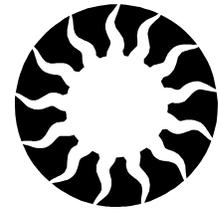


The Weather Watcher of the Inland Northwest

www.wrh.noaa.gov/Spokane



National Women's History Month Recognizes The Women of the Weather Bureau of WWII

In 1941, only two women were listed in the Weather Bureau. By 1945, over 900 women worked as observers, forecasters, and even staffed entire Weather Bureau offices! These women possessed a 'can do' attitude and became a force to be reckoned with in the field of meteorology. The National Weather Service (NWS) is proud to recognize the women who worked for the Weather Bureau during World War II.

This was a time of great advances in meteorology with the development of the upper air network and radar. The contributions and sacrifices of these women provided critical support to homeland safety during the war. Often under-recognized for their hard work, devotion, and professionalism, they deserve a standing ovation for blazing a path for today's men and women who walk in their footsteps. These women made significant contributions to meteorology and hydrology, which have not been forgotten.



Plotting upper-air maps

The NWS headquarters has compiled a list of women who worked in the Weather Bureau during this time. From this list, the NWS Director will be sending a letter of appreciation to acknowledge their pioneering efforts. For more information, please visit <http://www.lib.noaa.gov/edocs/women.html> ☀ Ken Holmes

The Bitter Cold of January

Location	Temp	Record
Spokane	-22	-23 in 1890
Sandpoint	-20	New record
Pullman	-17	New record
Davenport	-25	New record
Pomeroy	-15	New record
Republic	-24	New record
Wenatchee	-8	New record
Winthrop	-21	New record
Omak	-2	-8 in 1971
Winchester	-20	New record
Lewiston	-5	New record
St. Maries	-13	-15 in 1979
Ephrata	-11	New record

Mother Nature placed the Inland Northwest in a deep freeze to welcome in the new year. An arctic cold front slowly pushed across the region Sunday, January 4th, dropping several inches of snow. Behind the front, dry and very cold air filtered into the region under northerly winds. As the wind diminished overnight, strong radiational cooling on top of a fresh snow pack allowed temperatures to literally plummet well below zero by the morning of January 5th. The coldest reported temperatures included: -34°F at Turnbull Wildlife Refuge near Cheney, -32°F at Springdale, -28°F at Deer Park, and -24°F at Coeur d'Alene airport. It's not surprising, as late December to early January is climatologically the coldest time of the year. Many records were broken on this date, marking it the coldest of the season. ☀ Robin Fox



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Editor's Notes

Now that Spring is here, thunderstorms will become more of a common occurrence. It's important to protect yourself from lightning strikes both at home and outdoors.

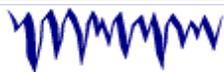
When a thunderstorm is nearby, remember these simple safety rules. Go inside a safe shelter or building. Stay away from trees. Avoid metal. Stay out of the water.

National Lightning Safety Awareness Week runs from June 20-26, 2004.

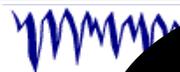
If there is something you would like to see in the next newsletter or if you have comments about a past issue of the Weather Watcher, please contact Robin Fox or Ken Holmes (509) 244-0110 extension 223.

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

All articles are written by the NWS staff and close contacts. A special thanks to Ron Miller, Charles Ross, Bob Bonner and John Livingston for their contributions.



A Winter of Extremes



Answer: Count the seconds between seeing the lightning and hearing the thunder. Divide by 5; it takes about 5 seconds for thunder to travel a mile. Thunder is difficult to hear more than 20 miles away.

This past winter was an excellent example of how different a season may be described, depending on what you remember. After a very cold and snowy November, it was certainly looking like a rough winter ahead. But December turned out to be a bit different than the preceding month. Nearly every day of the month was normal or warmer than normal. In fact, through Christmas, Lewiston reached at least 40° for all but 3 days. Periodic storms kept moving through the area during the first half of the month, bringing most of the precipitation for December. The weather dried out somewhat for the second half of the month but remained cloudy. The warm valley temperatures meant a mixture of rain and snow for the lower elevations, but in the mountains nearly all the precipitation was snow, resulting in a good start on the mountain snow pack. The weather pattern took a sharp turn at the end of the month. A strong cold front didn't bring much in the way of precipitation but temperatures were significantly colder, with sub-freezing highs for the last 3-5 days of the month.

The New Year started off with a snowstorm for much of the area. A strong storm developed in southwest Oregon

and tracked across the Palouse. Significant snow fell most of the day. Storm totals of 4-8 inches were common with Bovill, Idaho picking up 14 inches. Behind this storm came the coldest arctic air mass since February 1996. Temperatures dropped well below zero on the 4th and remained cold for the next few days.

The arctic air was slow to retreat. Warm southwesterly flow rode over the arctic air providing nearly continuous light snow and warming temperatures from the 6th through the 8th. A large ridge of high pressure during the middle of the month kept the skies cloudy and temperatures near or above normal with very little precipitation. The storm door opened again late in the month with a good snow storm on the 23rd and 24th. This resulted in the deepest snow pack of the year for Spokane. It was short-lived as warm southwesterly flow developed. Daytime temperatures warmed into the 40s and lower 50s with above-freezing temperatures at night. This pattern came to an end as the month closed out with a windy cold front. There were even a few lightning strikes from this front as it moved through the area on the morning of the 30th. January lightning is very rare, and to have it occur in the morning was even more unusual. Temperatures behind the front actually fell during the day. Wind gusts to 60 mph were measured on the Palouse. A gust to 52 mph was felt at Wenatchee while the winds at Spokane reach 49 mph.

February had a cold start with temperatures during the first half of the month more typical of early January. But warmer and wetter weather found its way into our area by Valentine's Day. Temperatures warmed to above normal values with highs reaching the 50s and lower 60s during the last few days of the month. For most of the region, February turned out to be near-normal for both temperatures and precipitation. A wet weather system on the 25th brought a good amount of precipitation to the east slopes of the Cascades. Wenatchee received 0.67" of rain and wet snow which put them well-above the normal precipitation for the month.

According to the NWS Climate Prediction Center, the spring outlook for the Inland Northwest for March through May appears to be seasonal with near normal temperatures and precipitation. For more information, visit <http://www.cpc.ncep.noaa.gov/products/predictions/90day/lead01/index.html> ☀ *Ron Miller*

Winter Weather Statistics

Wenatchee Airport	Dec.	Jan.	Feb.	Total
Avg High Temp	32.5	33.7	40.0	35.3
Departure from Norm	-1.0	-0.2	-1.6	+0.1
Avg Low Temp	23.5	22.4	27.3	24.4
Departure from Norm	+0.6	+0.6	+0.6	+0.6
Total Precip	1.35	0.73	1.43	3.51
Departure from Norm	-0.08	-0.41	+0.57	+0.08
Lewiston Airport	Dec.	Jan.	Feb.	Total
Avg High Temp	42.3	39.6	47.8	42.5
Departure from Norm	+3.1	+0.2	+2.2	+1.8
Avg Low Temp	30.9	28.2	33.0	29.7
Departure from Norm	+2.4	+0.2	+1.8	+1.4
Total Precip	1.79	0.92	0.73	3.44
Departure from Norm	+0.74	-0.22	-0.22	+0.30
Spokane Airport	Dec.	Jan.	Feb.	Total
Avg High Temp	34.1	28.6	39.0	34.5
Departure from Norm	+1.3	-2.3	-0.3	-0.4
Avg Low Temp	25.4	21.9	25.3	24.2
Departure from Norm	+3.8	+0.2	-0.4	+1.2
Total Precip	2.14	1.41	1.46	5.01
Departure from Norm	-0.11	-0.41	-0.05	-0.57
Total Snow	7.2	20.3	8.7	36.3
Departure from Norm	-7.9	+6.1	+2.1	+0.3



Spotter Corner

Spotter training is underway in the Inland Northwest. On the evening of February 26th, a session was held in at the Chelan County PUD in Wenatchee. There were about 37 spotters in attendance from Chelan, Douglas, Grant and Okanogan counties.

Another spotter session has been scheduled for the Lewiston area on March 31st at 7 pm in the basement of the Nez Perce County Courthouse. Spotters in the surrounding counties will receive post cards on the upcoming meeting. Please RSVP Ken Holmes by phone or email if you plan on attending.

We experienced active winter weather during the past several months from heavy snow and bitter cold, to freezing rain and high winds. A big thanks is extended to the entire spotter network of the Inland Northwest. Your timely reports on snow amounts, wind damage and precipitation type have been a valuable contribution to National Weather Service forecasts and warnings. We appreciate and applaud your diligent effort!!!

With what began last season, I would like to continue to acknowledge those spotters that were outstanding in their spotter reporting. Good Job! Keep up the good work!

Pend Oreille #9: Nancy Lewis and Al Veradale of Newport, WA with their frequent snow reports especially in the first half of January.

Nez Perce #17: Bill and Bernice Loft of Lenore, ID with their timely snow reports throughout the entire winter.

Latah #8: Emergency Manager Sandy Rolins for the county-wide situation reports and emails during time of hazardous winter weather.

Pend Oreille #18: Rocky Beach for his daily precipitation logs from the Cusick, WA area this winter.

Douglas #3: Harold Batten for his pleasant humor and reliable snow reports from the Waterville Plateau. ☀ *Robin Fox*



Staff News

- Administrative Assistant, Rose Tibbitts gave birth to Baby Madalyn on Feb 7th.
- Jeffrey Coté has joined the NWS Spokane staff as a Meteorologist Intern. He is from N Tonawanda in upstate New York. He graduated from SUNY Brockport and worked for 5 1/2 years at Weather-Bank in Edmond, OK.
- Electronics Technician, Merri Richmond received a promotion to the Salt Lake City Regional Headquarters. She will be relocating in early April.

Congratulations Rose, Jeff and Merri!



COOP Notes

Observers reporting via ROSA can discontinue the routine snowfall and snow depth groups on March 31st. If snow should occur after this date, please include these groups during the day of the event.

If you have internet access, you can report your observation to the National Weather Service through the web using WxCoder. Observers that are now using this program like it and consider it much easier than ROSA. If you are interested, please contact Bob Bonner and leave a voice message at 509-244-0110 ext. 225. ☀



Spring Flood Potential

Mountain snow pack is near average for early March across most of the Inland Northwest. The exception is in the east slopes of the northern Cascades where snow packs are currently a little lower, around 80% of normal. Precipitation in the valleys has run slightly below average since October, the start of the water year. This can be attributed partly to the dry conditions in February.

Rivers in the Inland Northwest reach their annual peak in spring or early summer as the mountain snow pack melts and runs off. As a general rule, the larger the snow pack the greater the threat of seasonal flooding. The potential for spring flooding this year is near average across the region. Some basins that regularly see high water flows during the spring, like the St. Joe River at St. Maries in Idaho, have the potential again this year. ☀ *Charles Ross*

Remember your Spring Spotter Checklist

Heavy Rain

Showery- 1/2" an hour
Steady Rain- 1" in 12 hrs
or 1.5"+ in 24 hrs

Flooding—any kind

Strong Winds

30 mph+ or damage

Hail—pea size or larger

Tornado/ Funnel Cloud

Travel Problems or
Any Damage due to
weather!



Web Site Survey

Now you have a chance to voice your opinion. For those of you internet savvy users, tell us what you think of the **National Weather Service Spokane** web pages!

Please visit <http://weather.gov/survey/web-survey.php?code=WFOOTXwebsite> to complete the survey. **There is also a link on the top of our web page.** It will only take a few moments of your time, but your input will help us customize and improve our web site for you and other users. ☀ *John Livingston*

New Director of the National Weather Service

Brigadier General (Ret.) David L. Johnson is the new NOAA Assistant Administrator for Weather Services and National Weather Service (NWS) Director, replacing the position held by Brigadier General (Ret.) Jack Kelly. General Johnson's first official duty was attending the annual meeting of the American Meteorological Society in Seattle, WA this past January.



General Johnson recently retired from the U.S. Air Force as Director of Weather, after an exemplary 30-year military career. He was responsible for developing policy and organizational structure to support global Air Force and Army operations.

"Having completed the NWS modernization, we need to continue optimizing the benefits of our investment and emphasize the infusion of science and technology," Johnson said. "We need to show that our investment is worth it - to the American public and to ourselves. This effort will pay dividends in the decades to come. I'm proud to be part of the team." He is the 15th person to lead the NWS organization since it began in 1870. ☀

The Weather Watcher Of the Inland Northwest



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Trivia: How can one estimate the distance of a nearby thunderstorm?