, was launched into space. By November 29th, the satellite was placed into geostationary orbit about 22,000 miles above the middle of the United States. Preliminary tests have confirmed the system is stable and preforming very well. This satellite will now be known as GOES-16.

GOES-16 is the first in a new generation of GOES satellites that will provide significant improvements for all NWS forecasters. GOES-16 will deliver three times the spectral bands, a four-fold increase in resolution, and a scan rate five times faster than the current geostationary satellites. Routine one-minute imagery scans of significant weather will occur over the CONUS and adjacent oceanic areas. In addition, GOES-16 will have the first-ever Geostationary Lightning Mapper (GLM) to provide near-instantaneous lightning observations, and a new suite of instruments to investigate Space Weather and the Sun. This new technology is expected to bring an exciting and bright future to weather tracking and forecasting. ☼ *Robin Fox*

Travel Resources

Winter brings it's own set of challenges for travel. From snow to a wintry mix to fog, it's important to know before you go. The NWS Spokane has put together an informative video on where to find travel weather and road information. You can view it and many other NWS Spokane videos at https://www.youtube.com/watch?v=F5K97q6lbd8 ☼ *Andrew Kalin*

The main points to remember:

- Check out the new **Travel link** on the left column of the NWS Spokane web page for weather/road impacts
- Check the state DOT web pages for current mountain pass and road conditions or **Dial 511**
- Visit the NWS Spokane web page and see the latest "**Weather Stories**" to highlight the latest weather
- Follow or Like NWS Spokane on **Facebook** and **Twitter**

Watch : Conditions are favorable for hazardous weather around the watch area.
CAUTION—Watch the Sky!

Warning : Hazardous weather is likely or is occurring in the warned area.
DANGER—ACT NOW!

The Weather Watcher
Of the Inland Northwest

National
Weather Service
2601 N Rambo Rd
Spokane, WA 99224
(509)-244-0110

HAPPY HOLIDAYS FROM NWS SPOKANE

Trivia: What are some record cold temperatures for the Inland NW?