



The Month In Review

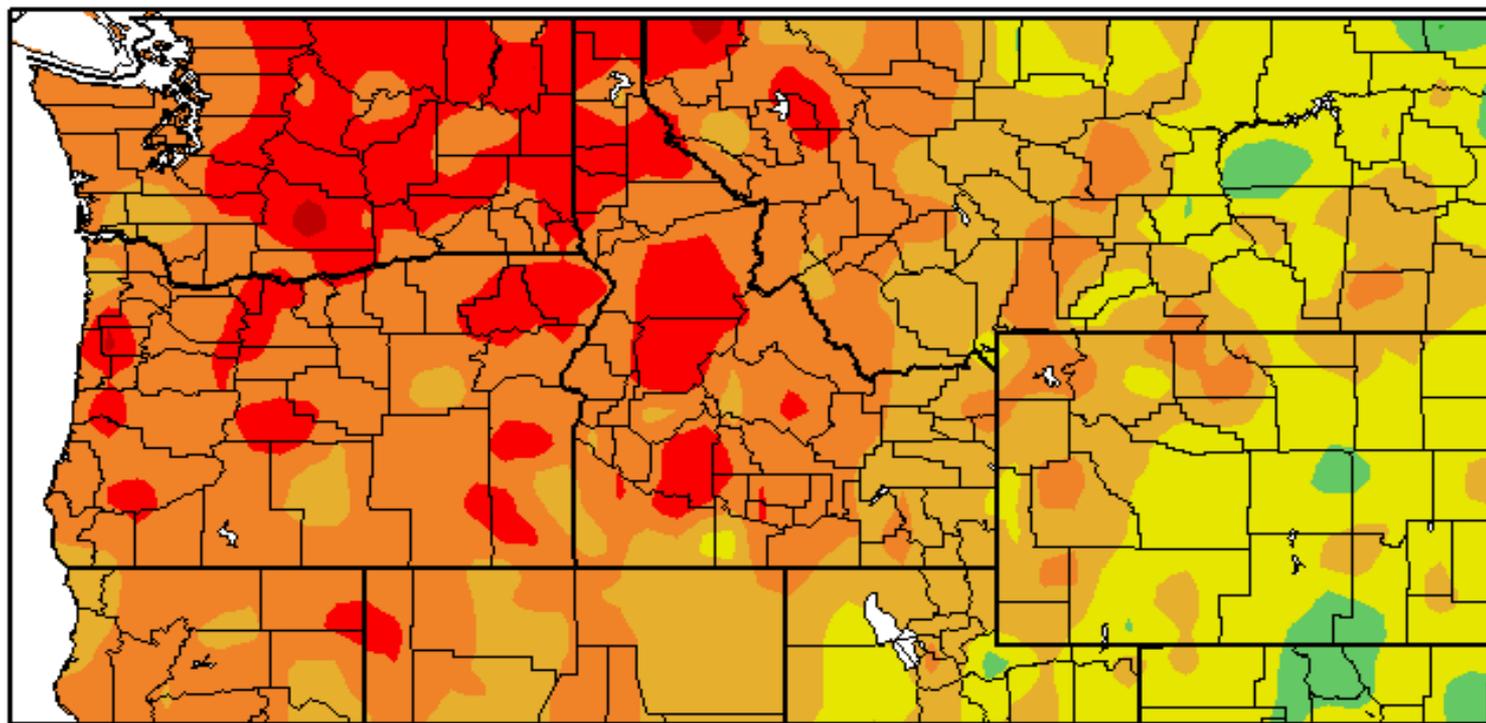
April 2016

National Weather Service
Pendleton, Oregon

Departure From Normal Temperature (F)

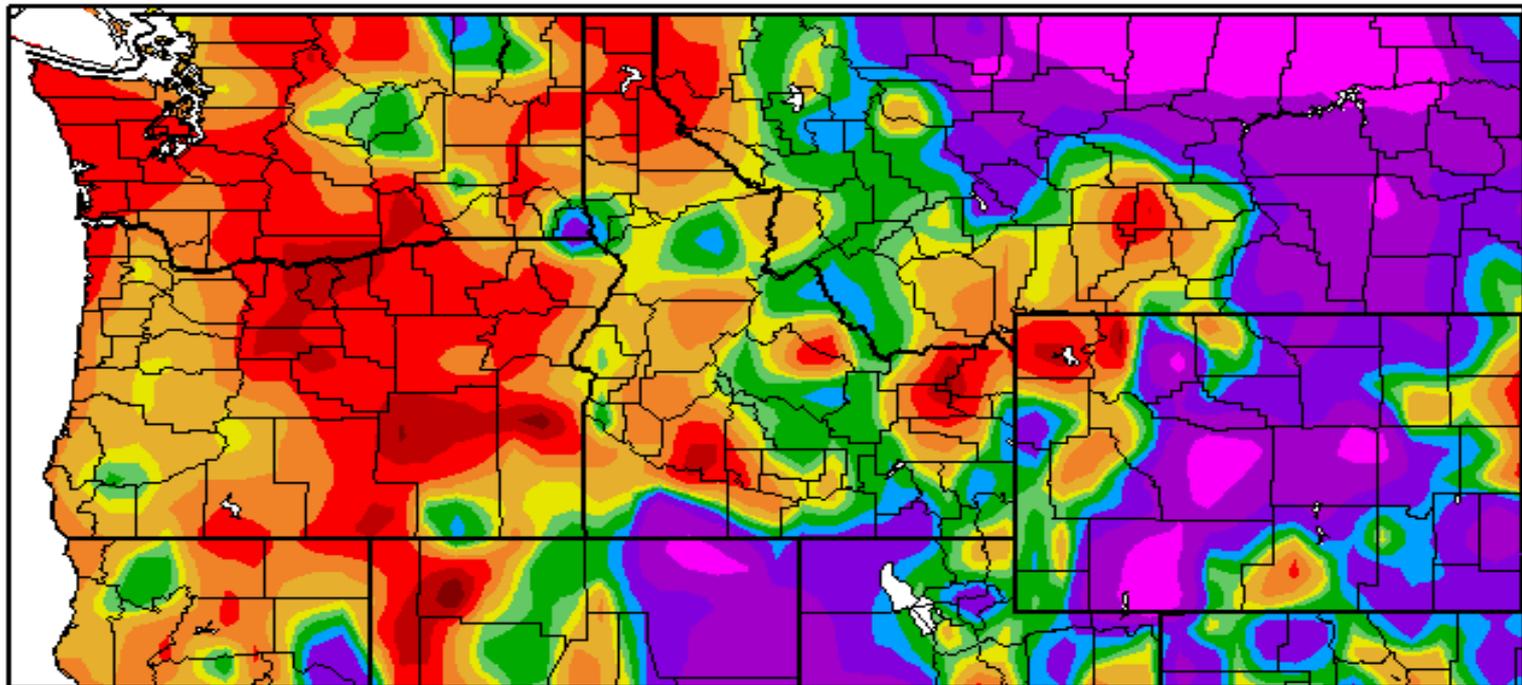
Departure from Normal Temperature (F)

4/1/2016 - 4/30/2016



Percent of Normal Precipitation (%)

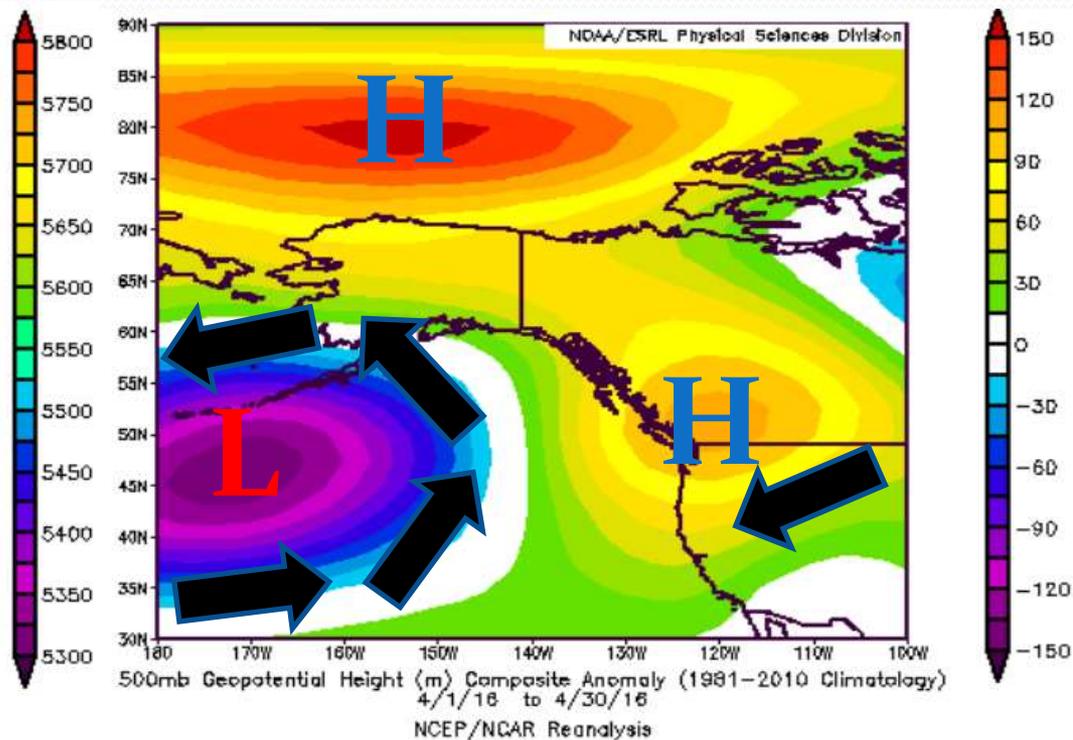
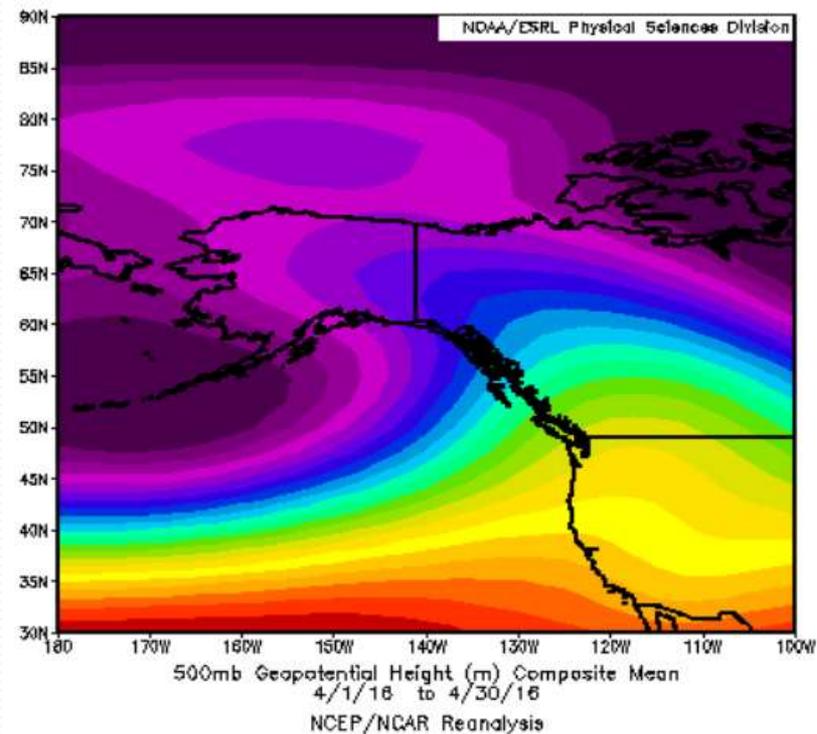
Percent of Normal Precipitation (%)
4/1/2016 - 4/30/2016





April 2016

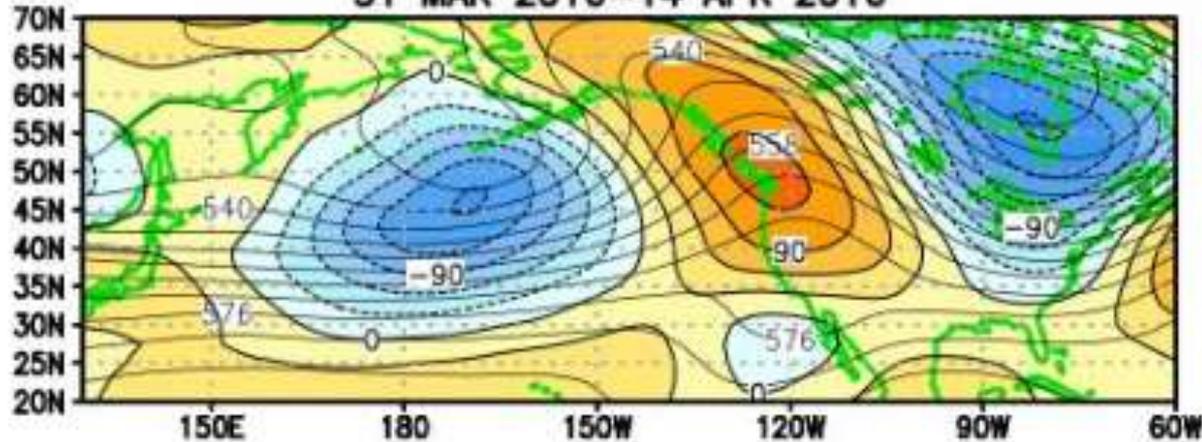
Synoptic Weather Pattern



The mean synoptic pattern for the month of April 2016 was characterized by a large, anomalous trough of low pressure southwest of Alaska. There was an upper level ridge of high pressure located across mainland Alaska and north across the Arctic Ocean. There was another upper level ridge centered over Washington state and British Columbia which extend southward across much of the western US. With this upper level ridge firmly in place over our area much of April featured well above average temperatures and drier than average conditions. Many reporting stations in our area had one of the warmest April's on record.

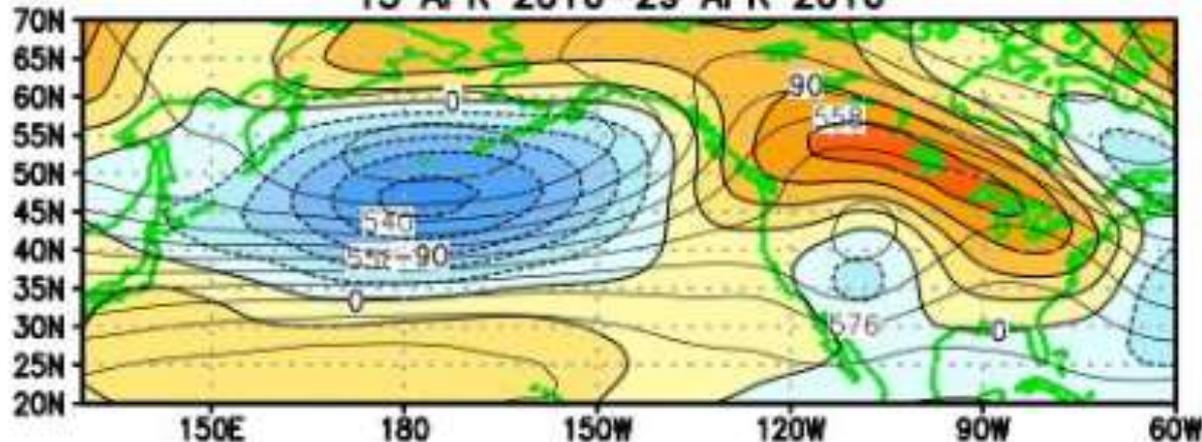
April 2016 Detailed Upper Level Pattern Analysis

31 MAR 2016–14 APR 2016



❖ The first two weeks of April features a strong, anomalous upper level ridge centered right over the Pacific Northwest.

15 APR 2016–29 APR 2016



❖ The second half of the month saw the upper level ridge relax and shift further east, but overall heights were still above average across Oregon and Washington.



Top 10 April Record Warm Daily Max Temperatures

City	Rank	April 2016 Max T	Current or Previous April Max T Record
Meacham, OR	#1	80 on 4/8	78 on 4/22/2012
Ellensburg, WA	#2	85 on 4/20	89 on 4/23/2012
Hermiston, OR	#3(T)	86 on 4/20	90 on 4/30/1998
Easton, WA	#3(T)	75 on 4/19	79 on 4/27/2004
Pasco, WA	#4	89 on 4/20	94 on 4/30/1998
Yakima, WA	#4	88 on 4/20	92 on 4/24/1977
Antelope, OR	#4(T)	85 on 4/21	90 on 4/28/1926
La Grande, OR	#7	83 on 4/11	88 on 4/25/1977
Satus Pass, WA	#9(T)	80 on 4/10	87 on 4/24/1977
The Dalles, OR	#10	89 on 4/20	95 on 4/30/1998

Top 10 April Record Warm Daily Minimum Temperatures

City	Rank	April 2016 Min T	Current or previous April Min T Record
Ellensburg, WA	#1	53 on 4/09	51 on 4/24/2007
Pasco, WA	#2(T)	54 on 4/23	58 on 4/24/2012
Hermiston, OR	#3	53 on 4/23	55 on 4/24/2012
La Grande, OR	#3(T)	52 on 4/22	53 on 4/21/1994
Easton, WA	#4(T)	45 on 4/23	48 on 4/26/2005
Satus Pass, WA	#8(T)	47 on 4/08	53 on 4/21/1994
The Dalles, OR	#9(T)	56 on 4/09	62 on 4/28/1977



Top 5 Record Warmest Average Minimum Temperatures for April

City	Rank	April 2016 Avg Min T	Previous April Avg Min T Record
Walla Walla, WA	#1	46.3	46.2 in 1994
The Dalles, OR	#1	46.4	45.0 in 1994
Ellensburg, WA	#1	42.3	37.5 in 2013
Hermiston, OR	#1	42.5	39.0 in 2005
Yakima, WA	#1	42.5	40.0 in 1980
Cle Elum, WA	#1	38.5	38.0 in 1994
Kennewick, WA	#1	47.5	45.5 in 1994
La Grande, OR	#1	39.2	39.0 in 1994
Moxee City, WA	#1	39.5	39.4 in 1987
Prosser, WA	#1	45.4	43.9 in 1934
Richland, WA	#1	45.3	44.8 in 1994



Top 5 Record Warmest Average Minimum Temperatures for April (Cont'd)

City	Rank	April 2016 Avg Min T	Current or Previous April Avg Min T Record
Pelton Dam, OR	#1	39.6	38.6 in 2005
Mount Adams R.S.	#2	36.4	38.1 in 1934
Arlington, OR	#3	46.0	46.2 in 1900
Moro, OR	#3	40.4	41.4 in 1934
Long Creek, OR	#4	34.9	35.8 in 1992
Whitman Mission	#4	39.9	41.6 in 1994
Pendleton (Downtown)	#4	41.9	42.9 in 1934
Heppner, OR	#4	41.2	41.6 in 1930
Goldendale, WA	#4	37.5	41.4 in 1934
Pendleton (Airport)	#5	43.0	44.0 in 1936
Sisters, OR	#5	31.7	33.4 in 1992



Top 5 Record Warmest Average Max Temperatures for April

City	Rank	April 2016 Avg Max T	Current or Previous April Avg Max T Record
Meacham, OR	#1	61.6	57.5 in 2000
Ellensburg, WA	#1	70.4	68.6 in 2004
Hermiston, OR	#1	72.6	69.8 in 2000
Pasco, WA	#1	74.5	70.6 in 2004
Yakima, WA	#1	74.3	70.4 in 1977
Antelope, OR	#1(T)	67.6	67.6 in 1949
La Grande, OR	#1	68.7	68.4 in 1977
Moxee City, WA	#1	69.7	67.4 in 1990
Whitman Mission	#1	70.7	70.2 in 1977
Long Creek, OR	#2	65.0	65.1 in 1987
The Dalles, OR	#2	72.4	72.5 in 1977



Top 5 Record Warmest Average Max Temperatures for April (Cont'd)

City	Rank	April 2016 Avg Max T	Warmest April Avg Max T Record
Prosser, WA	#2	72.5	74.3 in 1926
Sisters, OR	#2	65.7	66.0 in 1990
Pendleton(City)	#3	73.4	76.3 in 1934
Mt Adams R.S.	#3	65.5	71.5 in 1934
Moro, OR	#3	66.7	70.0 in 1934
Redmond, OR	#3	67.8	69.6 in 2000
Walla Walla, WA	#3	68.6	71.1 in 1977
Heppner, OR	#4	67.7	69.9 in 1934
Cle Elum, WA	#5	66.0	69.4 in 1931
Dayton, WA	#5	68.1	70.1 in 1934
Goldendale, WA	#5	67.0	69.2 in 1926



Top 3 Record Warmest Average Temperatures for April

City	Rank	April 2016 Avg T	Previous April Avg T Record
Walla Walla, WA	#1	57.4	57.2 in 1977
Meacham, OR	#1	47.1	44.6 in 1949
The Dalles, OR	#1	59.4	57.4 in 1977
Ellensburg, WA	#1	56.7	52.6 in 2004
Hermiston, OR	#1	57.6	54.0 in 2000
Pasco, WA	#1	58.5	55.2 in 1946
Yakima, WA	#1	58.4	54.1 in 1977
Cle Elum, WA	#1	52.1	51.8 in 1934
Kennewick, WA	#1	60.8	60.7 in 1934
La Grande, OR	#1	53.9	52.1 in 1987
Moxee City, WA	#1	54.6	53.1 in 1990



Top 3 Record Warmest Average Temperatures for April (Cont'd)

City	Rank	April 2016 Avg T	Current or Previous April Avg T Record
Prosser, WA	#1	59.0	56.6 in 1926
Richland, WA	#1	58.9	57.8 in 1947
Sisters, OR	#1(T)	48.7	48.7 in 1990
Whitman Mission	#1	55.3	54.7 in 1985
Long Creek, OR	#1	50.0	49.5 in 1987
Pendleton (Airport)	#2	56.2	59.6 in 1934
Heppner, OR	#2	54.4	55.6 in 1934
Prineville, OR	#2	52.7	52.9 in 1910
Moro, OR	#3	53.6	55.7 in 1934
Mt Adams R.S.	#3	51.0	54.8 in 1934
Pelton Dam, OR	#3	56.1	57.5 in 1990



Top 10 Driest Aprils on Record

City	Rank	April 2016 Monthly Precip	Record Lowest April Precip
Meacham, OR	#5	1.30"	0.40" in 1956
Hermiston, OR	#5(T)	0.28"	Trace in 1999
Long Creek, OR	#7 (T)	0.53"	0.10" in 1911
Moro, OR	#9(T)	0.12"	0.01" in 1956
Pasco, WA	#10	0.28"	0.15" in 1946
Pelton Dam, OR	#10	0.13"	Trace in 1966



April

Significant Weather

April 4th Rain & Wind Event



Location	Rain Total	Peak Wind
Pendleton, OR	0.08"	48 MPH
Meacham, OR	0.28"	22 MPH
Redmond, OR	Trace	35 MPH
Pasco, WA	0.02"	40 MPH
Walla Walla, WA	0.45"	37 MPH
Yakima, WA	Trace	40 MPH
Hermiston, OR	0.10"	45 MPH
Ellensburg, WA	0.09"	45 MPH
The Dalles, OR	0.03"	35 MPH
Easton, WA	0.39"	N/A

A storm system moved through the area on the 4th of April. This weather system brought periods of rain and wind to much of the region. Rainfall totals generally ranged from a few hundredths of an inch to a quarter inch in the lower elevations with up to a half inch in the Northern Blue Mountain Foothills. Gusty winds peaked between 40 – 50 MPH over the Columbia Basin and surrounding valleys.

April 11 – 15th Rain/Wind/Cooler

Location	5 Day Precip	Peak Wind	Coollest Temp
Pendleton, OR	0.13"	39 MPH	34°
Meacham, OR	0.57"	21 MPH	25°
Redmond, OR	0.19"	35 MPH	26°
Pasco, WA	0.26"	37 MPH	35°
Walla Walla, WA	0.43"	30 MPH	39°
Yakima, WA	0.26"	28 MPH	34°
Hermiston, OR	0.18"	30 MPH	34°
Ellensburg, WA	0.23"	39 MPH	34°
The Dalles, OR	0.15"	33 MPH	35°
John Day, OR	0.28"	32MPH	32°



A series of storm systems moved through the Pacific Northwest beginning on April 11th and continuing through about the 15th. These weather systems brought rain showers, gusty winds and much cooler temperatures. Some snow also fell in the mountains above about 4000 feet. Precipitation totals generally ranged from a tenth to a third of an inch across the lower elevations, with a half inch or more in the mountains. Peak wind gusts were mainly between 30 to 40 MPH. Temperatures cooled to into the mid 20s to mid 30s during the early morning hours on the 15th and 16th as the system departed the region.



April 18 – 22nd Hot Weather with Scattered Thunderstorms

Location	5 Day Precip	Thunder?	Highest Temp
Pendleton, OR	0.15"	Yes	83°
Meacham, OR	0.32"	No	79°
Redmond, OR	0.07"	Yes	83°
Pasco, WA	Trace	No	89°
Walla Walla	0.16"	Yes	82°
Yakima, WA	0.00"	No	88°
Hermiston, OR	Trace	No	86°
Ellensburg	0.00"	No	85°
The Dalles, OR	Trace	No	89°



An upper level ridge developed over the region between the 18th and 20th allowing temperatures to surge well above average. Many lower elevation locations reach the mid to upper 80s! A weather system moved into the area on the 20st through the 22nd bringing scattered thunderstorms.

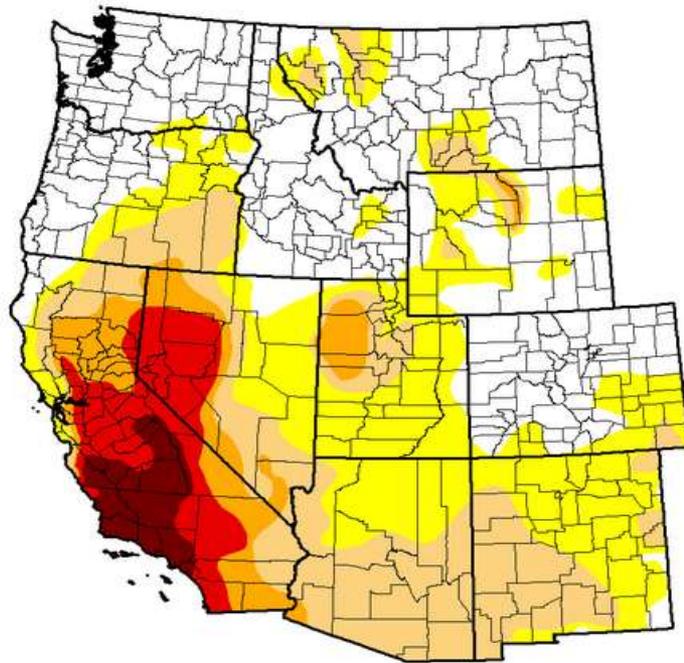
Drought Conditions Improving

U.S. Drought Monitor West

April 26, 2016
(Released Thursday April 28, 2016)
Valid 8 a.m. EDT

Statistics type: Traditional Percent Area

Export table:   



Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current 2016-04-26	38.85	61.15	34.76	14.79	8.71	2.81
Last Week 2016-04-19	40.56	59.44	34.76	14.89	8.71	2.81
3 Months Ago 2016-01-26	37.80	62.20	38.45	21.59	11.69	5.81
Start of Calendar Year 2015-12-29	33.17	66.83	45.07	29.30	15.92	6.85
Start of Water Year 2015-09-29	22.77	77.23	57.81	42.42	26.50	7.62
One Year Ago 2015-04-28	26.14	73.86	62.12	39.33	17.64	7.95

Estimated Population in Drought Areas: **45,148,355**

[View More Statistics](#)

Intensity:

 D0 (Abnormally Dry)
  D2 (Severe Drought)
  D4 (Exceptional Drought)
 D1 (Moderate 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):

Richard Heim, NOAA/NCEI

Download:   

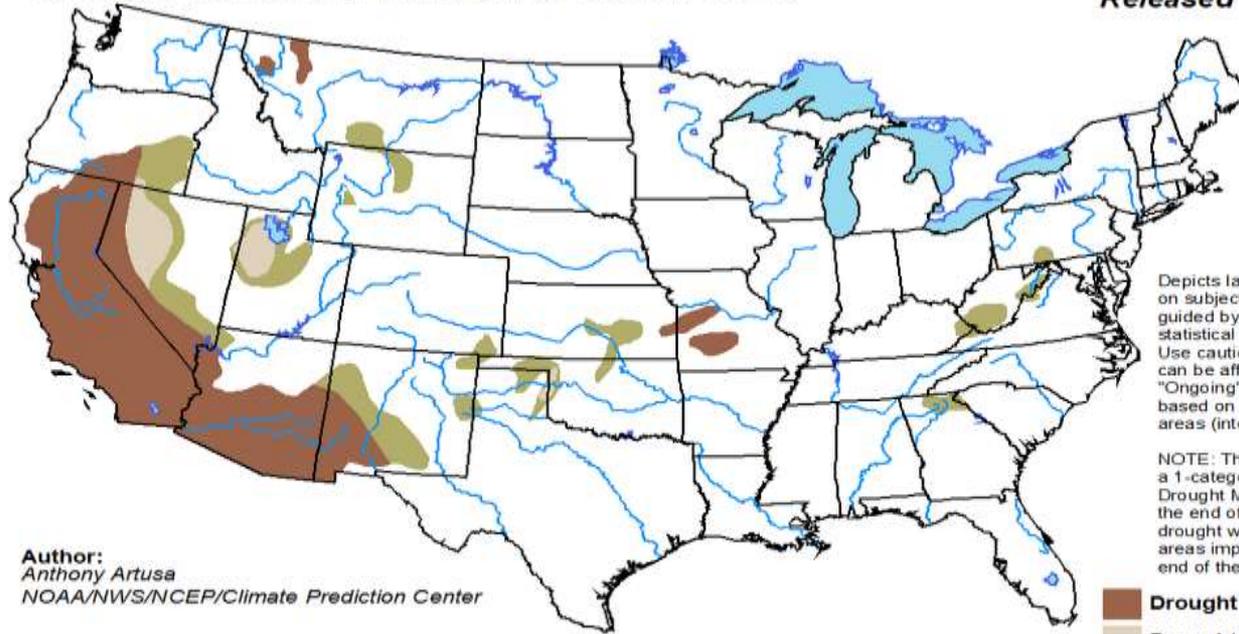
The latest drought monitor shows improvement across the Pacific Northwest, with only a small area of D₁, or moderate drought lingering in southeastern Oregon. Some portions of northeast Oregon remain in the D₀ or abnormally dry category. Much of Washington, north-central Oregon and western Oregon are no longer being affected by drought conditions.



May Drought Outlook

U.S. Monthly Drought Outlook
Drought Tendency During the Valid Period

Valid for May 2016
Released April 30, 2016



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

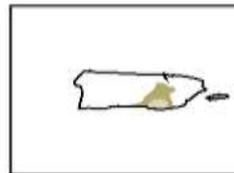
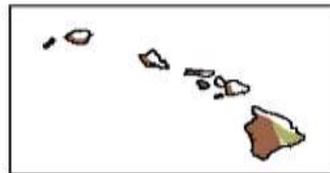
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Anthony Artusa
NOAA/NWS/NCEP/Climate Prediction Center

-  Drought persists
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



<http://go.usa.gov/3eZGd>



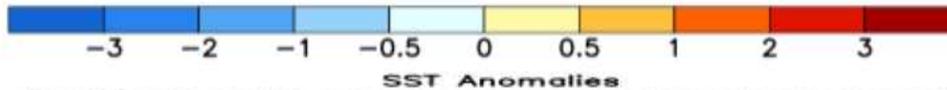
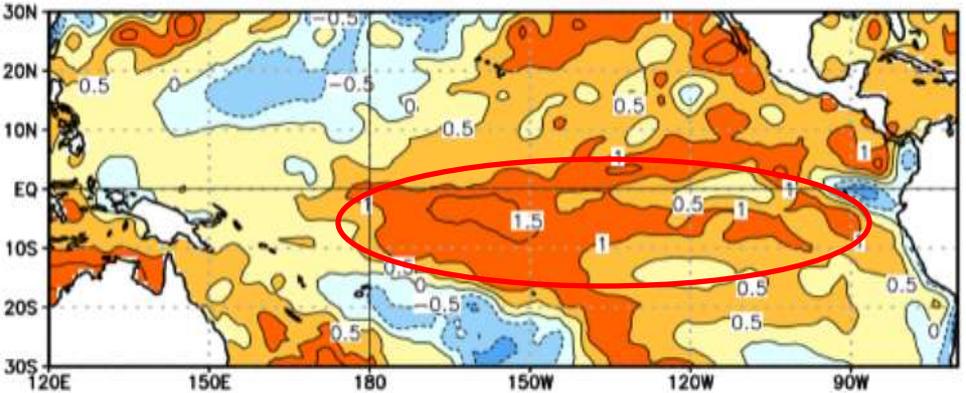
The monthly drought outlook from CPC indicates drought removal likely over much of southeastern Oregon, with drought persisting for South Central Oregon, south into much of California. This outlook is for the month of May.



Strong El Niño Weakening Possible La Niña Developing

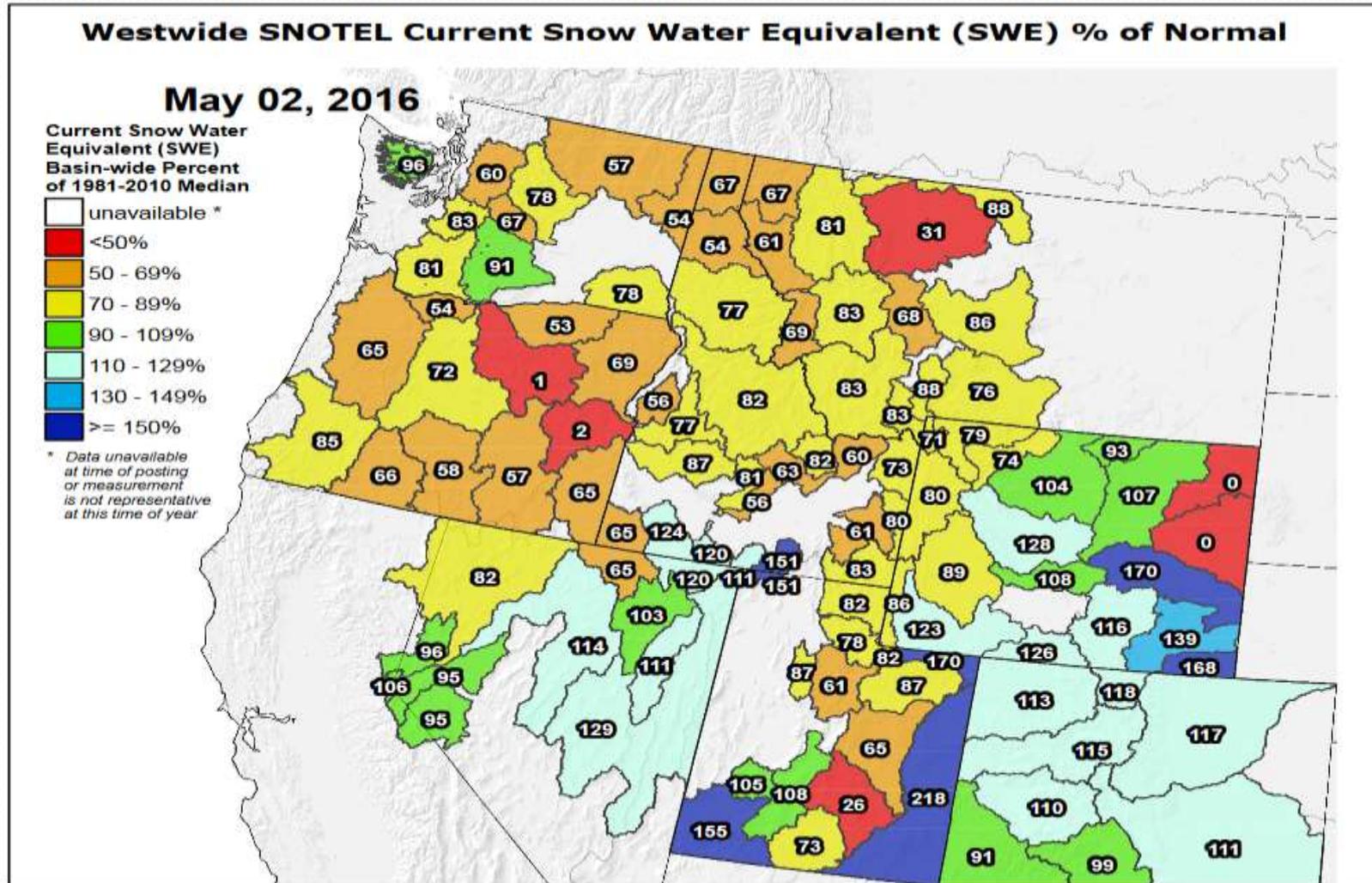


Average SST Anomalies
3 APR 2016 – 30 APR 2016



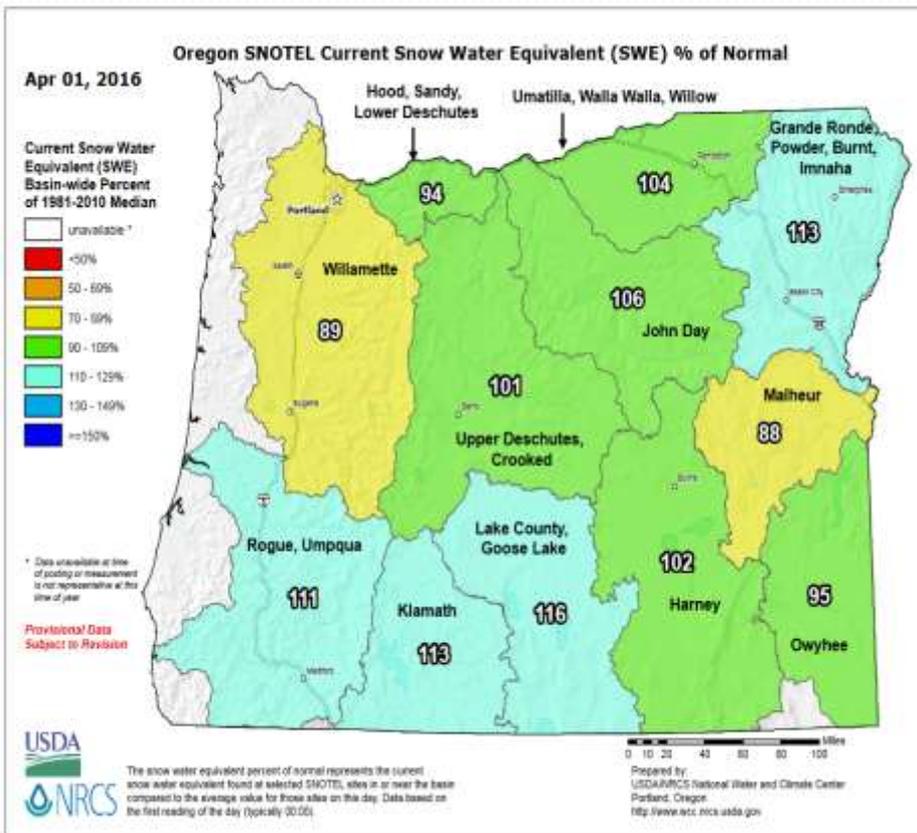
- ❖ An El Niño Advisory continues from the Climate Prediction Center. Sea Surface Temperature (SST) anomalies are decreasing in the tropical Pacific. However, an area of $+1$ to $+1.5^{\circ}\text{C}$ anomalies are still present.
- ❖ The Climate Prediction Center has stated that A transition to ENSO neutral is likely during late Northern Hemisphere spring or early summer, with about 70% chance for La Niña conditions to develop by this coming fall/winter. Accordingly a La Nina Watch has been issued by CPC.

Current Snow Water Equivalent

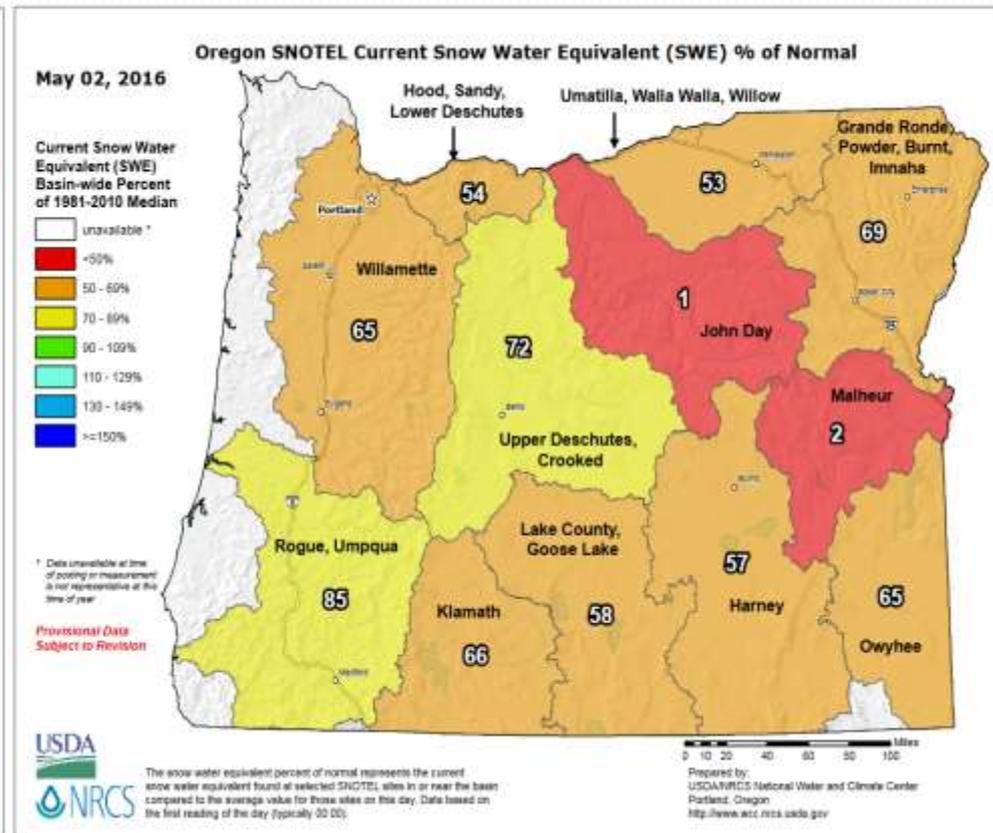


Current snow water equivalent (SWE) is now running below average across the entire Pacific Northwest, due to the warmer and drier than average conditions in April. The basins running closest to average to date are the Olympics and Yakima in Washington, at 96 and 91 percent, respectively.

Oregon Current Snow Water Equivalent



April 1st 2016: 88 to 116 percent of average SWE

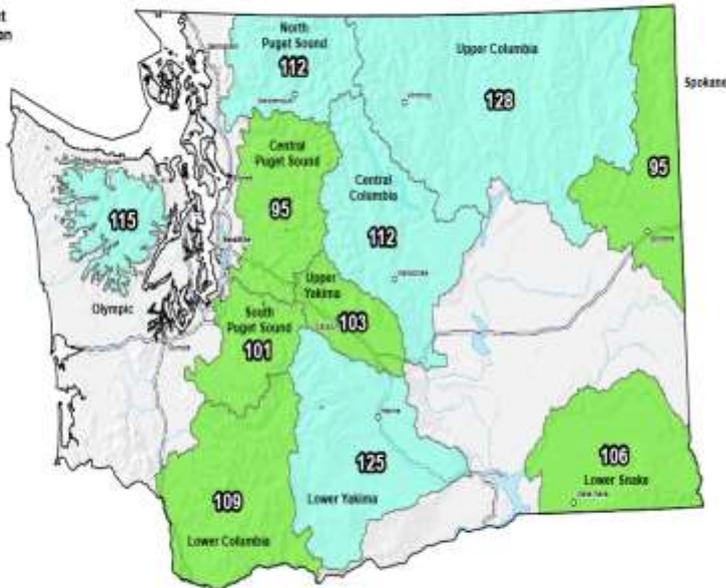
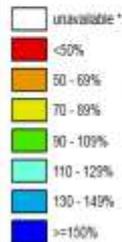


May 2nd 2016: 1 to 85 percent of average SWE

Washington Current Snow Water Equivalent

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

Apr 01, 2016
Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median



Provisional Data
Subject to Revision

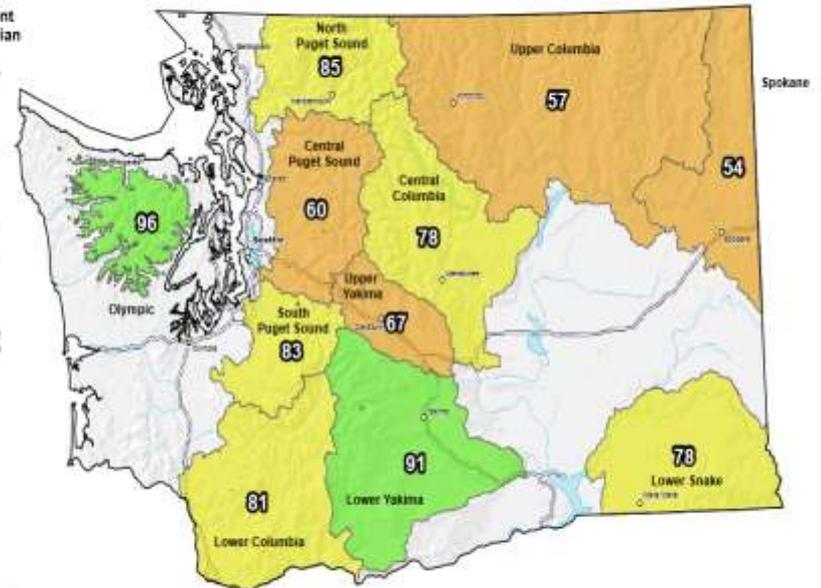
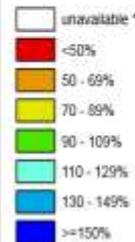


The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

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

May 02, 2016
Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median



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>

April 1st 2016: 95 to 128 percent of average SWE

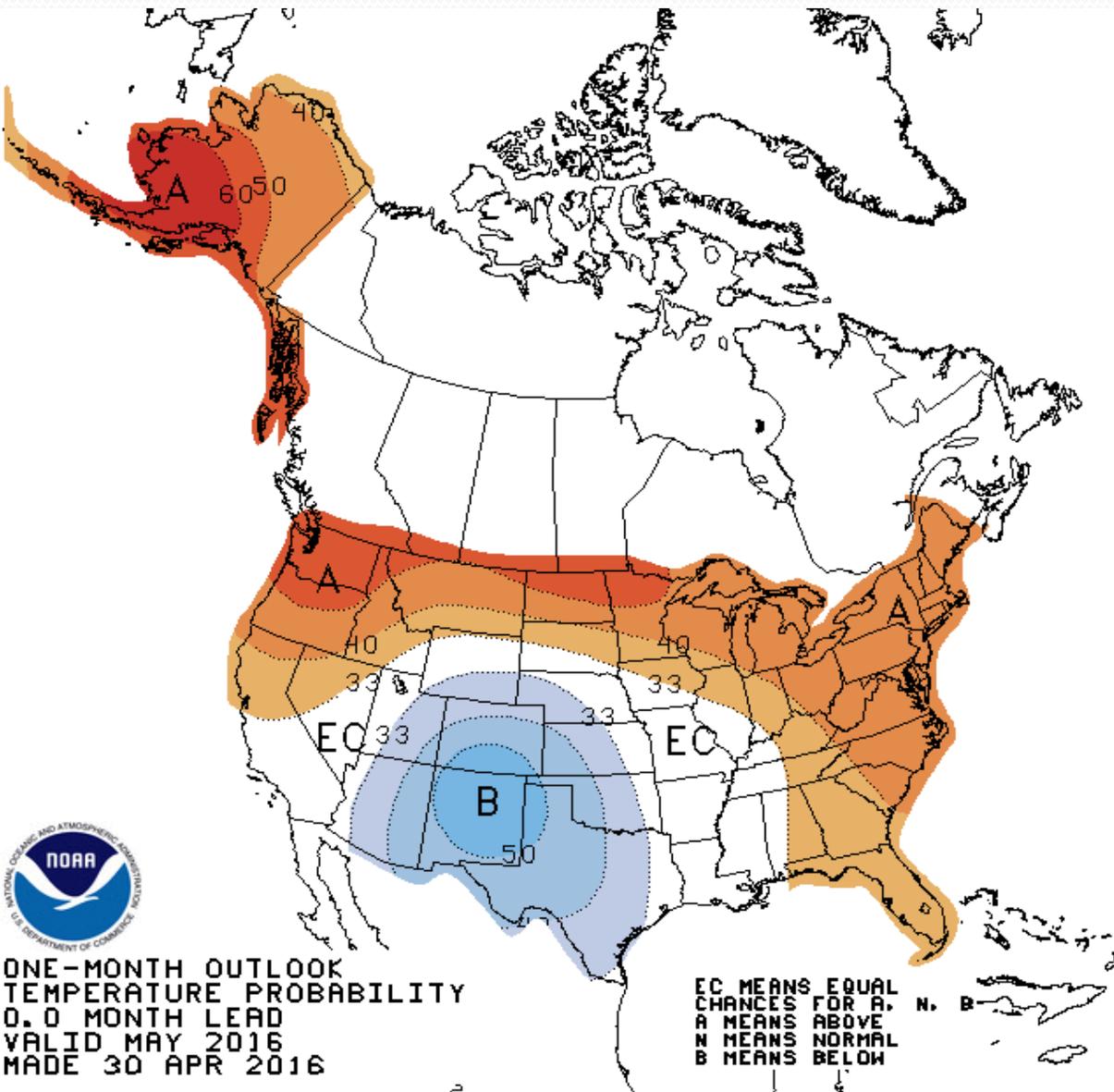
May 2nd 2016: 54 to 96 percent of average SWE



May Outlook

May Temperature Outlook

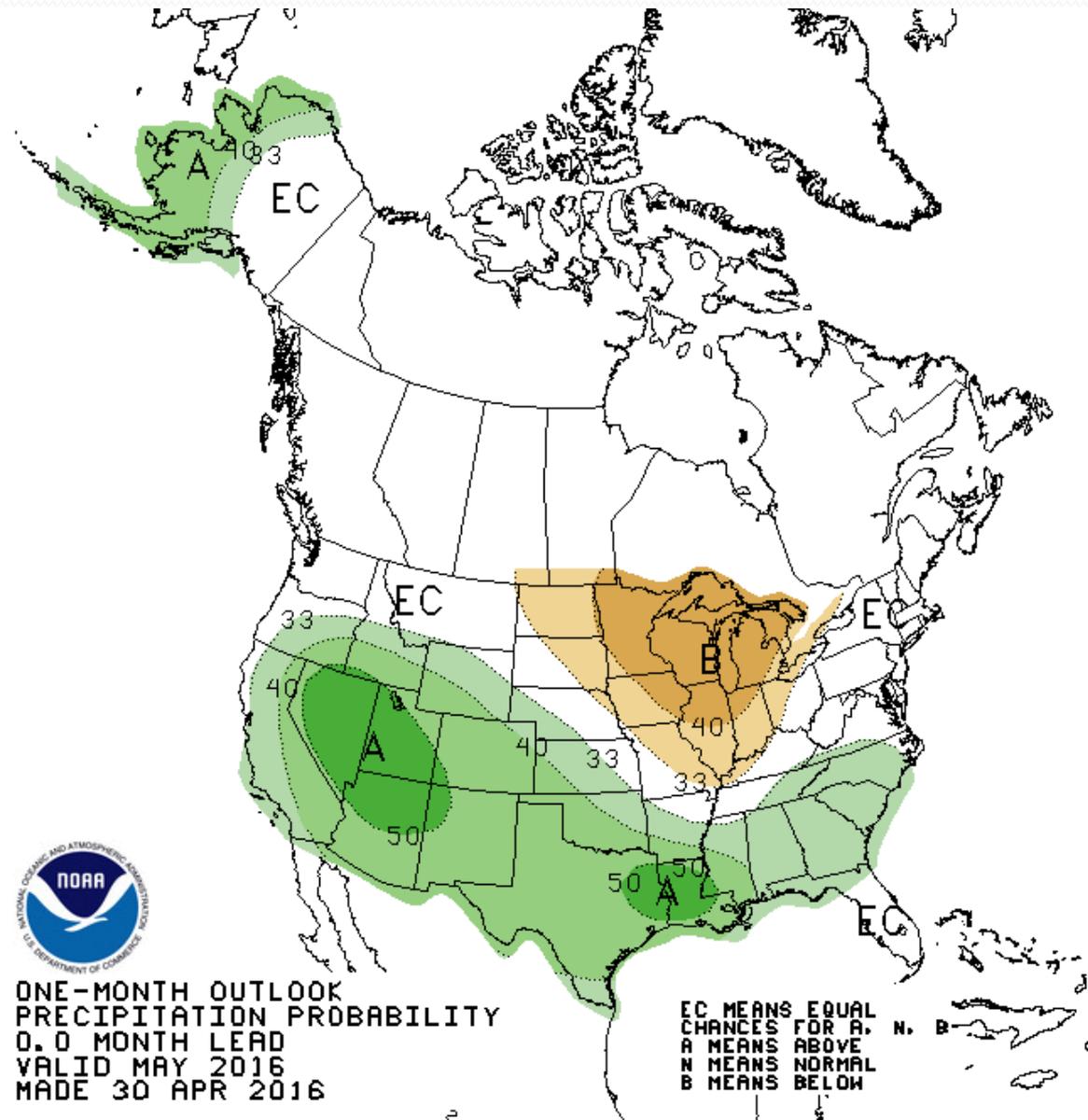
This graphic is issued by the Climate Prediction Center or CPC and is the Temperature Outlook for the month of May. The cool colors indicate a greater chance of below normal temperatures and the warm colors represent a greater chance of above normal temperatures. The time period for the normals runs from 1981-2010. Most of the Inland Pacific Northwest has a 40-50+ percent chance for above average temperatures in the month of May. This higher probability for warmth extends down the entire West Coast into Northern California, north to most of Alaska, and across the entire Northern Tier of the US. There are higher probabilities for below average temperatures in the Southwest, Southern Rockies and parts of Texas.



ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.0 MONTH LEAD
VALID MAY 2016
MADE 30 APR 2016

May Precipitation Outlook

This graphic is CPC's Precipitation Outlook for the month of May. The green colors represent a greater chance of above normal precipitation, and the brown colors represent a greater chance of below normal precipitation. All of Washington has equal chances for above, below or near normal precipitation in the month of May. Southern, and especially southeastern Oregon has higher probabilities for above average precipitation amounts in May. Please remember that these are probabilities of averages, and that the day-to-day weather will still vary for the month .



EC MEANS EQUAL
CHANCES FOR A,
N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.0 MONTH LEAD
VALID MAY 2016
MADE 30 APR 2016



Thank You!