



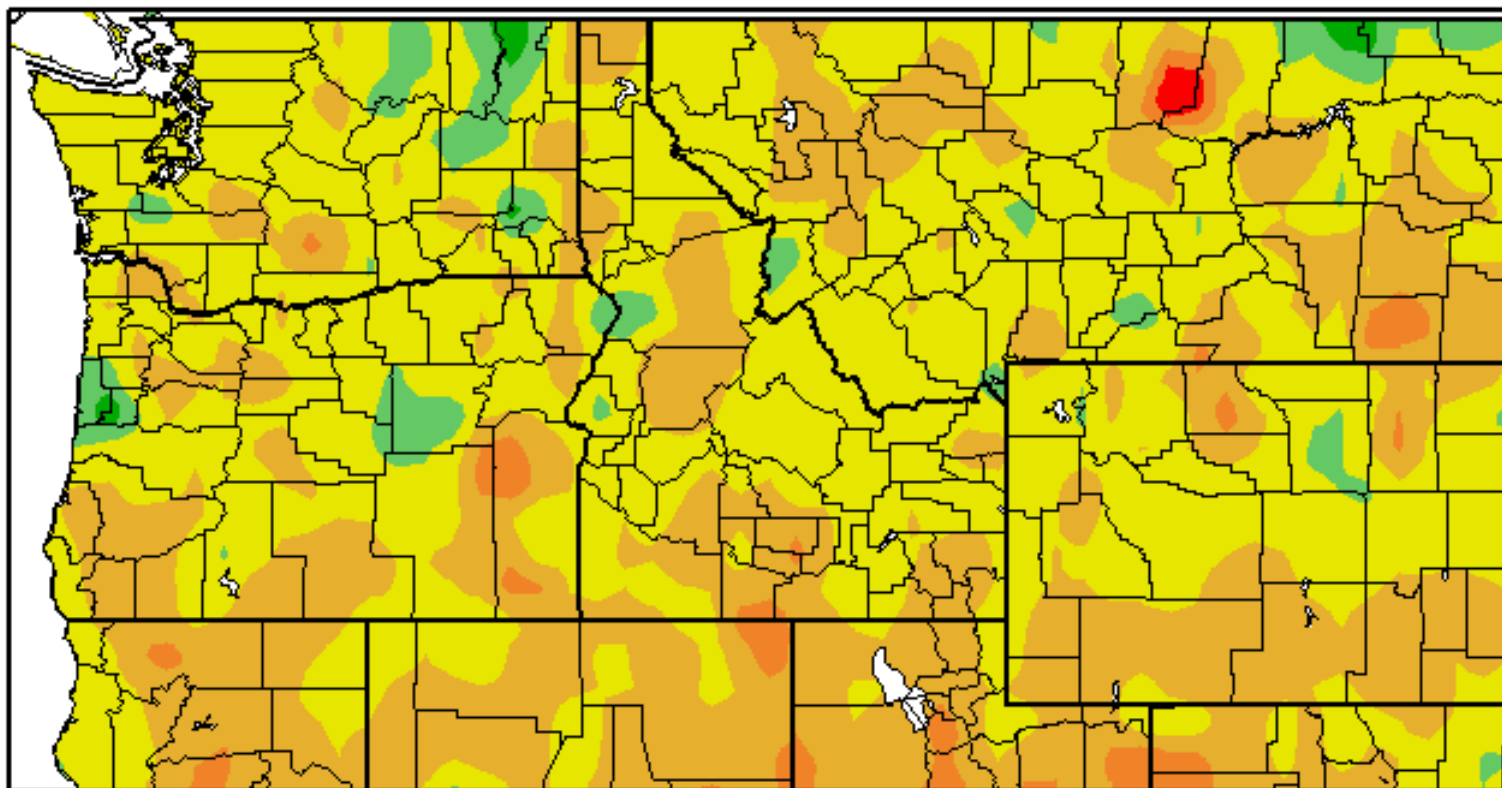
The Month In Review

June 2017

National Weather Service
Pendleton, Oregon

Departure from Normal Temperature (F)

6/1/2017 - 6/30/2017

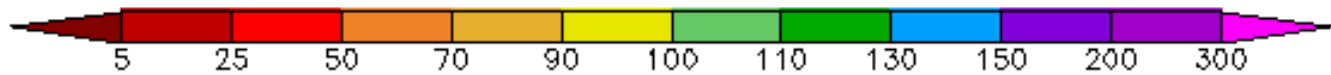
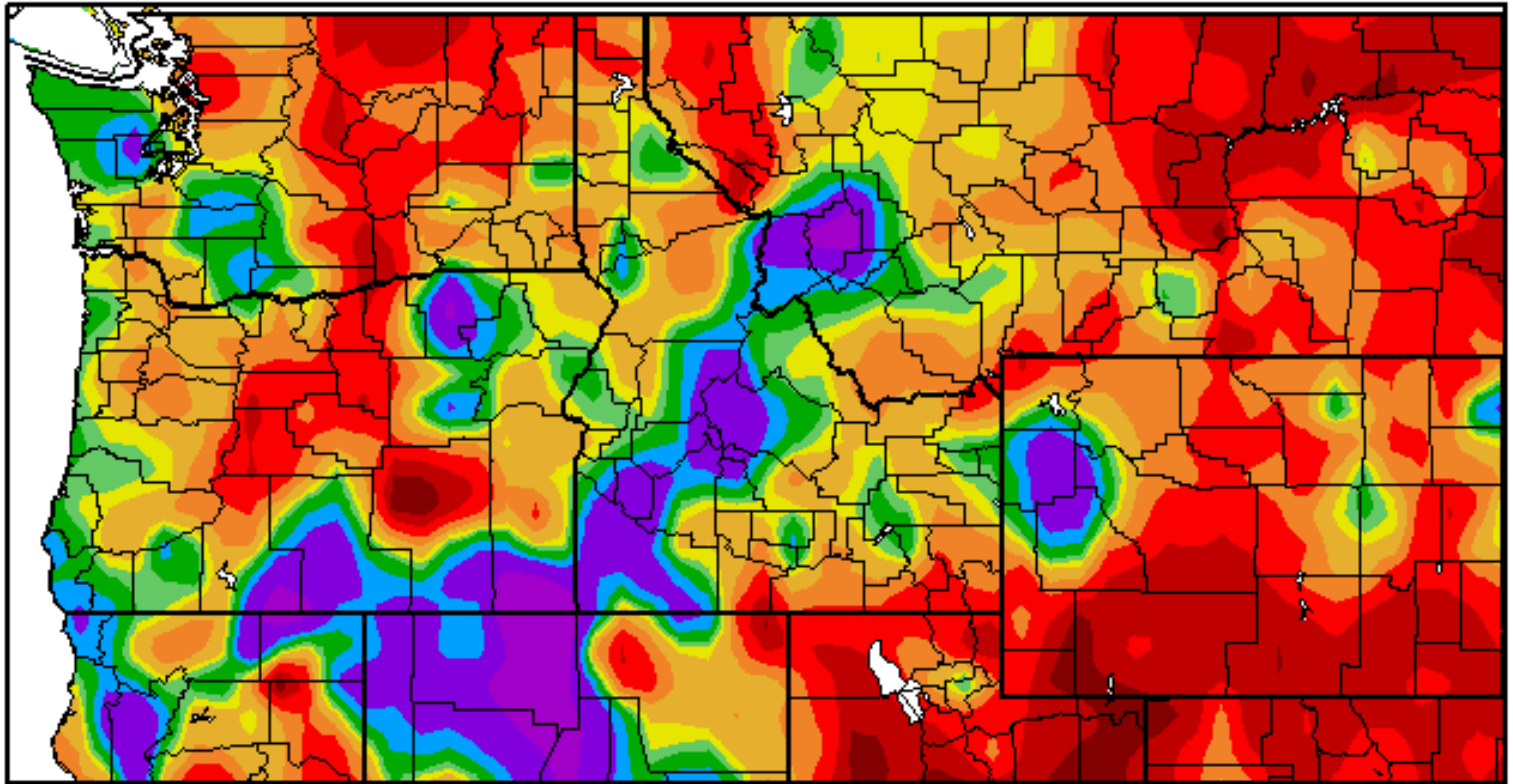


Generated 7/5/2017 at HPRCC using provisional data.

Regional Climate Centers

Percent of Normal Precipitation (%)

6/1/2017 - 6/30/2017



Generated 7/5/2017 at HPRCC using provisional data.

Regional Climate Centers

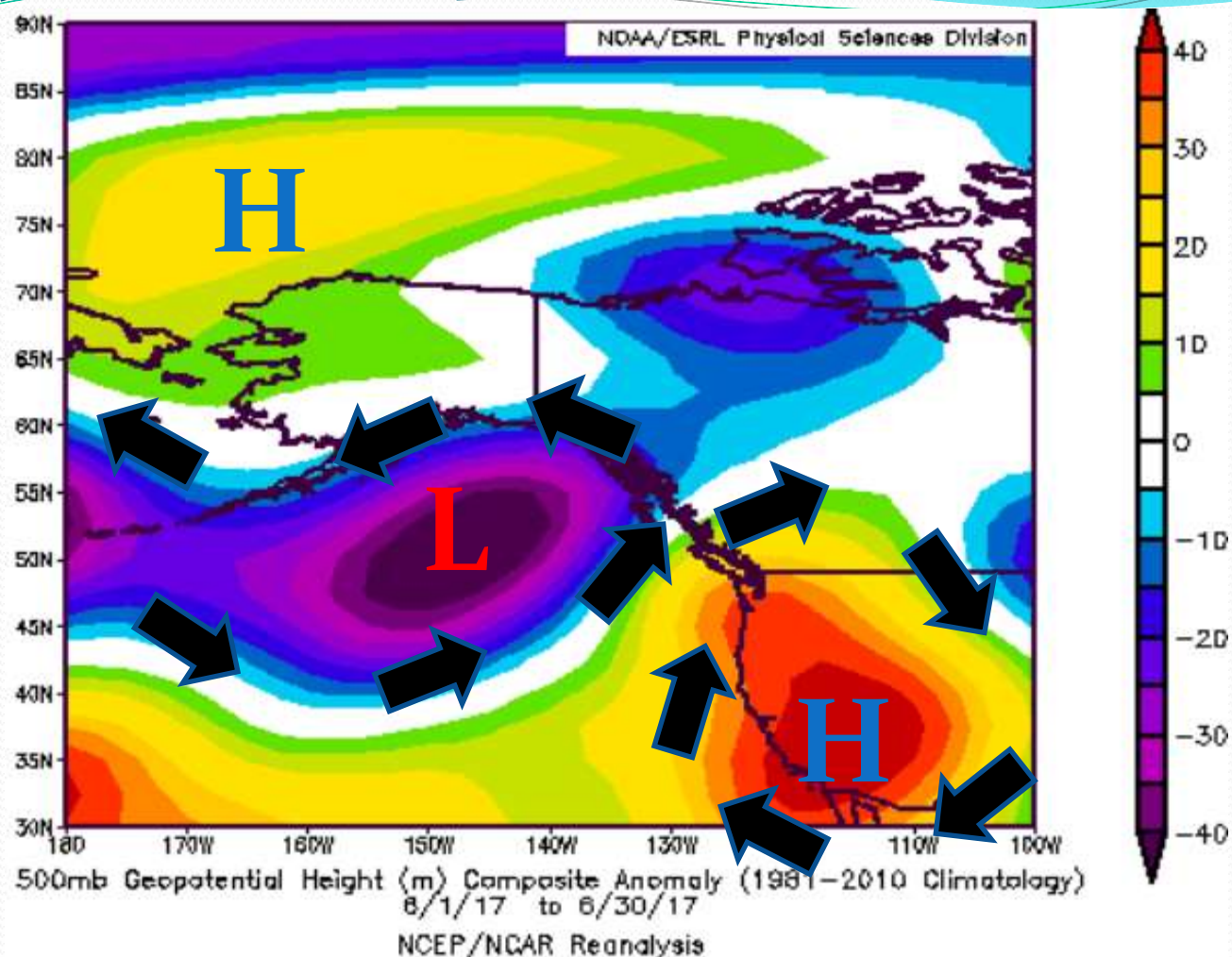


Select June Averages and Departures

	Max T	Max T D	Min T	Min T D	Ave T	Ave T D	PCPN	PCPN D
Yakima	83.9	4.4	52.0	3.7	68.0	4.1	0.19	-0.43
Kennewick	83.5	1.9	57.3	1.2	70.4	1.6	0.48	-0.03
Walla Walla	82.1	3.3	57.4	3.2	69.8	3.3	1.38	0.10
The Dalles	82.1	3.0	56.2	1.4	69.2	2.2	0.35	-0.52
Redmond	79.5	3.4	41.5	0.5	60.5	2.0	0.36	-0.28
Pendleton Airport	79.4	1.2	51.7	0.2	65.6	0.7	2.15	1.17
La Grande	77.4	2.7	48.9	0.2	63.2	1.5	0.94	-0.60

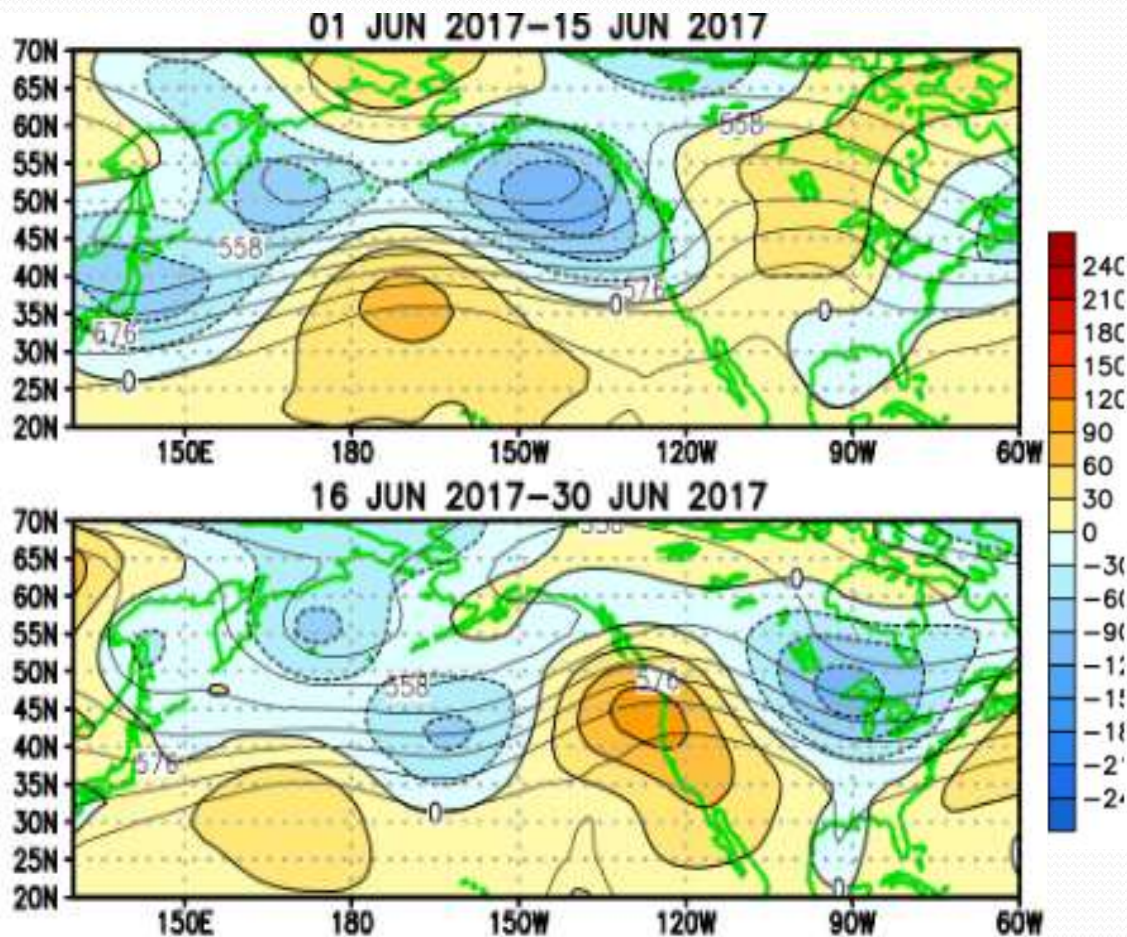


June 2017 Weather Pattern



The mean synoptic pattern for the month of June 2017 was characterized by an upper level low pressure system over the 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 over the Desert Southwest where record high temperatures occurred during the middle and end of the month.

June 2017 Detailed Upper Level Pattern Analysis



- ❖ During the first half of June, an upper level trough of low pressure was evident over the Gulf of Alaska, extending eastward into the Pacific Northwest. This kept our weather pattern cooler with periods of showers around.
- ❖ The second half of the month featured an expanding upper level ridge over the western US, including the interior Pacific Northwest. This kept conditions mainly hot and dry over the area. There were a few weak disturbances which allowed for occasional thunderstorms to develop.



Daily Record High Temperatures In June

City	June 2017 Daily Max T	Previous Record High
Antelope, OR	103 on 6/26	98 in 1925
The Dalles, OR	103 on 6/25	101 in 2006
Redmond, OR	102 on 6/25	101 in 1968
Long Creek, OR	100 on 6/26	93 in 1968
Prineville, OR	101 on 6/25 (T)	101 in 1970
Sisters, OR	98 on 6/26 (T)	98 in 2006
Pasco, WA	102 on 6/25	99 in 1945
La Grande, OR	97 on 6/26	95 in 1968
Meacham, OR	90 on 6/25	89 in 1970



Daily Record Low Temperatures In June

City	June 2017 Daily Min T	Previous Record Low
Easton, WA	35 on 6/05	40 in 2012
Pendleton, OR	39 on 6/11	41 in 1999
Sunriver, OR	28 on 6/06 (T)	28 in 2012
Goldendale, WA	34 on 6/05 (T)	34 in 1966
Meacham, OR	29 on 6/11	30 in 1999
Heppner, OR	36 on 6/12 (T)	36 in 1917
Pasco, WA	39 on 6/11	43 in 2012
John Day, OR	34 on 6/11 (T)	34 in 1974



Daily Precipitation Records In June

City	Daily Precip and Date	Previous Daily Precip Record
Cle Elum, WA	0.50" on 6/19	0.48" in 2013
La Grande, OR	0.62" on 6/12	0.38" in 1980
Meacham, OR	1.43" on 6/08	1.23" in 1970
Moro, OR	0.60" on 6/09	0.39" in 2004
Easton, WA	0.53" on 6/16	0.10" in 1905
Satus Pass, WA	0.57" on 6/16	0.15" in 1990
Pendleton (NWS Office)	1.54" on 6/27	0.12" in 2013
Redmond, OR	0.29" on 6/10	0.28" in 1969



Top 10 Wettest Water Years

City	Rank	Oct – Jun Precip 2016-17	Record Water Year Precip (Oct – Sept)
Pendleton, OR	#3	16.82”	18.45” in 1977-1978
Mt Adams RS	#3	63.00”	70.55” in 1955-1956
Sunriver, OR	#3	22.05”	27.04” in 2005-2006
Meacham, OR	#5	40.50”	46.53” in 2010-2011
Yakima, WA	#8	11.49”	14.25” in 1955-56
Bickleton, WA	#9	18.56”	22.11” in 1973-1974
Hermiston, OR	#10	8.38”	11.66” in 2010-2011

* The rest of July, August and September will be counted toward this water year’s total precipitation amount. Therefore, several locations could potentially record their wettest water year on record, if enough additional precipitation falls before October 1st .

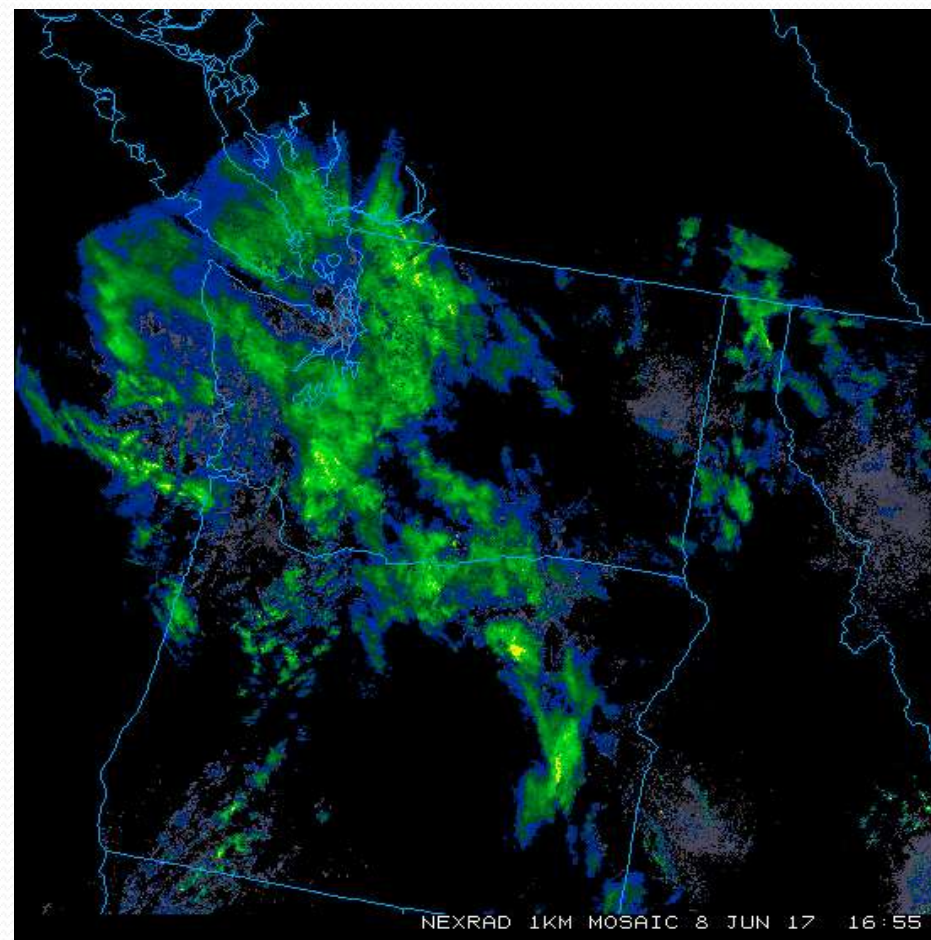


June

Significant Weather

June 4 – 10th Cool and Unsettled Weather

Location	Coollest Min T	Coollest Max T	7 Day Precip Total
Pendleton	42	63	0.92"
Hermiston	45	71	0.13"
Pasco	42	73	0.01"
Yakima	39	71	0.10"
Ellensburg	41	67	0.08"
Walla Walla	47	64	0.77"
The Dalles	46	69	0.30"
La Grande	40	60	0.23"
Redmond	30	60	0.36"
John Day	34	60	0.72"

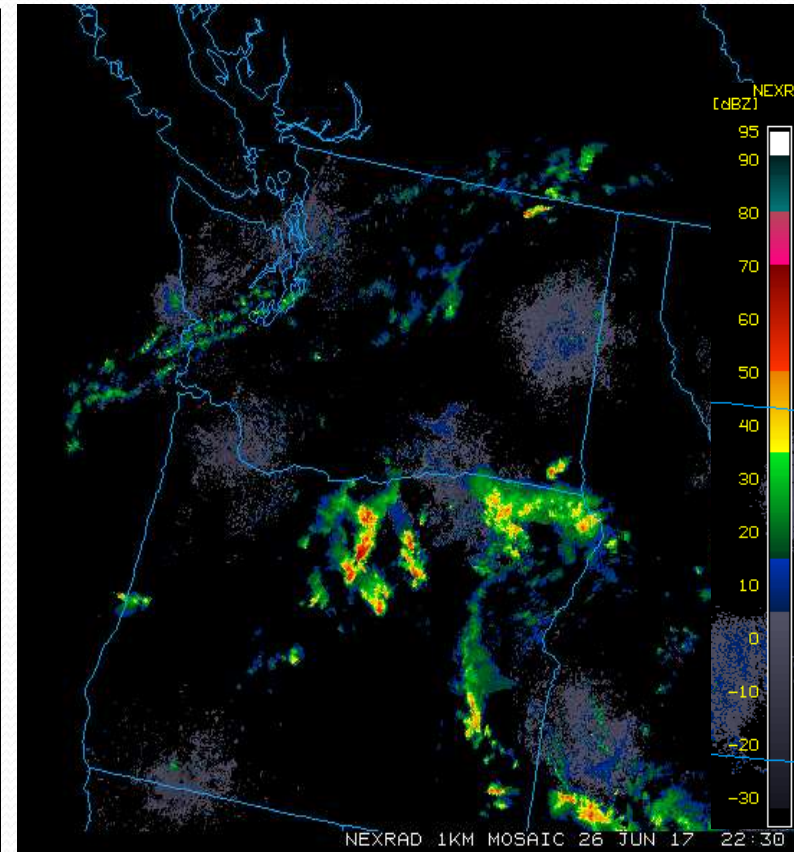


Radar image from 9:55 AM PDT June 8th shows a band of steady rain showers advancing through the area, as a front moves eastward.

June 26th Severe T'storms and Flash Flooding

Local Storm Reports

6/26/17 13:30	GRANT	JOHN DAY	TSTM WIND DMG	0.00	NEWSPAPER	MULTIPLE POWER OUTAGES DUE TO THUNDERSTORMS BETWEEN JOHN DAY AND LONG CREEK. REPORTED VIA SOCIAL MEDIA.
6/26/17 14:00	GRANT	SSW JOHN DAY	HAIL	0.75	TRAINED SPOTTER	MOSTLY DIME SIZED WITH A FEW LARGER STONES
6/26/17 14:00	GRANT	SSW JOHN DAY	HEAVY RAIN	1.00	TRAINED SPOTTER	ESTIMATED 1 INCH OF RAINFALL, 2-3 INCHES OF STANDING WATER OUTSIDE THE FEDERAL BUILDING
6/26/17 14:23	WASCO	7 N WARM SPRINGS	HAIL	1.75	PUBLIC	TRAINED SPOTTER RELAYED REPORT FROM THE PUBLIC OF GOLF BALL SIZED HAIL
6/26/17 15:35	WHEELER	2 EME CLARNO	HAIL	1.00	PARK/FOREST SRVC	HANCOCK FIELD STATION REPORTED VERY HEAVY RAIN, HAIL ABOUT THE SIZE OF CHERRY TOMATOES OR QUARTERS, AND SOME FLOODING OF SEVERAL BUILDINGS
6/26/17 16:30	WALLA WALLA	WALLA WALLA	TSTM WIND DMG	0.00	AMATEUR RADIO	POWERLINES DOWN
6/26/17 16:36	CROOK	7 SSE PRINEVILLE	HAIL	0.50	TRAINED SPOTTER	LASTED 10 MINUTES SOME LARGER STONES RELAYED VIA AMATEUR RADIO
6/26/17 16:47	UMATILLA	2 NW PENDLETON	TSTM WIND GST	64.00	ASOS	PENDLETON AIRPORT ASOS
6/26/17 16:51	UMATILLA	PENDLETON	TSTM WIND GST	64.00	ASOS	GUST TO 64 MPH AT PENDLETON AIRPORT
6/26/17 17:30	UMATILLA	PENDLETON	HEAVY RAIN	0.94	OFFICIAL NWS OBS	THUNDERSTORM PRODUCED VERY HEAVY RAIN AT THE PENDLETON AIRPORT...WITH 0.94 INCH ACCUMULATED IN 45 MINUTES...AND 0.88 INCH OF THAT FELL IN 30 MINUTES.
6/26/17 17:40	BENTON	5 WWW RICHLAND	TSTM WIND DMG	0.00	PUBLIC	PICTURES OF TREES SNAPPED OFF AT THE BASE AND UPROOTED VIA TWITTER
6/26/17 17:45	WALLA WALLA	WALLA WALLA	TSTM WIND DMG	0.00	AMATEUR RADIO	POWER OUTAGE IN EASTERN WALLA WALLA ON SCHOOL AVENUE.
6/26/17 17:45	BENTON	5 NNW RICHLAND	TSTM WIND GST	64.00	MESONET	
6/26/17 17:46	BENTON	WEST RICHLAND	TSTM WIND GST	62.00	MESONET	
6/26/17 17:52	BENTON	3 SSW RICHLAND	HAIL	0.25	TRAINED SPOTTER	
6/26/17 17:55	BENTON	KENNEWICK	FLASH FLOOD	0.00	AMATEUR RADIO	INTERSECTION OF CANAL DRIVE AND VOLLAND STREET FLOODED.



(Above) Radar imagery showing well developed storms moving SW to NE over northern Oregon at 330 PM PDT on June 26th. These storms produced very heavy rainfall, gusty winds, hail and over 4000 lightning strikes in eastern Oregon and Southeast Washington.

June 26th Severe T'storms and Flash Flooding (Cont'd)

Local Storm Reports

6/26/17 18:05	BENTON	RICHLAND	NON-TSTM WND DMG	0.00	AMATEUR RADIO	TREE BLOWN DOWN ON THE NORTHBOUND LANE OF HIGHWAY 240 JUST OUTSIDE OF RICHLAND AIRPORT.
6/26/17 18:13	BENTON	4 NW WEST RICHLAND	TSTM WND GST	68.00	MESONET	
6/26/17 18:20	BENTON	5 WNW KENNEWICK	FLASH FLOOD	0.00	TRAINED SPOTTER	SPOTTER REPORTED FLASH FLOODING OCCURRING ON GAGE BLVD ABOUT HALF MILE EAST OF LESLIE RD IN RICHLAND. TRAFFIC BEING REROUTED DUE TO FLOODED ROAD, WATER UP TO DOOR HANDLE.
6/26/17 18:30	BENTON	RICHLAND	NON-TSTM WND DMG	0.00	AMATEUR RADIO	POWER POLES AND TREES BLOWN DOWN ACROSS GEORGE WASHINGTON WAY.
6/26/17 18:46	BENTON	WEST RICHLAND	NON-TSTM WND DMG	0.00	AMATEUR RADIO	POWER OUTAGE AND TREES DOWN ON PRIVATE PROPERTY.
6/26/17 18:50	UMATILLA	PENDLETON	FLASH FLOOD	0.00	NWS EMPLOYEE	NWS EMPLOYEE OBSERVED DEBRIS ON AIRPORT HILL ROAD AS THE RESULT OF FLASH FLOODING EARLIER IN THE AFTERNOON.
6/26/17 18:55	BENTON	KENNEWICK	FLASH FLOOD	0.00	AMATEUR RADIO	CANAL DRIVE IS FLOODED WHERE IT GOES UNDERNEATH THE RAILROAD TRACKS NEAR THE INTERSECTION OF CANAL DRIVE AND VOLAND STREET
6/26/17 19:00	FRANKLIN	WSW KAHLOTUS	TSTM WND GST	67.00	MESONET	GUST TO 67 MPH BETWEEN 645 AND 7 PM
6/26/17 19:00	BENTON	KENNEWICK	HEAVY RAIN	1.05	MESONET	KENNEWICK VISTA FIELD 1.05 INCHES RAIN IN ONE HOUR.
6/26/17 19:00	UMATILLA	PENDLETON	HEAVY RAIN	1.37	ASOS	PENDLETON AIRPORT AUTOMATED SYSTEM RECORDED 1.37 INCHES RAIN IN ONE HOUR.
6/26/17 19:00	UMATILLA	PENDLETON	HEAVY RAIN	1.54	CO-OP OBSERVER	NWS OFFICE AT PENDLETON AIRPORT RECEIVED 1.54 INCHES RAIN IN ONE HOUR.
6/26/17 19:15	BENTON	RICHLAND	FLASH FLOOD	0.00	EMERGENCY MNGR	COLUMBIA PARK TRAIL CLOSED FROM HILLWOOD TO ROCKWOOD DUE TO SIGNIFICANT FLOODING
6/26/17 19:20	UMATILLA	PENDLETON	FLASH FLOOD	0.00	NWS EMPLOYEE	NWS EMPLOYEE OBSERVED DEBRIS ON AIRPORT HILL ROAD AS THE RESULT OF FLASH FLOODING EARLIER IN THE AFTERNOON.



Large hail (1.00" diameter) at the Hancock Field Station... 2 miles ENE of Clarno, OR

June 26th Severe T'storms and Flash Flooding (Cont'd)

- The National Weather Service in Pendleton issued 8 severe t'storm warnings on this day. The average lead time of the warnings was 11 minutes.
- The National Weather Service office in Pendleton also issued 2 flash-flood warnings on this day, with an average lead time of 72 minutes.
- This was the largest severe weather outbreak since 9/5/2013 when 18 warnings were issued in a single day.



Pasco Police Officer Wakeman was monitoring the June 26th lightning storm when a bolt struck near Irrigation Specialists on Fourth Avenue in Pasco near Interstate 182.

Image Courtesy of Pasco Police Dept and Tri-City Herald



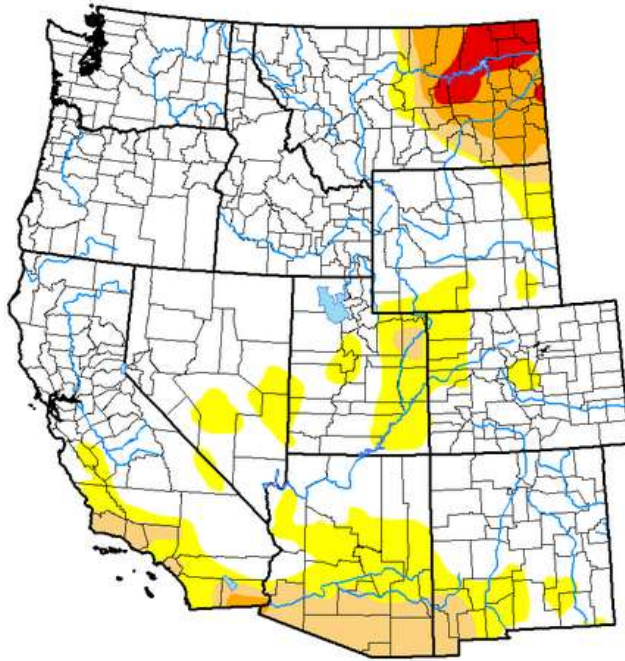
Lightning set fire to a house in the 1400 block of Meadow Hills Drive in Richland, WA on June 26th as a severe storm moved through.
Photo Courtesy: Rick Larson & Tri-City Herald

Drought Ends in Pacific NW

U.S. Drought Monitor West

July 4, 2017
(Released Thursday July 6, 2017)
Valid 8 a.m. EDT

Statistics type: Traditional Percent Area Export table:   








Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current 2017-07-04	75.35	24.65	10.27	4.49	1.60	0.00
Last Week 2017-06-27	79.51	20.49	9.85	3.28	0.84	0.00
3 Months Ago 2017-04-04	81.41	18.59	5.49	0.43	0.00	0.00
Start of Calendar Year 2016-12-27	52.19	47.81	22.47	9.10	5.43	2.44
Start of Water Year 2016-09-27	27.78	72.22	30.95	13.45	5.77	2.81
One Year Ago 2016-07-05	34.60	65.40	28.08	11.08	5.80	2.81

Estimated Population in Drought Areas: **13,261,458**

[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):

David Simeral, Western Regional Climate Center

Download:   

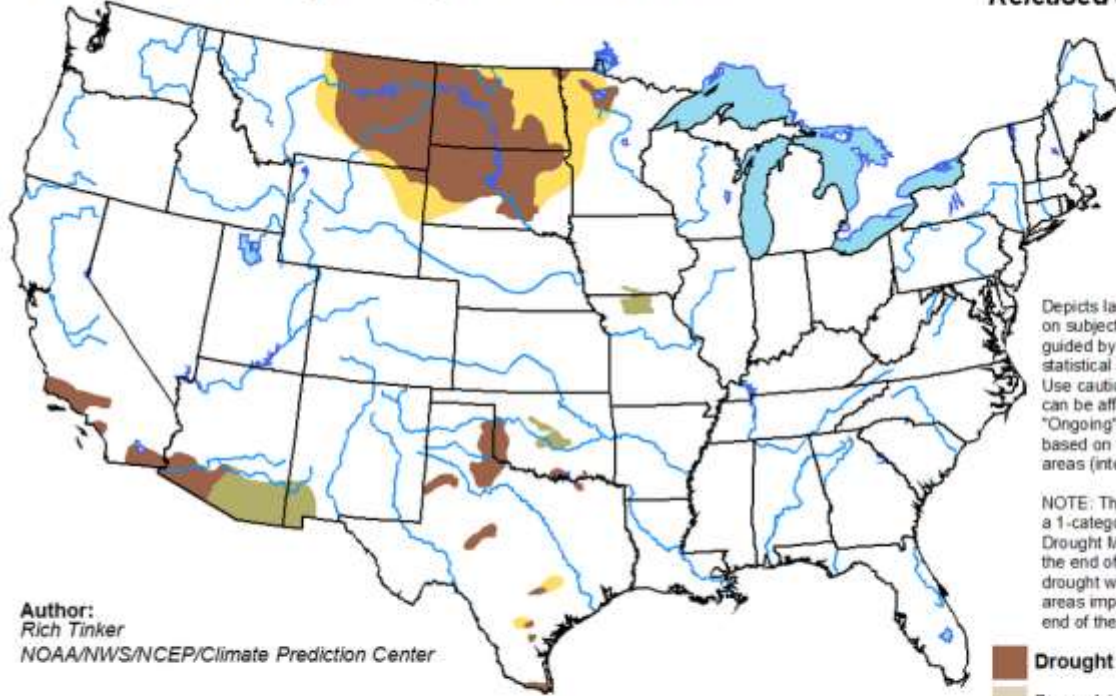
Drought conditions are no longer being reported in either Washington or Oregon at this time. Much of the western US has seen significant improvements since the beginning of the water year. Exceptional drought conditions no longer exists in the western US at this time. However, a small area of extreme drought conditions have now developed in eastern Montana.



Drought Outlook Through July

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





Valid for July 2017
Released June 30, 2017



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:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

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



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



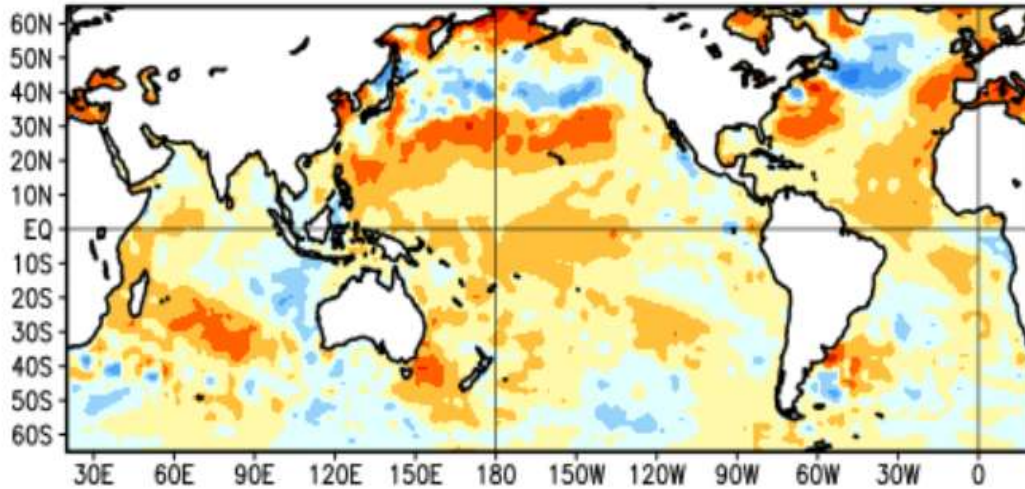
The monthly drought outlook through the end of July from the CPC indicates drought development is not expected in the Northwest. Some mountain snow pack remains in the highest elevations and reservoir levels are near to above normal across our area.



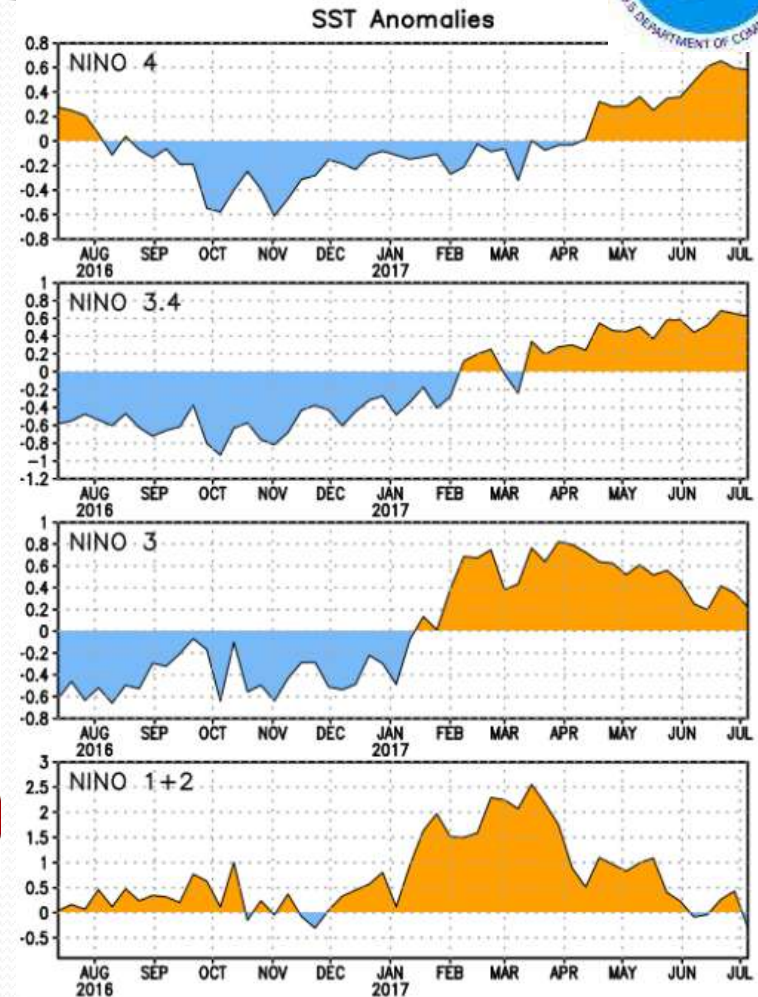
ENSO Neutral Conditions Prevail



Average SST Anomalies
11 JUN 2017 – 8 JUL 2017



-3 -2 -1 -0.5 0 0.5 1 2 3



ENSO neutral conditions are present. Sea Surface Temperatures (SSTs) are near to slightly above average across the central and east-central Pacific. SSTs are above average in the eastern Pacific. ENSO neutral conditions are favored through the summer and fall months.

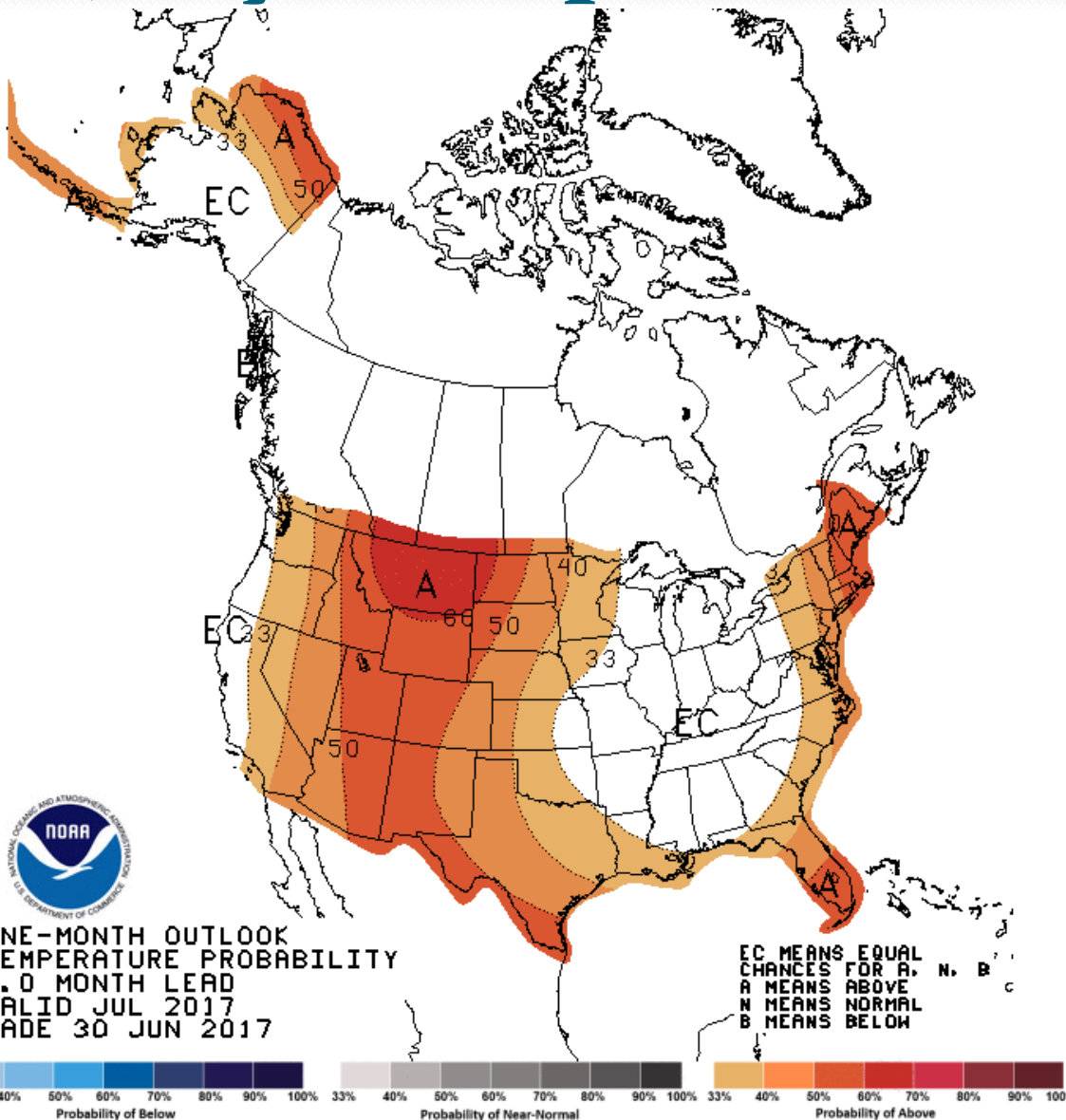


July Outlook

July Temperature Outlook

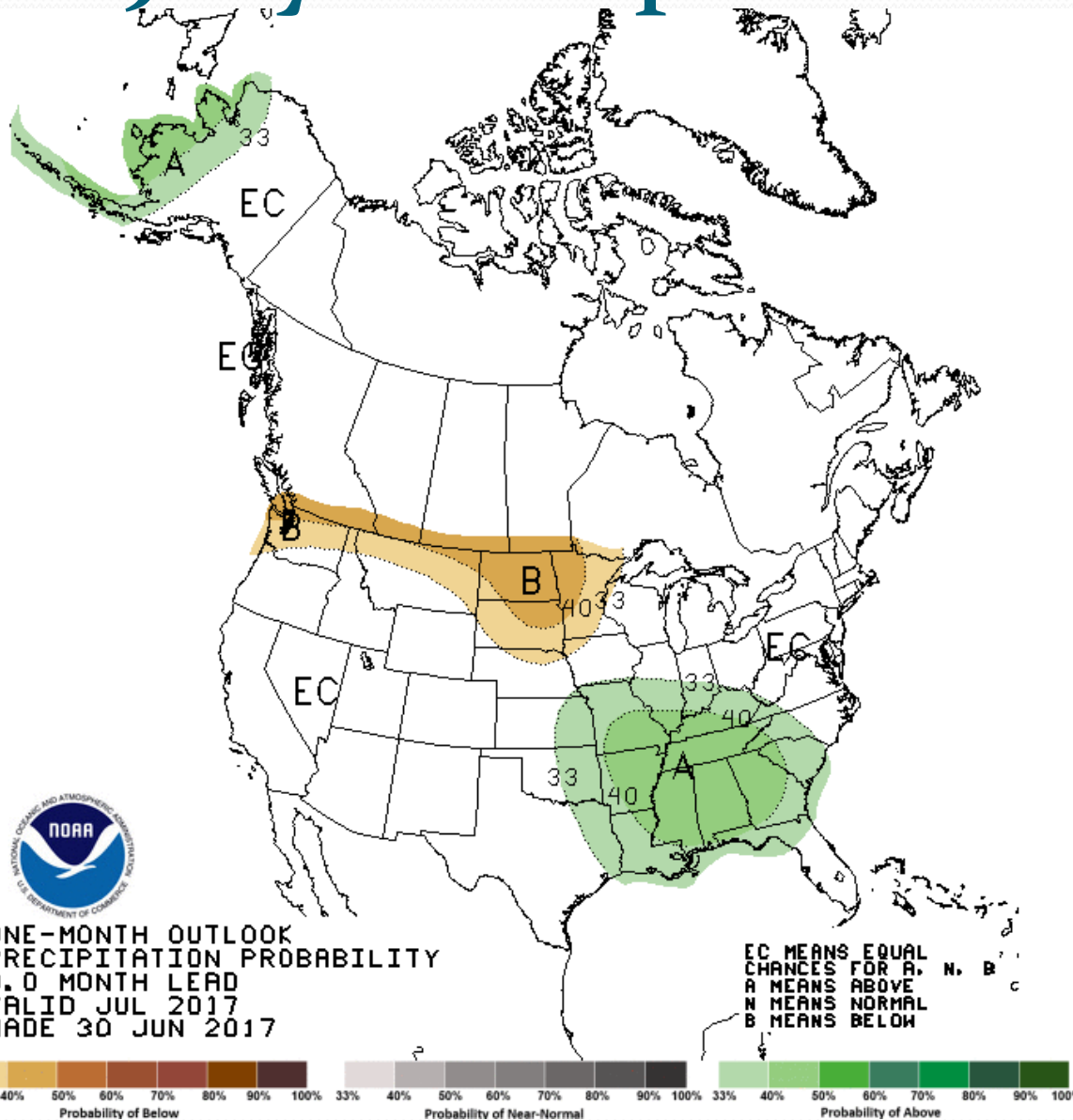
This graphic is issued by the Climate Prediction Center or CPC and is the Temperature Outlook for the month of July. The cool colors indicate a greater chance of below normal temperatures (none) and the warm colors represent a greater chance of above normal temperatures. The time period for the normals runs from 1981-2010.

Odds are tilted slightly toward hotter than average temperatures for the remainder of July across most of the interior Pacific Northwest. The highest probability of above average temperatures will be over Montana through July. There is no where in the US with higher chances of below normal temperatures in July.



ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.0 MONTH LEAD
VALID JUL 2017
MADE 30 JUN 2017

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. There are equal chances for above, below or near normal precipitation amounts over the Pacific Northwest through the month of July. There are greater chance for below normal precipitation across northern Washington, eastward along the Canadian border into Montana and the Northern Plains. There are greater chances of above normal precipitation in the lower Mississippi Valley and Southeast.

NOAA
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 U.S. DEPARTMENT OF COMMERCE
 ONE-MONTH OUTLOOK
 PRECIPITATION PROBABILITY
 0, 0 MONTH LEAD
 VALID JUL 2017
 MADE 30 JUN 2017



Thank You!