

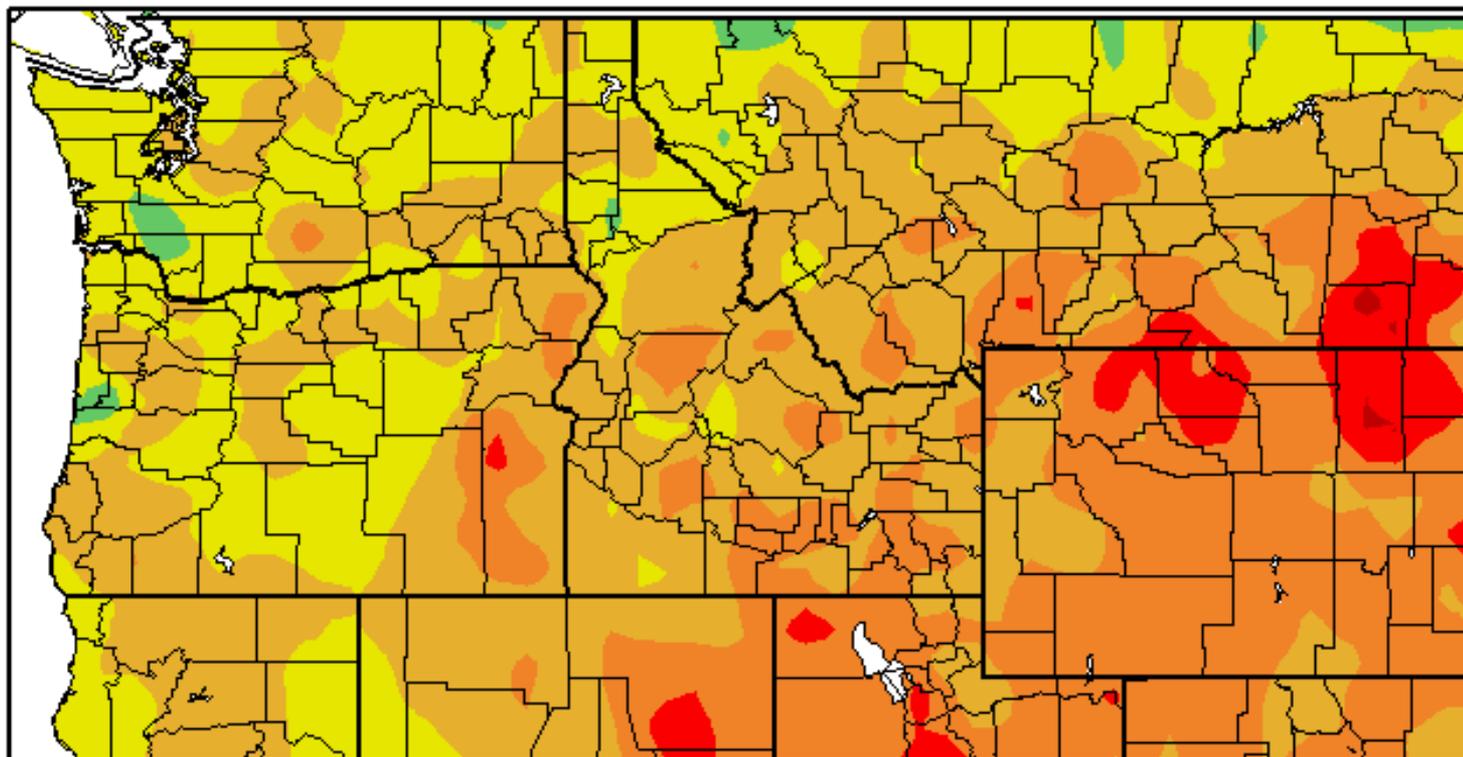


# The Month In Review

June 2016

National Weather Service  
Pendleton, Oregon

# Departure from Normal Temperature (F) 6/1/2016 – 6/30/2016

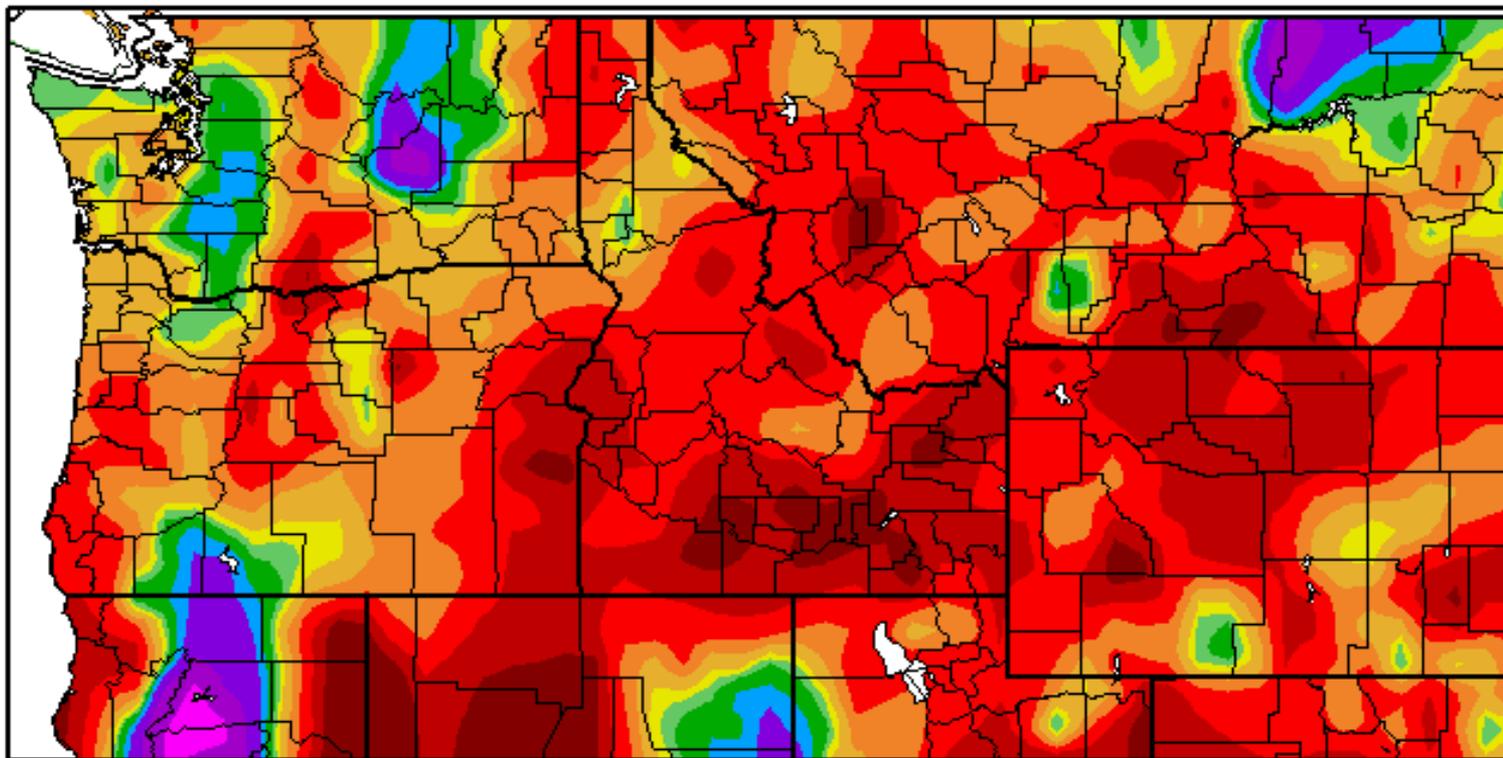


Generated 7/1/2016 at HPRCC using provisional data.

Regional Climate Centers

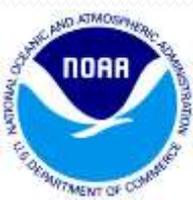


# Percent of Normal Precipitation (%) 6/1/2016 – 6/30/2016



Generated 7/1/2016 at HPRCC using provisional data.

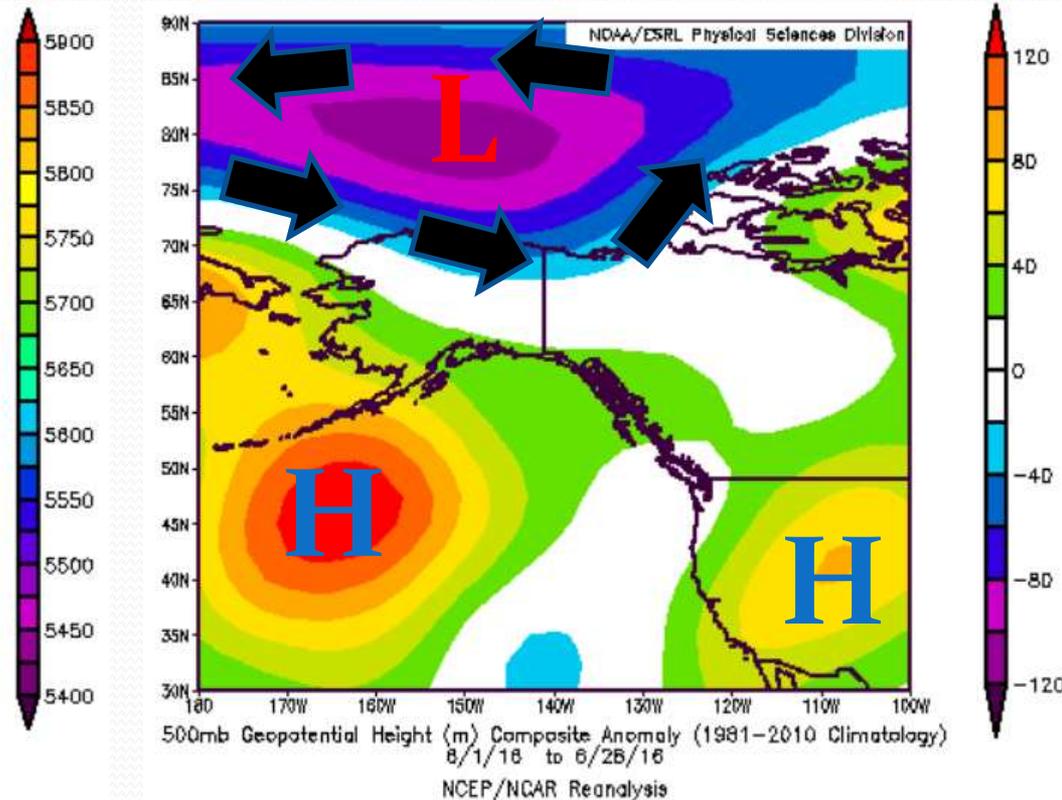
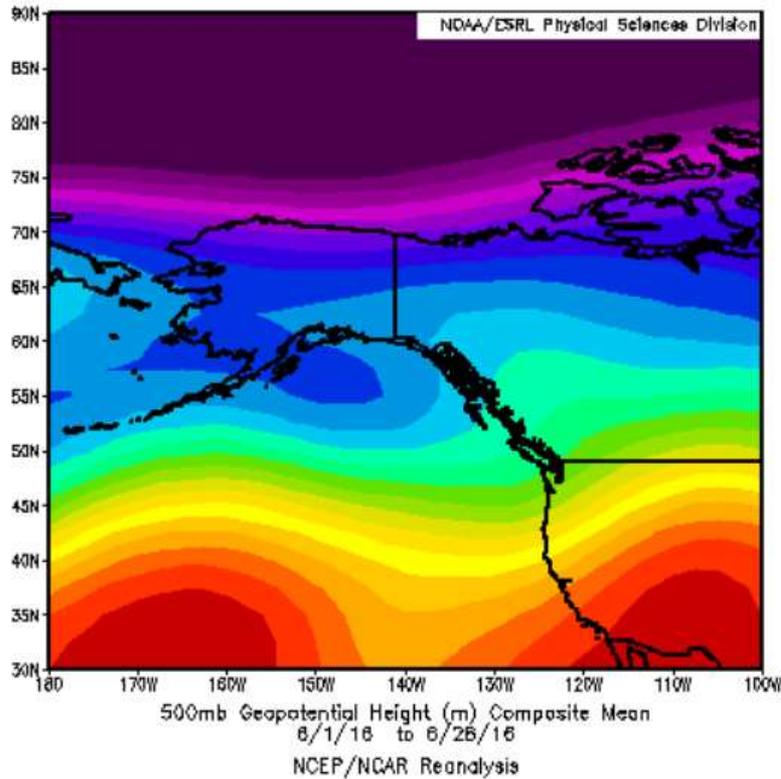
Regional Climate Centers





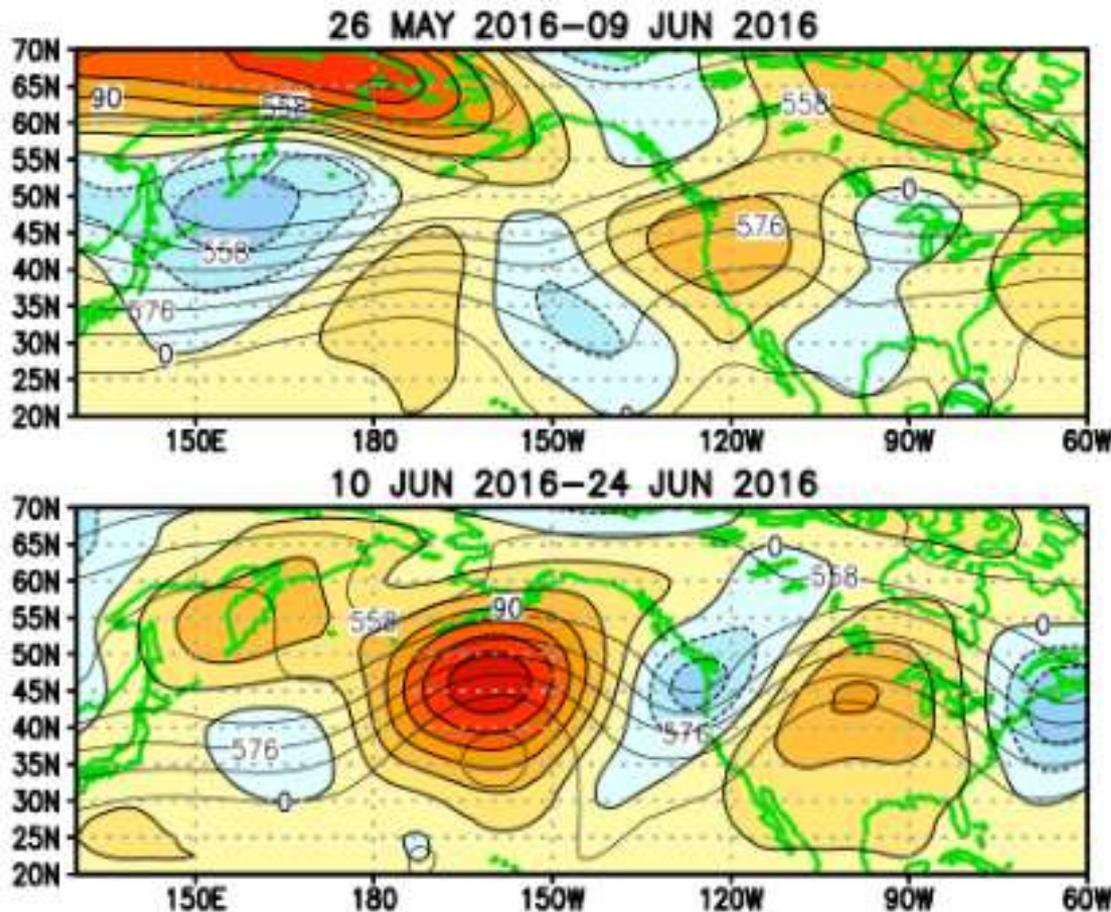
# June 2016

## Synoptic Weather Pattern



The mean synoptic pattern for the month of June 2016 was characterized by ample upper level ridging over the SW Gulf of Alaska, The Bering Sea and much of the Western US. There was also an area of below average heights for the month located over far northern Alaska and over parts of the Arctic sea. Overall the Pacific Northwest had near average heights for the month, as the mean ridge of high pressure remain just to the south and east over the Intermountain West.

# June 2016 Detailed Upper Level Pattern Analysis



- ❖ The first ten days of the month featured a long wave upper level ridge centered directly over the Pacific Northwest. This brought hot and dry weather to the region.
- ❖ The next two weeks saw the upper level ridge shift eastward across the high plains with a new ridge developing in the western Gulf of Alaska. This left the Pacific Northwest under a broad upper trough. This period featured cooler temperatures and more precipitation.



# Top 10 June Record Warm Daily Maximum Temperatures

City	Rank	June 2016 Max T	Current June Max T Record
Easton, WA	#3(T)	92 on 6/6	97 on 6/30/2008
Yakima, WA	#5(T)	104 on 6/6	108 on 6/28/2015
Hermiston, OR	#6(T)	104 on 6/6	111 on 6/27/2015
Satus Pass, WA	#7(T)	96 on 6/7	103 on 6/28/2015
Pasco, WA	#7(T)	104 on 6/6	111 on 6/28/2015
Meacham, OR	#8(T)	90 on 6/7	101 on 6/28/2015
Ellensburg, WA	#9(T)	100 on 6/5	108 on 6/27/2015
Whitman Mission	#9(T)	101 on 6/7	107 on 6/28/2015
Sisters, OR	#10	96 on 6/6	103 on 6/28/1976
La Grande, OR	#10	96 on 6/8	100 on 6/29/2015
Redmond, OR	#10	98 on 6/5	101 on 6/26/2015
The Dalles, OR	#10	104 on 6/5	108 on 6/26/2015



# Top 10 June Record Warm Daily Minimum Temperatures

City	Rank	June 2016 Min T	Current June Min T Record
Pelton Dam, OR	#2(T)	70 on 6/8	72 on 6/27/2015
Easton, WA	#3(T)	56 on 6/8	58 on 6/11/2015
Yakima, WA	#3(T)	72 on 6/29	75 on 6/29/2015
Hermiston, OR	#3(T)	68 on 6/29	75 on 6/29/2015
The Dalles, OR	#3(T)	68 on 6/29	75 on 6/29/2015
Pasco, WA	#5(T)	67 on 6/30	77 on 6/29/2015
Prosser, WA	#6(T)	71 on 6/7	77 on 6/29/2015
Cle Elum, WA	#7(T)	62 on 6/8	64 on 6/26/1992
Ellensburg, WA	#7(T)	65 on 6/29	68 on 6/30/2015



# Top 10 June Record Cold Daily Minimum Temperatures

City	Rank	June 2016 Min T	Current or previous June Min T Record
Redmond, OR	#1(T)	24 on 6/15	24 on 6/2/1976
The Dalles, OR	#2(T)	39 on 6/15	37 on 6/1/1966
Pasco, WA	#2(T)	39 on 6/17	37 on 6/7/2002
Hermiston, OR	#3(T)	39 on 6/19	38 on 6/16/2004
Ellensburg, WA	#6(T)	35 on 6/15	31 on 6/18/1954
Goldendale, WA	#7(T)	31 on 6/15	30 on 6/1/1966
Grizzly, OR	#8(T)	23 on 6/15	19 on 6/2/1976



# Top 10 Record Warmest Average Minimum Temperature for June

City	Rank	June 2016 Avg Min T	Current June Avg Min T Record
Pelton Dam, OR	#2	51.4	54.6 in 2015
Hermiston, OR	#3	52.8	57.5 in 2015
Condon, OR	#6	48.7	52.0 in 2015
Prosser, WA	#6	55.9	62.7 in 2015
Satus Pass, WA	#7	44.6	47.5 in 1970
Pasco, WA	#7	53.4	57.8 in 2015
Easton, WA	#9	44.9	47.1 in 2014
Ellensburg, WA	#10	50.8	57.3 in 2015
Sisters, OR	#10	41.2	45.9 in 2015



# Top 10 Record Warmest Average Maximum Temperature for June

City	Rank	June 2016 Avg Max T	Current or Previous June Avg Max T Record
Hermiston, OR	#2	85.5	91.9 in 2015
Pasco, WA	#3	85.7	92.7 in 2015
Meacham, OR	#4	71.6	78.6 in 2015
Ellensburg, WA	#5	79.9	88.7 in 2015
Yakima, WA	#6	84.9	92.5 in 2015
Easton, WA	#6	69.9	72.6 in 2004
Satus Pass, WA	#7	76.9	84.6 in 2015
Dayville, OR	#9	84.7	91.2 in 2015
Pendleton (City)	#9	83.7	89.7 in 1918
Long Creek, OR	#10	77.4	82.5 in 2015
Whitman Mission	#10	83.6	89.8 in 2015
Monument, OR	#10	84.1	89.6 in 1986



# Top 10 Record Warmest Average Temperature for June

City	Rank	June 2016 Avg T	Current June Avg T Record
Hermiston, OR	#2	69.2	74.7 in 2015
Pasco, WA	#3	69.6	75.3 in 2015
Dayville, OR	#4	67.7	73.0 in 2015
Satus Pass, WA	#5	60.7	65.7 in 2015
Easton, WA	#6	57.2	59.4 in 2004
Monument, OR	#7	66.4	69.3 in 1986
Ellensburg, WA	#8	65.4	73.0 in 2015
Yakima, WA	#8	68.6	74.9 in 2015
Sisters, OR	#10	59.2	65.2 in 2015
Long Creek, OR	#10	60.1	64.5 in 2015
Pelton Dam, OR	#10	67.9	72.2 in 2015



# June Significant Weather

# June 4 - 7<sup>th</sup> Early Season Heatwave

Location	Peak Temperature
Pendleton, OR	100°
Meacham, OR	90°
Redmond, OR	98°
Pasco, WA	104°
Walla Walla, WA	100°
Yakima, WA	104°
Hermiston, OR	104°
Ellensburg, WA	100°
The Dalles, OR	104°
Easton, WA	92°
Bend, OR	92°
Heppner, OR	97°
La Grande, OR	96°
Madras, OR	95°



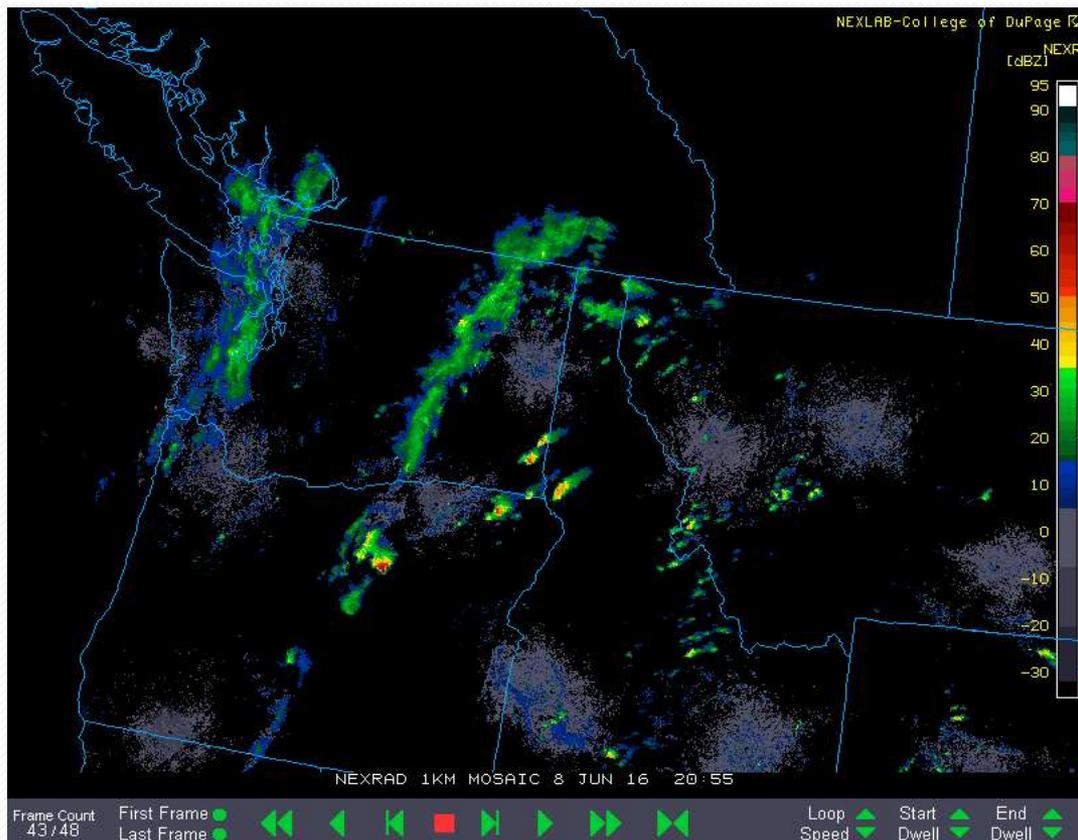
Mt. Adams from near Pendleton, OR on a clear day



Don't forget your pets during the hot weather!

# June 8 – 11<sup>th</sup> T'Storms, Cooler & Breezy

Location	4 Day Precip	Peak Wind
Pendleton, OR	0.37"	32 MPH
Meacham, OR	0.23"	N/A
Redmond, OR	0.02"	31 MPH
Pasco, WA	0.09"	33 MPH
Walla Walla, WA	0.23"	26 MPH
Yakima, WA	0.08"	31 MPH
Hermiston, OR	0.10"	29 MPH
Ellensburg, WA	0.03"	47 MPH
The Dalles, OR	Trace	39 MPH
Easton, WA	0.17"	N/A



## Local Storm Reports on 6/8/2016

MAG	TYPETEXT	CITY	COUNTY	SOURCE	REMARK
None	TORNADO	10 ESE MITCHELL	WHEELER	PUBLIC	TORNADO WAS SPOTTED BY DRIVER ON HWY 26. INDICATED IT WAS A SHORT AND WIDE TORNADO WHICH STAYED ON
1.75	HAIL	14 E MITCHELL	WHEELER	PUBLIC	DRIVER REPORTED 1.5 TO 2.0 INCH DIAMETER HAIL ON HWY 26
70	TSTM WND GST	14 E MITCHELL	WHEELER	PUBLIC	DRIVER ON HWY 26 ESTIMATED WIND GUSTS OF 70 MPH.
0.75	HAIL	9 SE SPRAY	GRANT	PUBLIC	SMALL HAIL AND BRIEF HEAVY RAIN.
0.88	HAIL	14 NNW DAYVILLE	GRANT	PUBLIC	ALSO REPORTED A ROTATING WALL CLOUD IN VICINITY. TIME BASED ON RADAR ESTIMATE.
None	LIGHTNING	14 NNW DAYVILLE	GRANT	PUBLIC	LIGHTNING STARTED A GRASS FIRE ON HOME OWNERS PROPERTY. TIME BASED ON RADAR ESTIMATE.
1.75	HAIL	MONUMENT	GRANT	CO-OP OBSERVER	WIND BLOWN GOLF BALL SIZE HAIL DENTED MOST EXPOSED VEHICLES AND CRACKED WINDSHIELDS. A FEW HOMES HA
1.75	HAIL	2 N MONUMENT	GRANT	TRAINED SPOTTER	
1	HAIL	1 NE UKIAH	UMATILLA	TRAINED SPOTTER	QUARTER SIZE HAIL
1	HAIL	ENE UKIAH	UMATILLA	TRAINED SPOTTER	QUARTER SIZE HAIL

# June 15 – 19<sup>th</sup> Much Cooler, Rain & Wind

Location	5 Day Precip	Peak Wind	Coolest Temp
Pendleton, OR	0.53"	31 MPH	41°
Meacham, OR	1.19"	10 MPH	30°
Redmond, OR	0.61"	29 MPH	24°
Pasco, WA	0.35"	35 MPH	39°
Walla Walla, WA	0.51"	24 MPH	44°
Yakima, WA	0.14"	28 MPH	34°
Hermiston, OR	0.29"	33 MPH	39°
Ellensburg, WA	0.59"	33 MPH	35°
The Dalles, OR	0.07"	35 MPH	39°
Easton, WA	0.52"	N/A	36°



A deep upper trough and low pressure system moved slowly over the Pacific Northwest during this time period. This system brought periods of showers and thunderstorms to much of the area, along with breezy winds and much cooler temperatures. Sub freezing temperatures were recorded across much of Central Oregon, along with the higher mountain plateau locations across the area.

# Drought Conditions Update

## U.S. Drought Monitor West

June 28, 2016  
(Released Thursday June 30, 2016)  
Valid 8 a.m. EDT

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

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current <a href="#">2016-06-28</a>	35.80	64.20	27.65	11.08	5.80	2.81
Last Week <a href="#">2016-06-21</a>	37.93	62.07	27.41	10.92	5.73	2.81
3 Months Ago <a href="#">2016-03-29</a>	32.63	67.37	34.24	14.82	9.53	4.74
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="#">2015-06-30</a>	23.90	76.10	60.38	39.01	17.13	7.26

Estimated Population in Drought Areas: **40,798,879**

[View More Statistics](#)

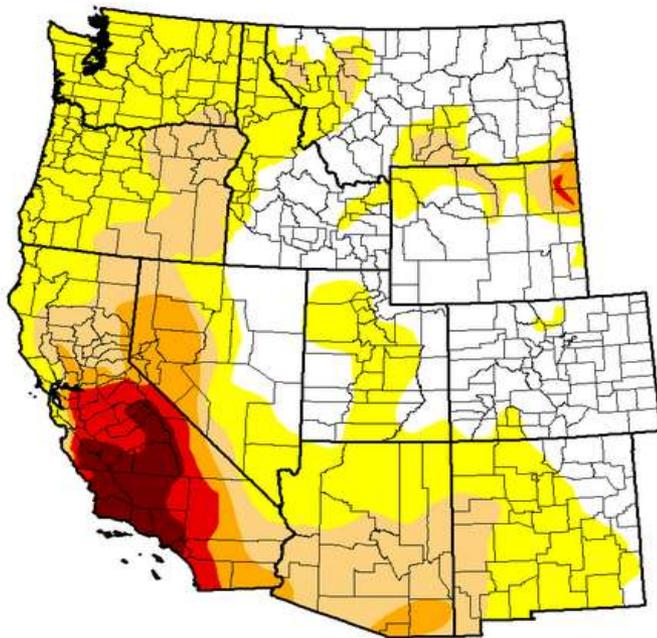
### Intensity:

■ 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):

Eric Luebehusen, U.S. Department of Agriculture



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

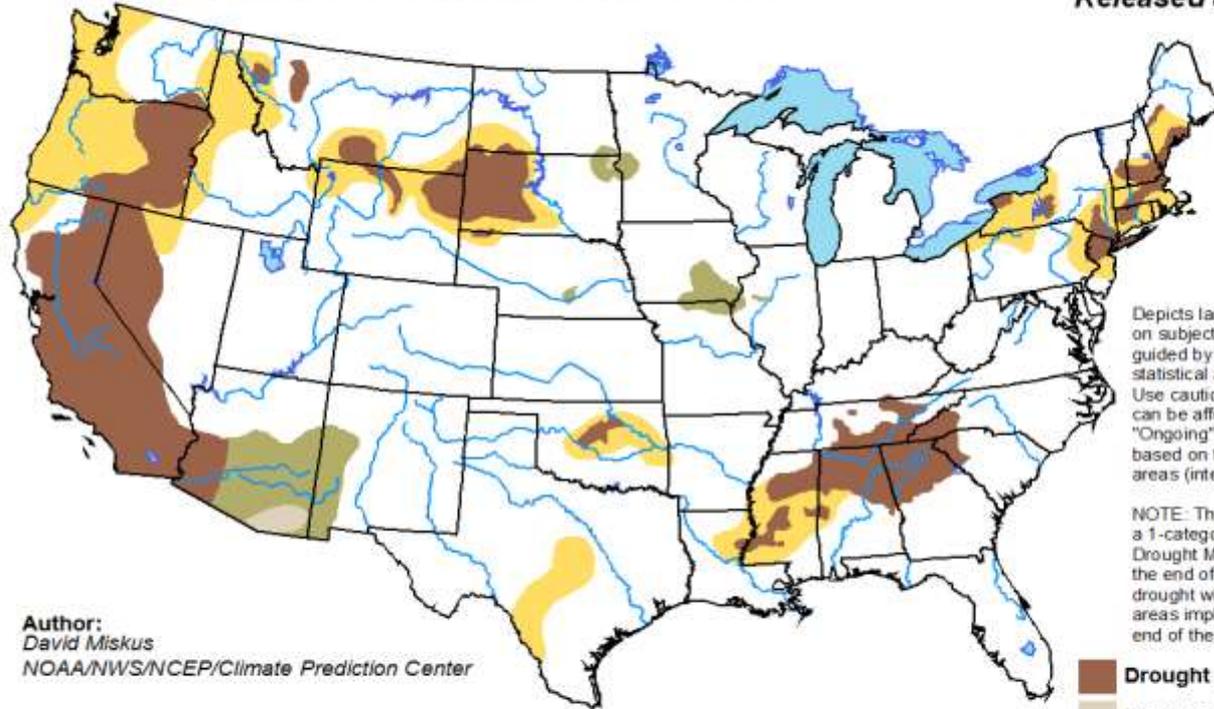
The latest drought monitor shows some minor degradation in the drought conditions, with all of Oregon now back in the D0, or abnormally dry category. Much of Eastern Oregon is now back in the D1, or moderate drought category.



# July Drought Outlook

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

Valid for July 2016  
Released June 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).

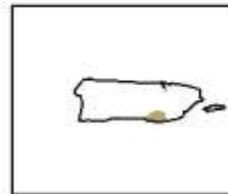
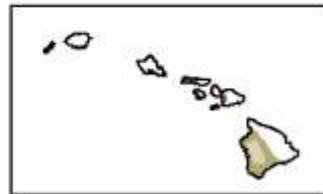
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:  
David Miskus  
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 persisting across all of Oregon and parts of Washington. Drought development is also likely across Central and North-Central Oregon along with on the west side of the Cascades.

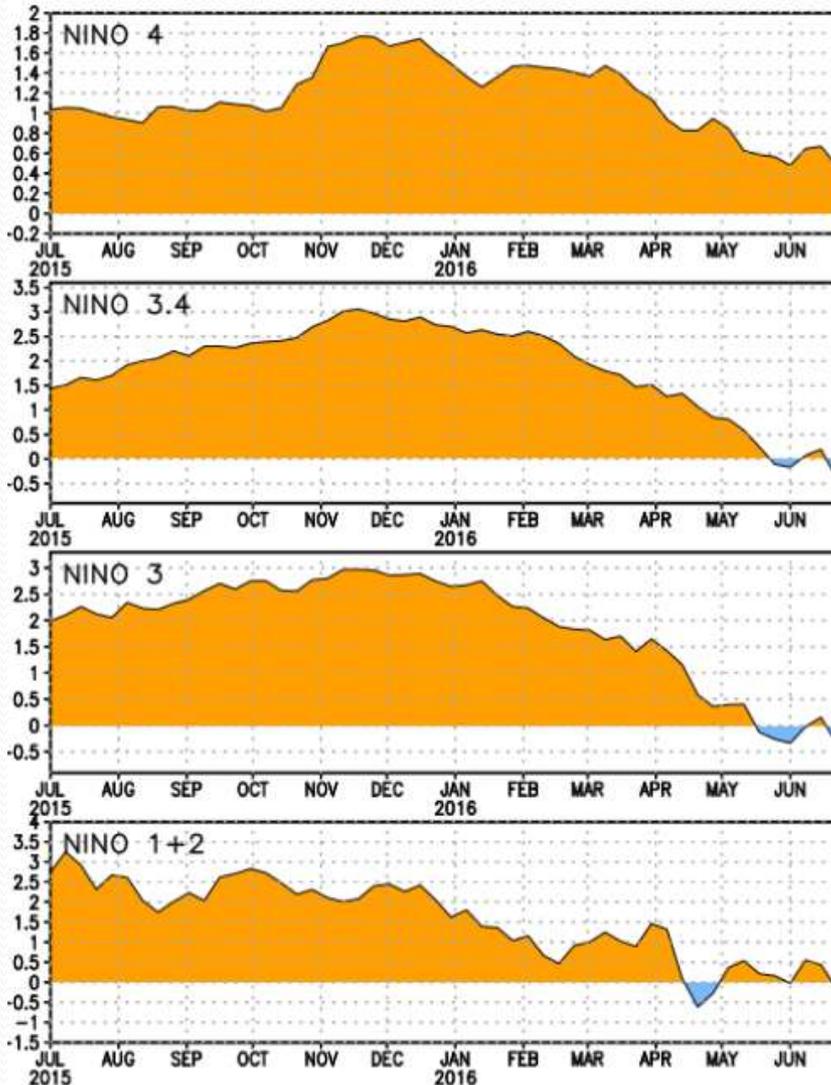


# Final El Niño Advisory

## La Niña Development Likely



SST Anomalies



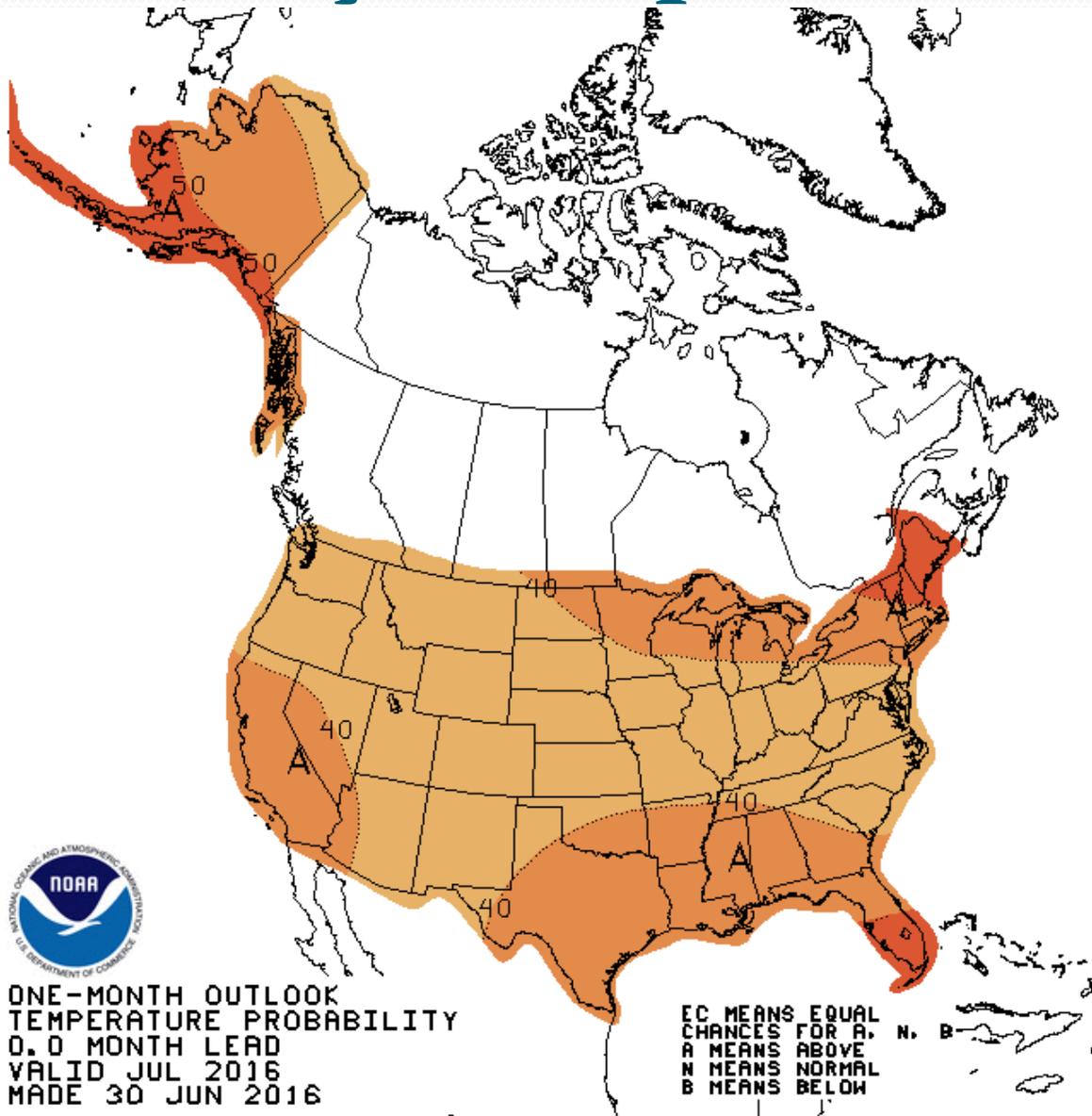
- ❖ Final El Niño Advisory from the Climate Prediction Center. Sea Surface Temperature (SST) anomalies are decreasing in the tropical Pacific. However, an area of +0.5 to +1.0°C anomalies are still present.
- ❖ A La Niña watch is also in effect, as La Niña is now favored to develop during the Northern Hemisphere Summer, with about a 75% chance for La Niña development by the fall/winter 2016-2017.



# July Outlook

# July Temperature Outlook

This graphic is issued by the Climate Prediction Center or CPC and is the Temperature Outlook for the month of July. 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 the odds tilted slightly ( 34 - 39 percent) toward above average temperatures in July.

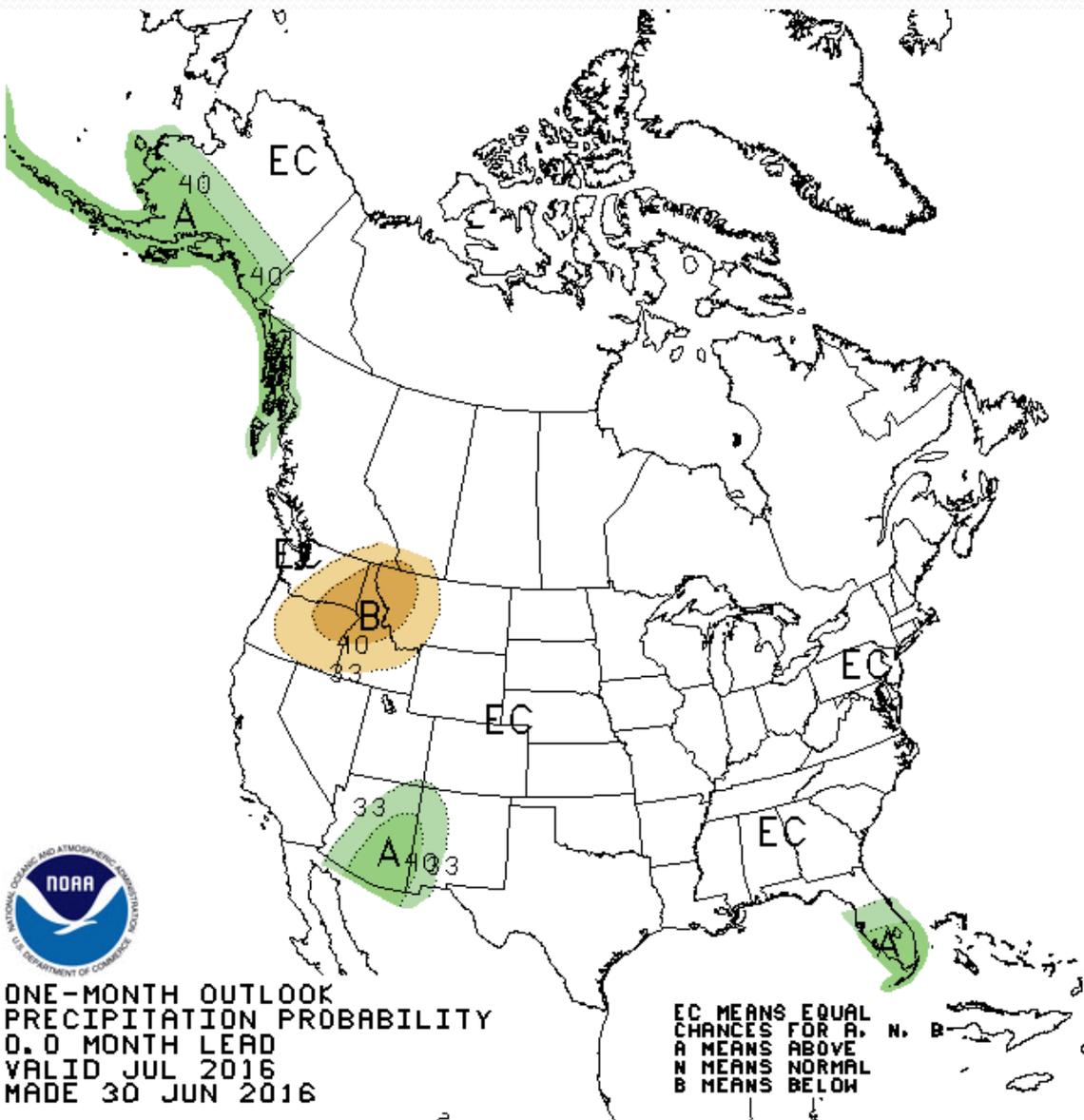


ONE-MONTH OUTLOOK  
TEMPERATURE PROBABILITY  
0.0 MONTH LEAD  
VALID JUL 2016  
MADE 30 JUN 2016

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

# July Precipitation Outlook

This graphic is CPC's Precipitation Outlook for the month of July. The green colors represent a greater chance of above normal precipitation, and the brown colors represent a greater chance of below normal precipitation. Much of eastern Washington and eastern Oregon have higher probabilities for below average precipitation totals in July. Western Washington and western Oregon have equal chances for above, below or near average precipitation amounts in July.



ONE-MONTH OUTLOOK  
PRECIPITATION PROBABILITY  
0, 0 MONTH LEAD  
VALID JUL 2016  
MADE 30 JUN 2016



Thank You!