

# **The Month In Review**

**July 2018**

National Weather Service  
Pendleton, Oregon

# July, 2018 Climate Summary

The month of July can be summarized as a very hot month on record in Northeast Oregon and Southeast Washington. The temperatures well above average overall during the month. There were probably hotter Julys in the past, but this most recent July was one of the hottest on record since records began. More details for the Month of July will be shown in this presentation. Also, most stations did not report any rain during the month including the Pendleton Airport. This has been one of the driest Julys on record too. The most significant weather concern for this July are the wildfires, including the number and size of wildfires across the forecast area and region. The most significant fire would likely be the Substation Fire in north central Oregon.



**Large towering smoke plume from the Substation Fire.**



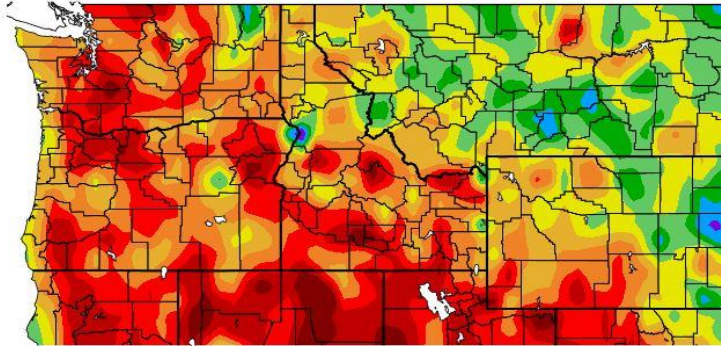
**Flaming front of the Substation Fire in north central Oregon.**



**Very dry vegetation which cured already by the end of June and continued into July.**

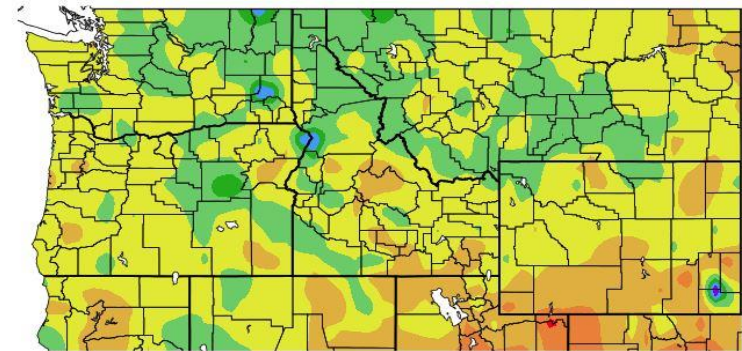
# July 2018 Departure from Normal Temperatures

Departure from Normal Temperature (F)  
7/1/2018 – 7/31/2018



Departure from normal for July, 2018

Departure from Normal Temperature (F)  
6/1/2018 – 6/30/2018



Generated 8/6/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

Generated 7/2/2018 at HPRCC using provisional data.

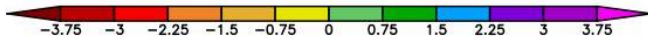
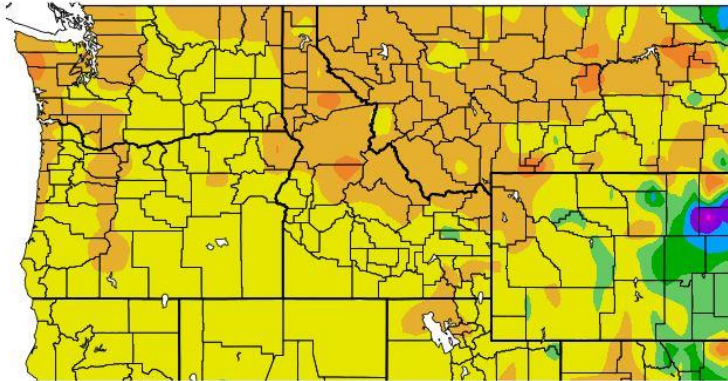
NOAA Regional Climate Centers

Departure from normal for June, 2018

**The images above show a comparison of the departure from normal for July vs. June, 2018. As the images show, July (upper left) was significantly warmer than normal than for June (lower right) for Oregon and Washington.**

# July 2018 Departure from Normal Precipitation

Departure from Normal Precipitation (in)  
7/1/2018 – 7/31/2018

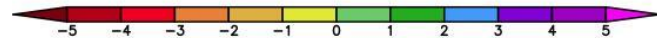
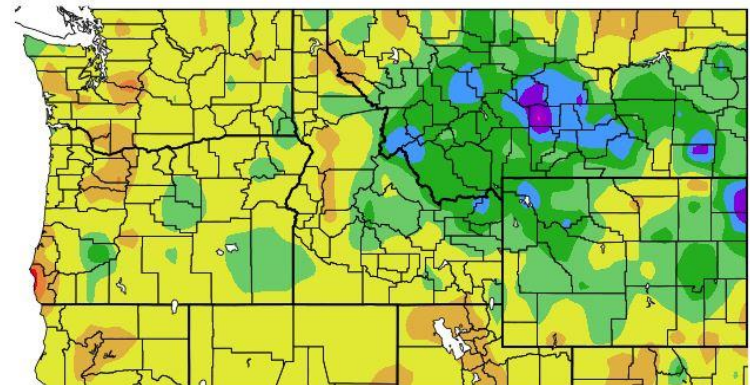


Generated 8/6/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from normal precipitation for July

Departure from Normal Precipitation (in)  
6/1/2018 – 6/30/2018



Generated 7/2/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from normal precipitation for June

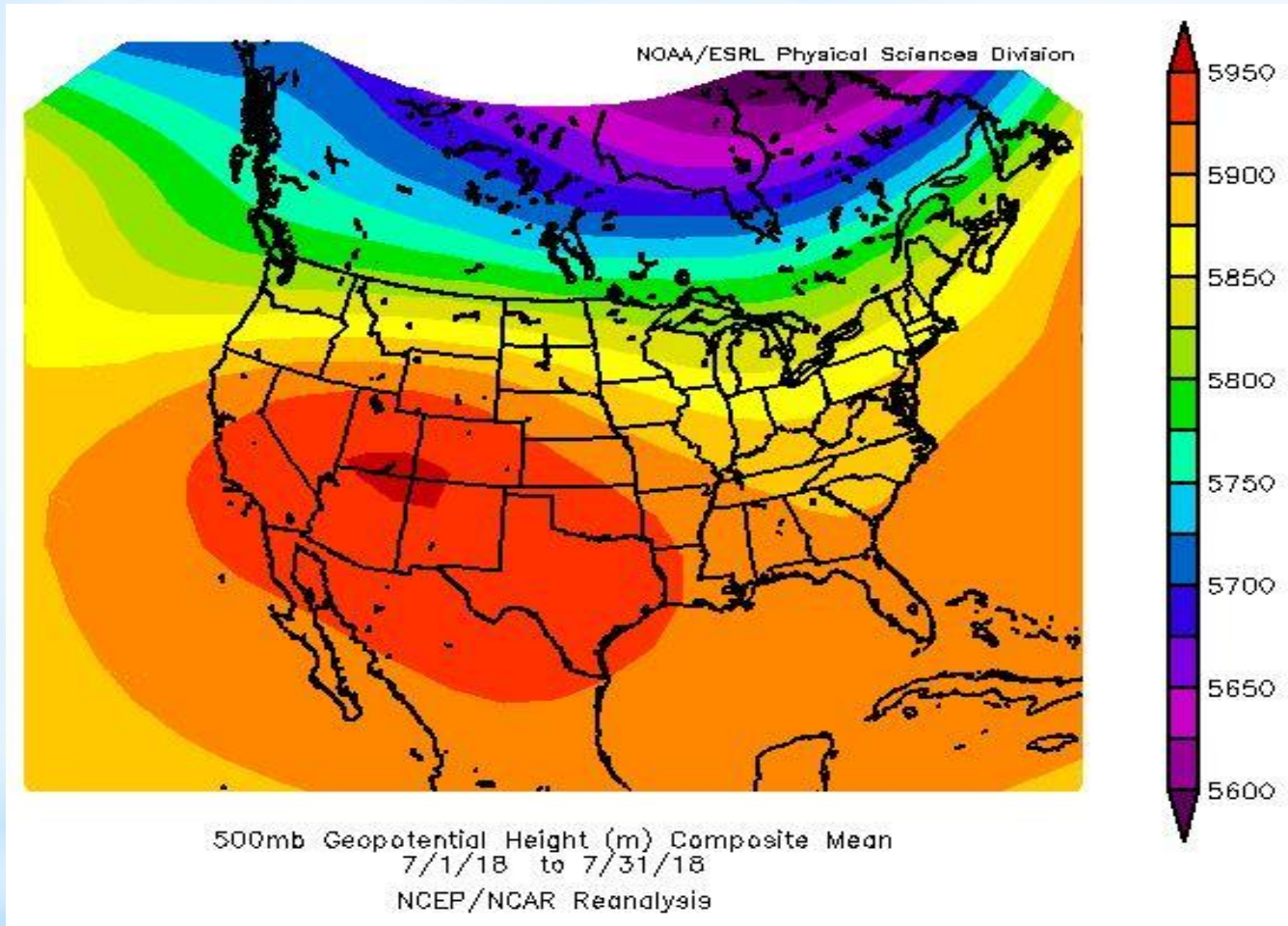
**The above images show a comparison of July vs. June 2018 precipitation departure. July was only a little bit drier than June. June was near normal while July was below normal.**

# July 2018 Departures from normal for select cites

	Max T	Max T D	Min T	Min T D	Ave T	Ave T D	PCPN	PCPN D
Yakima	95.2	7.3	55.6	2.3	74.2	3.6	0.00	-0.22
Kennewick	94.1	3.8	62.8	1.1	78.5	2.5	0.00	-0.22
Walla Walla	94.0	4.8	64.1	3.2	79.0	4.0	0.00	-0.59
The Dalles	94.6	7.1	62.6	2.2	78.6	4.6	0.00	-0.16
Redmond	92.4	6.8	48.9	2.7	70.7	4.8	Trace	-0.53
Pendleton Airport	92.9	4.9	58.3	1.1	75.6	3.0	0.00	-0.32
La Grande	92.3	6.9	54.1	0.3	73.2	3.6	0.00	-0.68

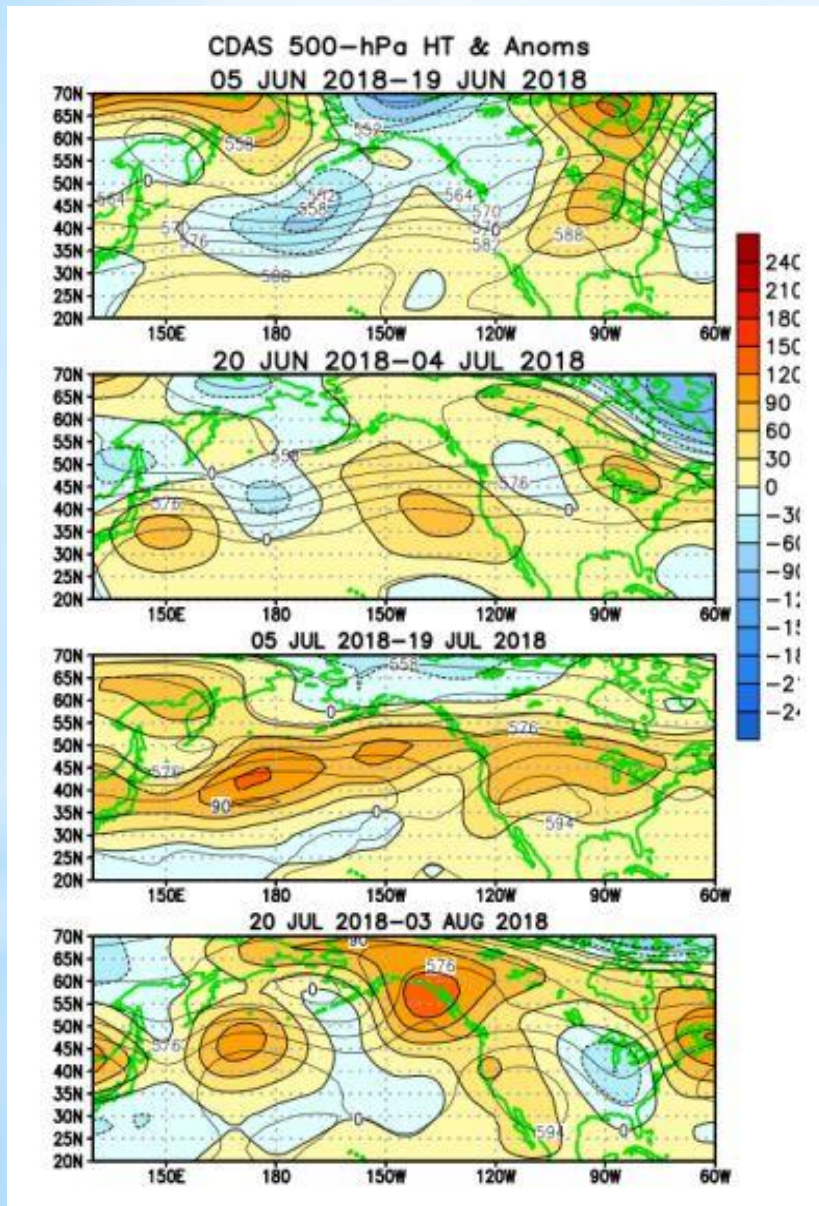
The data above shows that ALL locations had higher than normal temperatures and below normal precipitation (except a trace at Redmond, OR). In comparison with June, July had more widespread above normal temperatures and no precipitation (except for a trace at Redmond, OR). The hot and dry conditions led to the vegetation to cure early and allow more fire starts earlier in the season.

# July 2018 Average 500 MB Weather Pattern



The image above shows a mean upper high pressure center over the Four Corners region of the USA with the ridge extending into the Pacific Northwest while the eastern USA had a mean upper trough. This has resulted in warmer and drier conditions for the month in the Pacific Northwest and Forecast Area.

# More Detailed 500 MB Plots for June & July, 2018



These graphics shows roughly a bi-weekly comparison of the 500 MB weather patterns beginning on June 5<sup>th</sup> and ending on August 3<sup>rd</sup>. This represents generally June and July, 2018 bi-weekly comparisons. Land boundaries are in green.

In the first image there was a weak trough over the western USA with a much stronger trough over the central and eastern USA. The second image shows a zonal flow over most of the USA. In the last two images, which comprise most of July there was a stronger upper ridge over the western USA and a trough over the eastern USA. This has resulted in a drier than normal first part of June, followed by a near normal last part of June. In July (the last two images) there was a stronger upper ridge over the western USA which resulted in a much hotter and drier period (July 5<sup>th</sup> through August 3<sup>rd</sup>).

# Significant Weather Events, Record Temperatures and Some Significant Wildfires for July, 2018 to the Present Time

During the month of July, 2018, there were not any significant thunderstorms or other weather events which required a Local Storm Report (LSR). However, there were some record temperatures reached or tied. All of the record temperatures occurred on the 15<sup>th</sup> of July or later. The tables below shows a list of the records that were either tied or broken, and also some significant wildfires and acreage that occurred or are still active in the forecast area.

## Record Temperatures

STATION	PREVIOUS RECORD RECORD / YEAR	NEW RECORD	RECORDS BEGAN
JULY 15TH, 2018			
THE DALLES, OR	102 / 1984	105 / 2018	1929
JULY 29, 2018			
THE DALLES, OR	107 / 2003	107 (TIED)	1929
HERMISTON, OR	107 / 1958	107 (TIED)	1906
ELLENSBURG, WA	102 / 2014	102 (TIED)	1934
JULY 31, 2018			
HERMISTON, OR	104 / 2015	104 (TIED)	1906

## Some Significant Wildfires

Wildfires	Size (Acres)
Substation Fire	Over 75,000
South Valley Fire	20,026
Mile Post 90 Fire	14,500
Long hollow Fire	33,451
Wilson Prarie Fire	405
Miriam Fire	12,000



# July, 2018 Observed Monthly Max & Min Temperatures

Location	Highest Maximum Temperature	Lowest Minimum Temperature
Pendleton, OR	103	48
Redmond, OR	101	33
Pasco, WA	107	49
Yakima, WA	103	46
Walla Walla, WA	106	54
Bend, OR	97	34
Ellensburg, WA	105	44
Hermiston, OR	107	48
John Day, OR	98	38
La Grande, OR	99	43
The Dalles, OR	107	54
MT Adams RS, WA	99	41

**Most stations had maximum temperatures over 100 degrees, but a cool night.**

# July 2018, Monthly Total Precipitation and Snowfall Totals

Location	Total Monthly Precip	Total Snowfall
Pendleton, OR	0.00	0
Redmond, OR	Trace	0
Pasco, WA	0.00	0
Yakima, WA	0.00	0
Walla Walla, WA	0.00	0
Bend, OR	0.00	0
Ellensburg, WA	Trace	0
Hermiston, OR	0.00	0
John Day, OR	0.10	0
La Grande, OR	0.00	0
The Dalles, OR	0.00	0
Mt Adams RS, WA	0.00	0

**Most stations reported no rain or snow (hail) for the month, except for a trace of rain at Redmond, OR, and Ellensburg, WA, and only a tenth of an inch at John Day, OR.**

# End of July, 2018 - Current Drought Monitor

## U.S. Drought Monitor West

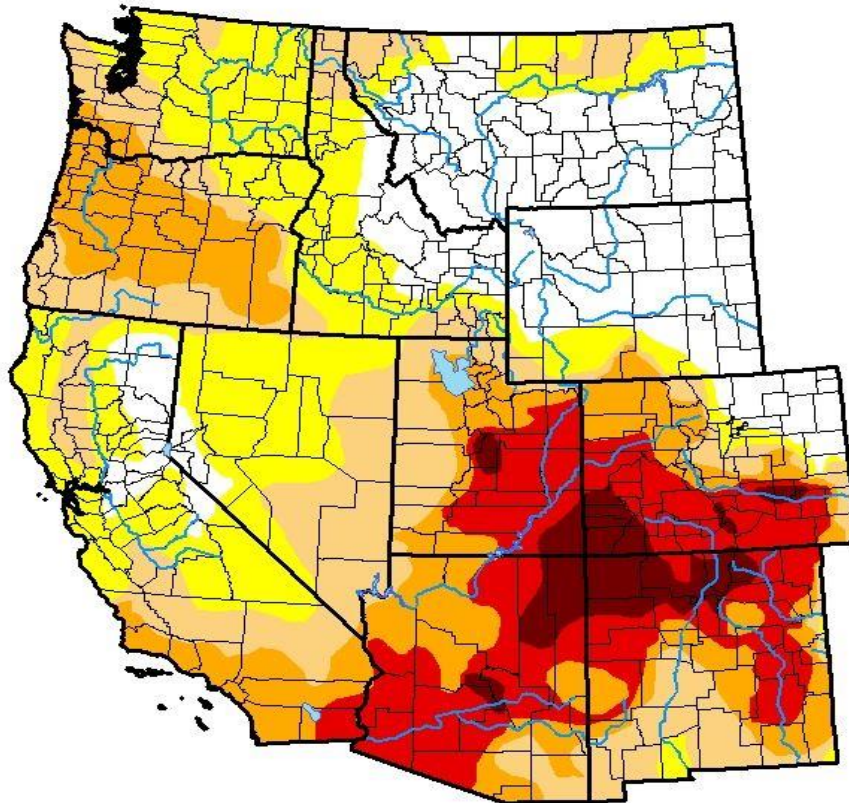
**July 31, 2018**

(Released Thursday, Aug. 2, 2018)

Valid 8 a.m. EDT

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	22.11	77.89	54.85	34.72	17.47	4.02
<b>Last Week</b> <i>07-24-2018</i>	25.32	74.68	52.28	35.57	18.72	4.04
<b>3 Months Ago</b> <i>05-01-2018</i>	39.20	60.80	43.89	28.30	15.50	2.72
<b>Start of Calendar Year</b> <i>01-02-2018</i>	48.76	51.24	29.03	8.60	1.52	0.00
<b>Start of Water Year</b> <i>09-26-2017</i>	55.72	44.28	21.01	8.72	5.30	2.17
<b>One Year Ago</b> <i>08-01-2017</i>	65.88	34.12	9.67	4.94	3.11	1.47



Intensity:



*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.*

Author:

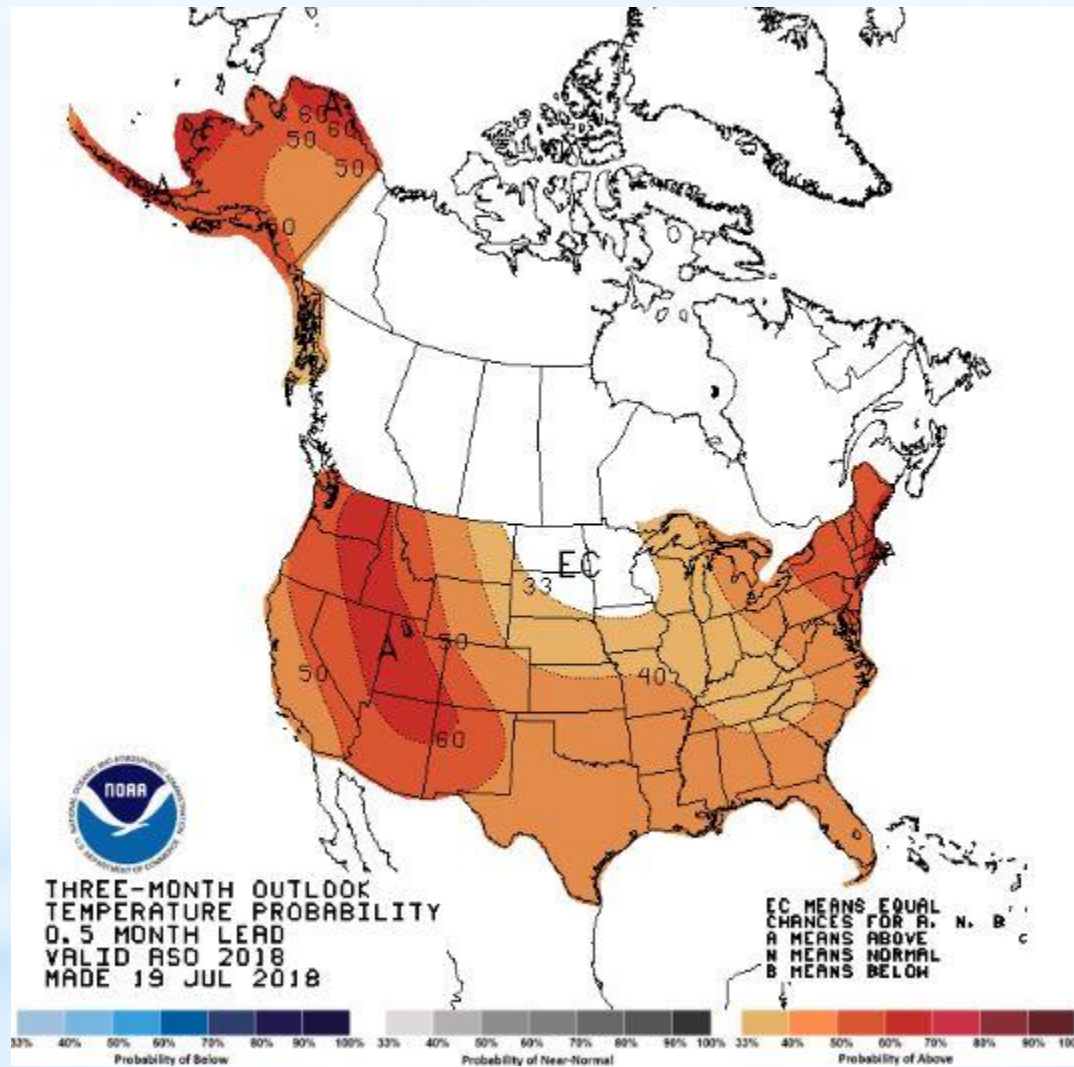
Chris Fenimore  
NCEI/NESDIS/NOAA



<http://droughtmonitor.unl.edu/>

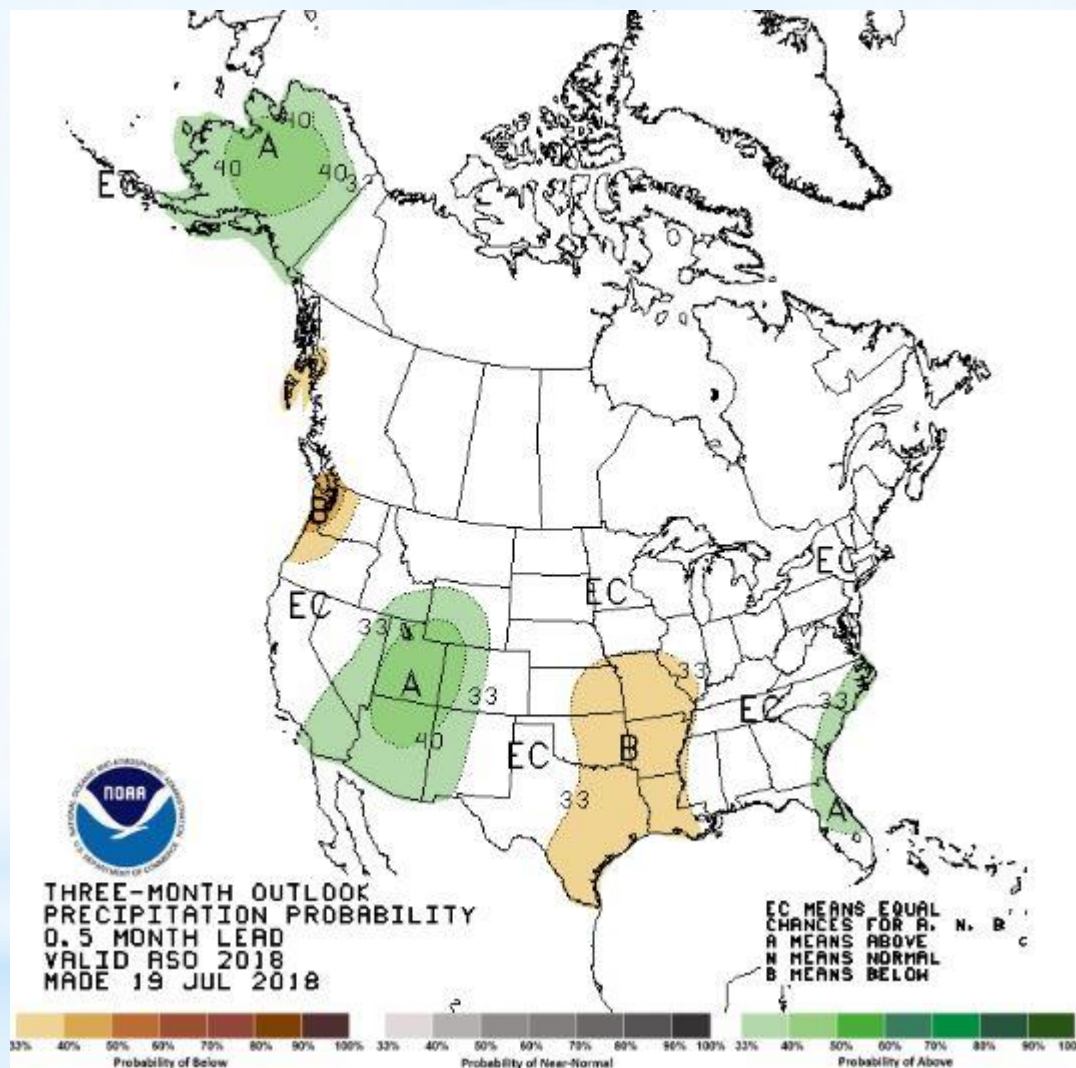
At the end of July (July 31, 2018) the northern and northeast portion of the Forecast Area was abnormally to moderately dry (D0 – D1). The southern and southwest portion of the Forecast Area was in a severe drought (D2).

# USA Three Month Temperature Outlook (August, September & October)



The temperature outlook for the next three months shows much above normal temperatures for most of the Forecast Area.

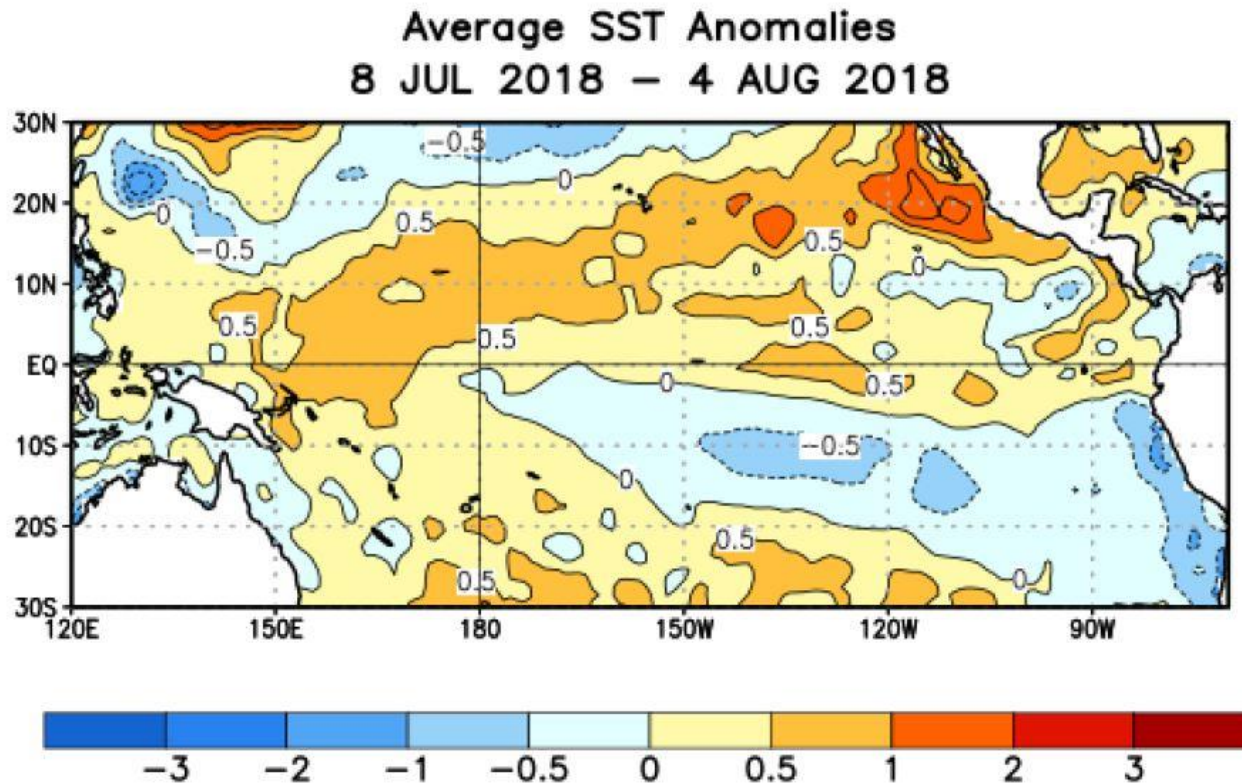
# USA Three Month Precipitation Outlook (August, September & October)



The precipitation outlook for the next three months shows most of the Forecast Area to have equal chances of either above or below normal Precipitation.

## SST Departures (°C) in the Tropical Pacific During the Last Four Weeks

During the last four weeks, equatorial SSTs were near-to-above average across most of the Pacific Ocean. SSTs were below average along the South American coast.





**Thank You!**