

The Weather Watcher

of the Inland Northwest

www.weather.gov/Spokane

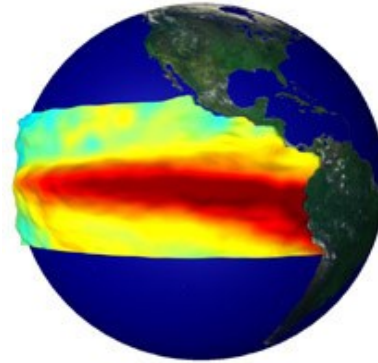


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El Nino Watch for the Winter

The long range models indicate a good chance for an El Nino to develop for the Winter 2012-2013 season. El Nino pertains to the warming of the equatorial ocean waters off the coast of Peru in the eastern Pacific. When this happens, the area of enhanced thunderstorm activity shifts in the Pacific equatorial region, which alters the jet stream and the storm track. El Nino primarily peaks during the mid to late winter in the Northern Hemisphere. Typically, El Nino winters bring warmer weather and less snow to the valleys and low lands of the Inland Northwest, as the storm track lies across the southern U.S. Our last El Nino event was the winter of 2009-2010. ☀ *Jeremy Wolf*



A global view of El Nino showing warm ocean water in the equatorial Pacific.

Editor's Notes

It's time to prepare for colder weather. Winter is right around the corner and this mild fall weather is a great time to get ready. September is National Preparedness Month. It's a way to remind everyone that emergencies can and do happen without warning. From power outages to floods and winter storms, it's a good idea to have flash lights and batteries on hand, along with a AM/FM & NOAA weather radio. Don't forget to winterize your car. And remember to have enough water and food for your family to last at least 3 days.

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

This newsletter and past issues are available online on our NWS Spokane web page. If you would like a paper copy, please contact us and we will put you on the mailing list.

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 to Mark Turner, Ron Miller, Jeremy Wolf, Andy Brown for their contributions.

Holden Village Celebrates 50 years of Weather Observations

Cooperative Weather Station 45-3730, Holden Village, reached a significant milestone on June 2nd, 2012. On this date the staff of Holden Village had taken observations of temperature, precipitation, snow fall and snow depth daily for 50 years. In recognition of this achievement, NWS Spokane Meteorologist in Charge, John Livingston and Observing Program Leader, Mark Turner, presented Holden Village Executive Director, Chuck Carpenter with a 50 year Honored Institution Award from the NWS.

Holden Village, located in the Railroad Creek Valley near the north end of Lake Chelan, has a long and storied history. Harry Holden discovered an outcropping of copper ore at the site in 1896. Owing to the remoteness of the location and the severity of the climate, it would be more than 40 years before a load of ore was shipped down Lake Chelan to market. The Howe Sound Company took control of the property in 1928 and produced copper, zinc, gold and silver through 1957. Falling ore prices and challenging extraction conditions made the mine unprofitable by this time and the decision to close the mine was made.

The Howe Sound Company attempted to sell the site as a resort community in 1957, the price; \$100,000. A student at the Lutheran Bible Institute in Seattle saw a newspaper

article about the mine sale and figured "the property could be useful for a church summer camp, or...a retreat center." Negotiations went on for several years, with the Howe Sound Company eventually selling the property to the Lutheran Bible Institute... for \$1.

After 50 years, Holden is still mainly staffed by volunteers. And folks come from the world over, year round, to experience this unique site set deep in the Washington Wilderness. For more information on Holden Village, see: <http://www.holdenvillage.org/> ☀ *Mark Turner*

MIC John Livingston & Chuck Carpenter of Holden Village

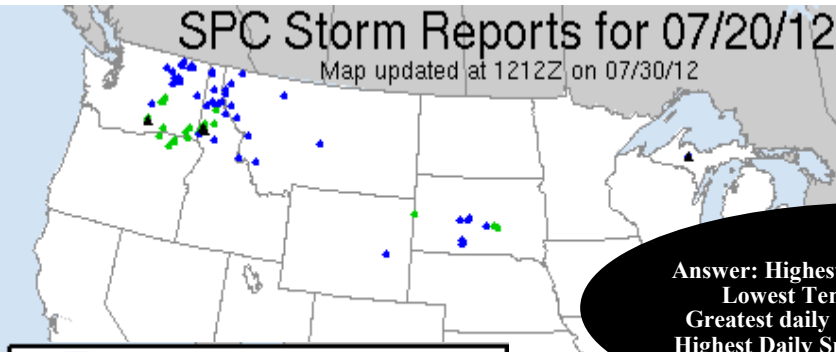


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The Wild Weather from July 20th

A ridge of high pressure was present over the western United States by mid of July, while an area of low pressure sat offshore of Oregon and Washington. This kept a moist southwest flow over the Inland Northwest. A series of weather disturbances tracked through this flow pattern and led to rounds of thunderstorms for our region. Most of the storms were slow moving and produced large hail and heavy rain. Flash flooding was reported from the stronger storms. The combination of several days of precipitation and the intense, almost tropical, nature of the thunderstorms allowed numerous debris flows and mudslides to occur. By July 20th, a stronger weather disturbance dropped south from the Gulf of Alaska and tracked through much of Washington and north Idaho. The strong forcing from this weather system and the very unstable atmosphere triggered several very strong to severe thunderstorms with large hail, damaging winds and heavy rain. Large hail was reported from Moses Lake, WA to Juliaetta, ID. Severe winds were reported near the Canadian border from Oroville to Priest Lake. Thanks for the many spotter reports and pictures! ☀

Wind Damage on the Sandpoil River in Nrn Ferry Co.



Answer: Highest Temp—101° on 7/31/65,
 Lowest Temp— -32° on 12/30/68,
 Greatest daily pcpn—5.01" on 2/12/72,
 Highest Daily Snowfall—34.0" on 3/6/72!

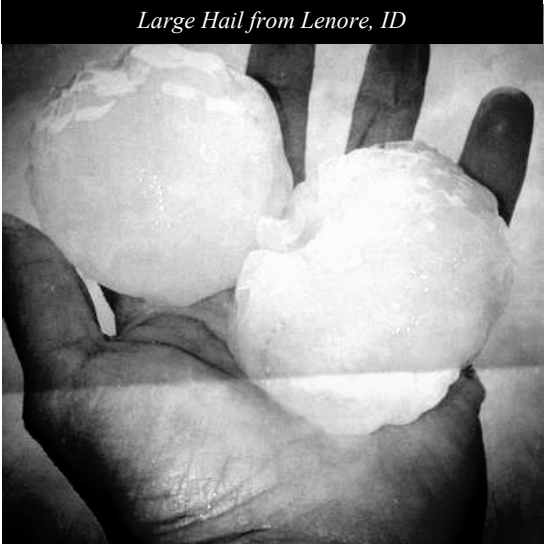
NOAA
WIND REPORTS/HI..... (93/1)
HAIL REPORTS/LG..... (41/5)
TOTAL REPORTS..... (135)

National Weather Service
 Storm Prediction Center Norman, Oklahoma

- High Wind Report (65KT +)
- ▲ Large Hail Report (2" dia. +)

Local Large Hail Reports

Time	Location	Report
1948	WNW Juliaetta	1.75" hail
2000	2 SW Lenore	2.75" hail
2015	1 SW Lenore	2.50" hail
2015	8 WNW Moses Lake	1.25" hail



NWS Spokane

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 John Livingston

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 Ron Miller

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 Laurie Nisbet
 Jeremy Wolf
 Jeffrey Coté
 Ellie Kelch
 Steve Bodnar
 Steven Van Horn

Meteorologist Interns
 Joey Clevenger
 Ty Judd
 Ryan Flichman

Electronic Systems Analyst
 Dwight Williams

Electronic Technicians
 Paul Kozsan
 Mike Henry

Facilities Technician
 Mike Belarde

Summer Season of 2012

Summers in the Inland Northwest can be frustratingly short. As we have said before, summer really doesn't start here until after the 4th of July. The weather in **June** is just too variable to be considered summer in most years. After a cool but dry May, attention turned to June to see how it would turn out. The answer came fairly quickly after the first few mild days. A cold and wet weather system moved into the region dropping temperatures into the 50s. The mercury only rose to 57° in Wenatchee on the 7th, making this the coldest daytime temperature ever so late in the year. Several rainfall records were set on the 5th, including 1.11" at Colville and 1.05" at Sandpoint. On the 6th, more rain fell, including 1.54" at Priest River and 1.33" at Newport. Several locations didn't reach 50° that day; Mullan, ID had a high of only 46°. Overnight freezing temperatures were reached on the morning of the 7th at Winthrop, Mazama, and Waterville. Certainly this was not summer. Temperatures did warm back up to normal values by the middle of the month. But the rain continued to come every few days, especially at Bonners Ferry, ID, where the monthly total of 5.24" was a record for June. Grand Coulee picked up 1.23" of rain on the 26th, a record for the day. When it was all said and done, June 2012 was most decidedly not a summer month.

As the calendar turned to **July**, the majority of the U.S. was sweltering under a record heat wave. But the same weather pattern that brought heat to much of the lower 48, brought wet weather to the Northwest. Then almost right on cue, the temperatures warmed to above normal values on the 6th of July as the eastern heat wave pushed west. Temperatures soared on the 8th to their warmest readings in the Inland Northwest since August 2009. Lewiston topped out at 106°, Moses Lake 105° and Wenatchee at 103°, all records for the day. The combination of all the June rain as well as the air flow from the south resulted in one of the most humid periods in recent memory. Typically the Inland Northwest will have a few "muggy" days in late May or early June, but this year was unusual for its persistence as well as how late in July it was. This led to a week of severe thunderstorms and flash floods. Over 2" of rain fell in four hours near Omak on the 15th, while debris flows blocked Highway 97 near Malott. But by far the most memorable event of the summer will be the severe weather on July 20th. That's when a line of thunderstorms moved through much of the area bringing large hail and damaging winds along with more flooding. The largest hailstones were baseball-sized and fell near Julietta, ID. Numerous trees were blown down, especially in Ferry County. Two deaths occurred as the result of falling trees. Then after this event the weather changed dramatically. The rest of the month was dry with warm temperatures.

As exciting as the weather was in July, **August** was rather boring. The weather remained warm and dry. It was the hottest month in the Inland NW since July 2007. Thunderstorms on the morning of the 21st brought lightning and the only rain, albeit light, of the month for many loca-

tions in the Inland NW. ☀ *Ron Miller*

Autumn Outlook

More dry and mild weather to continue? The NWS Climate Prediction Center forecasts a better chance of below normal precipitation and a equal chances of above or below normal temperatures for the Inland Northwest for October, November and December. ☀

Summer Weather Statistics

Wenatchee Water Plant	Jun	Jul	Aug	Total
Avg High Temp	75.3	91.5	92.0	86.2
Departure from Norm	-4.5	+3.3	+4.4	+1.1
Avg Low Temp	53.2	62.7	62.0	59.3
Departure from Norm	-2.4	+1.2	+1.5	+0.1
Total Precip	0.60	0.15	0.00	0.75
Departure from Norm	-0.06	-0.19	-0.19	-0.44
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	77.1	92.6	94.0	87.9
Departure from Norm	-1.4	+3.3	+5.2	+2.4
Avg Low Temp	53.9	62.6	60.7	59.1
Departure from Norm	+0.5	+3.0	+1.5	+1.7
Total Precip	2.03	0.64	T	2.67
Departure from Norm	+0.79	-0.02	-0.69	+0.08
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	70.0	85.3	86.0	80.4
Departure from Norm	-3.8	+2.0	+3.1	+0.4
Avg Low Temp	49.2	58.9	57.2	55.1
Departure from Norm	-1.2	+2.6	+1.4	+0.9
Total Precip	2.86	0.84	0.13	3.83
Departure from Norm	+1.61	+0.20	-0.46	+1.35
Total snowfall	0.0	0.0	0.0	0.0
Departure from Norm	0.0	0.0	0.0	0.0

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Remember your Autumn Spotter Checklist

First Snow of the Season!

Strong Winds:
30 mph+ or damage

Snow:
2"+ valleys & 4"+ mountains

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 Flooding

Any Mixed Precipitation!

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

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

Staff News

Andy Brown, the new Warning Coordination Meteorologist, arrived in Spokane in mid-August with his wife Lisa and twin five year old daughters, Alyssa and Katy. He has been in the NWS for eight years; the majority of that time spent in Anchorage, AK as a Lead Forecaster. Prior to his time in Alaska, Andy provided forecasts to the aviation community through a private sector organization in Houston, TX. Andy earned his Bachelor of Science degree in Meteorology from Texas A&M University in 1999. "I'm thrilled to join the Spokane team! I look forward to many years of interacting with the community, emergency managers, and the media to ensure that the National Weather Service is fulfilling our mission of saving lives and property." Good luck to Andy and his family!

Sadly, we want to share the news of a fellow NWS employee, Verne Ballard, who passed away on August 18th. Verne worked at NWS Spokane from October 1995 until January 2009 as a Hydro-meteorological Technician. He also worked many years at the Los Angeles NWS office. Verne was a Navy veteran with 20 years of service. We offer our condolences to Verne's family; he will be missed. ☀ *Andy Brown & RFox*

Observers:

When below freezing temperatures are expected, please winterize your rain gauge by removing the funnel and inner tube and bring it indoors. Review the rules on observing and measuring snow through the training shows at <http://www.cocorahs.org>

Spotters:

Please report your first snow fall and then any snow that is significant for you and your travel. Let us know when you experience strong gusty winds or wind damage. You can brush up on weather spotting by taking the "Role of the Skywarn Spotter" at <https://www.meted.ucar.edu/> ☀ *RFox*

Watch : Conditions are favorable for severe or hazardous weather around the watch area. **CAUTION—Watch the Sky!**
Warning : Severe or hazardous weather is likely or is occurring in the warned area. **DANGER—ACT NOW!**

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Of the Inland Northwest



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Trivia: What are some weather extremes from Holden Village, WA?