



# The Month In Review

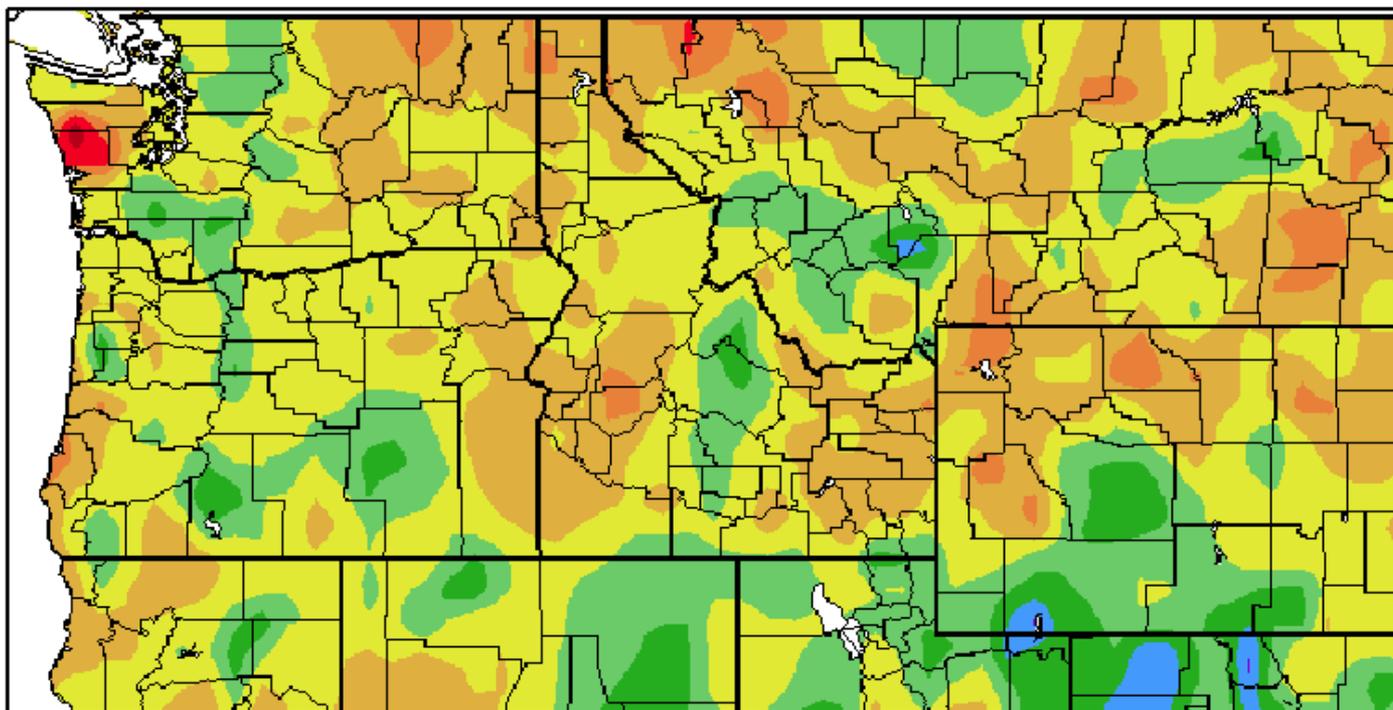
January 2016

National Weather Service  
Pendleton, Oregon

# Departure From Normal Temperature (F)

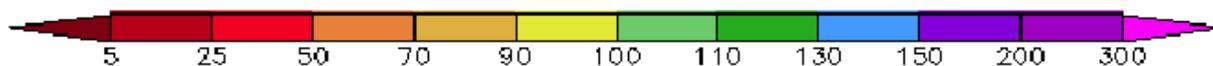
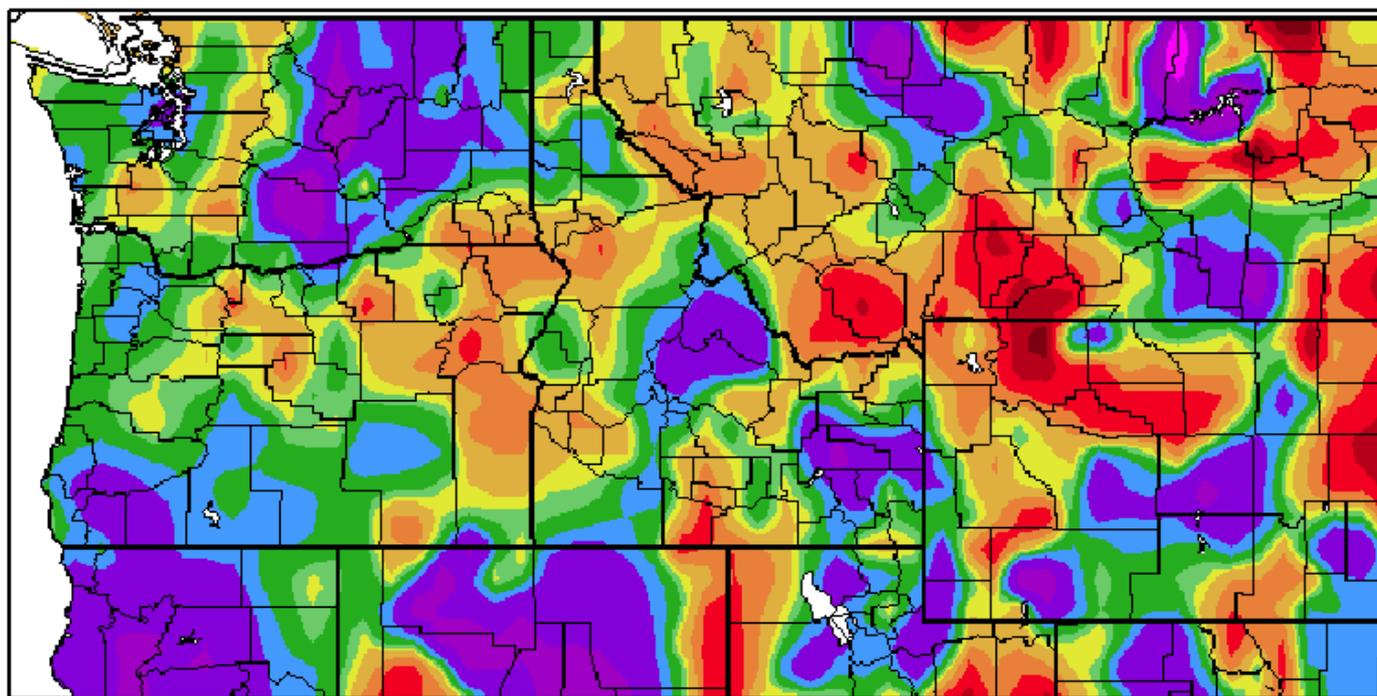
Departure from Normal Temperature (F)

1/2/2016 - 1/31/2016



# Percent of Normal Precipitation (%)

Percent of Normal Precipitation (%)  
1/2/2016 - 1/31/2016



Generated 2/1/2016 at HPRCC using provisional data.

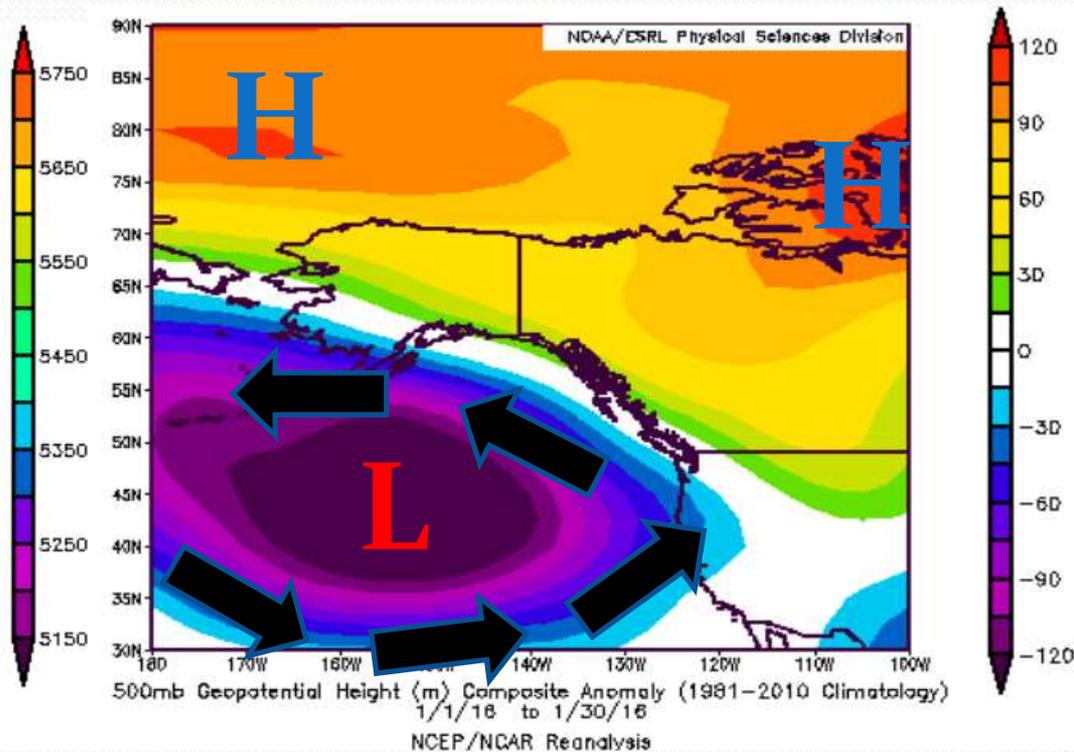
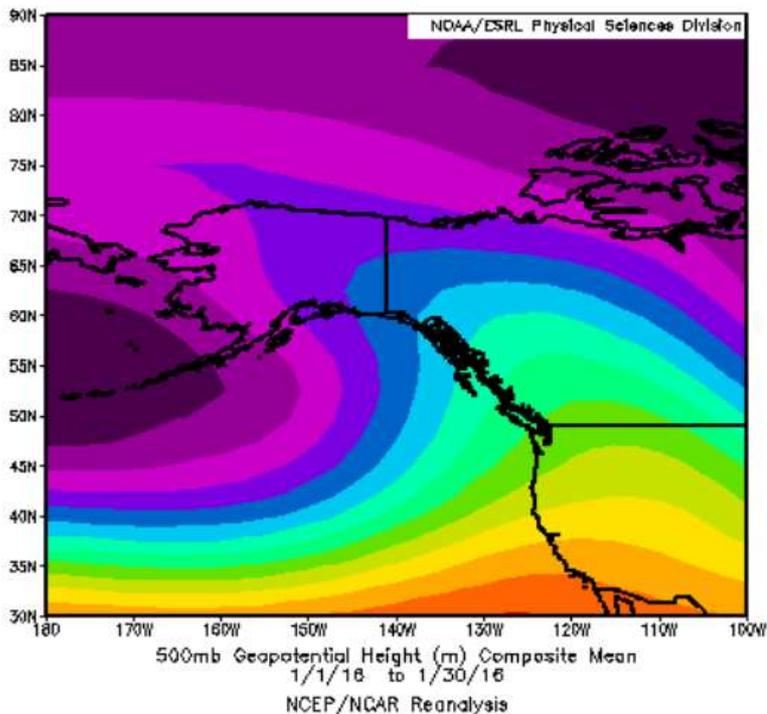
Regional Climate Centers





# January 2016

## Synoptic Weather Pattern



The mean synoptic pattern for the month of January 2016 was characterized by a large, anomalous trough of low pressure south of Alaska, extending along the West Coast of the US. There was an upper level ridge of high pressure located across northern Alaska and much of Canada during this time. This allowed a west to southwest flow to dominate in the Pacific Northwest for the month. The flow of moisture into the Pacific Northwest was not quite as strong as it was in December, but numerous weather systems were still able to affect the region during the month. These weather systems brought near average amounts of rain and snow to most of the area, with northern California and Central Washington receiving the most precipitation compared to average. This Pacific Maritime flow also allowed temperatures to remain rather mild through the month (at least for January standards).



# Daily High Temperatures Set in January 2016

City	Daily Record Max T	Previous Daily Record Max T
Pelton Dam, OR	64° on 1/28/16	64° in 1976 (T)
Whitman Mission	62 on 1/23/16	53° in 2011
Walla Walla, WA	60° on 1/22/16	52° in 1986
Hermiston, OR	59° on 1/23/16	59° in 2011 (T)
Pasco, WA	59° on 1/22/16	54° in 2011
Monument, OR	58° on 1/25/16	58° in 1998
The Dalles, OR	57° on 1/22/16	56° in 2011
Yakima, WA	57° on 1/28/16	57° in 1974 (T)
Long Creek, OR	56° on 1/28/16	54° in 1998



# Daily Record Low Temperatures Set in January 2016

City	Daily Record Min T	Previous Daily Record Min T
Seneca, OR	-21 on 01/02/2016 *	-31 in 1971
Sunriver, OR	-13 on 01/01/2016	-6 in 2008
Meacham, OR	-9 on 01/02/2016	-9 in 1950
Sisters, OR	-5 on 01/01/2016	-5 in 2015
Selah, WA	-3 on 01/01/2016	3 in 2011
Pasco, WA	8 on 1/03/2016	8 in 2011 (T)
Hermiston, OR	22° on 1/31/2016	23 in 2011

\*Honorary mention, not a daily record, as it reached -31 on this date in 1971



# Daily Precipitation Records

## January 2016

City	1-Day precip and Date	Previous Daily Precip Record
Satus Pass, WA	1.75" on 1/20/2016	1.00" in 1972
Whitman Mission	0.81" on 1/19/2016	0.66" in 1970
Sunriver, OR	0.58" on 1/13/2016	0.38" in 2011
Pelton Dam, OR	0.57" on 1/20/2016	0.38" in 1993
Arlington, OR	0.53" 1/20/2016	0.40" in 2012
Yakima, WA	0.50" on 1/19/2016	0.39" in 2012
Moxee City, WA	0.45" 1/19/2016	0.29" in 2012
Ellensburg, WA	0.44" on 1/20/2016	0.39" in 1951
Pasco, WA	0.23" 1/12/2016	0.23" in 2003



# Top 20 Monthly January Precipitation Records

City	Rank	Jan 2015 Precipitation	Highest January Precipitation
Pasco, WA	#6	1.19 Inches	1.98 Inches in 2003
Yakima, WA	#6	2.31 Inches	3.68 Inches in 1995
Hermiston, OR	#8	1.10 Inches	2.23 Inches in 2004
Ellensburg, WA	#9	1.69 Inches	3.01 Inches in 1953
Moxee City, WA	#13	1.60 Inches	2.89 Inches in 1995
Pelton Dam, OR	#18	1.81 Inches	4.32 Inches in 1970



# Top 10 Monthly January Lowest Snowfall Records

City	Rank	Jan 2016 Snowfall	Lowest Jan Snowfall	# of years 0.0” Jan Snow
Pasco, WA	#5 (T)	Trace	0.0 Inches	4 years
Walla Walla, WA	#6(T)	Trace	0.0 Inches	5 years
Pendleton, OR	#6(T)	Trace	0.0 Inches	5 years
Hermiston, OR	#6(T)	Trace	0.0 Inches	5 years
Dayton, WA	#9(T)	Trace	0.0 Inches	8 years
Heppner, OR	#10 (T)	Trace	0.0 Inches	5 years
Long Creek, OR	#11	0.8 Inches	0.0 Inches	4 years



# Top 20 January Monthly Highest Snowfall Records

City	Rank	Jan 2016 Snowfall	Highest Monthly Jan Snowfall on Record
Selah, WA	#3	8.0"	10.5" in 2004
Sunriver, OR	#12	5.7"	34.0" in 2008
Easton, WA	#18	17.5"	96.0" in 1907
Yakima, WA	#19	11.7"	26.6" in 1950



# January Significant Weather

# January 1 – 3<sup>rd</sup> Cold Start to the New Year



A deep, cold, upper level trough moved over the region during this time. Combined with the lingering snowpack from ample December snowfall overnight lows were able to plummet during the first few days of the month.

Location	Coldest Temperature
Seneca	-21
Sunriver	-13
Meacham	-9
Bend	-8
Sisters	-6
Cle Elum	-6
Joseph	-4
Ellensburg	-4
John Day	-2
Long Creek	-1
La Grande	-1
Yakima	0
Redmond	1
Prineville	2
Goldendale	3

# January 3 – 5<sup>th</sup>

## Snow & Light Freezing Rain

Location	Snow Total	Maximum Snow Depth
Trout Lake, WA	7.0"	33"
Cle Elum, WA	6.0"	16"
Yakima, WA	5.0"	11"
White Salmon, WA	4.2"	M
Goldendale, WA	4.0"	11"
Ellensburg, WA	3.7"	10"
Easton, WA	3.0"	41"
Prosser, WA	1.5"	1.5"
Richland, WA	1.0"	1.0"
Kennewick, WA	0.5"	0.5"
Echo, OR	0.3"	T
Pendleton, OR	0.2"	T



*Shoveling Snow in Yakima, WA. Photo courtesy of KNDU*

A storm system with abundant moisture moved over our area from January 3<sup>rd</sup> through the 5<sup>th</sup>. This storm system moved over lingering cold air, and was therefore able to produce some significant snowfall totals across parts of the region. The heaviest snow fell along the East Slopes of the Cascades, The Yakima Valley, and Kittitas Valley region. Light snow, mixed with freezing rain also affected the Columbia Basin and Blue Mtn Foothills.

# January 11 – 13<sup>th</sup> Rain & Snow

Location	3 Day Rain Totals	3 Day Snow Totals
Walla Walla	0.29 Inches	0 Inches
Meacham	1.06 Inches	6 Inches
The Dalles	0.21 Inches	0 Inches
Ellensburg	0.19 Inches	1.3 Inches
Hermiston	0.17 Inches	0 Inches
Pendleton	0.33 Inches	Trace
Pasco	0.28 Inches	0 Inches
Yakima	0.31 Inches	3.5 Inches
Cle Elum	0.39 Inches	3.5 Inches
Easton	0.60 Inches	4.0 Inches
Goldendale	0.48 Inches	0.3 Inches
Redmond	0.24 Inches	0.2 Inches
Bend	0.11 Inches	1.0 Inches



After a break in the weather, the pattern once again turned much more active heading into mid-month. From January 11<sup>th</sup> through the 13<sup>th</sup> several Pacific weather systems moved through the area, bringing large amounts of rain and snow (to parts of the area). By this time in the month temperatures had begun a warming trend as Pacific air replaced any leftover Canadian or Arctic air that was in place. Therefore snow only in the higher elevations, a few parts of Central Oregon, and once again along the East Slopes of the Washington Cascades.



# January 16 – 20<sup>th</sup> Rain & Snow



A series of low pressure systems once again moves through the forecast area. These storm system brought ample amounts of precipitation to the entire area...even more than the previous storm system just days before. Moderate to even heavy snow amounts were once again observed near Yakima, Ellensburg, Easton and into the Blue Mountains. Other locations were spared the snow, but received a moderate rainfall.

Location	Precipitation (Storm Total)	Snowfall (Storm Total)
Walla Walla	0.66 Inches	0.0 Inches
Meacham	1.41 Inches	5.0 Inches
The Dalles	1.09 Inches	0.0 Inches
Ellensburg	0.87 Inches	6.6 Inches
Hermiston	0.57 Inches	0.0 Inches
Pendleton	0.62 Inches	0.0 Inches
Pasco	0.53 Inches	Trace
Yakima	0.98 Inches	3.0 Inches
Cle Elum	1.39 Inches	8.0 Inches
Easton	1.69 Inches	12.5 Inches
Goldendale	1.27 Inches	0.0 Inches
Redmond	0.47 Inches	0.0 Inches
Bend	0.61 Inches	Trace
John Day	0.32 Inches	0.0 Inches
La Grande	0.16 Inches	0.0 Inches

# January 28 – 29<sup>th</sup> Rain & Wind

Location	Rainfall Total
Walla Walla	0.33"
Meacham	1.21"
The Dallas	0.64"
Ellensburg	0.27"
Hermiston	0.23"
Pendleton	0.38"
Pasco	0.15"
Yakima	0.27"
Cle Elum	0.29"
Easton	1.05"
Goldendale	0.50"
Bend	0.26"



Location	Peak Wind Gust
Pendleton	50 MPH
Walla Walla	49 MPH
La Grande	49 MPH
Lexington	48 MPH
Redmond	47 MPH
Prineville	47 MPH
Hermiston	46 MPH
John Day	41 MPH
Pasco	41 MPH
The Dallas	35 MPH
Yakima	31 MPH
Moro	29 MPH

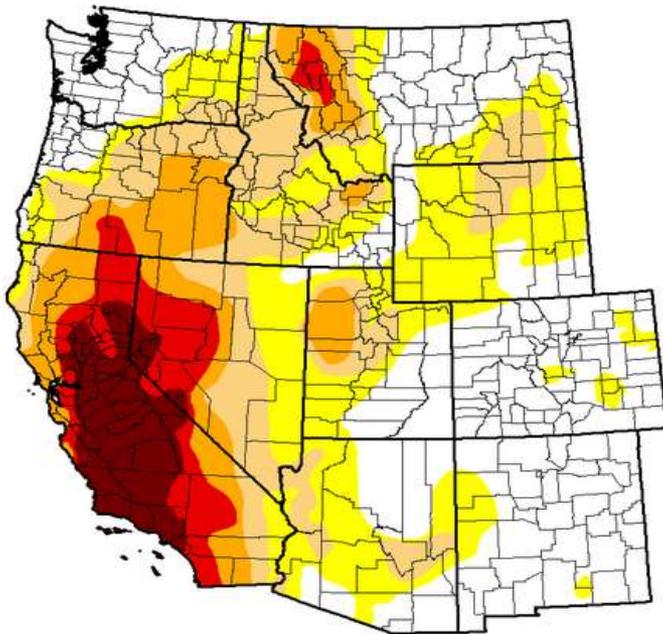
To round out the end of the month another storm system pushed through our area. This storm brought warmer air and rising snow levels. Snow levels at times reached 6000-8000 feet, allowing some significant, but short lived snow melt to occur even in the mountains. This snow melt combined with a moderate rainfall to bring some rises on area rivers and streams. Little to no flooding was reported as the snowpack froze back up the last day of the month. Winds were also strong and gusty behind the sharp cold front on January 29<sup>th</sup>.

# Drought Conditions Improving

## U.S. Drought Monitor West

January 26, 2016  
(Released Thursday January 28, 2016)  
Valid 7 a.m. EST

Statistics type: Traditional Percent Area Export table: [PNG](#) [CSV](#) [XLS](#)



Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current <a href="#">2016-01-26</a>	37.80	62.20	38.45	21.59	11.69	5.81
Last Week <a href="#">2016-01-19</a>	37.36	62.64	40.19	21.59	12.26	6.14
3 Months Ago <a href="#">2015-10-27</a>	26.79	73.21	55.42	41.21	26.23	7.62
Start of Calendar Year <a href="#">2015-12-29</a>	33.17	66.83	45.07	29.30	15.92	6.85
Start of Water Year <a href="#">2015-09-29</a>	22.77	77.23	57.81	42.42	26.50	7.62
One Year Ago <a href="#">2015-01-27</a>	31.10	68.90	53.77	33.36	18.72	6.96

Estimated Population in Drought Areas: **42,974,651**

[View More Statistics](#)

### Intensity:

- D0 (Abnormally Dry)
- D2 (Severe Drought)
- D4 (Exceptional Drought)
- D3 (Extreme Drought)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying [text summary](#) for forecast statements.

### Author(s):

Mark Svoboda, National Drought Mitigation Center

Download: [PNG](#) [PDF](#) [JPG](#)

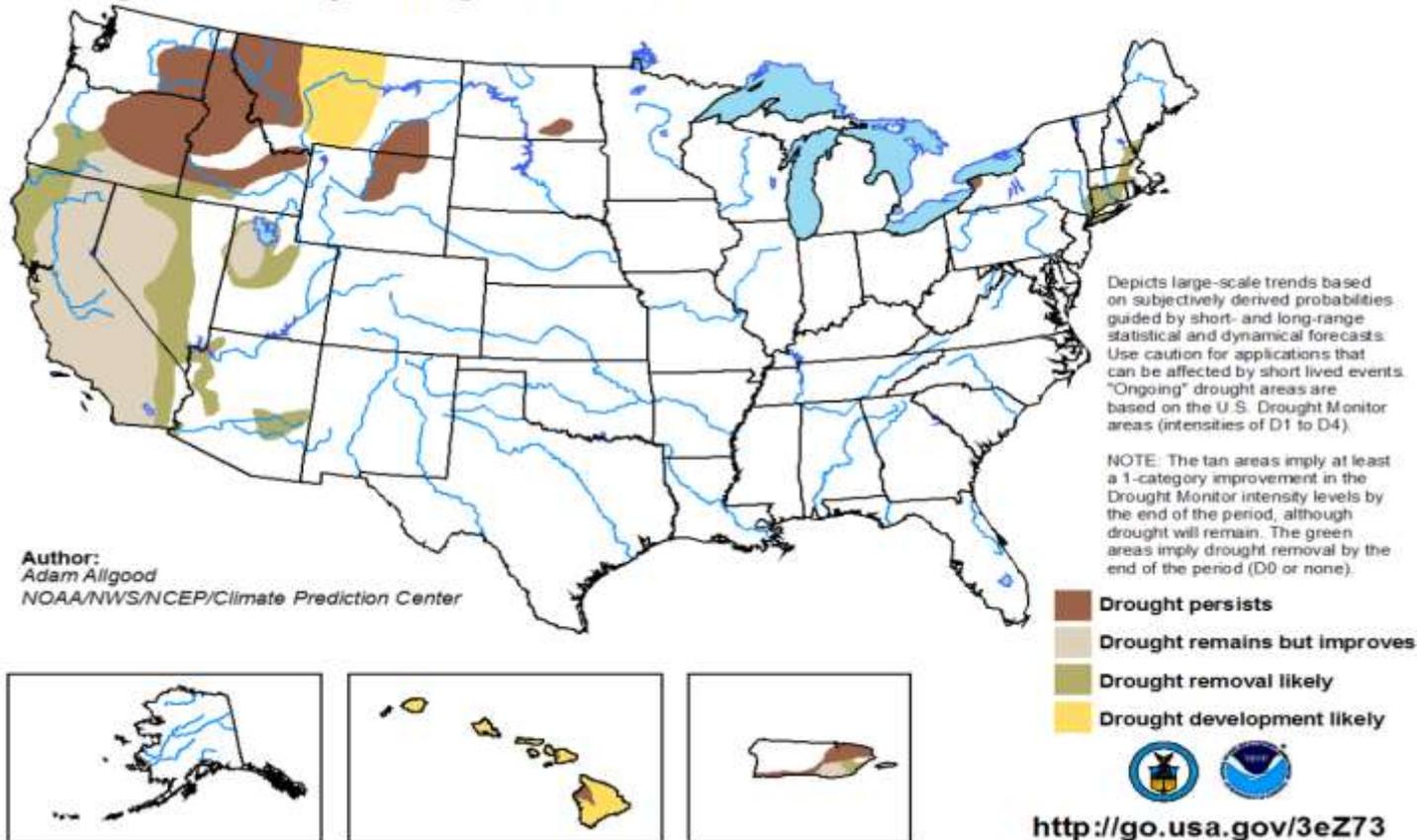
The latest drought monitor shows improvement across the Pacific Northwest, with only a small area of D<sub>1</sub>, or moderate drought lingering in southeastern Washington. Most of Eastern Oregon has now been reduced to only D<sub>1</sub> or D<sub>2</sub> drought status. However, there remains a small area of D<sub>3</sub> (severe drought) in south-central Oregon within the Klamath River Basin.



# Seasonal Drought Outlook

## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for January 21 - April 30, 2016  
Released January 21, 2016

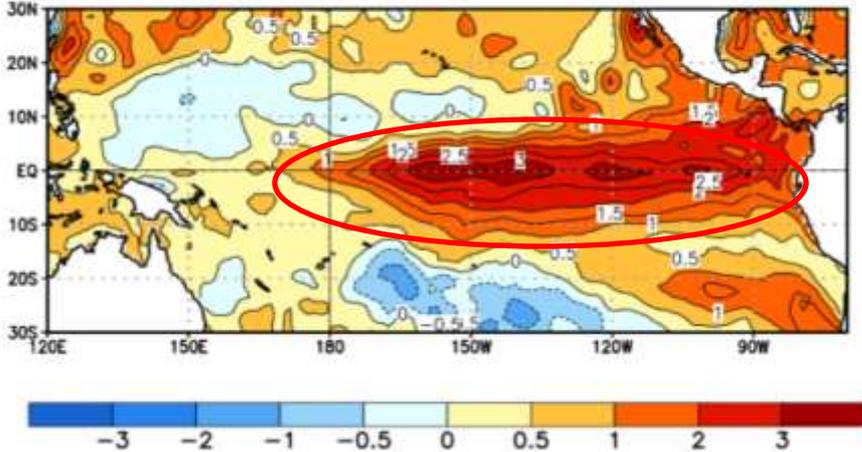


The seasonal drought outlook from CPC indicates drought persisting for much of our area (but likely not becoming worse). The only exception is in southern Oregon where drought removal or improvement is likely. This may be updated next month to reflect recent trends in precipitation and snowpack across our area.



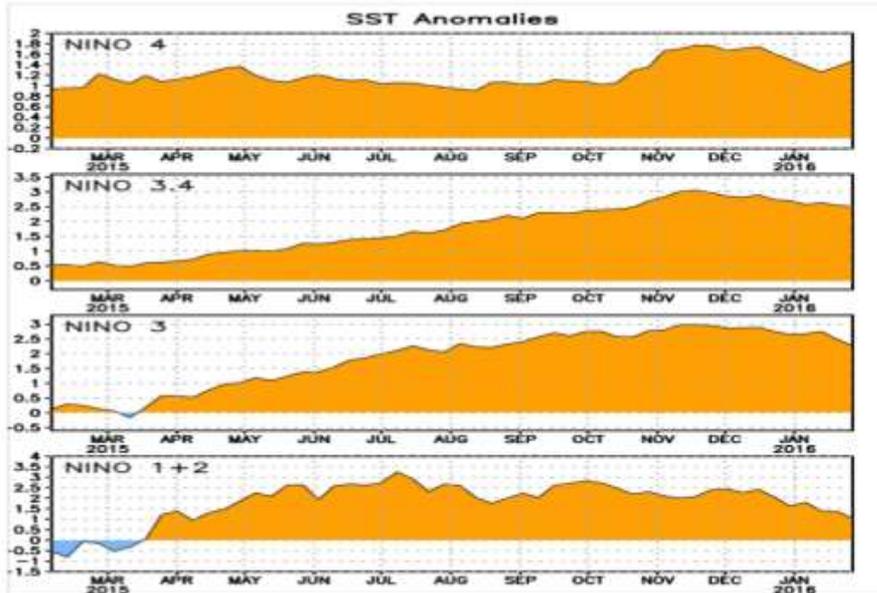
# El Niño Conditions Continue

Average SST Anomalies  
3 JAN 2016 – 30 JAN 2016

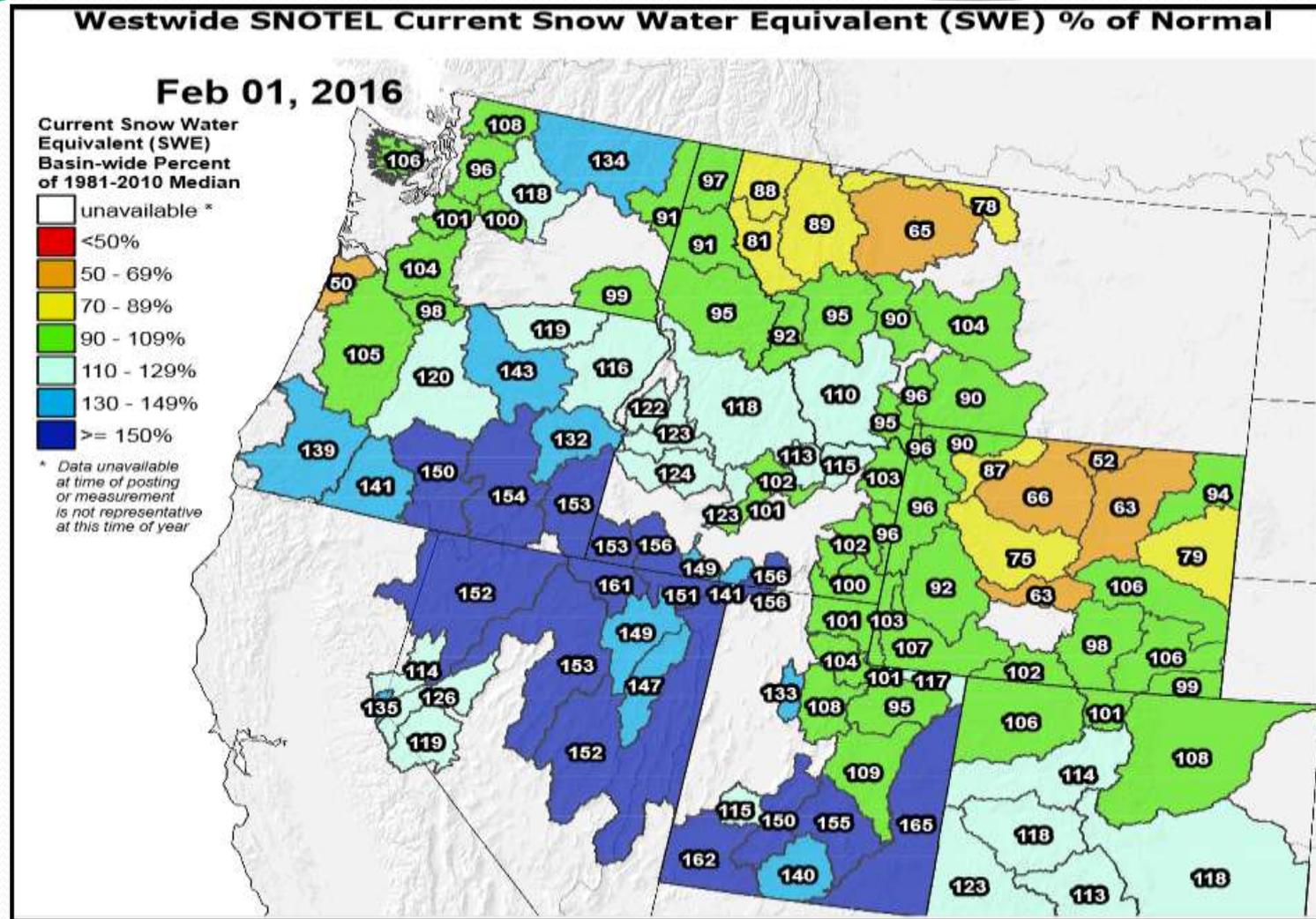


❖ An El Niño Advisory has been issued by the Climate Prediction Center, with the warmest temperatures noted off the South American coast along the Equator. \*\*El Niño conditions are present\*\*

❖ The Climate Prediction Center has stated that strong El Niño conditions will gradually weaken through the spring, with ENSO neutral conditions developing by late spring or early summer.



# Current Snow Water Equivalent



Current snow water equivalent (SWE) is running mainly above average across the Pacific Northwest. Just about all of Washington and Oregon now has SWE values between 90 and 155 percent of normal for February 1<sup>st</sup>. This should provide a source of much needed water through the spring and summer months ahead. We are in much better shape compared to last year at this time.

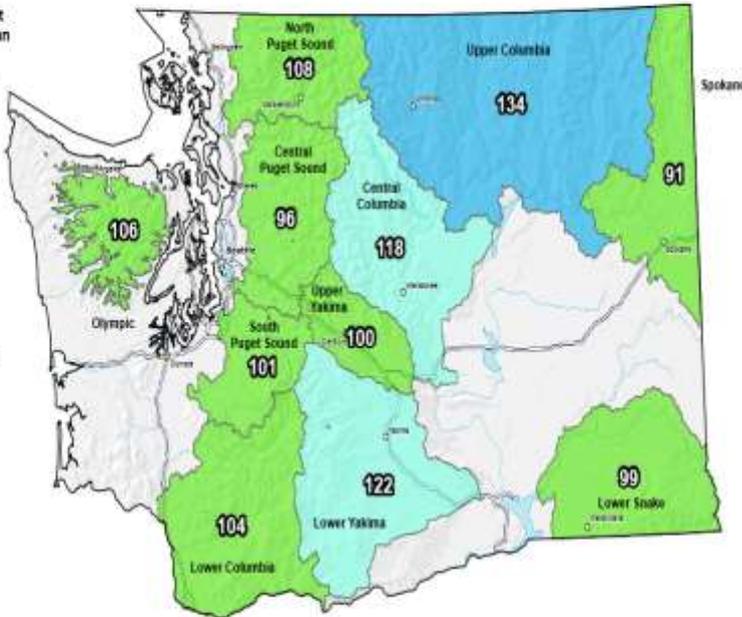
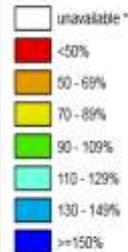
# Washington Current VS. 2015

## Snow Water Equivalent

Washington SNOTEL Current Snow Water Equivalent (SWE) % of Normal

Feb 01, 2016

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median



Spokane

Provisional Data  
Subject to Revision



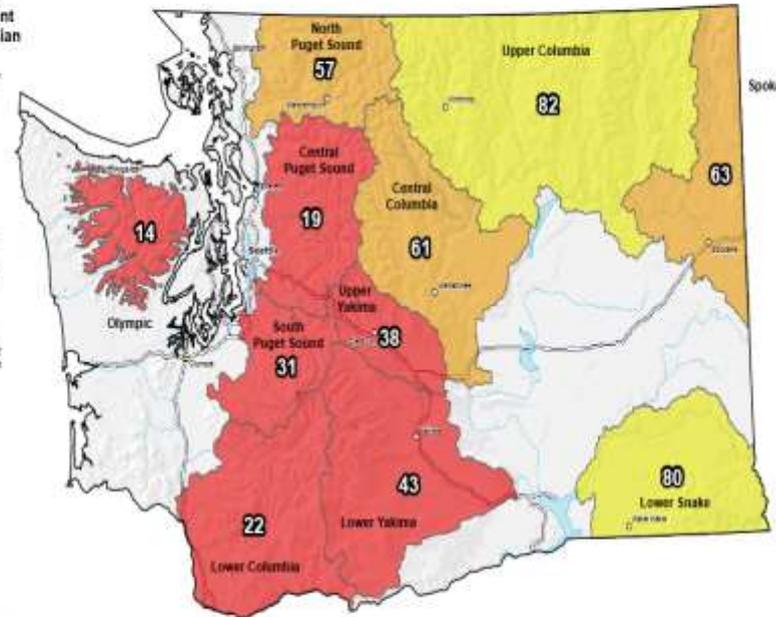
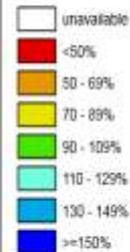
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by:  
USDA-NRCS National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>

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Feb 01, 2015

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Subject to Revision



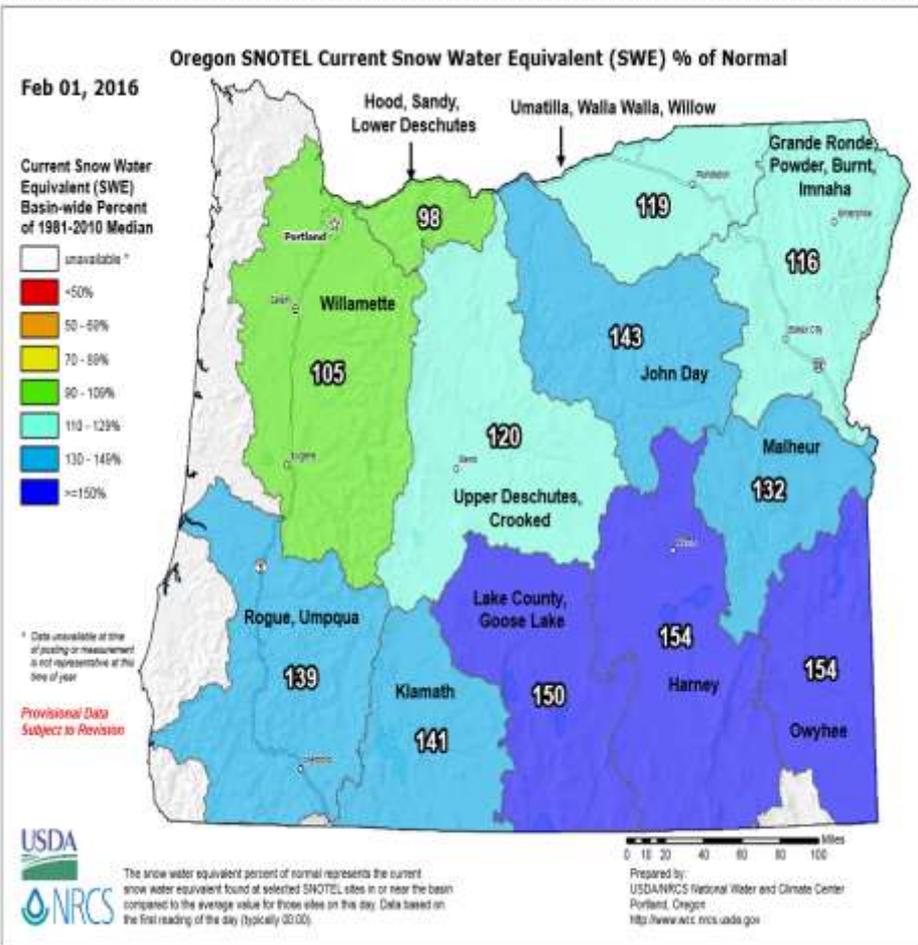
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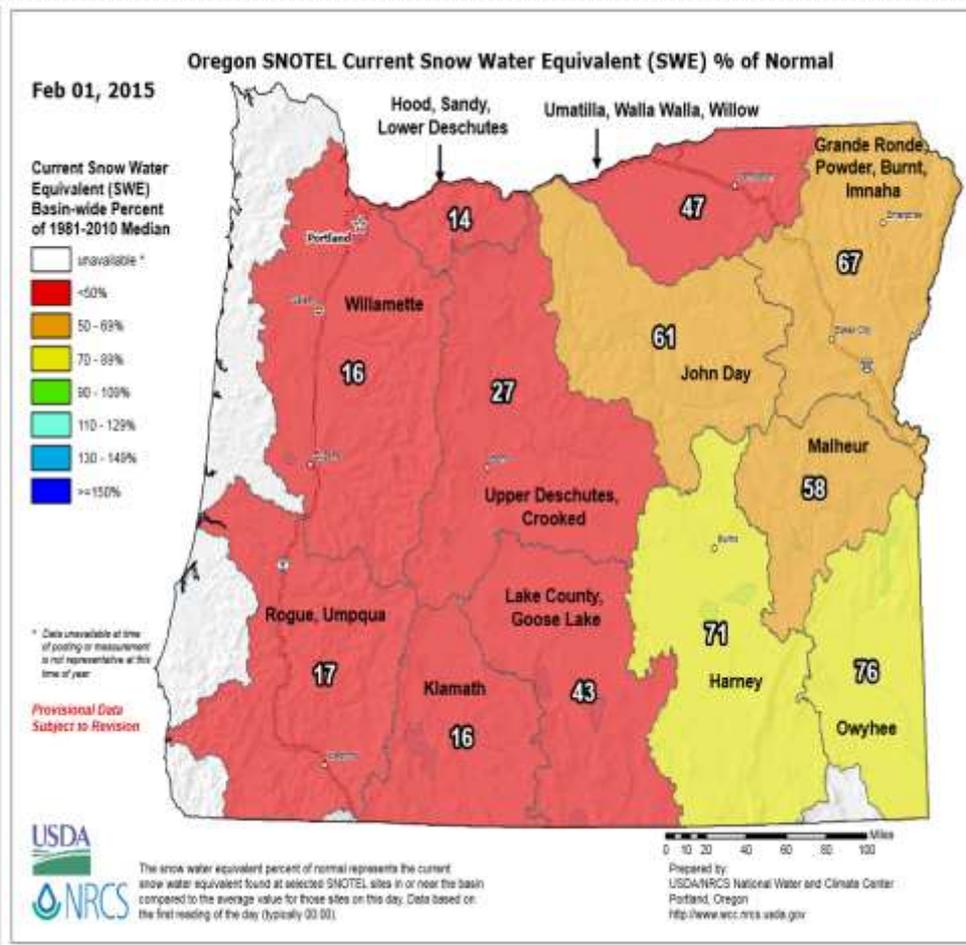
February 1<sup>st</sup> 2016: 91 to 134 percent SWE

February 1<sup>st</sup> 2015: 14 to 82 percent SWE

# Oregon Current VS. 2015 Snow Water Equivalent



February 1<sup>st</sup> 2016: 98 to 154 percent SWE

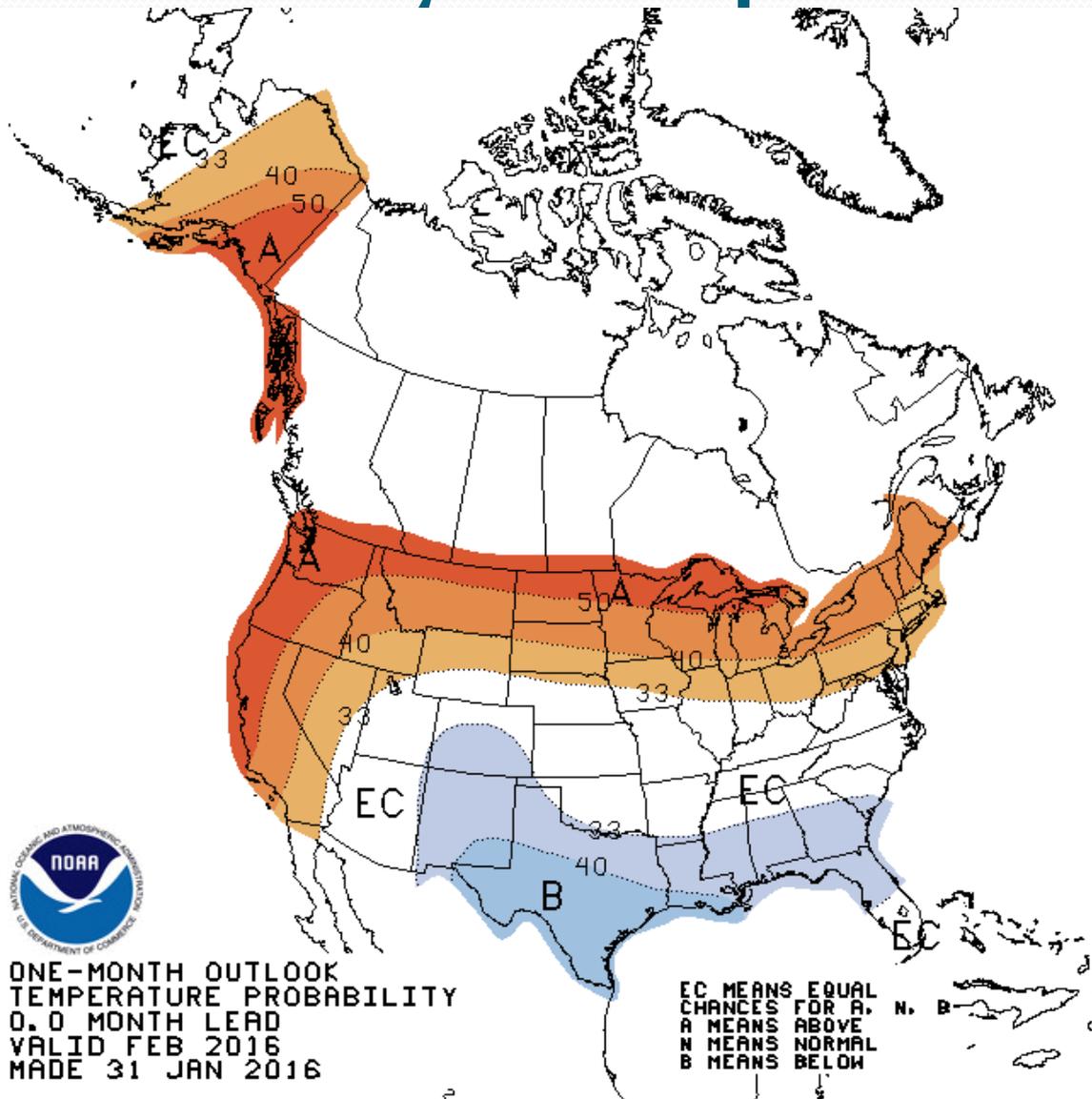


February 1<sup>st</sup> 2015: 14 to 76 percent SWE



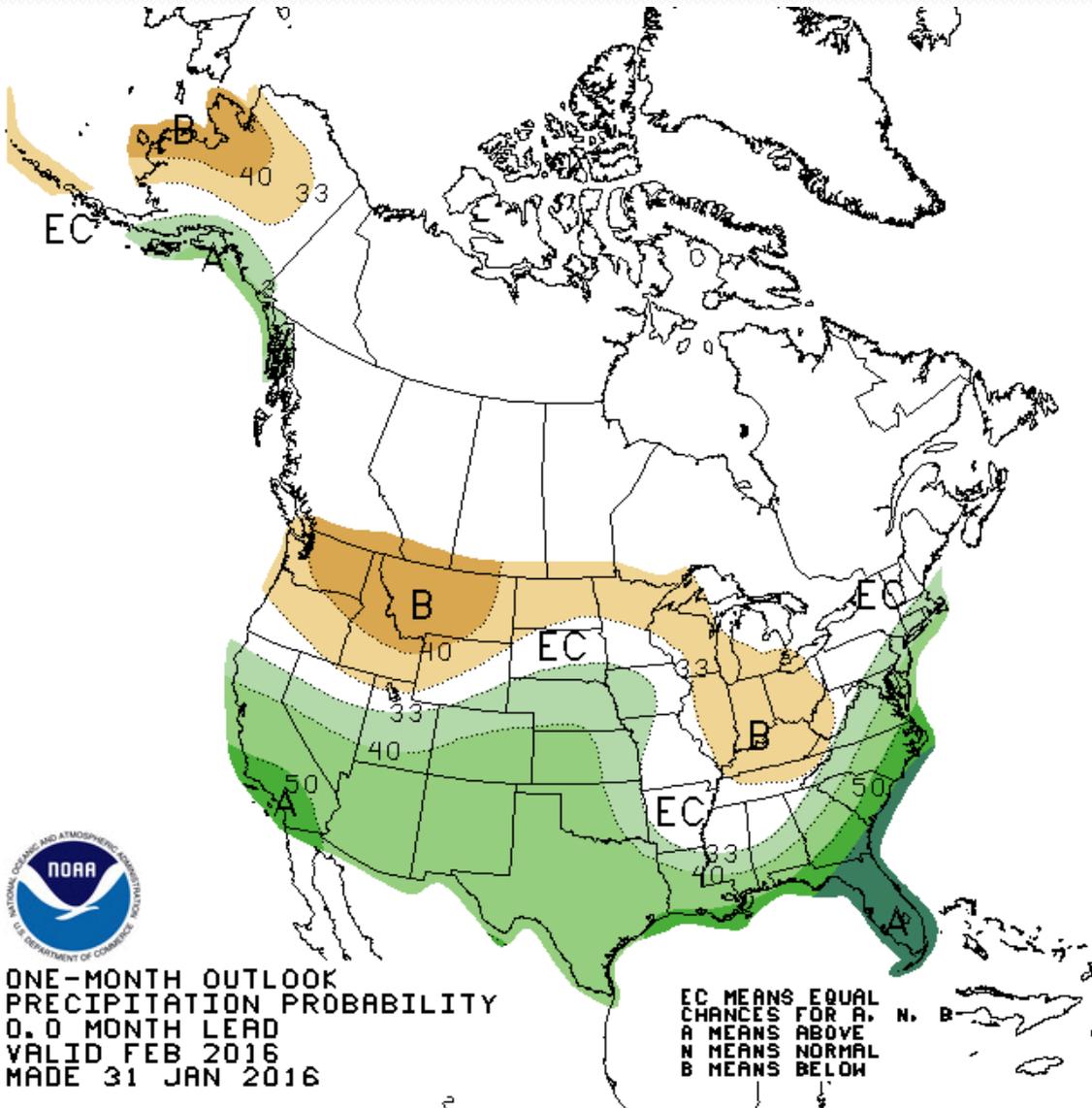
# February Outlook

# February Temperature Outlook



This graphic is issued by the Climate Prediction Center or CPC and is the Temperature Outlook for the month of February. The cool colors indicate a greater chance of below normal temperatures and the warm colors represent a greater chance of above normal temperatures. The time period for the normals runs from 1981-2010. Most of the Inland Pacific Northwest has a 40 – 50+ percent chance for above average in the month of February. This higher probability for warmth extends down the entire West Coast into California and north to most of Alaska as well.

# February Precipitation Outlook



This graphic is CPC's Precipitation Outlook for the month of February. The green colors represent a greater chance of above normal precipitation, and the brown colors represent a greater chance of below normal precipitation. Most of Washington and Oregon have a 33 to 40 percent chance to see below average precipitation in February. Southwestern Oregon does have equal chances for above, below, or near normal precipitation totals through the month. Please remember that these are probabilities of averages, and that the day-to-day weather will still vary for the month.



Thank You!