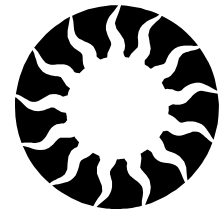


The Weather Watcher of the Inland Northwest

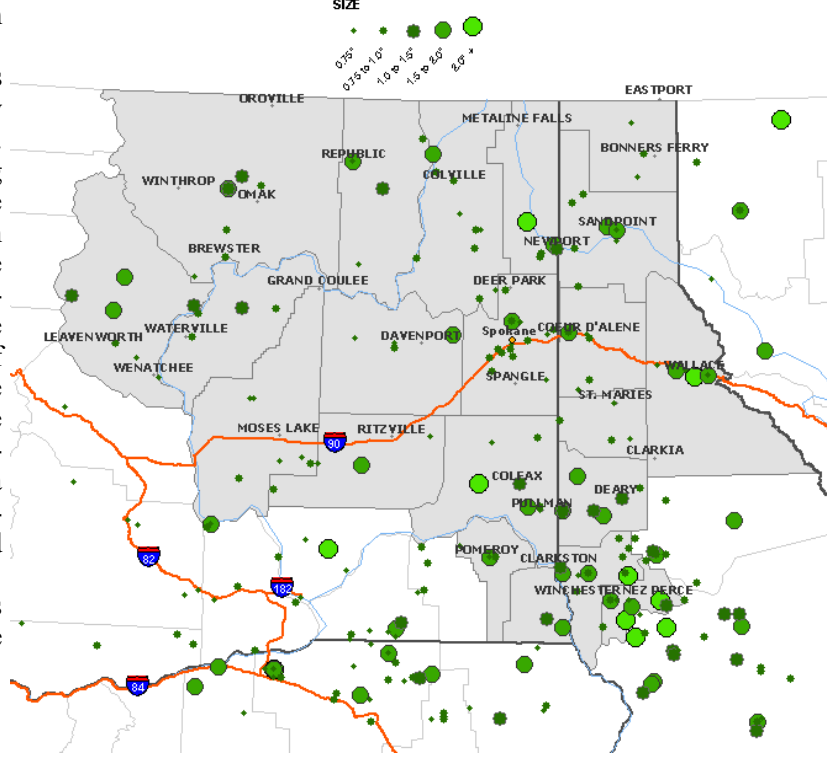
www.weather.gov/Spokane



The Climatology of Hail

Hail is irregular lumps of ice which form in thunderstorms. The strength of a storm's updraft determines how large the hail will get. The stronger the rising motion in the storm, the bigger the hail. And then the bigger the hail, the more severe the thunderstorms. The map at the right shows the range of severe hail reports in the last 50+ years over the Inland Northwest. Severe hail is the size of a penny or 3/4 inch in diameter; this is indicated by the smallest dots. There have been reports of over 2" hail in the region. ☀ *Kerry Jones*

Severe Hail Reports 1950-2007



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Editor's Notes

"When thunder roars, go indoors." That's the slogan the NWS wants you to remember. Summer is the peak season for thunderstorms. An average of 62 people are killed by lightning each year in the United States. In 2007, there were 45 total lightning fatalities. None of us need to take chances when it comes to lightning. And it doesn't have to rain hard to have a thunderstorm. In the Inland Northwest, we can get lightning with little if any rain. So play it safe. The National Lightning Awareness Week is June 22-28, 2008.

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

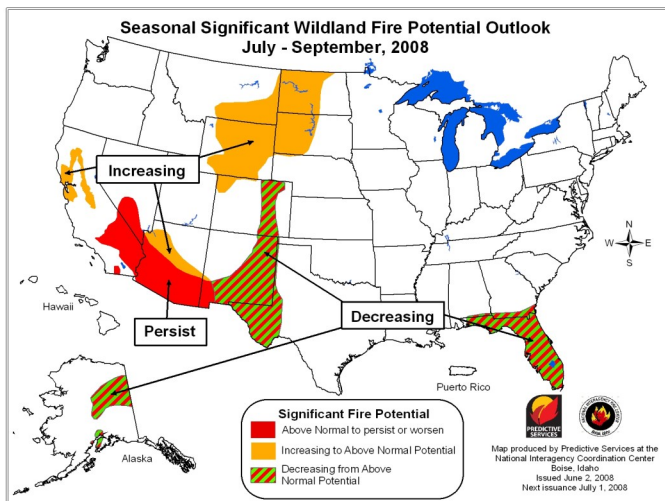
The main purpose of this publication is to keep our readers informed about our services and programs, and to recognize those who help us with our mission, including weather spotters, co-op observers, media, and emergency management.

All articles are written by the NWS staff. A special thanks to Ron Miller, Kerry Jones, Bob Tobin, and Royce Fontenot for their help with the included articles.

Fire Weather Outlook 2008

Washington and Idaho experienced a generally wet winter and cool spring. The mountains across the Inland Northwest remain above normal with snow pack. Precipitation was generally above normal east of the Kettle mountains into the Idaho Panhandle and south into the Blue Mountains. Yet precipitation was slightly below normal across the east slopes of the Cascades and into the Okanogan highlands. June started out cool and wet, but will become dry late in the month. This will be followed by a warm and generally dry summer. Snow melt on north facing slopes will continue.

This will push the peak fire season back until the end of July as fuels cure and dry. Then the fire potential is expected to increase to seasonal levels. The summer storm track looks like it will remain south and east of the region through the summer. Our area typically gets one to three good lightning storms during July and August. Overall, we are expecting normal fire potential into September. ☀ *Bob Tobin*



Spring 2008 across the Inland Northwest

After a long snowy winter for much of the Inland Northwest, many of the residents were looking forward to spring in hopes of warmer weather. Unfortunately for them, the cold weather continued well into spring this year. Springtime snow, a somewhat infrequent event in this parts, became almost common-place this year.

At first **March** looked like it would deliver on the much-needed warmer weather. Similar to the latter half of February, storms were less frequent and warmer, bringing more rain than snow to the lower elevations. Temperatures were very close to normal. But by the middle of the month, the weather pattern changed. Actually, the pattern returned to what we had seen most of the winter. The result was nearly the same. Spokane Airport had measurable snow on 10 of the last 18 days, including the last 6 days of the month (five of which set daily records).

The first storm arrived on the 20th and 21st, bringing 4-6" of snow just north and east of the Spokane area and about 2" to the metro area. A colder and wetter storm moved in on the 26th. Again, widespread 4-6" of snow fell across the northern and eastern valleys with more in the mountains. As is typical with these springtime snows, localized areas picked up considerably more snow. A spotter near Hunters, WA received 8" and another observer near Clark Fork, ID reported an impressive 12.5" of snowfall. More snow fell on the 29th, with 12.8" reported in Rathdrum, ID and 18" of snowfall at Spirit Lake, ID. At Spokane Airport, 4.6" of snow fell on the 30th. The high temperature this next-to-the-last day of March was only 34°, the coldest day of the month. By month's end, Spokane had picked up 15.8" of snow, making it the 2nd snowiest March all-time.

The turn of a calendar page didn't mean a big change in the weather for **April**. The morning of the 1st saw temperatures that would be considered cold even in winter. Deer Park dropped to 13° while the NWS office just west of Spokane registered a low of 19°. Residents in Spokane and the surrounding areas were treated to a Saturday morning snowfall on the 5th of 1 to 3", leaving many to wonder if it would ever end. Then the weather pattern finally changed as high pressure built into the region. Temperatures for the next weekend warmed suddenly in the 70s with Lewiston even reaching 82° on Sunday the 13th. Residents rejoiced that spring had finally arrived. But as most of us know, spring is defined by its ups and downs. So the warm weekend was predictably cooler. Highs only reached the into the 40s, with Spokane topping out at only 39 degrees on the 20th with 1.3" of snowfall. This was the latest day in the spring season that Spokane had ever stayed below 40°, an impressive mark in this long, snowy year. Temperatures returned to near normal values for the end of the month. Temperatures for the month were still 3 to 6 degrees below average.

After a chilly morning on **May** 1st, the Inland Northwest finally saw an end to the snow and a return to warmer temperatures. For the first half of the month, temperatures were near normal but the weather was dry. Then temperatures

sky-rocketed. Similar to 2006, this May saw a period of extremely warm temperatures in the middle of the month. The difference between 2006 and this year was the mountain snow pack. For mid-May the snow pack was up to 150% of normal, due in part to the snowy winter, but also a result of the cool April which had delayed the normal spring melt. As valley temperatures soared into the 80s and lower 90s, with mountain temperatures in the 70s, the mountain snow started to melt in a hurry. In one week's time, many of the mountain weather sensors recorded a snow melt of 10" of liquid. That's the same as if our area had received 10" of rain in one week. The result was widespread river flooding. Many rivers in north Idaho and eastern Washington rose above flood stage. The most impressive was on the St Joe River at St Maries, where the river crested on the 22nd, 4.5 feet above flood stage. The Coeur d'Alene River at Cataldo crested 3 feet above flood stage, closing numerous roads.

The hot weather was brought to an end on the 20th as a wet cold front moved through the area, bringing up to a half inch of rain to many locations. One phenomenon noticeably absent from this spring was thunderstorms. The spring of 2008 saw much less shower activity than normal. There was an isolated strong thunderstorm on the 7th of May in which



*High water near Wolf Lodge Campground on April 14th.
Courtesy of KREM TV.*

dime-sized hail covered the ground 3" deep near Priest River, ID. By the end of the month the weather pattern had become more conducive to thunderstorms. The 28th saw numerous slow-moving wet thunderstorms in southeast Washington and the southern Idaho Panhandle. One storm east of Moscow produced hail nickel to quarter-sized for a half an hour. The result was hail so deep that Latah County snow plows had to be dispatched to clear roads. Heavy rain also washed out some roads in Garfield County. But this rainfall was unable to make up for an otherwise dry month. So after a very active winter season, the Inland Northwest actually had a precipitation deficit of 1 to 2 inches during the spring. For the water year (October 1st – present), most of the area had received below normal precipitation. The only locations with above normal precipitation were in the Panhandle and extreme eastern Washington. ☀ *Ron Miller*

Welcome CoCoRaHS

Calling all Washington observers! The Community Collaborative Rain, Hail, and Snow (CoCoRaHS) Network is here. We are looking for Washington volunteer observers who want collect and measure precipitation, ranging from rain, hail and snow. All you need is a rain gauge, an internet connection or telephone, and a passion for weather. You can order the official 4 inch rain gauges from the program web site. So if you are a weather enthusiast who wants to take part in this grassroots, non-profit, community-based network, then you should join the fun. Go to www.cocorahs.org for more information on joining, training, and accessing the precipitation data.

I bet some folks are wondering, what is the difference between CoCoRaHS and the spotter program? Well, these are two different programs that both benefit the NWS. The spotter program is event-driven based on severe weather in your area. You just notify the NWS when you observe severe or hazardous weather. No equipment is necessary. With CoCoRaHS, you need a rain gauge and be willing to report precipitation every day, including rain, hail, and snow. The time commitment is slightly more, although it only takes a couples minutes a day to accomplish the task. You are welcome to do both - a spotter and a CoCoRaHS observer!

Training will be offered to CoCoRaHS observers. After the initial in-person training sessions in early June, the NWS Spokane will offer tele- conference call training seminars on the 4th Thursday during the next several months. Details will be emailed or available on our web page. Save a date! ☀ Robin Fox

June 26th 2-3 pm
July 24th 5-6 pm
August 21th 2-3 pm
September 25th 5-6 pm



Snow plows clearing hail in Deary, ID on May 29th. Courtesy of Brian Roberts with Deary Rural FD.

Spring Weather Statistics

Wenatchee Water Plant	Mar	April	May	Total
Avg High Temp	53.2	59.3	74.3	62.3
Departure from Norm	-1.7	-5.3	+1.2	-1.9
Avg Low Temp	32.2	36.5	50.5	39.7
Departure from Norm	-1.7	-4.3	+1.9	-1.4
Total Precip	0.31	0.15	0.11	0.57
Departure from Norm	-0.33	-0.36	-0.40	-1.09
Total Snowfall	0.0	0.0	0.0	0.0
Departure from Norm	-0.9	0.0	0.0	-0.9
Lewiston Airport	Mar	April	May	Total
Avg High Temp	51.4	58.7	73.1	61.1
Departure from Norm	-2.4	-2.9	+3.2	-0.7
Avg Low Temp	32.9	35.4	48.9	39.1
Departure from Norm	-2.7	-5.2	+2.0	-2.0
Total Precip	0.72	0.53	0.95	2.20
Departure from Norm	-0.40	-0.78	-0.61	-1.79
Total Snowfall	T	T	0.0	T
Departure from Norm	-1.1	-0.1	0.0	-2.2
Spokane Airport	Mar	April	May	Total
Avg High Temp	43.6	52.0	68.6	54.7
Departure from Norm	-5.0	-5.5	+2.4	-2.7
Avg Low Temp	29.0	32.0	45.1	35.4
Departure from Norm	-1.4	-3.5	+2.5	-0.8
Total Precip	1.86	1.27	0.93	4.06
Departure from Norm	+0.33	-0.01	-0.67	-0.35
Total snowfall	15.8	4.8	0.0	20.6
Departure from Norm	+12.2	+3.9	-0.2	+15.9

SPOTTER REPORTS:

Phone: (509) 244-0435 or 800-483-4532 or Online: <http://spotter.weather.gov>

Remember your Summer Spotter Checklist

Funnel Cloud or Tornado

Hail: pea size or larger

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

Any Flooding

Strong Winds: 30 mph+ or damage

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

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

Staff News

Electronic Technician Ray Grant has transferred to Burlington, Vermont in May. We wish Ray and his family the best of luck.



Summer Outlook 2008

The effects of La Niña will weaken through the summer months, according to the Climate Prediction Center's long range forecasts. For the Inland northwest, the forecast shows a greater chance for normal to slightly above normal precipitation and a greater chance of below normal precipitation. For more information, visit <http://www.cpc.ncep.noaa.gov>.

Flooding Strikes the Inland Northwest

Location	Date of Crest	Crest Elevation	Flood Stage
Cd'A River at Cataldo	May 18 th	25.64'	24.0'
Lake Coeur d'Alene	May 23 rd	2134.75'	2132.0'
Moyie River at Eastport	May 21 st	9.96'	9.0'
St Joe River at Calder	May 19 th	13.18'	13.0'
St Joe River at St Maries	May 21 st	36.94'	32.5'
Spokane River at Spokane	May 23 rd	28.41'	27.0'
Stehekin River at Stehekin	May 19 th	25.64'	24.0'
Methow River at Pateros	May 19 th	10.21'	10.0'
Okanogan River at Tonasket	May 22 nd	15.10'	15.0'
Kettle River at Ferry	May 20 th	18.67'	18.5'

Due to the heavy mountain snowpack and the rapid warming this spring, most rivers experienced flooding. Here is a table listing main-stem rivers that exceeded flood stage in May across the Inland Northwest. ☀
Royce Fontenot

The Weather Watcher

Of the Inland Northwest



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Trivia: How many lightning fatalities have there been in Washington and Idaho?