

The Month In Review

December 2018

National Weather Service
Pendleton, Oregon

December, 2018 Climate Summary

The month of December, 2018 can be summarized as warmer and drier than normal. Most locations had above normal temperatures and below normal precipitation (both rain and snow). There were some short periods of fog and/or low clouds, but there were also days or periods of a week or more with frequent weather systems. Probably the most significant weather during December, 2018 were wind events, which were several. Often, a tight pressure gradient had been set up over the Grande Ronde Valley and along the Blue Mountain Foothills due to a thermal gradient between the colder air east and south of the Blue Mountains and warmer air northwest of the Blue Mountains. In particular, the Grande Ronde Valley had several wind events as well as the Blue Mountain Foothills at the base of the Blue Mountains.



Whitening of trees at the National Weather Service office due to light snow on Christmas morning.



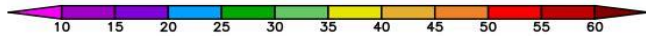
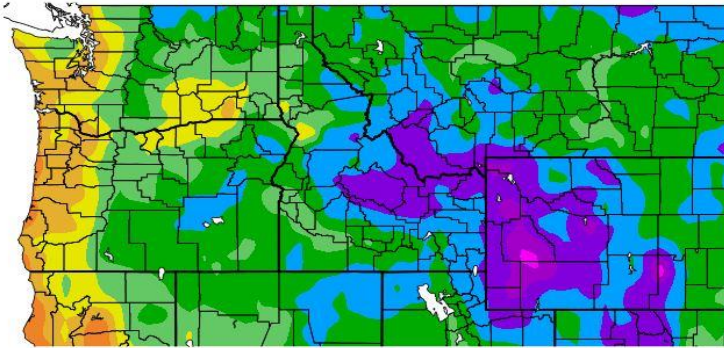
On Christmas morning, there was 0.7 inches of snow at the National Weather Service, Pendleton.



There were several wind events during the month of December.

December, 2018 Departure from Normal Temperatures

Temperature (F)
12/1/2018 – 12/31/2018

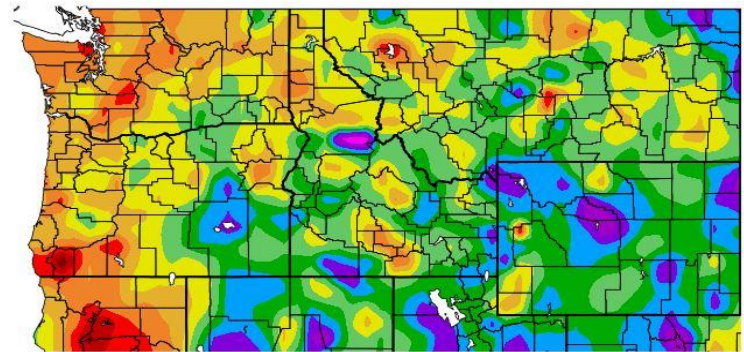


Generated 1/6/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from normal for December, 2018

Departure from Normal Temperature (F)
11/1/2018 – 11/30/2018



Generated 12/1/2018 at HPRCC using provisional data.

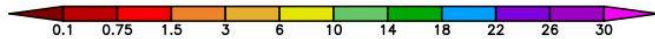
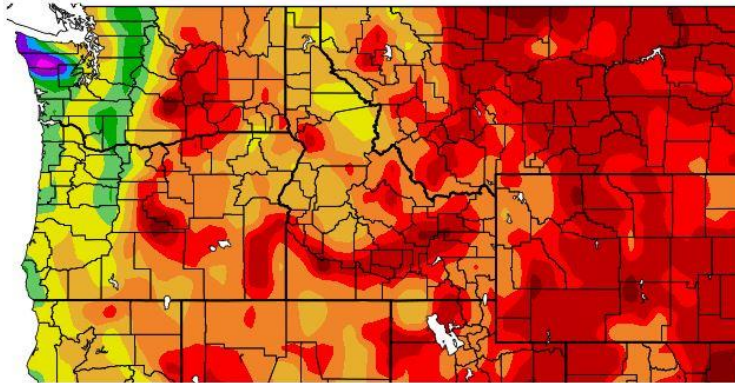
NOAA Regional Climate Centers

Departure from normal for November, 2018

The images above show a comparison of the departure from normal of the average temperature for December vs. November, 2018. These images show that the Lower Columbia Basin had warmer than normal temperatures, but the higher terrain surrounding the Basin had near to a little below normal AVERAGE temperatures. It should be noted that individual stations were mostly warmer than normal in the table two slides below, but overall much of the forecast area was cooler than normal.

November, 2018 Departure from Normal Precipitation

Precipitation (in)
12/1/2018 – 12/31/2018

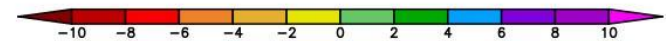
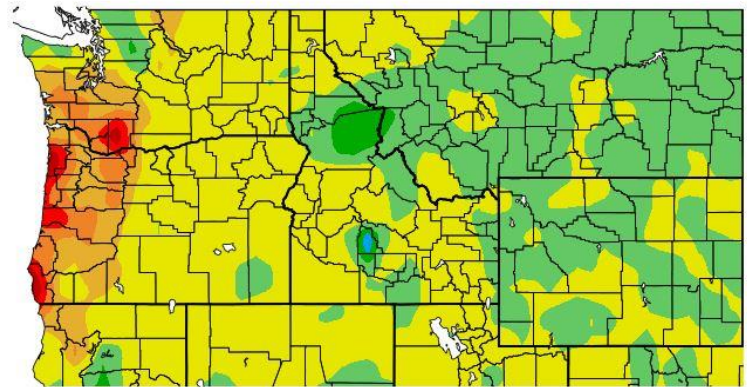


Generated 1/6/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from normal precipitation for December

Departure from Normal Precipitation (in)
11/1/2018 – 11/30/2018



Generated 12/1/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from normal precipitation for November

The above images show that for the month of December, 2018, the precipitation was well below normal for the entire forecast area (central / northeast Oregon and southeast / south central Washington). There was a much greater departure from normal for December than for November. Most of the precipitation fell over the Northern Blue Mountains (northeast Umatilla and northern Union Counties).

December, 2018 departures from normal for select cites

	Max T	Max T D	Min T	Min T D	Ave T	Ave T D	PCPN	PCPN D	Snow	Snow D
Yakima	41.7	5.9	27.4	6.1	34.5	6.0	0.68	-0.85	0.3	-9.4
Kennewick	44.9	5.0	33.2	4.4	39.0	4.7	1.04	-0.09	T	-2.2
Walla Walla	45.5	7.0	33.8	5.4	39.7	6.3	1.98	-0.49	T	-4.4
The Dalles	44.5	4.2	32.9	2.7	38.7	3.5	2.57	-0.16	M	M
Redmond	44.3	3.8	25.3	4.6	34.8	4.2	0.65	-0.51	T	-5.1
Pendleton Airport	43.7	4.2	31.1	4.1	37.4	4.2	1.66	0.19	0.7	-5.3
La Grande	37.9	0.3	23.7	0.0	30.8	0.1	0.55	-1.11	0.6	-2.8

The data above shows that all stations had above normal temperatures and below normal precipitation (except for Pendleton, which had slightly above normal precipitation). All stations also had below normal snowfall for December. These data are likely a result of a developing El Nino in combination with a persistent trough in the east and southeast USA and an upper ridge over the western USA. Some years the forecast area will be much colder in December, than December 2018, with much more snowfall than was in December, 2018.

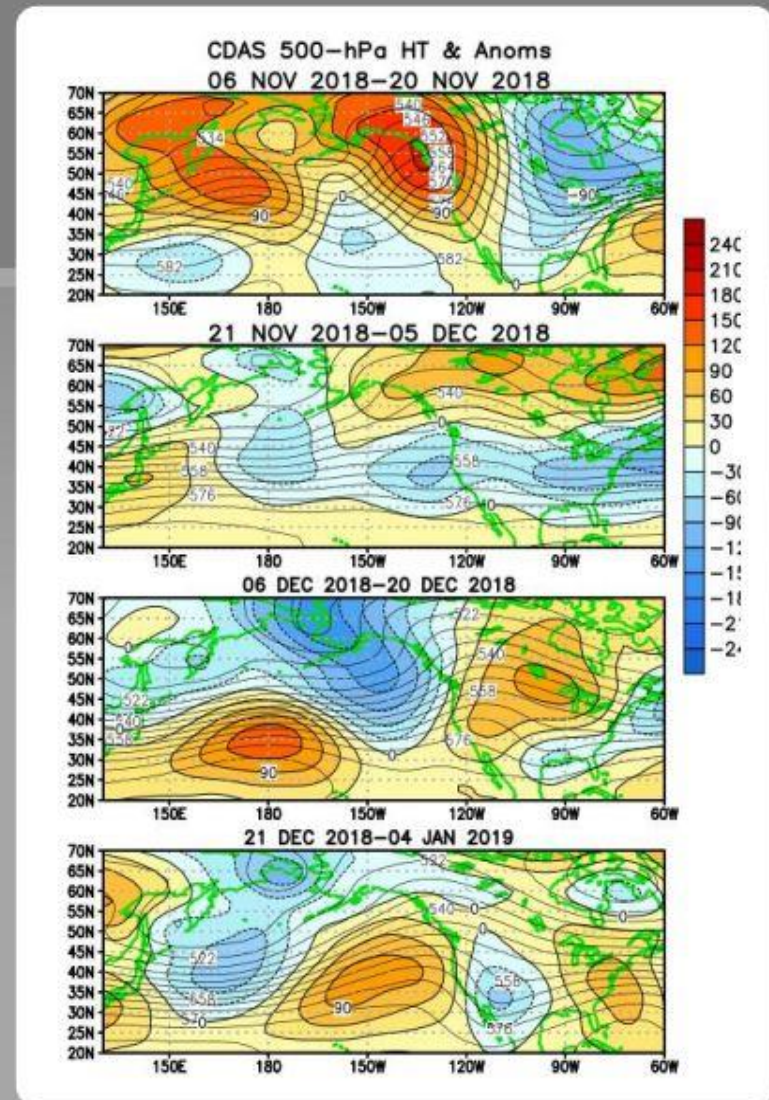
500 MB Plots – 6th November, 2018 through 4th January, 2019

Atmospheric anomalies over the North Pacific and North America During the Last 60 Days

From early to mid November, the pattern was mostly characterized by anomalous ridging (and above-average temperatures) over the western U.S. and anomalous troughing (and below-average temperatures) over the central and/or eastern U.S.

During late November to early December, below-average heights (and temperatures) were present across most of the contiguous U.S.

Since late December, anomalous ridging (and above-average temperatures) were evident over the eastern U.S., along with anomalous troughing (and below-average temperatures) over the western U.S.



Significant Weather Events for the month of December, 2018

The next several slides show Local Storm Reports (LSR's) for significant weather events which occurred in the forecast area during December. Most significant weather events were either strong wind or heavy mountain snow events.

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
144 PM PST SUN DEC 9 2018				
..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...	
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....	
..REMARKS..				
1224 PM	NON-TSTM WND GST 5 SE	LA GRANDE	45.27N 118.01W	
12/09/2018	M67 MPH	UNION OR	AWOS	
LA GRANDE AIRPORT LGD REPORTED PEAK WIND GUST TO 58 KTS OR 67 MPH FROM SOUTHEAST.				

These data show a significant high wind event which resulted in multiple wind advisories for December 9th, 2018.

A significant wind event on December 9th, 2018 in the Grande Ronde Valley.



Significant Weather Events for the Month of December, 2018 (cont)

These data shows LSR's for a strong wind and heavy snow event on December 12th.

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
1000 AM PST WED DEC 12 2018				
..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...	
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....	
..REMARKS..				
0958 AM	HEAVY SNOW	1 WSW SKI BLUEWOOD	46.08N 117.85W	
12/12/2018	M13.0 INCH	COLUMBIA	WA	TRAINED SPOTTER
13 INCHES OF NEW SNOW IN 24 HOURS. ELEVATION 4500 FEET.				
1006 AM PST WED DEC 12 2018				
0930 AM	HEAVY SNOW	1 SE FLORA	45.89N 117.29W	
12/12/2018	M8.0 INCH	WALLOWA	OR	COCORAHS
8 INCHES OF NEW SNOW DURING PAST 24HRS. ELEVATION 4408 FEET.				
0415 PM	NON-TSTM WND GST 7 SSE	LA GRANDE	45.23N 118.01W	
12/11/2018	M60 MPH	UNION	OR	MESONET
MESONET STATION ODT18, 7 SE LA GRANDE.				



Significant Weather Events for the Month of December, 2018 (cont)

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
1000 AM PST WED DEC 12 2018				
..TIME...	...EVENT...	...CITY LOCATION...		
...LAT.LON...				
..DATE...	....MAG....	..COUNTY LOCATION..	..ST..	....SOURCE....
..REMARKS..				
0115 PM	NON-TSTM WND GST 10 NNW	BENTON CITY	46.39N	119.59W
12/11/2018	M61 MPH	BENTON	WA	MESONET
MESONET STATION HRMTN, 10 NW BENTON CITY.				
1029 AM PST WED DEC 12 2018				
0828 PM	NON-TSTM WND GST 15 ESE	MORO	45.38N	120.46W
12/11/2018	M69 MPH	GILLIAM	OR	MESONET
MESONET STATION D1028, 14 ESE MORO.				

These data shows LSR's for a strong wind and heavy snow event on December 12th (cont).



Significant Weather Events for the Month of December, 2018 (cont)

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
901 AM PST FRI DEC 14 2018				
..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...	
..DATE...	....MAG....	..COUNTY LOCATION..ST...	....SOURCE....	
..REMARKS..				
0815 AM	NON-TSTM WND GST 2 E MITCHELL		44.57N 120.11W	
12/14/2018	E60.00 MPH	WHEELER OR	CO-OP OBSERVER	
0835 AM	NON-TSTM WND GST 5 S MISSION		45.59N 118.67W	
12/14/2018	M63.00 MPH	UMATILLA OR	PUBLIC	
WIND CAUSING BROKEN BRANCHES, WOOD PILE BLOWN OVER, ROOF SHINGLES BLOWN OFF, GARBAGE CAN FILLED WITH BRICKS APPROXIMATELY 250 LBS BLEW OVER.				
1119 AM	NON-TSTM WND GST 6 SSE PENDLETON		45.59N 118.77W	
12/14/2018	M67 MPH	UMATILLA OR	NWS EMPLOYEE	
OFF DUTY NWS EMPLOYEE.				

These data shows LSR's for a strong wind event on December 14th.



Significant Weather Events for the Month of December, 2018 (cont)

PRELIMINARY LOCAL STORM REPORT					
NATIONAL WEATHER SERVICE PENDLETON OR					
901 AM PST FRI DEC 14					
2018					
..TIME...	...EVENT...	...CITY LOCATION...			
...LAT.LON...					
..DATE...	....MAG....	..COUNTY LOCATION..	ST..	...SOURCE....	
..REMARKS..					
0946 AM	NON-TSTM WND GST 1 NW	HEPPNER		45.36N 119.56W	
12/14/2018	M58 MPH	MORROW	OR	MESONET	
MESONET STATION C5615, HEPPNER.					
0629 AM	NON-TSTM WND GST 4 SSE	ISLAND CITY		45.29N 118.00W	
12/14/2018	M67 MPH	UNION	OR	AWOS	
AWOS STATION LGD, LA GRANDE/UNION COUNTY AIRPORT.					
1215 PM	NON-TSTM WND GST 5 SSW	MISSION		45.60N 118.70W	
12/14/2018	M72 MPH	UMATILLA	OR	MESONET	
MESONET STATION E8735, 4 SSW MISSION.					
1213 PM	NON-TSTM WND GST 12 SSE	WAITSBURG		46.11N 118.07W	
12/14/2018	M63 MPH	WALLA WALLA	WA	MESONET	
MESONET STATION E6137, 11 SSE WAITSBURG.					

These data shows LSR's for a strong wind event on December 14th (cont).



Significant Weather Events for the Month of December, 2018 (cont)

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
901 AM PST FRI DEC 14 2018				
..TIME...	...EVENT...	...CITY LOCATION...		
...LAT.LON...				
..DATE...	....MAG....	..COUNTY LOCATION..	ST..	...SOURCE....
..REMARKS..				
12/14/2018	M72 MPH	UMATILLA	OR	MESONET
MESONET STATION E7176, 4 W ADAMS.				
1239 PM	NON-TSTM WND GST 10 ESE	MISSION		45.60N 118.49W
12/14/2018	UNKNOWN MPH	UMATILLA	OR	DEPT OF HIGHWAYS
INTERSTATE 84 CLOSED DUE HIGH WINDS FROM 7 MILES EAST OF PENDLETON TO 4 MILES OF LA GRANDE. SEMI BLOWN OVER 14 MILES EAST OF PENDLETON LIKELY DUE TO THE STRONG WINDS.				
1233 PM	NON-TSTM WND GST	WESTON		45.81N 118.42W
12/14/2018	UNKNOWN MPH	UMATILLA	OR	PUBLIC
PRINCIPAL AT WESTON MIDDLE SCHOOL REPORTS EXTERIOR PANE OF EAST FACING WINDOW BLOWN OUT FROM WIND GUSTS.				

These data shows LSR's for a strong wind event on December 14th (cont).



Significant Weather Events for the Month of December, 2018 (cont)

0230 PM	NON-TSTM WND GST 2 SW UNION	45.19N 117.90W	
12/14/2018	M59 MPH UNION	OR MESONET	
1216 PM	NON-TSTM WND GST 1 WNW CAYUSE	45.68N 118.58W	
12/14/2018	M90.00 MPH UMATILLA	OR MESONET	
1235 PM	HIGH SUST WINDS CAYUSE	45.68N 118.56W	
12/14/2018	M60.00 MPH UMATILLA	OR NWS EMPLOYEE	
MEASURED WITH HAND HELD ANEMOMETER			
1231 PM	NON-TSTM WND GST 4 W ADAMS	45.76N 118.65W	
12/14/2018	M75 MPH UMATILLA	OR MESONET	
1235 PM	HIGH SUST WINDS CAYUSE	45.68N 118.56W	
12/14/2018	M60.00 MPH UMATILLA	OR NWS EMPLOYEE	
MEASURED WITH HAND HELD ANEMOMETER			
0640 PM	NON-TSTM WND GST 3 N JOSEPH	45.39N 117.23W	
12/14/2018	M66 MPH WALLOWA	OR MESONET	

These data shows LSR's for a strong wind event on December 14th (cont).



Significant Weather Events for the Month of December, 2018 (cont)

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
844 AM PST TUE DEC 18 2018				
..TIME...	...EVENT...	...CITY LOCATION...		
...LAT.LON...				
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....	
	..REMARKS..			
0647 AM	HEAVY SNOW	2 SSE SNOQUALMIE PASS	47.39N 121.39W	
12/18/2018	M8.0 INCH	KITTITAS WA	COCORAHS	
	RECEIVED 8.0 INCHES SNOW OVERNIGHT. CURRENTLY 32 DEG AND SNOWING.			
0715 AM	HEAVY SNOW	SNOQUALMIE PASS	47.42N 121.41W	
12/18/2018	U0.0 INCH	KITTITAS WA	DEPT OF HIGHWAYS	
	WSDOT REPORTED VIA THEIR WEBSITE AND SOCIAL THAT I-90 BOTH DIRECTIONS BETWEEN NORTH BEND AND ELLENSBURG WAS CLOSED DUE TO MULTIPLE VEHICLE SPINOUTS, FROM HEAVY SNOW AND POOR VISIBILITY.			

These data shows LSR's for a heavy snow event on December 18th over the WA Cascades.



Significant Weather Events for the Month of December, 2018 (cont)

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
601 AM PST SUN DEC 23 2018				
..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...	
..DATE...	....MAG....	..COUNTY LOCATION..ST...	....SOURCE....	
..REMARKS..				
0600 AM	SNOW	1 N TROUT LAKE	46.01N 121.53W	
12/23/2018	M5.0 INCH	KLICKITAT WA	TRAINED SPOTTER	
0700 AM	HEAVY SNOW	2 SSE SNOQUALMIE PASS	47.39N 121.39W	
12/23/2018	M7.5 INCH	KITTITAS WA	COCORAHS	
ACCUMULATION THROUGH 7 AM. SNOW BEGAN AROUND 6 PM.				
0800 AM	HEAVY SNOW	8 SSW TROUT LAKE	45.89N 121.59W	
12/23/2018	M7.8 INCH	KLICKITAT WA	COCORAHS	
SNOW BEGAN AROUND 8 PM. ELEVATION 1952 FT.				
0415 PM	SNOW	4 WSW ELGIN	45.53N 117.99W	
12/23/2018	M3.0 INCH	UNION OR	TRAINED SPOTTER	
3 INCHES OF NEW SNOW SINCE 8AM. ELEVATION 3145 FEET.				

These data shows LSR's for a heavy snow event on December 23rd over the WA Cascades.



Significant Weather Events for the Month of December, 2018 (cont)

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
1149 AM PST MON DEC 24 2018				
..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...	
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....	..REMARKS..
0700 AM	HEAVY SNOW	2 SW WALLOWA	45.55N 117.56W	
12/24/2018	M6.0 INCH	WALLOWA	OR	COCORAHS
COCORAHS OBSERVER RECORDED 6 INCHES OF SNOW ACCUMULATION.				
0830 AM	SNOW	5 NNE LA GRANDE	45.39N	
12/24/2018	M4.0 INCH	UNION	OR	TRAINED SPOTTER
SPOTTER MEASURED 4 INCHES OF SNOW ACCUMULATION OVERNIGHT.				
0930 AM	HEAVY SNOW	9 N ELGIN	45.69N 117.92W	
12/24/2018	M7.2 INCH	UNION	OR	COCORAHS
COCORAHS OBSERVER RECORDED A 24 HOUR ACCUMULATION OF 7.2 INCHES OF SNOW. ELEVATION 2873 FEET.				
0930 AM	SNOW	4 NW MEACHAM	45.55N	
12/24/2018	M6.5 INCH	UMATILLA	OR	COCORAHS
COCORAHS OBSERVER MEASURED 6.5 INCHES OF SNOW ACCUMULATION.				

These data shows LSR's for a heavy snow event on December 24th over the Northeast mountains of Oregon.



Significant Weather Events for the Month of December, 2018 (cont)

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
823 AM PST THU DEC 27 2018				
..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...	
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....	
..REMARKS..				
0800 AM	SNOW	5 NNE LA GRANDE	45.39N 118.07W	
12/27/2018	M4.5 INCH	UNION	OR	TRAINED SPOTTER
CURRENTLY CLOUDY WITH CALM WINDS AND 24 DEGREES.				
0100 PM	HEAVY SNOW	9 N UKIAH	45.26N 118.93W	
12/27/2018	U7.5 INCH	UMATILLA	OR	PUBLIC
FROM SOCIAL MEDIA POST.				

These data shows LSR's for a heavy snow event on December 27th over the Northeast mountains of Oregon.



Significant Weather Events for the Month of December, 2018 (cont)

PRELIMINARY LOCAL STORM REPORT				
NATIONAL WEATHER SERVICE PENDLETON OR				
756 AM PST SAT DEC 29 2018				
..TIME...	...EVENT...	...CITY LOCATION...		
...LAT.LON...				
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....	
	..REMARKS..			
0753 AM	SLEET	5 NNE LA GRANDE	45.39N 118.07W	
12/29/2018	M4.00 INCH	UNION	OR	TRAINED SPOTTER
	SPOTTER MEASURED 4 INCHES OF SNOW ACCUMULATION IN 12 HOURS.			
0956 AM	NON-TSTM WND GST 13 WNW	BICKLETON	46.08N 120.54W	
12/29/2018	M58 MPH	YAKIMA	WA	MESONET
	THE HIGH RIDGE RAWS MEASURED A WIND GUST OF 58 MPH. ELEVATION 2106 FEET.			
0146 PM	NON-TSTM WND GST	BENTON CITY	46.27N 119.49W	
12/29/2018	M58 MPH	BENTON	WA	MESONET
	CWOP STATION IN BENTON CITY RECORDED WINDS GUSTING TO 58 MPH.			

These data shows LSR's for a winter weather and strong wind event on December 29th – 30th over the Northeast Oregon mountains, north central Oregon, south central Washington, and the valleys east of the Cascades of Oregon and Washington.



Significant Weather Events for the Month of December, 2018 (cont)

0231 PM	NON-TSTM WND GST 4 NW WEST RICHLAND	46.36N 119.46W
12/29/2018	M64 MPH BENTON WA MESONET	
11 INCHES OF NEW SNOW IN 24 HOURS. ELEVATION 2873 FEET.		
0930 AM	SNOW 8 ESE SPOUT SPRINGS	45.70N 117.91W
12/29/2018	M3.6 INCH UNION OR COCORAHS	
CORRECTION TO PREVIOUS REPORT. 3.6 INCHES OF NEW SNOW IN 24 HOURS. ELEVATION 2873 FEET.		
0230 PM	NON-TSTM WND GST KAHLOTUS	46.64N 118.55W
12/29/2018	M61.00 MPH FRANKLIN WA MESONET	
CWOP STATION E5837		
0109 AM	NON-TSTM WND GST 17 NW GOLDENDALE	46.00N 121.07W
12/30/2018	M65.00 MPH KLUCKITAT WA MESONET	
RAWS GRAYBACK		
0109 AM	NON-TSTM WND GST 16 WNW WHITE SWAN	46.48N 121.03W
12/30/2018	M73.00 MPH YAKIMA WA MESONET	
RAWS SEDGE RIDGE		

These data shows LSR's for a winter weather and strong wind event on December 29th – 30th over the Northeast Oregon mountains, north central Oregon, south central Washington, and the valleys east of the Cascades of Oregon and Washington (cont).



Significant Weather Events for the Month of December, 2018 (cont)

0215 AM	NON-TSTM WND GST 1 NE SISTERS	44.30N 121.53W
12/30/2018	M61.00 MPH DESCHUTES OR AWOS	
SISTERS AIRPORT K6K5		
0245 AM	NON-TSTM WND GST 5 WSW RUFUS	45.67N 120.84W
12/30/2018	M58.00 MPH SHERMAN OR MESONET	
MESONET STATION XMRY		
0248 AM	NON-TSTM WND GST 11 E SHANIKO	45.00N 120.53W
12/30/2018	M67.00 MPH WASCO OR MESONET	
RAWS NORTH POLE RIDGE		
0845 PM	NON-TSTM WND DMG 2 SE KENNEWICK	46.18N 119.13W
12/29/2018	BENTON WA TRAINED SPOTTER	
ESTIMATED GUSTS TO 50 MPH. WINDS BLEW A 10-FOOT PIECE OF A SECURED METAL ROOF OFF OF A CHICKEN COOP INTO A NEIGHBORS YARD.		

These data shows LSR's for a winter weather and strong wind event on December 29th – 30th over the Northeast Oregon mountains, north central Oregon, south central Washington, and the valleys east of the Cascades of Oregon and Washington (cont).



December, 2018 Observed Monthly Max & Min Temperatures

Location	Highest Maximum Temperature	Lowest Minimum Temperature
Pendleton, OR	61	20
Redmond, OR	60	6
Pasco, WA	57	21
Yakima, WA	58	20
Walla Walla, WA	63	21
Bend, OR	54	7
Ellensburg, WA	52	19
Hermiston, OR	59	18
John Day, OR	54	1
La Grande, OR	47	9
The Dalles, OR	57	26
MT Adams RS, WA*	45	16
* Incomplete data		

These data show that every station, except for Pendleton and Redmond, never got above 59 degrees for a high temperature during the month. The lowest was 6 degrees at Redmond, which is also one of the stations that DID get above 59 degrees.

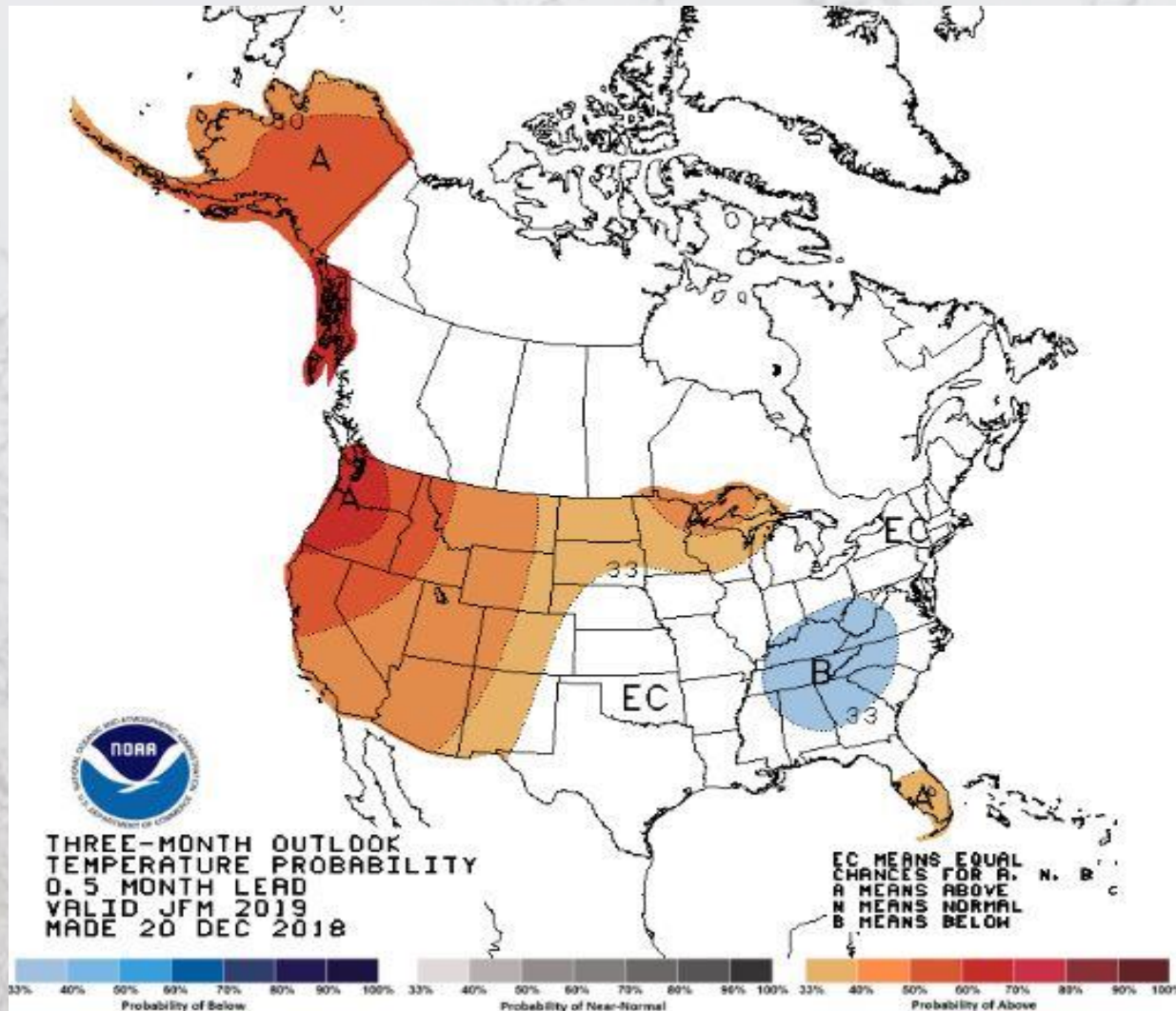
December, 2018, Monthly Total Precipitation Totals

Location	Total Monthly Precip	Total Snowfall or Hail
Pendleton, OR	1.66	0.7
Redmond, OR	0.65	T
Pasco, WA	0.88	T
Yakima, WA	0.68	0.3
Walla Walla, WA	1.98	T
Bend, OR	1.85	0
Ellensburg, WA	1.13	M
Hermiston, OR	0.91	T
John Day, OR	0.94	11.5
La Grande, OR	1.34	4.6
The Dalles, OR	2.57	M
Mt Adams RS, WA*	6.65	5.0

*Incomplete data

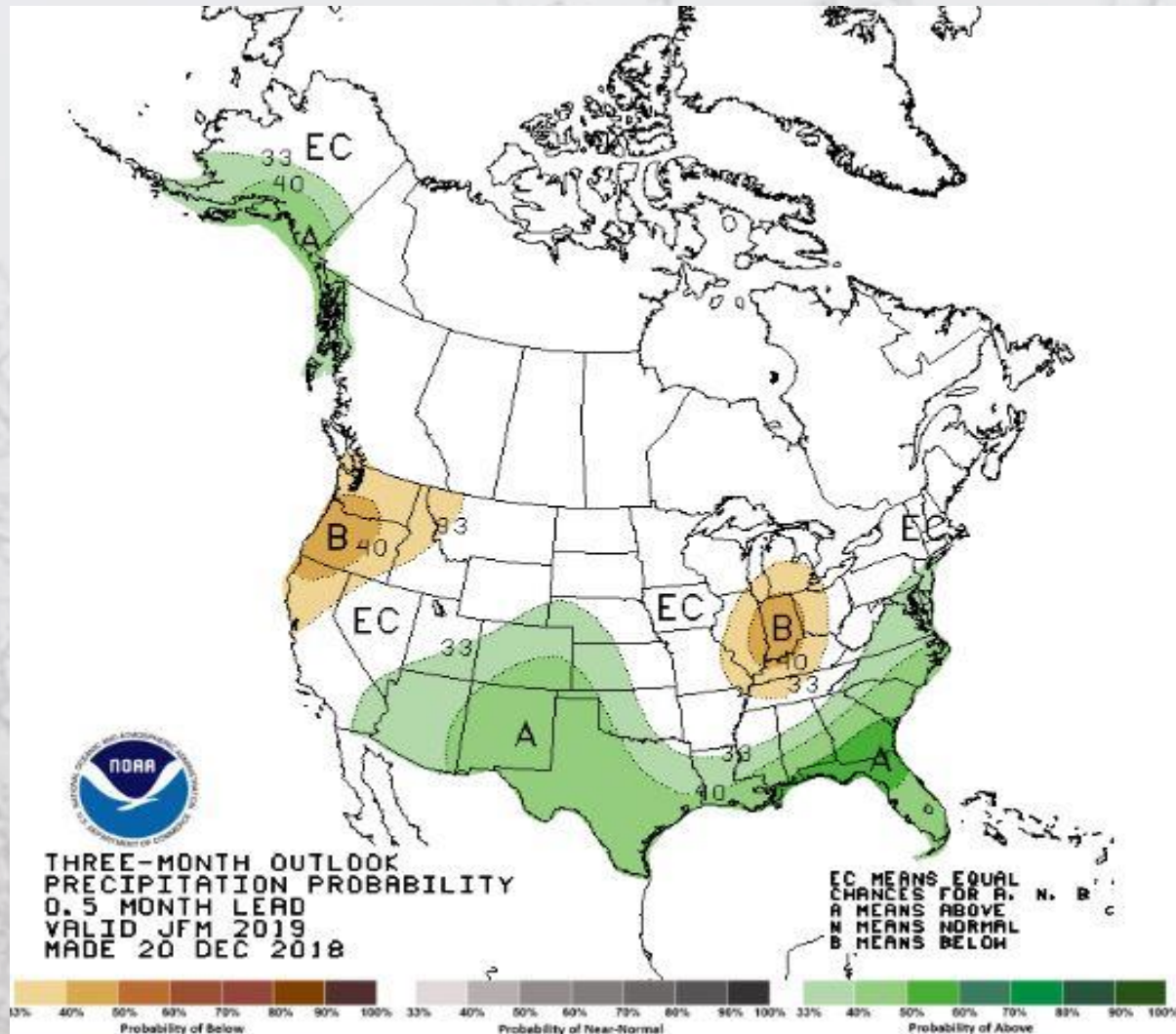
All stations had at least a half inch or more of liquid equivalent precipitation. Snowfall Amounts were on the low side with the greatest being John Day, OR with 11.5 inches.

Three Month Temperature Outlook (January, February & March)



The temperature outlook for the next three months shows about a 50 - 70% chance of being above normal for all of the Pacific Northwest and the forecast area.

Three Month Precipitation Outlook (January, February & March)

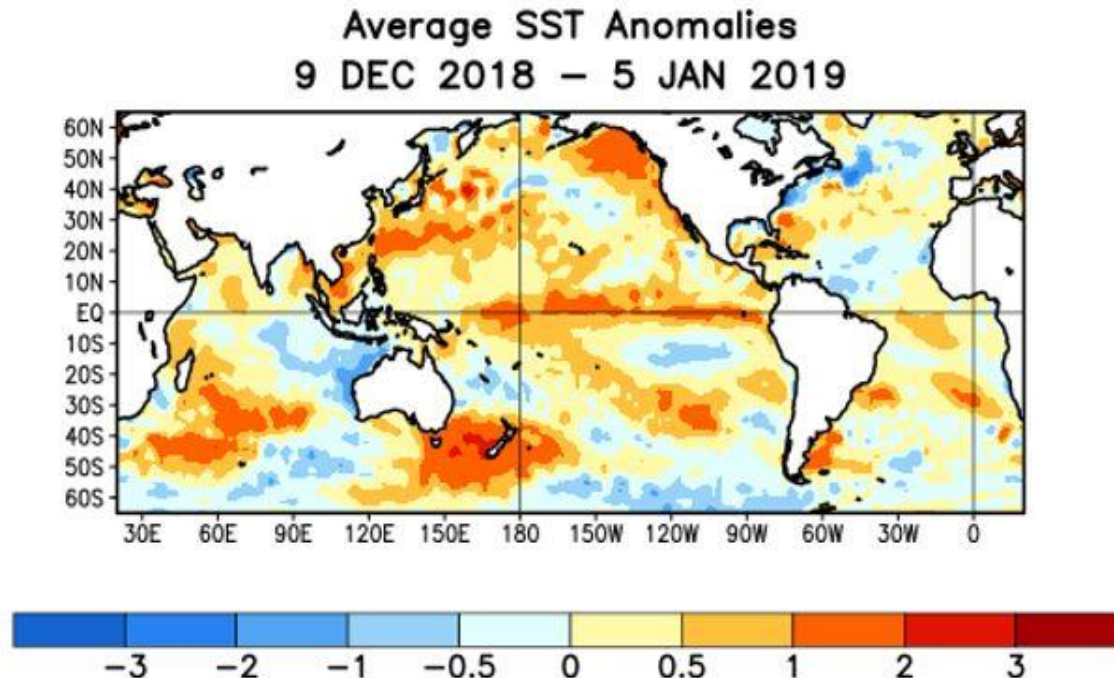


The precipitation outlook for the next three months shows that the Pacific Northwest will have below normal precipitation throughout all of the Pacific Northwest and forecast area.

El Nino/La Nina Index for 9th December, 2018 – 5th January, 2019

Global SST Departures (°C) During the Last Four Weeks

During the last four weeks, equatorial SSTs were above average across the Pacific and central Atlantic Oceans.



Note that the SST's were above average for most of the tropical western and eastern Pacific. This is indicative that an El Nino is still evolving. The weather patterns during the last month are typical of an El Nino.



Thank You!