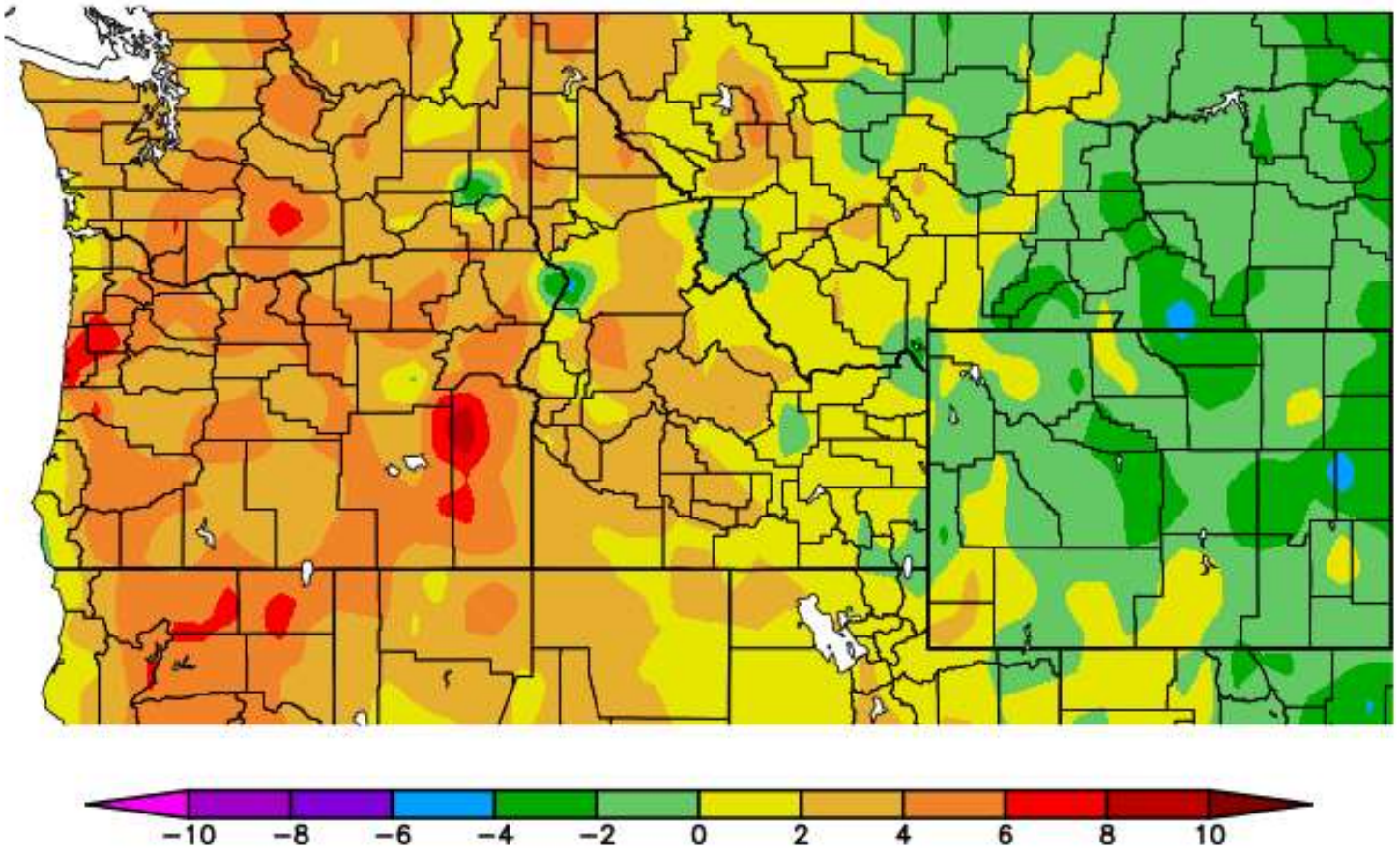
The Month In Review

August 2017

National Weather Service
Pendleton, Oregon

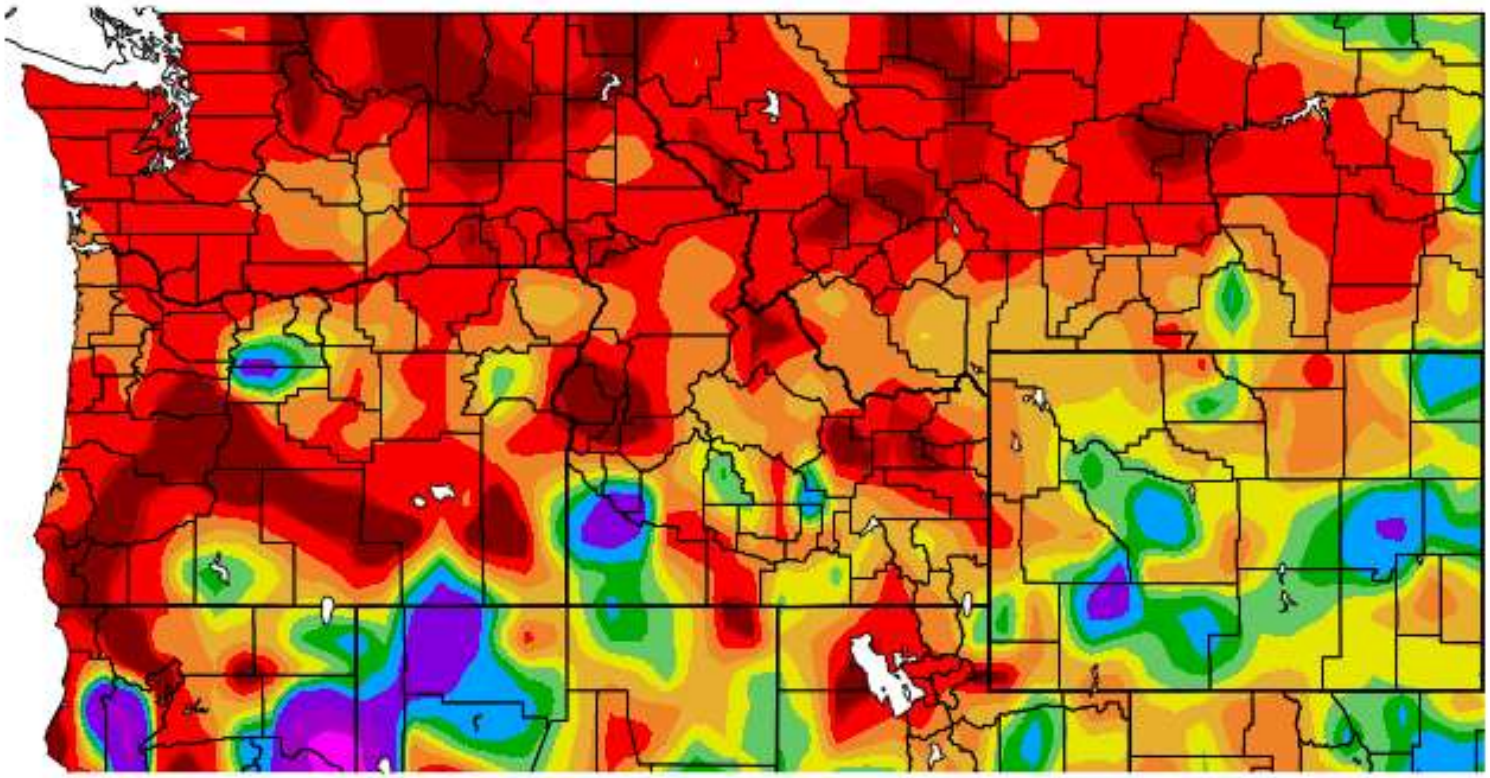
Departure from Normal Temperature (F)
8/1/2017 – 8/31/2017



Generated 9/2/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
8/1/2017 – 8/31/2017



2 5 25 50 75 100 125 150 200 400 800

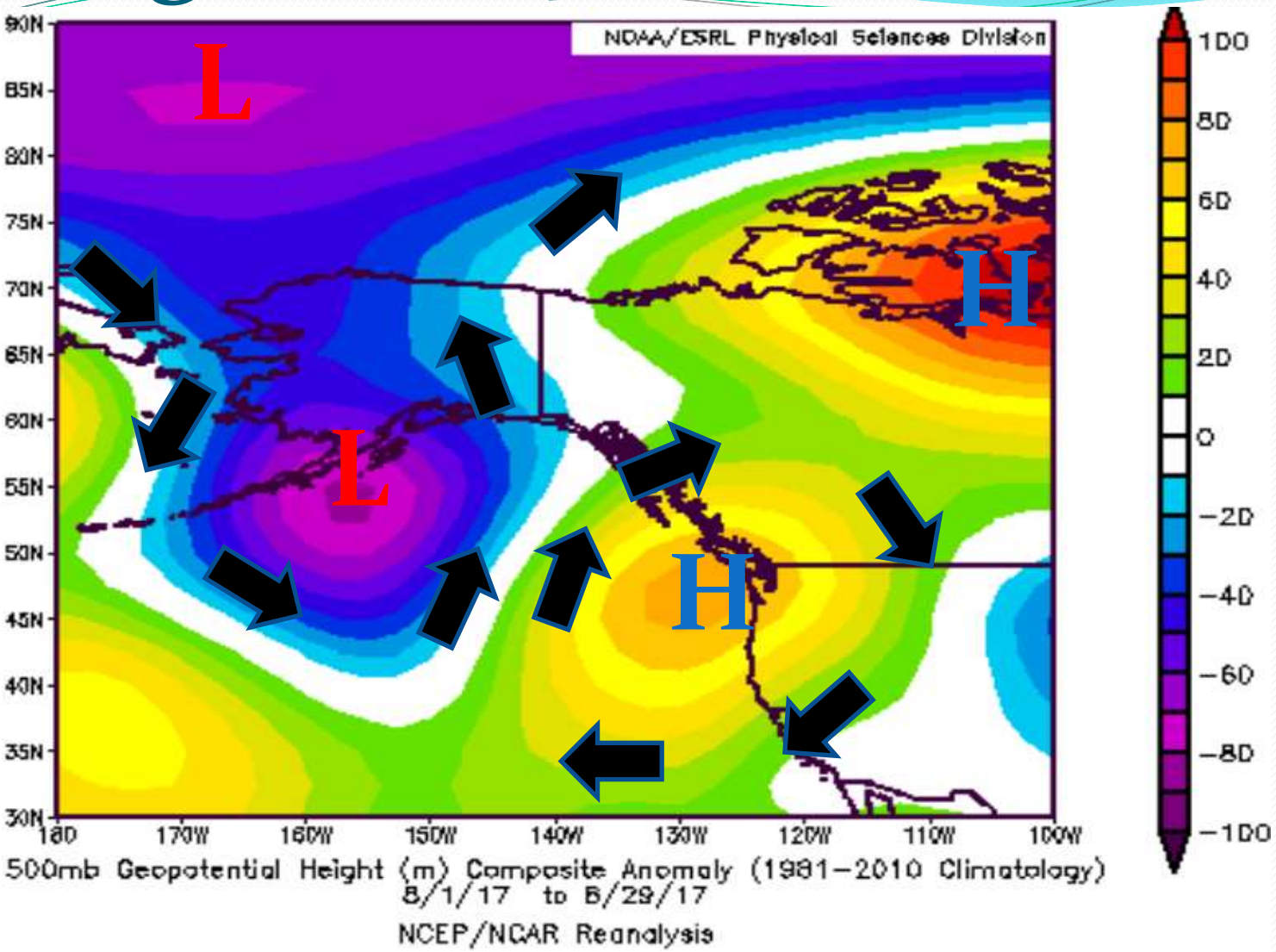
Generated 9/2/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

Select August Averages and Departures

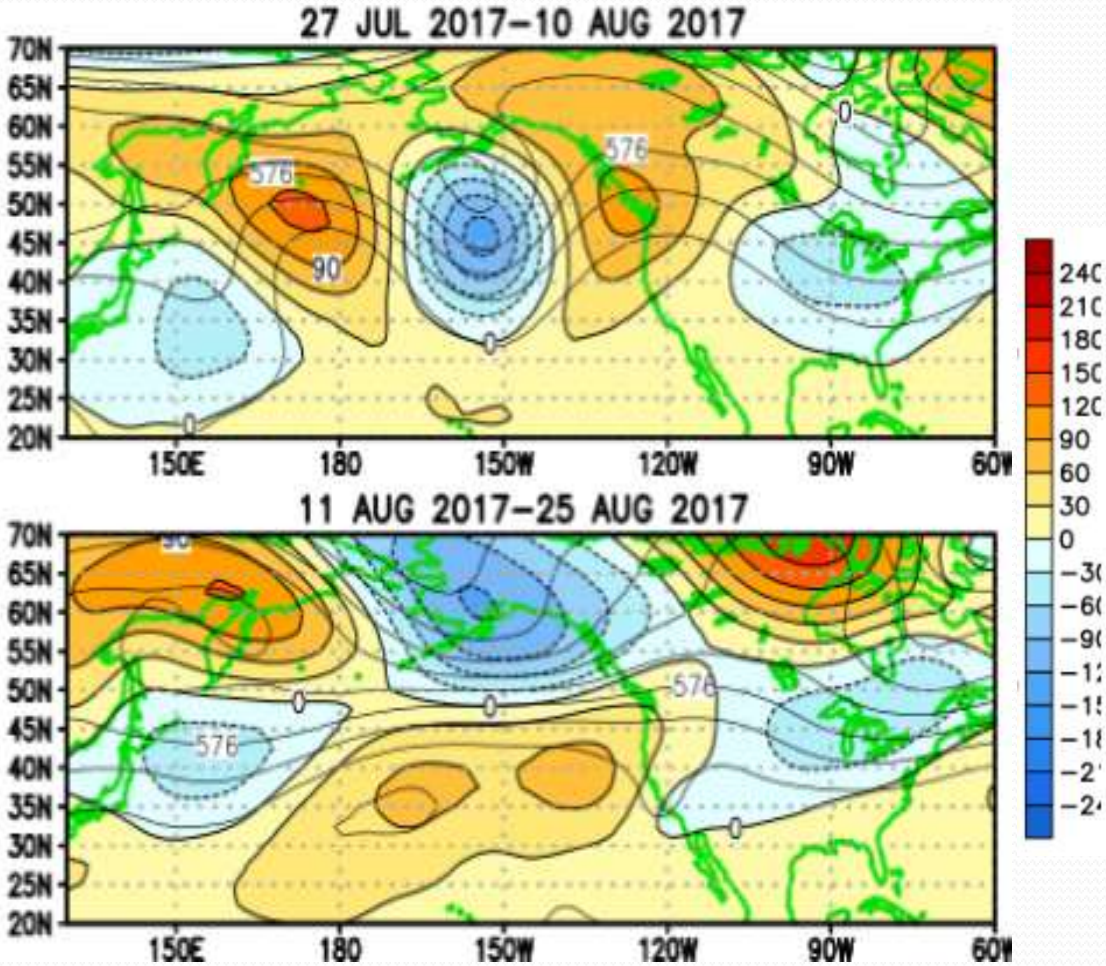
	Max T	Max T D	Min T	Min T D	Ave T	Ave T D	PCPN	PCPN D
Yakima	94.7	7.9	57.8	6	76.2	6.9	0.13	-0.26
Kennewick	93	3.7	61.8	1	77.4	2.4	0.02	-0.16
Walla Walla	92.3	4.2	64.8	4.4	78.5	4.3	0.02	-0.55
The Dalles	93.9	6.6	62.7	3.2	78.3	4.9	0.05	-0.18
Redmond	91.2	6.4	47.5	2.3	69.3	4.3	0.02	-0.48
Pendleton Airport	92.1	5.3	58.6	1.8	75.4	3.6	0.07	-0.31
La Grande	90.8	5.1	53.3	1	72	3.0	0.05	-0.80

August 2017 Weather Pattern



The mean synoptic pattern for the month of August 2017 was characterized by an upper level low pressure system over the west-central gulf of Alaska, with a large upper level ridge of high pressure over the western US. The highest heights compared to average were found just off the Pacific Northwest coast. This caused abnormally dry and hot conditions to persist through the month.

August 2017 Detailed Upper Level Pattern Analysis



- During the first half of August, an upper level trough of low pressure was evident over the Gulf of Alaska. Meanwhile a large ridge of high pressure remained anchored over the Pacific Northwest…keeping our weather dry and hot.
- The second half of the month featured an expanding trough in the eastern Gulf of Alaska, with a lower amplitude, flat ridge over the interior Pacific Northwest. This kept conditions mainly dry with above average temperatures continuing.

Daily Record Low Temperatures In August

City	Aug 2017 Daily Min T	Previous Record Low
Easton, WA	44 on 8/15	46° in 2014
Ellensburg, WA	40 on 8/25	42° in 1959
Pasco, WA	46 on 8/26	46° in 2008
Meacham, OR	30 on 8/15	33° in 2009
La Grande, OR	44 on 8/15	44° in 1974

Daily Record High Temperatures In August

City	Aug 2017 Daily Max T	Previous Daily Record High
Antelope, OR	102 on 8/29	97 in 2006
Condon, OR	97 on 8/30	97 in 2009
Easton, WA	96 on 8/05	91 in 2005
The Dalles, OR	108 on 8/03	106 in 1998
Pendleton Arpt	100 on 8/02	100 in 2015
Redmond, OR	100 on 8/02	98 in 1998
Ellensburg, WA	105 on 8/10	98 in 2014
Meacham, OR	96 on 8/28	95 in 1998
Yakima, WA	103 on 8/03	103 in 1961
Bend, OR	95 on 8/29	95 in 2006

Top 5 Hottest Augusts

City	Rank	August 2017 Avg Temperature	Current or Previous hottest August Avg T
Ellensburg, WA	#1	74.8	73.9 in 2004
Hermiston, OR	#1	75.8	75.3 in 2014
Bend, OR	#1	68.8	67.7 in 1968
Easton, WA	#1	66.8	66.3 in 2014
Yakima, WA	#1	76.2	74.2 in 1977
Pelton Dam, OR	#1	75.6	75.5 in 2001
Long Creek, OR	#1	70.1	68.1 in 2001
Condon, OR	#1(T)	71.5	71.5 in 1961
Monument, OR	#2	74.0	74.3 in 1971
The Dalles, OR	#3	78.3	80.1 in 1967

Top 5 Hottest Augusts (Cont'd)

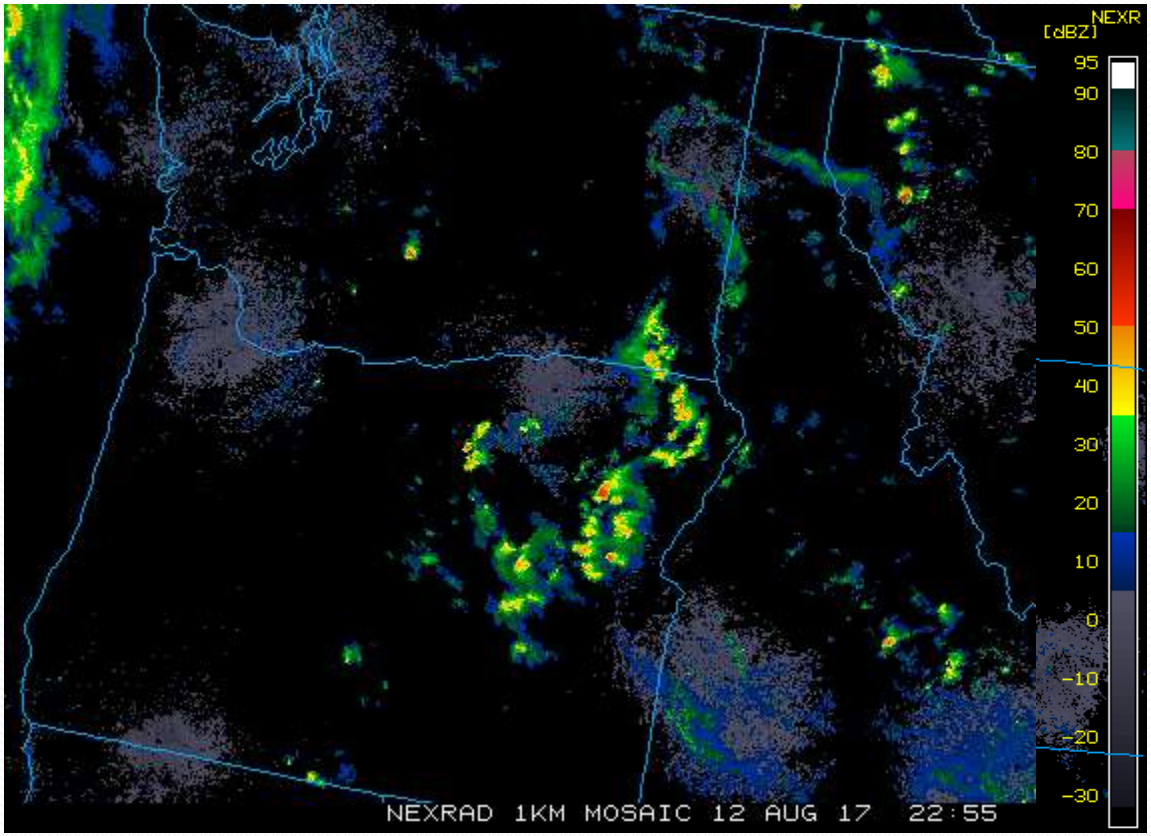
City	Rank	August 2017 Avg Temperature	Current or Previous hottest August Avg T
Heppner, OR	#3	73.5	74.6 in 1897
Moro, OR	#3	73.0	73.2 in 1967
Mt Adams RS	#3(T)	69.6	70.5 in 1981
Pendleton (City)	#3	75.0	76.2 in 1901
Goldendale, WA	#4	71.6	72.1 in 1915
Seneca, OR	#4	61.7	63.3 in 1935
Walla Walla, WA	#5	78.5	80.1 in 1967
Redmond, OR	#5	69.3	72.6 in 1967

August
Significant Weather

August 7 – 11th Very Hot Temperatures

Location	Hottest Temperature
Pendleton	103°
Hermiston	104°
Pasco	102°
Yakima	103°
Ellensburg	105°
Walla Walla	103°
The Dalles	103°
La Grande	97°
Redmond	98°
Heppner	99°

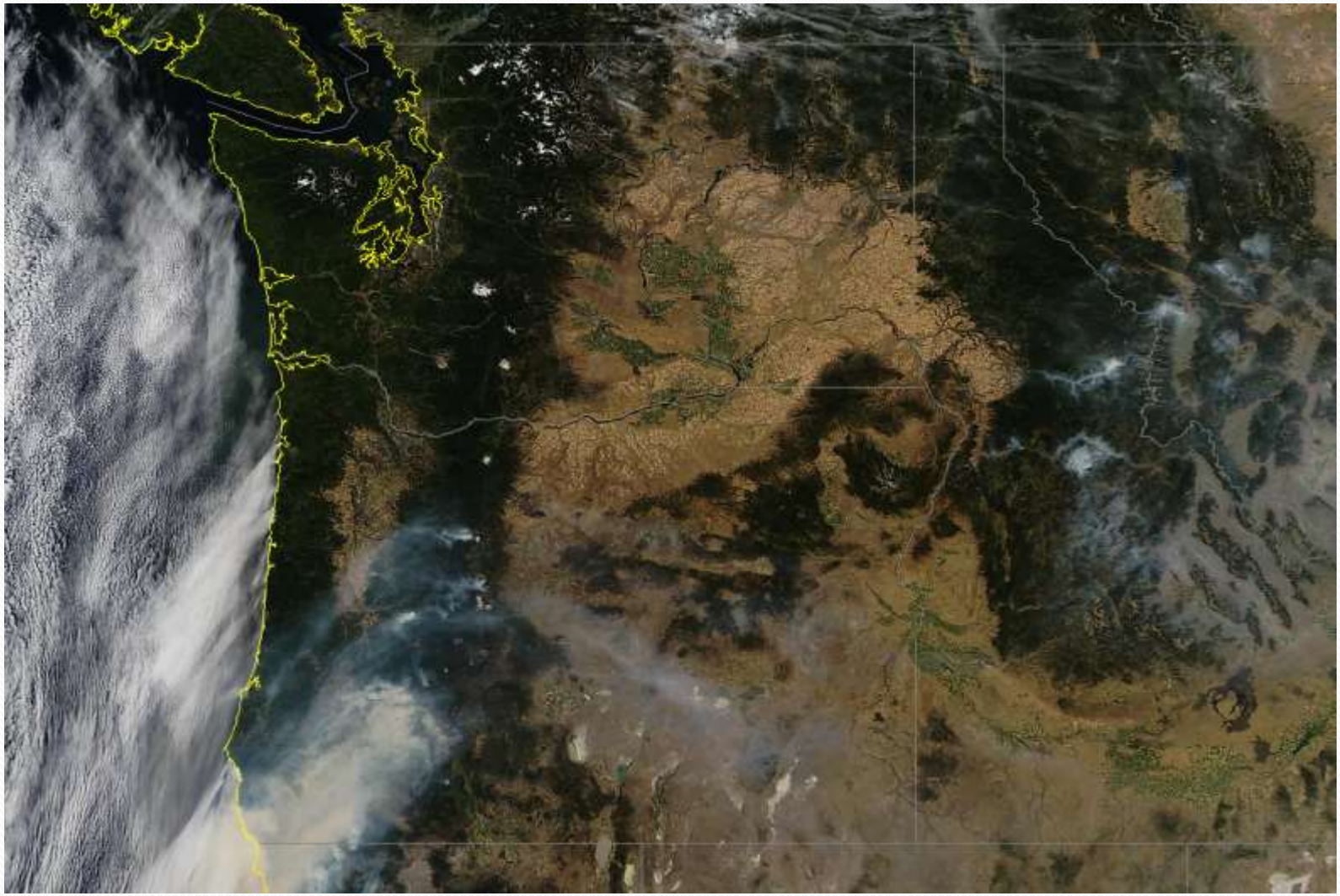
Thunderstorms August 10 – 12th



Isolated to scattered thunderstorms developed over Central Oregon on August 11th, then spread into the Northeast Oregon mountains on August 12th . The greatest concern from these storms were new wildfire starts in near record dry fuels. Also, as noted in the local storm reports below, a few storms produced pea size hail and locally gusty winds.

Office	Report Time	County	Location	ST	Event Type	Mag.
PDT	2017-08-11 5:40 ...	JEFFERSON	2 WNW MADRAS	OR	HAIL	0.5
Source: TRAINED SPOTTER **Remark:**						
Active Products: None						
PDT	2017-08-12 3:07 ...	WALLOWA	3 ESE LOSTINE	OR	HAIL	0.5
Source: TRAINED SPOTTER **Remark:**						
Active Products: None						

2017 Solar Eclipse



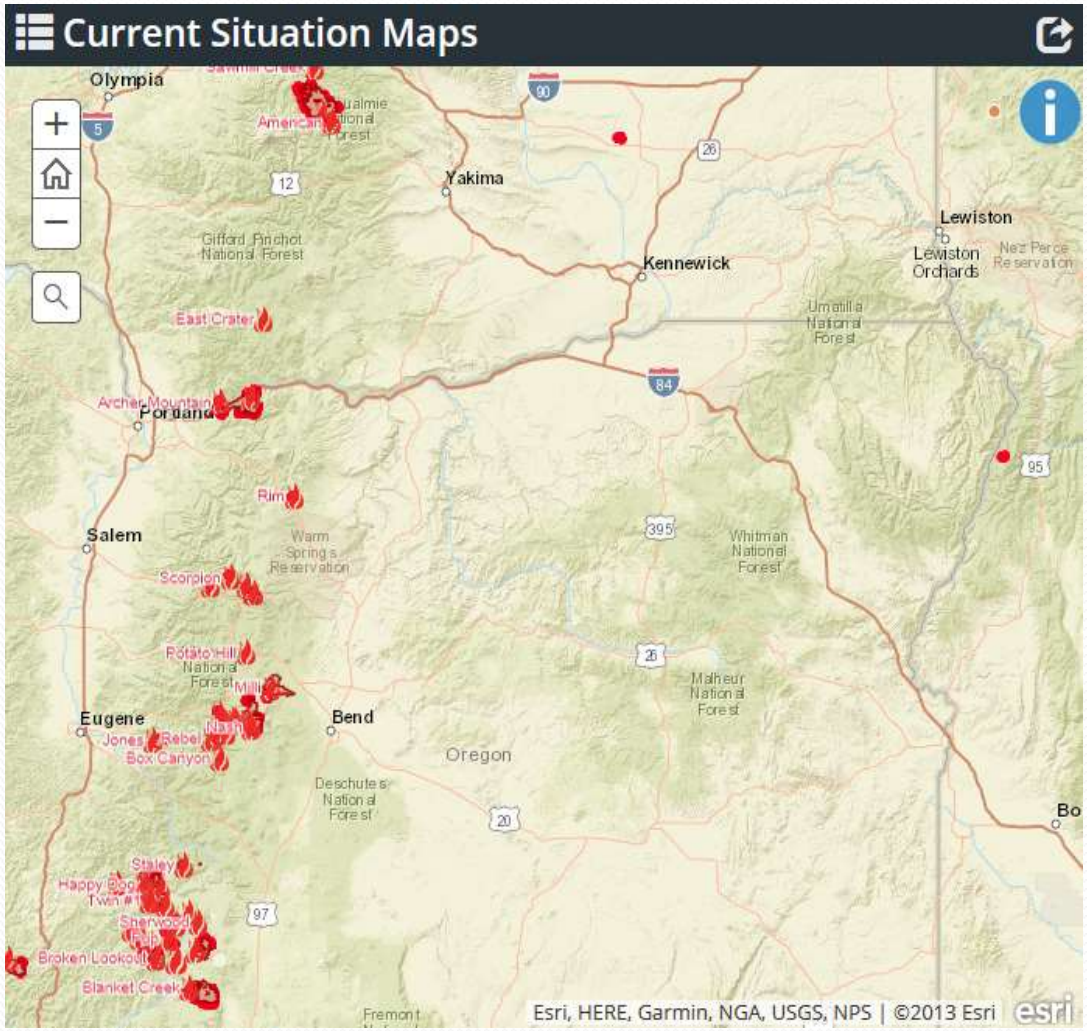
MODIS high-resolution polar orbiting satellite image from the midday hours on Monday, August 21st. This shows clear skies over just about all of eastern Oregon and Washington during the eclipse. There are some areas of wild fire smoke noted in west-central Oregon.

2017 Eclipse Photos

2017 Eclipse Photos

2017 Eclipse Photos

Numerous Wild Fires



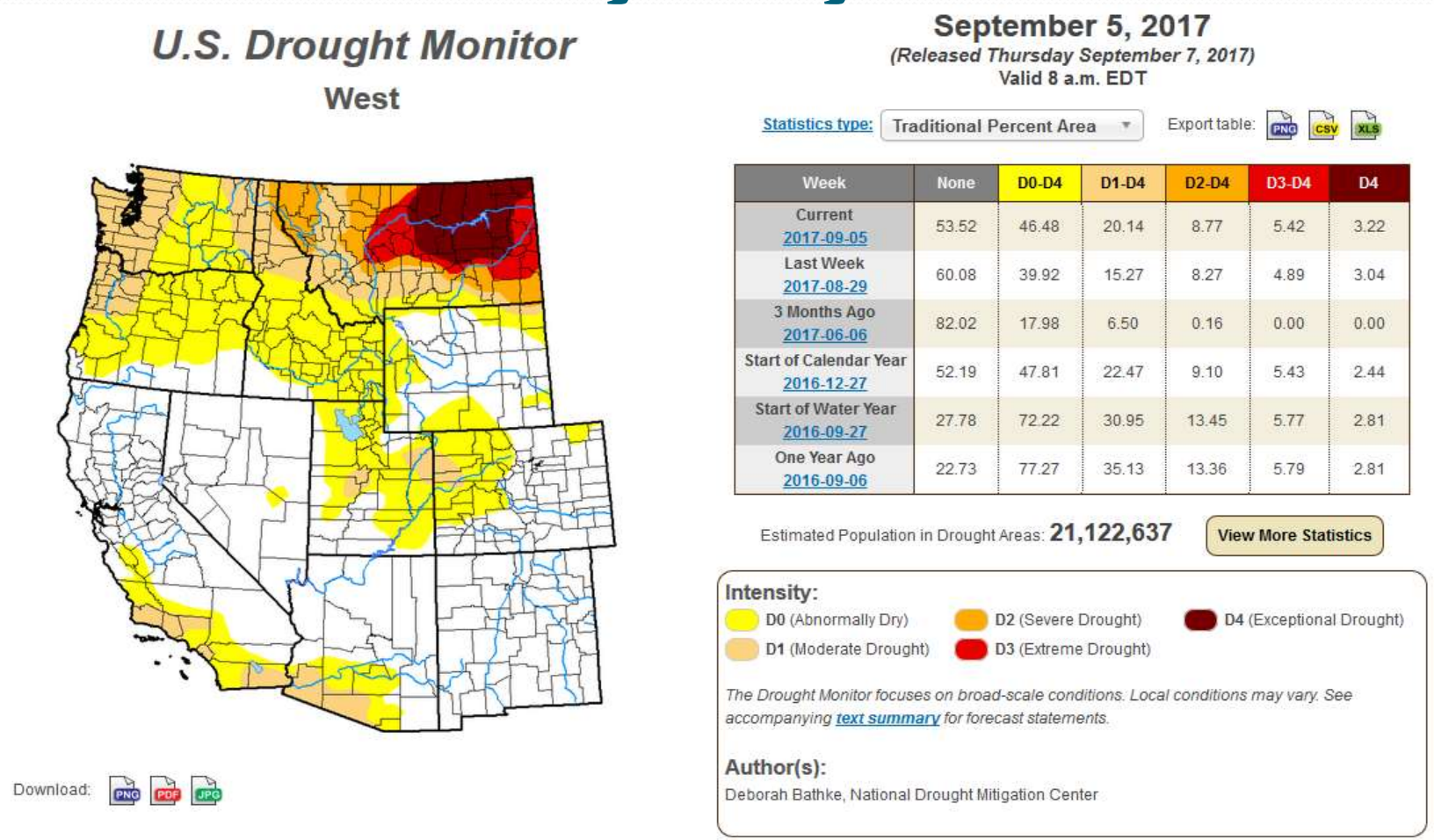
Many wildfire starts were reported in the month of August, as area fuels reached near record dry levels. Some of the fires were human cause, while some can be attributed to lightning. Many of the large wildfires reported at the end of August were located in the Cascades of both Oregon and Washington, as well as numerous fires burning in southwestern Oregon. A few of the most well know and largest fires include: the Millie fire, Nash Fire, Whitewater Fire, Norse Peak, Jolly Mountain, and the Chetco Bar Fire in the Siskiyou National Forest near Brookings, OR. Additional, destructive fires have developed in early September, including the Eagle Creek Fire in the Columbia Gorge.

Record Wildfire Smoke and Poor Air Quality

Location	Number of Days with smoke or haze reported in August
Pendleton, OR	14 days (12 consecutive)
Redmond, OR	25 days (14 consecutive)
Pasco, WA	23 days (13 consecutive)
Yakima, WA	19 days (11 consecutive)
Walla Walla, WA	15 days (12 consecutive)

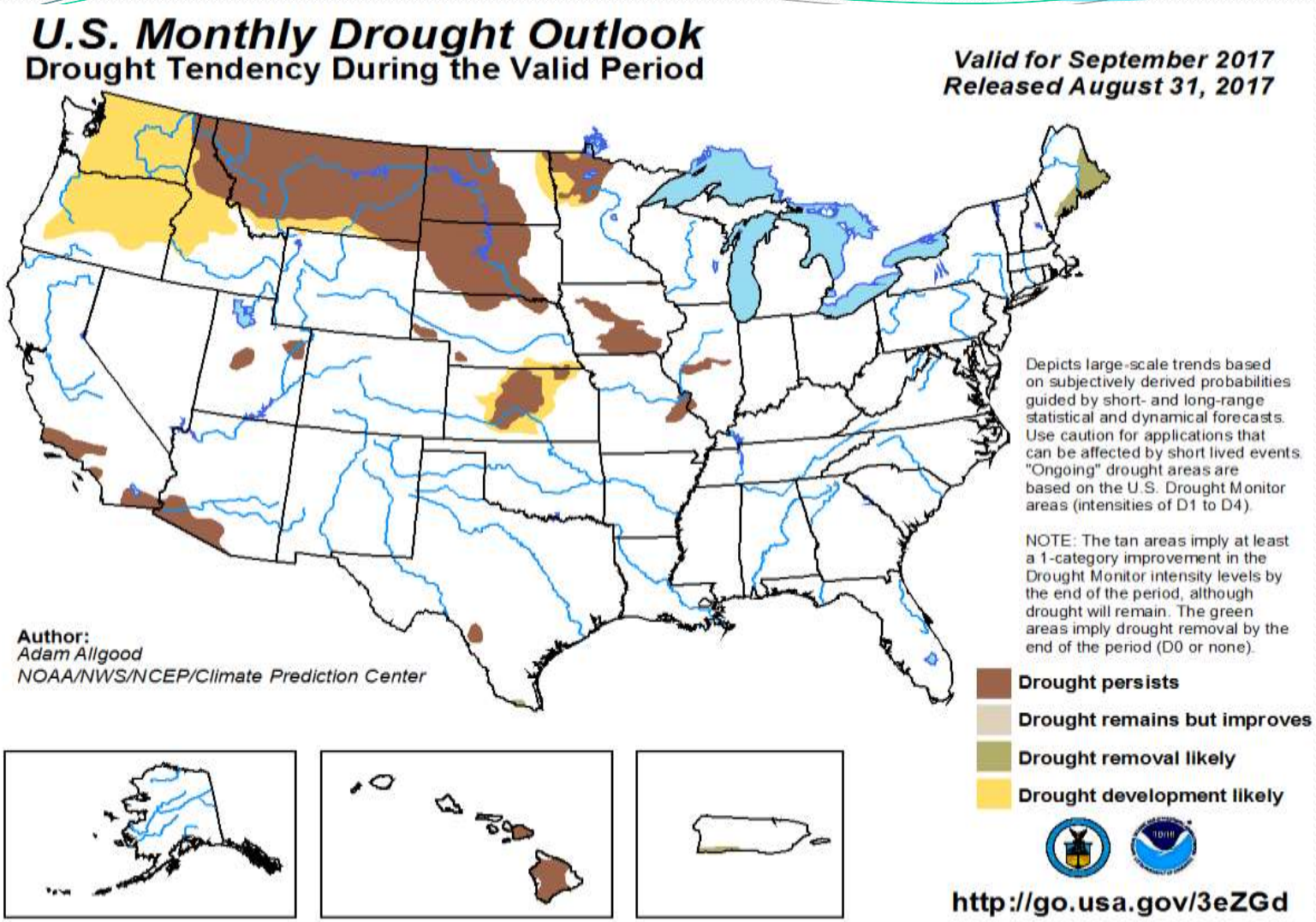
With an upper level ridge dominating the weather pattern during the first half, and toward the end of the month, ample amounts of wildfire smoke spread across our area. The smoke lingered for 2 consecutive weeks in some locations…then returned after a short reprieve. Dense smoke and poor air quality remain a concern heading into September.

Abnormally Dry Conditions



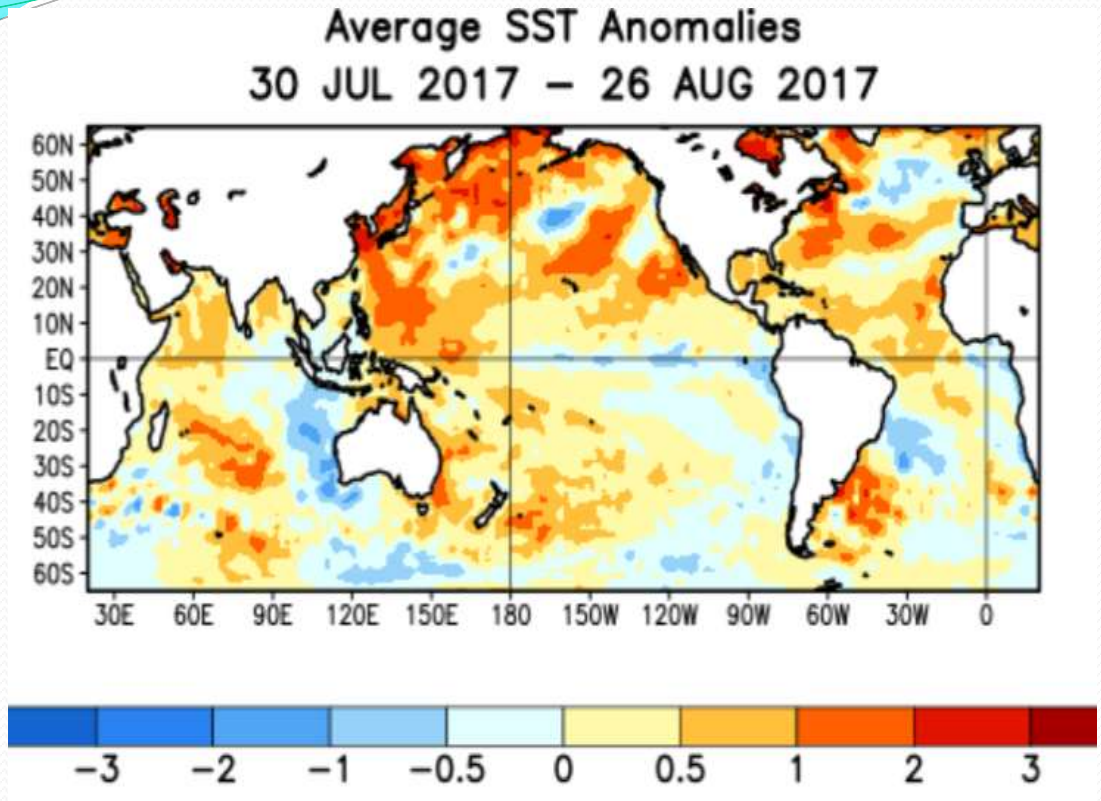
Moderate drought conditions are now being reported in portions of western Washington and Oregon, also in Northeast Washington. Abnormally dry conditions have returned to much of the area, after seeing very little if any precipitation in the last 60 days. Exceptional drought has developed in eastern Montana. California continues to improve over last year's conditions.

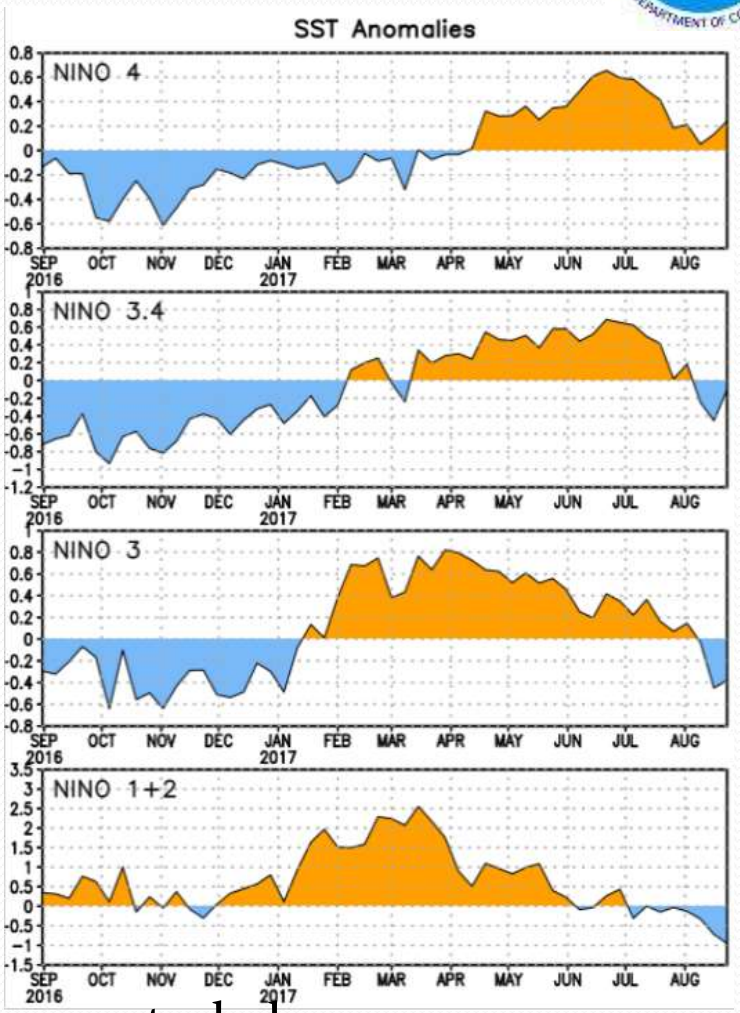
Drought Outlook Through September



The monthly drought outlook through the end of September from the CPC indicates drought development is now **expected** in the Northwest. However, current reservoir levels in the Northwest are in much better shape compared to last year, so this seems to be a short term drought.

ENSO Neutral Conditions Continue

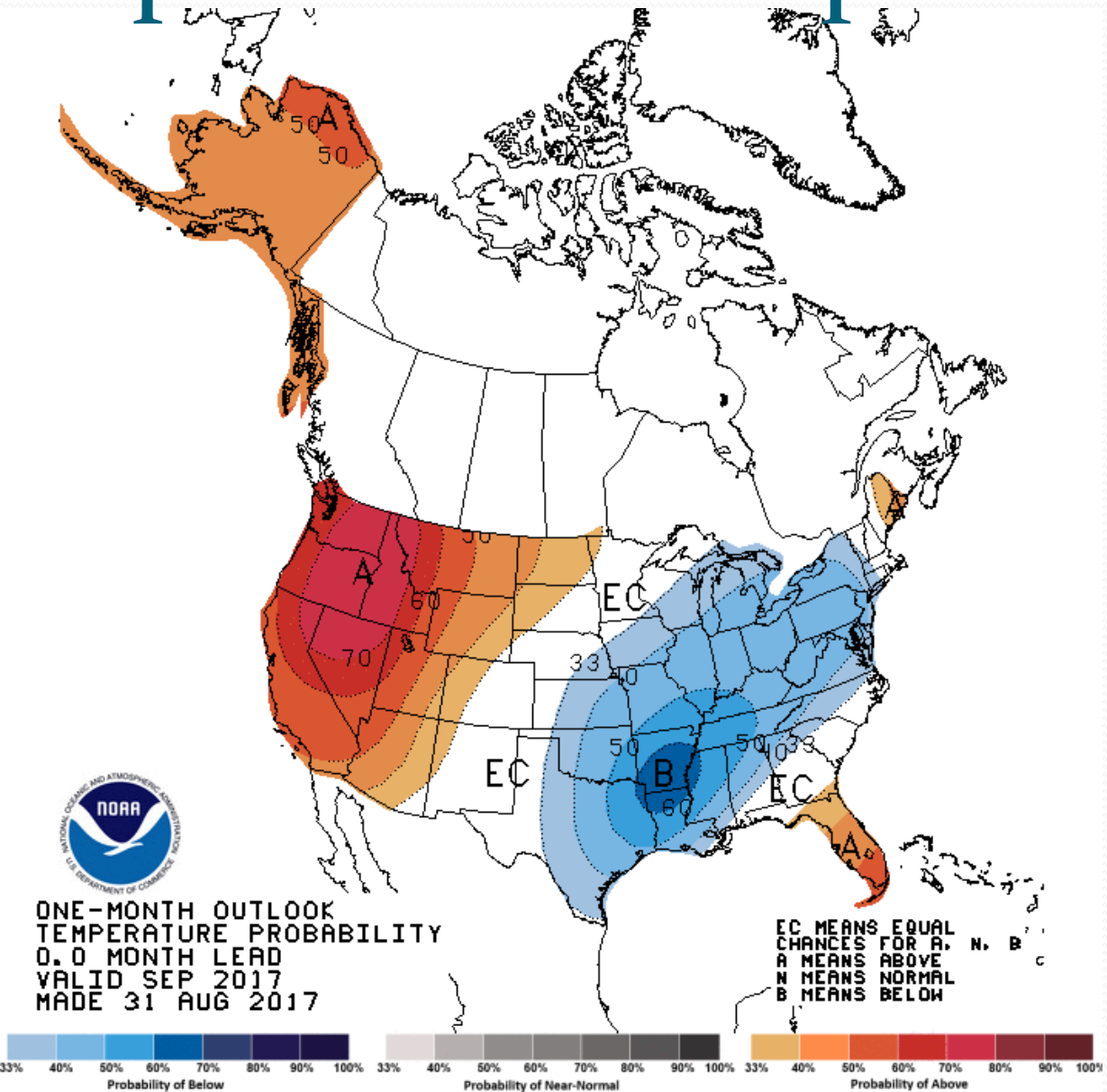




- ENSO-Neutral conditions are present
- Equatorial sea surface temperatures (SSTs) are near-to-below average across the central and east-central Pacific Ocean
- ENSO-Neutral is favored (85% chance through Sept, then 55% Dec-Feb) into the Northern Hemisphere winter of 2017-18.

September Outlook

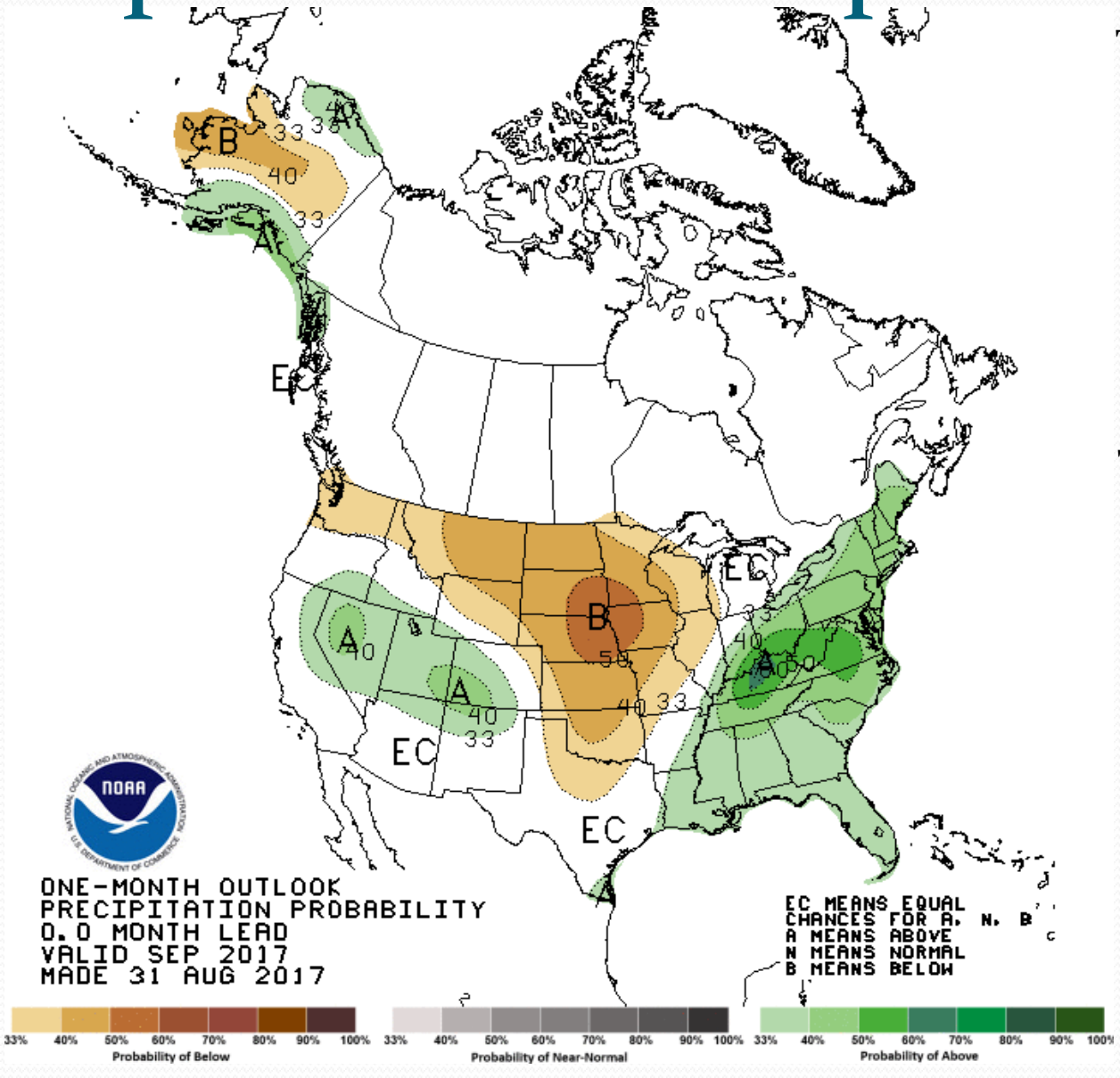
September Temperature Outlook



This graphic is issued by the Climate Prediction Center or CPC and is the Temperature Outlook for the month of September. 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.

Odds are tilted toward higher than average temperatures for the remainder of September across the interior Pacific Northwest. The highest probability of above average temperatures will be over north-Eastern Oregon and Washington through September. The highest chance for below normal temperatures will be in the lower Mississippi Valley

September Precipitation Outlook



This graphic is CPC's Precipitation Outlook for the month of September. The green colors represent a greater chance of above normal precipitation, and the brown colors represent a greater chance of below normal precipitation.

There are equal chances for above, below or near normal precipitation amounts over much of Oregon. There are slight chances for below normal precipitation amounts over Washington through September.

The best chance for above average precipitation amounts will across the Eastern US.

Thank You!