



The Inland Northwest Informer

Information For Storm Spotters, Cooperative Observers And Everyone

A Publication Of WFO Pendleton, Oregon

Fall-Winter 2009 - Volume 5

El Niño Summary 2009-2010

By Diana Hayden and Jon Mittelstadt

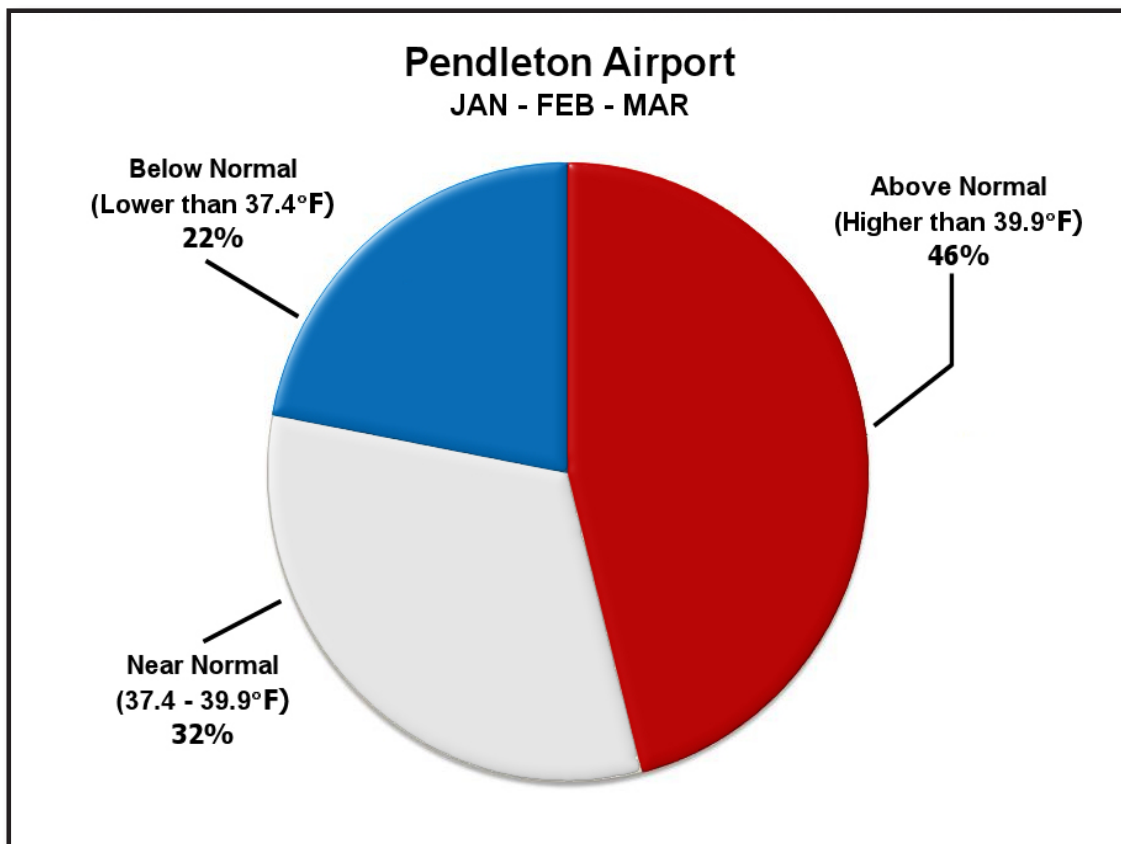
The Climate Prediction Center issued an El Niño Advisory in July 2009. An El Niño Advisory is issued when El Niño conditions are observed and are expected to continue. NOAA climate scientists expect El Niño conditions to strengthen during the winter of 2009-2010 and continue into the spring of 2010. El Niño

is a phenomenon in the equatorial Pacific Ocean characterized by a positive sea surface temperature departure from normal averaged over three months. There is also a shift in convection in the western Pacific further east than average. This causes enhanced convective rainfall across the eastern half of the equatorial

Pacific, and suppressed convective rainfall over the western equatorial Pacific. Taking into consideration previous El Niño winters, the Climate Prediction Center's seasonal outlook for the winter of 2009-2010 shows an increased chance for above normal temperatures and below normal precipitation. For the Pendleton

airport, the three month period covering December through February shows a 39% chance of above normal temperatures, with a 27% chance of below normal temperatures. In the three month period covering January through March for the Pendleton airport, there is a 46% chance of above normal temperatures, with a 22% chance of below normal temperatures (see figure below).

While El Niños typically bring warmer and drier conditions to the Pacific Northwest, there have been seasons when above normal snowfall



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occurred. For example, at the Pendleton Airport 6 out of the 23 El Niño winters on record have had above normal snowfall. Therefore, the percentage of above normal seasonal snowfall during an El Niño winter for Pendleton is 26.1%. The following table lists the seasonal average snowfall and the percentage of above average seasonal snowfall during El Niño winters for selected stations.

	Pendleton, OR	La Grande, OR	Yakima, WA	Bend, OR	Union, OR	Cle Elum, WA
Seasonal Average Snowfall	16.8	24.1	23.2	31.5	22.7	74.9
% Above Seasonal Average Snowfall	26.1%	16.7%	22.2%	26.1%	13.0%	27.3%

Another factor that influences the climate over the Pacific Northwest is the Pacific Decadal Oscillation (PDO). The PDO is a recently described pattern of climate variation similar to the El Niño-Southern Oscillation (ENSO), though on a timescale of decades and not seasons. It is characterized by sea surface temperature anomalies of one sign in the north-central Pacific and sea surface temperature anomalies of the opposite sign north and east near the Aleutians and the Gulf of Alaska. PDO “events” can persist for 20 to 30 years. The causes of the PDO are not well understood. The PDO is currently in a cool, or negative phase with cooler than average

water off the coast of North America from Alaska to the equator.

The following table looks back at previous winters when conditions were similar to those expected to occur during the 2009-2010 winter season (moderate El Niño and negative PDO). Bolded values within the table indicate annual snowfall that is greater than the average annual snowfall.

Even though El Niño winters are typically warm and dry for the Pacific Northwest, there is still the possibility that above average snowfall may occur during an El Niño winter. ❖

	Pendleton, OR	La Grande, OR	Yakima, WA	Bend, OR	Union, OR	Cle Elum, WA
1951-1952	26.1	35.0	23.8	56.0	35.3	85.9
1963-1964	2.8	19.7	10.2	26.8	15.0	107.3
1965-1966	13.4	31.8	31.9	32.9	23.5	117.5
1968-1969	42.0	37.0	41.0	74.5	37.6	40.8
1994-1995	13.6	5.9	13.0	20.9	13.5	92.5
2006-2007	4.8	6.2	17.7	1.0	10.5	30.0
Average Snowfall	16.8	24.8	23.2	31.5	22.7	74.9

Water Year Precipitation

October 2008 - September 2009

By Marilyn Lohmann, Service Hydrologist

Station	Amount In Inches	Percent of Normal
Bend.....	10.17.....	87%
Condon.....	11.93.....	82%
Dayville.....	7.30.....	64%
Dufur.....	12.13.....	91%
Heppner.....	12.63.....	89%
John Day City.....	11.56.....	85%
Joseph.....	20.64.....	122%
LaGrande.....	19.58.....	112%
Madras 2N.....	5.07.....	66%
Meacham.....	43.79.....	117%
Milton-Freewater.....	18.48.....	116%
Moro.....	8.48.....	74%
Pelton Dam.....	8.98.....	83%
Pendleton, WFO.....	14.82.....	116%
Pilot Rock.....	14.95.....	104%
Prineville.....	8.97.....	86%
Redmond Airport.....	7.95.....	93%
The Dalles.....	12.33.....	106%
Union Exp Stn.....	13.39.....	93%
Walla Walla.....	22.23.....	128%
Wickiup Dam.....	18.44.....	84%
Dayton.....	24.84.....	127%
Ellensburg.....	10.98.....	121%
Hanford.....	5.95.....	86%
Ice Harbor Dam.....	11.03.....	101%
McNary Dam.....	4.61.....	57%
Mill Creek Dam.....	20.43.....	104%
Mt Adams RS.....	33.61.....	77%
Prosser.....	5.56.....	69%
Sunnyside.....	6.35.....	88%
Whitman Mission.....	17.48.....	121%
Yakima Airport.....	6.89.....	83%

The water year began with a cooler and drier October, followed by near to below normal precipitation during November. December saw near to above normal precipitation with above normal snowfall. January was still dry across central Oregon, but near to above normal over the rest of northeast Oregon and south central Washington. February was much drier than normal across the region with a number of locations just east of the Cascades reporting only 10 to 30 percent of normal precipitation for the month. March saw much colder temperatures and above normal precipitation. April was cooler than normal with dry conditions in the lower elevations, while the mountains saw above normal precipitation. Above normal precipitation was noted for May and June with very dry conditions and hot conditions for July. Well above normal precipitation occurred over northeast Oregon during August with dry conditions over Washington. September was drier than normal across the region. ❖

Did You Know?

November 7, 1940 - The Galloping Gertie bridge at Tacoma, Washington collapsed in strong winds resulting in a six million dollar loss, just four months after the grand opening of the new bridge. The winds caused the evenly sized spans of the bridge to begin to vibrate until the central one finally collapsed.

November 20, 1996 - Heavy snowfall continued in Eastern Washington with 14 inches of snow falling in Yakima, knocking out power to 15,000 homes and cancelling all bus service for the first time in 20 years. Ellensburg received between 18 and 22 inches of snow, which resulted in 27 trucks jack-knifing on the 30 mile stretch of I-82 between Ellensburg and Yakima.

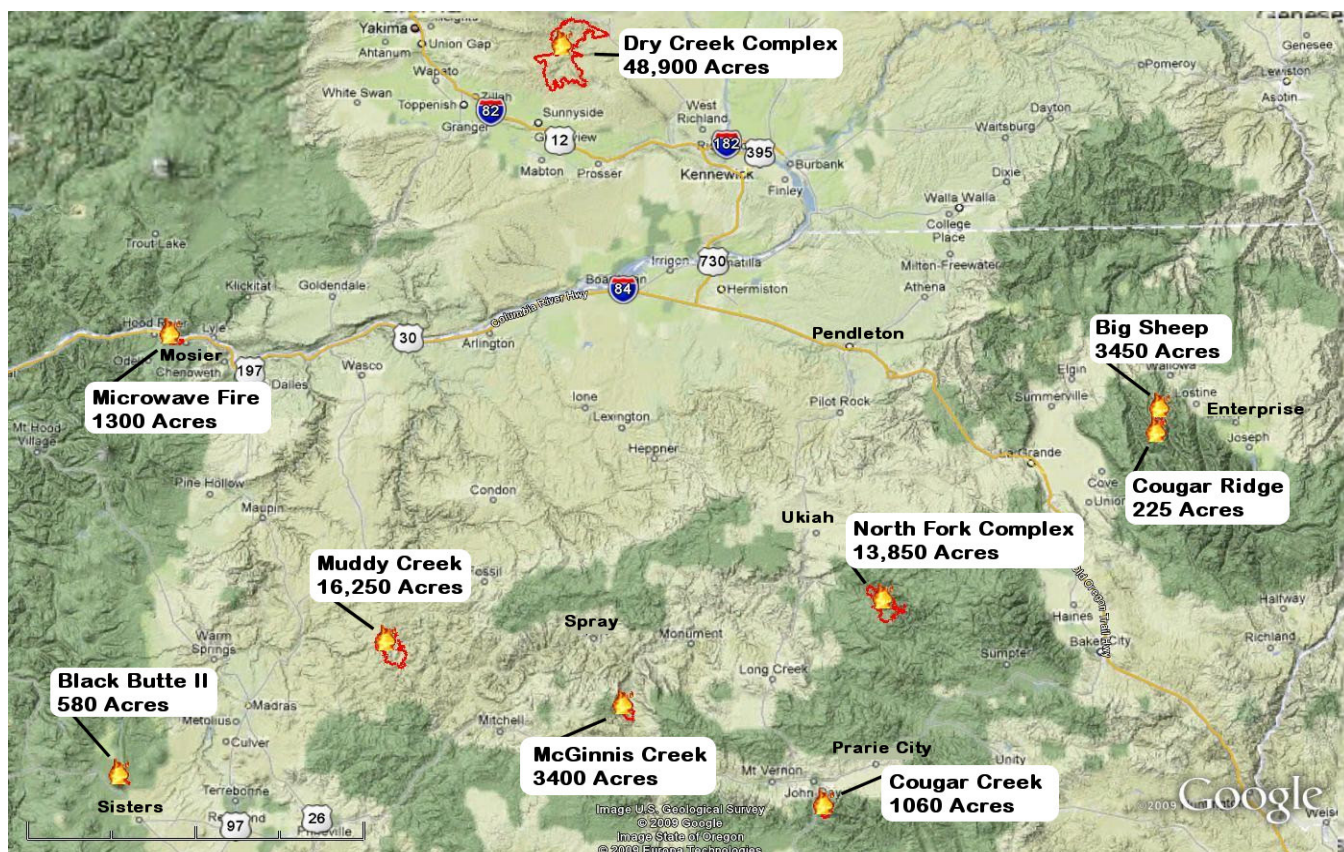
November 24, 1982 - Hurricane Iwa lashed the Hawaiian Islands of Niihau, Kauai, and Oahu with high winds gusting to 120 mph and surf. Damage totaled 150 million dollars on Kauai, and 50 million dollars on Oahu. It marked the first time in 25 years that Hawaii had been affected by a hurricane.

2009 Fire Season Review

By Joe Solomon and Jon Bonk, Incident Meteorologists

The 2009 fire season across the Pendleton forecast area was below average. A typical fire season begins in June across the Columbia Basin and early to mid July in the mountains. This year the fire season was two to four weeks late in starting. For the mountains, this meant there was no large outbreak of fires until late July. However, this was short-lived as a weather event on August 6th and 7th brought a record amount of rain to a large

portion of the area. This helped subdue fire season through the rest of August, which is typically the most active time of the fire season. September saw an increase of fire activity once fuels became dry again, but with shorter days and cool nights, the fires were pretty easily controlled or contained. The map below shows where significant fires occurred this summer within the Pendleton office's fire weather area of responsibility. ❖



[Google Maps Disclaimer](#)

Attention Cooperative Observers

If you have internet access, please take a look at our new web page dedicated to our Cooperative Observers at: <http://www.wrh.noaa.gov/pdt/reference/coop/index.php>.

We would like all of our Cooperative Observers to provide information to us on a daily basis. This information will be used to enhance our products and to provide better public service. Observations may be submitted online or over the phone. If observations are submitted daily, there is no need to mail in your forms to us. For more information please contact Jim Smith at 541-276-7832 or email james.a.smith@noaa.gov.

Cooperative Program Highlights



Presenting the award to Mr. Tienhaara is Mike Vescio (left), Meteorologist-In-Charge at WFO Pendleton. Also on hand were hydro-meteorological technician Robert Brooks (far left) and meteorologist Jon Bonk (far right).

Recognizing 41 years of service to America, NOAA's National Weather Service has named Mr. Wayne Tienhaara (Dufur) as a 2009 recipient of the agency's John Campanius Holm Award for outstanding service in the Cooperative Weather Observer Program. The award is one of the agency's most prestigious, and only 25 are presented each year to cooperative weather observers from around the country. Meteorologist-In-Charge Mike Vescio, of the Pendleton weather forecast office, presented the award during a ceremony held on September 23, 2009 at Mr. Tienhaara's residence.

Cooperative observers are the bedrock of weather data collection and analysis. Satellites, high-speed computers, mathematical models, and other technological breakthroughs have brought great benefits to the nation in terms of better forecasts and warnings. But without the century-long accumulation of accurate weather observations taken by volunteer observers, scientists could not begin to adequately describe the climate of the United States. We cannot thank Mr. Tienhaara enough for his years of service.

The National Weather Service's Cooperative Weather

Observer Program has given scientists and researchers continuous observational data since the program's inception more than a century ago. Today, some 11,700 volunteer observers participate in the nationwide program to provide daily reports on temperature, precipitation and other weather factors such as snow depth, river levels and soil temperature.

The first extensive network of cooperative stations was set up in the 1890s as a result of an 1890 act of Congress that established the U.S. Weather Bureau. Many of the stations have even longer histories. John Campanius Holm's weather records, taken without benefit of instruments in 1644 and 1645, were the earliest known recorded observations in the United States.

Many historic figures have also maintained weather records, including Benjamin Franklin, George Washington and Thomas Jefferson. Jefferson maintained an almost unbroken record of weather observations between 1776 and 1816, and Washington took weather observations just a few days before he died. The Jefferson and Holm awards are named for these weather observation pioneers.

Cooperative Program Highlights



A 70 year Family Heritage Award was presented to the Rufener family in Grizzly, Oregon on June, 23 2009 Presenting the award was Mike Vescio (left), the Meteorologist In Charge at NWS Pendleton. On hand for the award were Sam Rufener (center), his son Wyatt Rufener, and daughter Samara Rufener.

A 50 year Institutional Award was presented to the City of Madras, Oregon on June 23, 2009. Observations are taken by the Department of Public Works. Accepting the award was Greg Whittenburg (right). The award was presented by NWS Pendleton Meteorologist In Charge Mike Vescio (left).



Cooperative Program Highlights



A 45 year Length of Service Award was presented to Roberta Keegan (right) in Ashwood, Oregon on June, 23 2009. Presenting the award was Mike Vescio (left), the Meteorologist In Charge at NWS Pendleton.



A 35 year Length of Service Award was presented to Doug Daniels (right) in Glenwood, Washington on June, 15 2009. Presenting the award was Mike Vescio (left), the Meteorologist In Charge at NWS Pendleton.

Photo Album



*Wickiup Reservoir, with Davis Mountain (left) and Maiden Peak (right) to the south.
By A. Adams*



*Barge on the Columbia River
By R. Brooks*



*Round-Up parade in Pendleton.
By T.W. Earle*