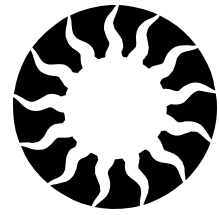


The Weather Watcher of the Inland Northwest

www.weather.gov/Spokane



Winter Snow and El Nino

The past two winters delivered more snow to the Spokane area, and much of the Inland Northwest, than has ever been recorded in a two-year period. The winter total from October 2007 through May 2009 was just over 190" of snow. The previous two-year record was 165" set between October 1948 and May 1950. The question that begs to be asked then, is what will this winter bring? Are we going to see another snowy winter? Can this coming year exceed the record for three-year snow accumulations? The current three-year record stands at 245", spanning from October 1949 and May 1952. If we do our calculations right, that means approximately 55" of snow needs to fall this winter. This is just a bit above the 46" average for the Spokane area. While achieving that total is possible, it becomes less likely with time as the region enter into a moderately-strong El Nino episode.

El Nino refers to the disruption of the ocean-atmosphere system in the Tropical Pacific ocean. Specifically it relates to unusually warm waters found in the central to eastern Pacific Ocean, off the coast of Equator and is caused by the disruption of the typical easterly trade winds. So how does this relate to the

weather in the Pacific Northwest, especially east of the Cascades? Even though this phenomenon is located thousands of miles south of our area, a moderate to strong El Nino often brings significant changes to our winter weather. Temperatures over the Inland Northwest usually surge well above seasonal normals with higher snow levels, while precipitation amounts remain at or slightly below normal. The images below show how winters from December to February rank during a strong El Nino year. For more details and larger images, visit the Climate Prediction Center at http://www.cpc.noaa.gov/products/predictions/threats2/enso/el_nino/.

So does this guarantee our upcoming winter will be warmer than normal with normal or below normal precipitation? The last moderate El Nino we saw was in the winter of 2002-03. That year saw 21.2" inches of snow. The last strong El Nino was in 1997-98 and that year the area received a paltry 18.3". While there are no guarantees in weather, the upcoming El Nino episode suggests our chances for breaking the three-year snowfall record are remote. ☀ Jon Fox

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Editor's Notes

Mark your calendars. The first day of fall or the autumnal equinox is September 22, 2009 @ 21:18 GMT or 2:18 pm PDT. Daylight Savings Time will finally end on Sunday, November 1st.

September is also National Preparedness Month and NOAA Weather Radio Month. It's time to prepare for winter. Remember NOAA Weather Radio - your source of weather information 24/7.

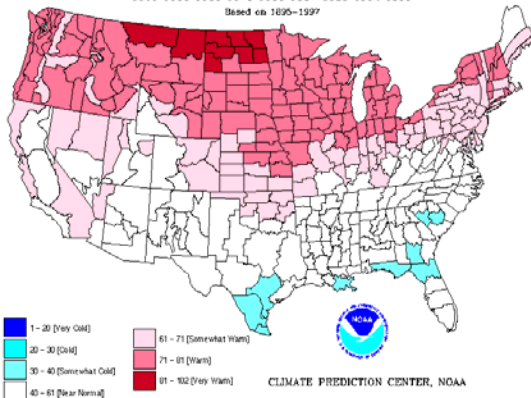
We made changes to our newsletter distribution. With each issue available online, we limited our mailing list. We encourage you to read our newsletter on our web page. But if you would prefer a paper copy, please contact us and we will keep you on the mailing list.

For any questions or comments on the newsletter, please contact Robin @ (509) 244-0110 ext. 223 or email nws.spokane@noaa.gov.

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

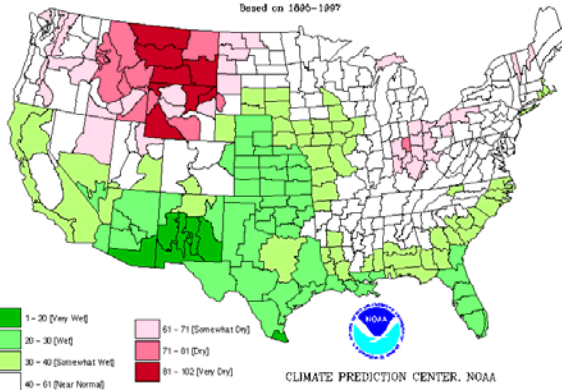
A big thanks to the NWS staff that wrote these articles!

AVERAGE DECEMBER - FEBRUARY [3-month] TEMPERATURE RANKINGS DURING ENSO EVENTS
1941 1958 1966 1973 1983 1987 1988 1992 1995
Based on 1926-1997



Average Temperature Rankings during El Niño

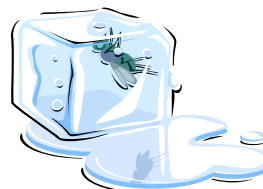
AVERAGE DECEMBER - FEBRUARY [3-month] PRECIPITATION RANKINGS DURING ENSO EVENTS
1915 1919 1941 1950 1966 1973 1983 1987 1988 1992 1995
Based on 1926-1997



Average Precipitation Rankings during El Niño

Winter Outlook 2009-10

- Better chance of above normal temperatures
- Better chance of at or below normal precipitation



Are your gauges ready?



With winter just around the corner, we would like to remind all our observers to review the correct procedures for measuring snowfall, snow depth, and the water equivalent of snow. Remember to winterize your gauges before the first big freeze or first snow. Whether you have a 4 inch or 8 inch rain gauge, remember to **remove the funnel and measuring inner tube**. Set out your snow board and have your ruler or yard

stick ready.

The NWS Spokane has a VHS tape or a DVD on the correct procedures of measuring the water equivalent of snow. If you would like to obtain a copy to review, please contact Bob Bonner at the NWS office.

There is a online training on winter weather available on the CoCoRaHS web page. Visit <http://www.cocorahs.org> and click on training slide shows on the right. NWS Spokane will host remote CoCoRaHS winter refresher courses over the next several months. Look for the latest schedule on our web page or via email in the coming weeks. ☼ *Robin Fox & Bob Bonner*

Staff News

Hydrologist, Royce Fontenot has set his sights on warmer climates. He transferred to Slidell, LA this summer to the Lower Mississippi River Forecast Center.

Warning Coordination Meteorologist, Kerry Jones, will be moving south as well. He and his family will return to the Albuquerque, NM where he will take on the position of NWS Warning Coordination Meteorologist in his home town. He plans to depart Spokane by mid October.

We wish Royce, Kerry and their families the best of luck in their new NWS positions. ☼ *Robin Fox*

Summer Lightning

Summer Weather Statistics

Wenatchee Water Plant	Jun	Jul	Aug	Total
Avg High Temp	82.3	91.6	88.9	87.6
Departure from Norm	+2.2	+3.8	+1.7	+2.6
Avg Low Temp	57.0	62.8	61.4	60.4
Departure from Norm	+1.5	+1.9	+1.2	+1.5
Total Precip	0.35	0.19	0.00	0.54
Departure from Norm	-0.34	-0.11	-0.41	-0.86
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	0.0	0.0	0.0	0.0
Lewiston Airport	Jun	Jul	Aug	Total
Avg High Temp	79.9	91.6	88.3	86.6
Departure from Norm	+2.0	+4.1	+0.7	+2.3
Avg Low Temp	54.3	61.1	61.2	58.9
Departure from Norm	+0.7	+1.9	+1.9	+1.5
Total Precip	0.82	0.48	1.76	3.06
Departure from Norm	-0.34	-0.24	+1.01	+0.43
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	0.0	0.0	0.0	0.0
Spokane Airport	Jun	Jul	Aug	Total
Avg High Temp	75.1	85.5	83.1	81.2
Departure from Norm	+1.2	+3.0	+0.5	+1.6
Avg Low Temp	51.3	58.8	57.6	55.9
Departure from Norm	+2.1	+4.2	+3.1	+3.1
Total Precip	1.18	0.48	0.74	2.40
Departure from Norm	0.00	-0.28	+0.06	+0.24
Total snowfall	0.0	0.0	0.0	0.0
Departure from Norm	0.0	0.0	0.0	0.0

Answer: Sept. 23, 1926

NWS Spokane

Meteorologist In Charge

John Livingston

Administrative Assistant

Rose Tibbitts

Warning Coordination Meteorologist

Kerry Jones

Science Operations Officer

Ron Miller

Data Acquisition Program Manager

Robert Bonner

Service Hydrologist

Information Technology Officer

Todd Carter

Lead Forecasters

Jon Fox
Matt Fugazzi
Bob Tobin
Greg Koch
Paul Bos

General Forecasters

Robin Fox
Rocco Pelatti
Laurie Nisbet
Jeremy Wolf
Jeffrey Coté
Mike Fries
Ellie Kelch
Steve Bodnar

Hydro-Meteorological Technician & Interns

Stan Savoy
Colby Newman
Steven Van Horn

Electronic System Analyst

Dwight Williams

Electronic Technicians

Paul Kozsan
Mike Henry

Facilities Technician

Mike Belarde

Summer 2009 in Review

This past summer saw the usual number of warm, sunny days and mild nights. Overall, it was a bit warmer than normal. The summer of 2009 ranks 10 out of 85 for Wenatchee, 36 out of 129 for Lewiston, and 27 out of 129 for Spokane. But in general, it was still cooler than the recent summers of 2003-2007. Meanwhile Seattle and Phoenix were experiencing their hottest July ever, while folks from Iowa to Pennsylvania saw their coldest July ever.

June started out on the warm side with temperatures reaching near 90° on the 3rd and 4th. This warm spell came to a quick end as a cooler and unstable air mass moved into the area. Strong thunderstorms were prevalent on the 5th through the 7th. The storms on the 6th were noteworthy as 4 tornadoes were spawned between Creston and Wilbur in eastern Washington. These tornadoes were fairly weak and did not cause any damage, but there were several impressive photos taken of them. They can be seen at: http://www.wrh.noaa.gov/otx/photo_gallery/Jun6_Creston_tornadoes.php.



Crest twin tornadoes. Courtesy of Dawn Nelson

There were more strong thunderstorms on the 12th with nickel-sized hail and funnel clouds reported near Ephrata and Moses Lake. Heavy rain from thunderstorms dropped 1.41" in 40 minutes near Northport, WA on the 15th. An observer at Inchelium picked up 2.90" from storms. The heavy rains caused some road wash-outs in the area. A very cold Pacific storm then moved into the area with heavy rains on the 19th. Spokane Airport only reached a high temperature of 55° on the 21st. But warmer weather quickly returned with near normal temperatures to finish out the month.

While many **July** 4th weekends in the Inland Northwest are less than summer-like, this year the holiday weekend was, with temperatures in the 90s across the much of the region. A cold front for the start of the new work week brought rain and much cooler temperatures to the region. Some locations struggled to reach 70°

on the 8th. After a brief warm spell, an even colder air mass moved into the area. Thunderstorms that moved in with the front brought 1 inch hail stones to Kettle Falls. Behind the front, Pullman and Kellogg only reached a high of 62° on the 13th; not exactly mid-July weather. But after this cold episode, summer took hold on the Inland Northwest. Temperatures for the remainder of the month would be in the 80s and 90s with a few 100°s in the usual places like Lewiston, which hit 101° on the 22nd. Thunderstorms on the 25th brought more heavy rain and small hail to the communities of northeast Washington. On the evening of the 27th, thunderstorms from Canada moved across the northern Panhandle. One of these storms produced strong winds knocking down trees in the town of Priest River. The next afternoon, another strong thunderstorm developed near Priest Lake. This storm dropped 1 inch hail near Coolin. Damaging winds from the storm knocked down trees from Priest Lake to Newport. The worst damage occurred in a small community just east of Newport, where numerous trees were blown down, four of which landed on a house.

August started off with the hottest weather of the summer. Readings on the 1st included 107° at Wenatchee, 106° at Lewiston, Omak, Moses Lake, Ephrata and La Crosse, and 103° at Ritzville and Colville. A weak cool front provided some relief, as temperatures dropped back into the 90s for the remainder of the first week of August. A heavy rainstorm moved into the area from the south on the 6th and 7th. This storm brought widespread rain to the Panhandle and extreme eastern Washington. Lewiston received a total of 1.41" of rain from the event and had a high temperature of only 68° on the 7th, well below the normal of 89°. Before summer heat could return, another cold front moved into the region a week later. Once again a number of locations had highs only in the 60s on the 14th. But the heat would return. Temperatures quickly jumped back into the 90s and lower 100°s. But a couple of weaker cool fronts would provide breaks in the heat on the 23rd and 29th. As a result, while the average temperatures for the summer would show it to be warmer than normal, the frequent Pacific fronts and associated rainfall would provide breaks in the heat about every 7 to 10 days. ☀ *Ron Miller*

**Remember your
Fall Spotter
Checklist**

Snow: first event and then...
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.



You are invited to the
National Weather Service
Open House

Saturday, October 3rd
11am-4pm

Free tour of the facility...Watch a weather balloon launch...
Meet the meteorologists.

Winter Weather Awareness

Winter weather awareness week is scheduled for Oct xx-xxth across Washington, Idaho and Oregon. This will be a great time to start preparing your home, office, vehicle and property for the upcoming winter storms of wind, snow, rain and cold. Here are things to keep in mind and add to your preparedness list for this fall:

- Weatherize your vehicle now. Make sure you have adequate tires, chains or sand. Remember your ice scraper and brush.
- Stock up on your winter safety kit- including a blanket, batteries, food, and water in your car.
- Winterize your home - including storm windows, doors, weather stripping, and insulation.

**The Weather
Watcher**

Of the Inland Northwest



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

«county» «SPT #» «HAM» «COOP ID»
«FIRST NAME» «LAST NAME» «HAM
CALL»
«2ND FIRST NAME» «2ND LAST NAME»
«2ND HAM CALL»
«AFFILIATION»
«ADDRESS»
«CITY», «STATE» «ZIP»

**Trivia: When was
Spokane's earliest first
snowfall?**