

A vibrant rainbow arches across a dark, stormy sky above a flat landscape. In the foreground, there are several industrial buildings and a runway. The scene is captured during a storm, with heavy clouds and a bright rainbow. The text "The Month In Review" is overlaid in yellow, serif font, centered in the upper half of the image. Below it, "May 2018" is also overlaid in yellow, serif font, centered. In the bottom right corner, "National Weather Service Pendleton, Oregon" is overlaid in yellow, sans-serif font.

The Month In Review

May 2018

National Weather Service
Pendleton, Oregon

May, 2018 Climate Summary

The month of May, 2018 has been one of the warmest months of May ever. For example the average temperature at the Pendleton Airport (NWS station) was 63.7 degrees, which is 5.8 degrees above normal. The average high temperature for this past May was 77.5 degrees. The normal high temperature is in the 60s at the beginning of the month to the lower 70s at the end of the month. There were a couple of thunderstorm events in which a significant weather statement or a Severe Thunderstorm Warning was needed. However, there have been more active months of May in previous years for thunderstorm events. Below are some photographs that represent weather conditions during the month.



Thunderstorms already developing at 6 AM



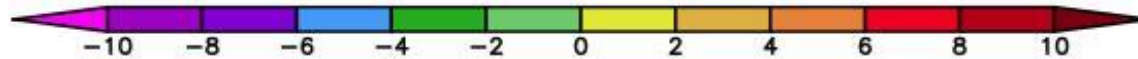
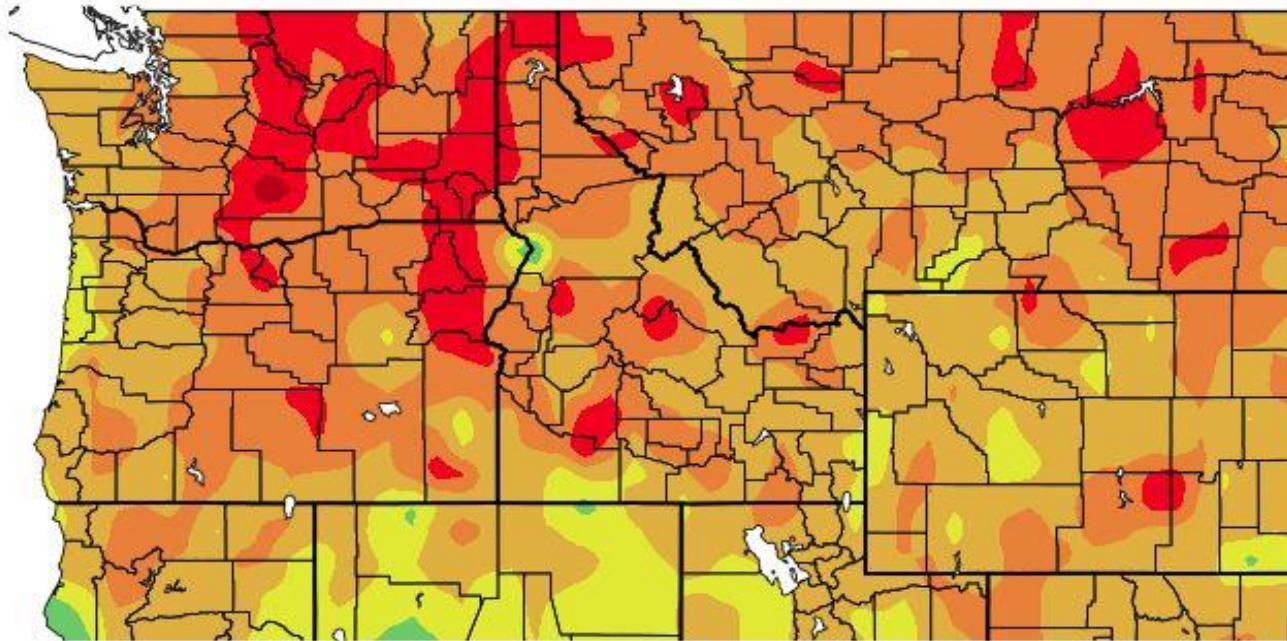
A severe thunderstorm moving into the area



Cloud to ground lightning near Pendleton

May 2018 Departure from Normal Temperatures

Departure from Normal Temperature (F)
5/1/2018 – 5/31/2018



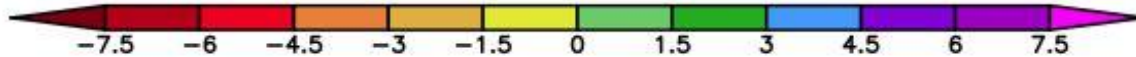
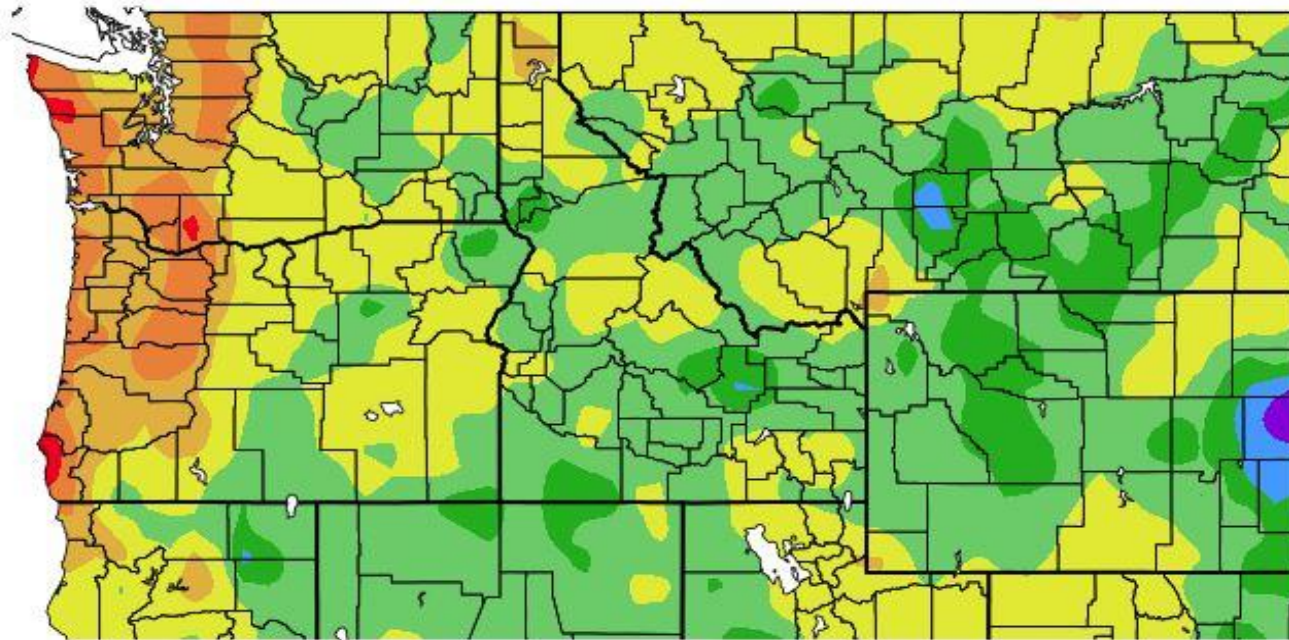
Generated 6/2/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

As the map shows, the Pacific Northwest and CWA had much above normal high temperatures as shown by the orange and red on the map.

May 2018 Departure from Normal Precipitation

Departure from Normal Precipitation (in)
5/1/2018 – 5/31/2018



Generated 6/2/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

As the map shows, the Pacific Northwest and CWA had near to slightly below normal precipitation for the month. However, the data in the next slide shows below normal Precipitation for the select cities shown.

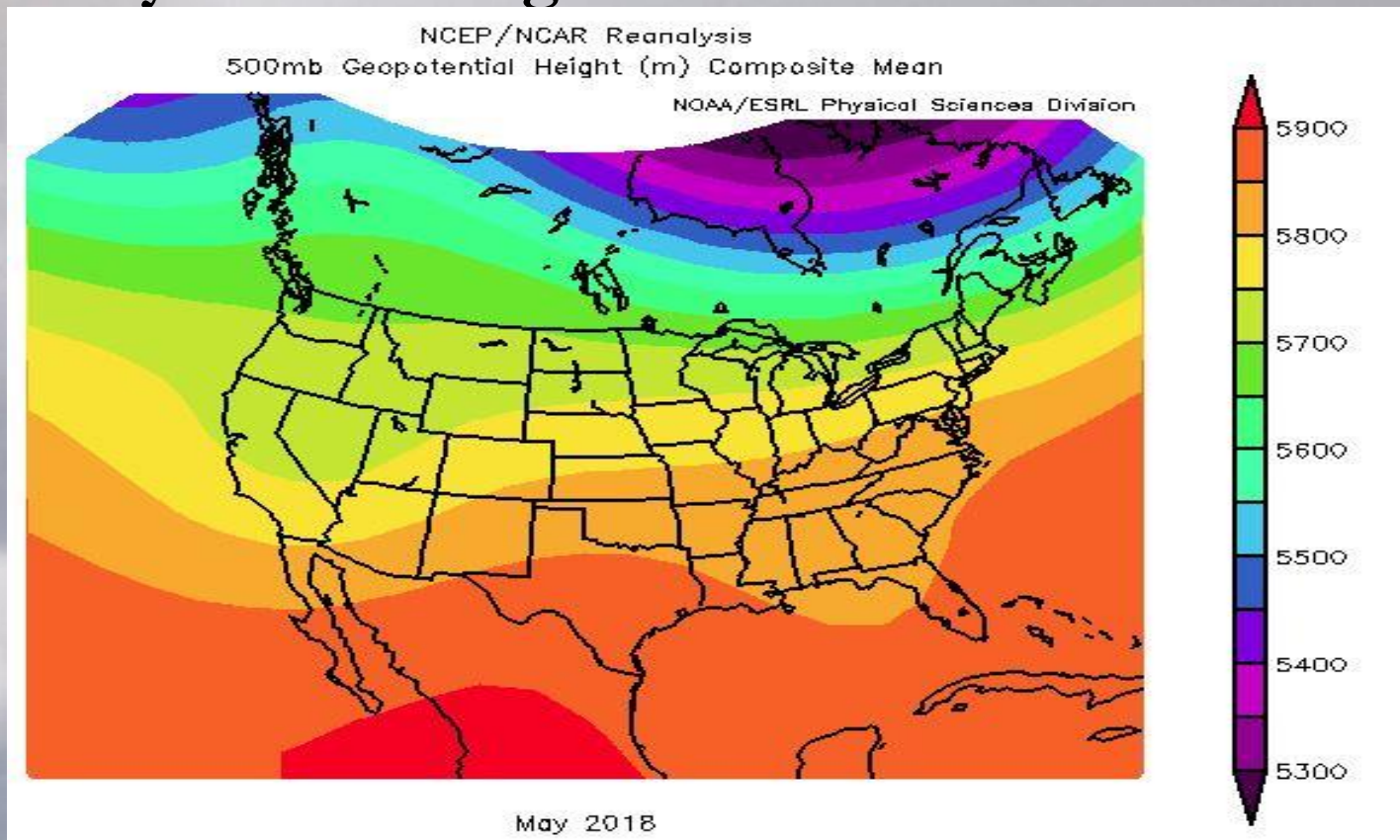
May, 2018 Averages and Departures of Temperatures and Precipitation for Select Cities

	Max T	Max T Dep	Min T	Min T Dep	Ave T	Ave T Dep	PCPN	PCPN Dep
Yakima	81.2	8.8	51.3	9.4	66.3	9.2	0.13	-0.45
Kennewick	80.5	6.0	55.2	5.7	67.9	5.9	0.58	-0.06
Walla Walla	76.6	6.2	54.8	6.5	65.7	6.3	0.77	-1.36
The Dalles	79.6	6.7	51.7	3.1	65.7	4.9	0.40	-0.29
Redmond	75.1	7.6	41.5	6.1	58.3	6.9	0.93	-0.10
Pendleton Airport	77.5	7.5	49.8	4.2	63.6	5.8	0.65	-0.70
La Grande	74.7	8.0	47.4	5.3	61.1	6.7	1.02	-0.97

The data above shows that the average maximum, minimum and mean temperatures were significantly above normal for the month by as much as +9.4 degrees at Yakima, WA. However, the Average precipitation were all below normal for the month by as much as -1.36 inches at Walla Walla, WA.

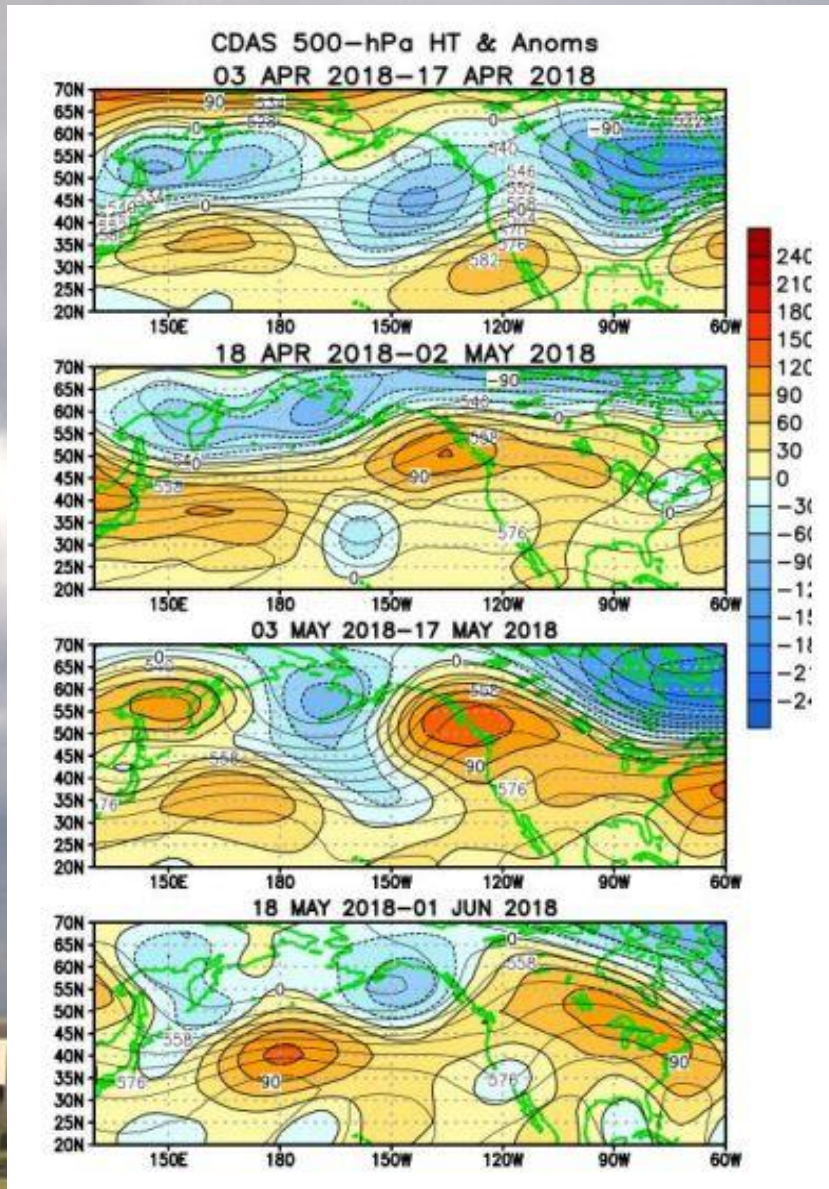


May 2018 Average 500 MB Weather Pattern



This image shows an overall trough over the western USA for the month of May, 2018. Despite the warmer than average temperatures shown in previous slides/tables the mean trough over the western USA would suggest a cooler and wetter than normal month. May 2018 was indeed drier than average which means there were likely less cloudy days. Less cloudy days have resulted in more warmer days with a few much warmer days which made the average temperatures warmer than normal overall, despite the trough over the western USA. On the other hand, there was an overall ridge pattern over western Canada with the Pacific Northwest actually being in the middle of a split flow pattern.

Detailed 500 MB Analysis for April & May, 2018



This graphic shows a comparison of detailed 15 day sets of mean 500 MB analysis and anomalies for the period April and May, 2018. Land boundaries are in green.

Every single plot in this 4 set of detailed 500 mb plots shows an upper ridge over the Pacific Northwest. This would indeed result in a warmer than normal period, while the previous slide of the average 500 mb plot pattern for the month shows an average of a trough or a split flow over the Pacific Northwest. There were only a few thunderstorm events which could have been the cause of why May, 2018 was drier than normal and warmer than normal overall.

Significant Weather Events for May, 2018

During the month of May, 2018, the primary weather hazards were thunderstorms, some of which were strong to severe. These are some Local Storm Reports (LSRs) of severe thunderstorm events for May, 2018.

PRELIMINARY LOCAL STORM REPORT					
NATIONAL WEATHER SERVICE PENDLETON OR					
755 PM PDT TUE MAY 8 2018					
..TIME...	...EVENT...	...CITY LOCATION...	...LAT.LON...	..DATE...	...MAG....
..DATE...	...MAG....	..COUNTY LOCATION..	..ST..	...SOURCE....	..REMARKS..
0718 PM	TSTM WND GST	HERMISTON	45.83N 119.28W	05/08/2018	M53.00 MPH
		UMATILLA	OR	ASOS	
0737 PM	TSTM WND GST	PENDLETON	45.67N 118.82W	05/08/2018	M62.00 MPH
		UMATILLA	OR	ASOS	
0753 PM	TSTM WND GST	4 W ADAMS	45.77N 118.65W	05/08/2018	M63 MPH
		UMATILLA	OR	MESONET	
0802 PM	TSTM WND GST	HELIX	45.85N 118.66W	05/08/2018	M53.00 MPH
		UMATILLA	OR	MESONET	
0825 PM	TSTM WND GST	4 WSW COLLEGE PLACE	46.03N 118.46W	05/08/2018	M55.00 MPH
		WALLA WALLA	WA	MESONET	

The primary hazard in May were hail and strong thunderstorm winds. On May 8th, a severe thunderstorm moved across the Lower Columbia Basin and the Blue Mountain Foothills.



Heavy rain, strong winds and Blowing dust with severe Thunderstorm on May 8th, 2018.

Significant Weather Events for May, 2018

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On May 5th, 8th, and 16th as shown on the left were reports of significant thunderstorm events. The primary hazard on these dates were hail and strong thunderstorm winds.



0232 PM HAIL E SENECA 44.14N 118.97W
05/06/2018 E0.50 INCH GRANT OR TRAINED SPOTTER

0357 PM HAIL 9 NW TERREBONNE 44.44N 121.30W
05/08/2018 M0.88 INCH JEFFERSON OR TRAINED SPOTTER

DIME TO NICKLE SIZED HAIL.

0400 PM HAIL 2 NNE MADRAS 44.66N 121.11W
05/08/2018 M0.50 INCH JEFFERSON OR TRAINED SPOTTER

0410 PM HAIL MADRAS 44.63N 121.13W
05/08/2018 E0.25 INCH JEFFERSON OR LAW ENFORCEMENT

DESCHUTES COUNTY SHERIFF WAS ON SOUTH SIDE OF MADRAS ON HIGHWAY 97. TRAFFIC STOPPED DUE TO HAIL AND TORRENTIAL RAIN. VISIBILITY LESS THAN 1/4 MILE IN STORM. WIND GUSTS TO 40 MPH.

0740 PM TSTM WND DMG 1 E THORN HOLLOW 45.68N 118.44W
05/08/2018 UMATILLA OR TRAINED SPOTTER

DOWNED TREE BRANCHES AT SEVERAL LOCATIONS EAST OF CAYUSE. LARGEST BRANCHES WERE 6 TO 10 INCHES IN DIAMETER. SEVERAL POWER OUTAGES.

0302 PM HEAVY RAIN SKI BLUEWOOD 46.08N 117.84W
05/16/2018 M0.81 INCH COLUMBIA WA PUBLIC

0.52 INCH OF RAIN SINCE 11 AM. 0.81 INCH OF RAIN SINCE MIDNIGHT. NO FLOODING OBSERVED BUT CREEKS RUNNING HIGH. A LITTLE OVER 30 INCHES OF SNOW REMAIN ON THE TOP OF SKI BLUEWOOD.

Significant Weather Events for May, 2018

During the month of May, 2018, the primary weather hazards were thunderstorms, some of which were strong to severe. These are Local Storm Reports of severe thunderstorm events for the month of May, 2018.

1140 AM	FUNNEL CLOUD	3 NNW SENECA	44.17N 119.00W
05/20/2018	GRANT	OR	PUBLIC
FROM SOUTHBOUND HWY 395, NORTH OF SENECA, OBSERVED BRIEF FUNNEL CLOUD FROM THUNDERSTORM LASTED 3-4 MINUTES. ALSO GOT HEAVY RAIN AND PEA SIZED HAIL.			
0412 PM	HEAVY RAIN	COVE	45.30N 117.81W
05/22/2018	M0.58 INCH	UNION	OR CO-OP OBSERVER
DURATION ONE HOUR.			
1140 AM	FLASH FLOOD	1 SSE BEND	44.06N 121.31W
05/25/2018	DESCHUTES	OR	LAW ENFORCEMENT
FRANKLIN AVENUE UNDERPASS CLOSED AT US-97 DUE TO WATER OVER THE ROAD			
1053 PM	HEAVY RAIN	9 S IMNAHA	45.43N 116.84W
05/25/2018	M0.87 INCH	WALLOWA	OR MESONET
DURATION 1 1/2 HOURS. CWOP C6808			
1053 PM	HEAVY RAIN	1 NE COVE	45.31N 117.80W
05/25/2018	M0.96 INCH	UNION	OR MESONET
DURATION 2 HOURS. CWOP E3064			
..TIME...	..EVENT...	..CITY LOCATION...	..LAT.LON...
..DATE...	..MAG....	..COUNTY LOCATION..ST..	..SOURCE....
..REMARKS..			
1035 PM	FLASH FLOOD	15 E JOSEPH	45.35N 116.92W
05/25/2018	WALLOWA	OR	DEPT OF HIGHWAYS
A ROCKSLIDE CAUSED BY HEAVY RAINFALL CLOSED THE IMNAHA HIGHWAY,HIGHWAY 350 AT MP 14 THROUGH 20 FRIDAY EVENING. THE CLEANUP CONTINUES AS CREWS HAVE BEEN WORKING TO OPEN THE HIGHWAY.			

On May 20th, 22nd, and 25th the primary hazards were heavy rain and/or flash Flooding.



May, 2018 Observed Monthly Max & Min Temperatures

Location	Highest Maximum Temperature	Lowest Minimum Temperature
Pendleton, OR	90	40
Redmond, OR	87	26
Pasco, WA	92	42
Yakima, WA	92	40
Walla Walla, WA	88	45
Bend, OR	80	28
Ellensburg, WA	91	38
Hermiston, OR	94	37
John Day, OR	83	28
La Grande, OR	84	36
The Dalles, OR	94	41
MT Adams RS, WA	83	31

May 2018, Monthly Total Precipitation and Snowfall Totals

Location	Total Monthly Precip	Total Snowfall
Pendleton, OR	0.65	0
Redmond, OR	0.93	0
Pasco, WA	0.76	0
Yakima, WA	0.13	0
Walla Walla, WA	0.77	0
Bend, OR	0.53	0
Ellensburg, WA	0.45	M
Hermiston, OR	0.91	0
John Day, OR	1.62	M
La Grande, OR	2.52	0
The Dalles, OR	0.02	M
Mt Adams RS, WA	0.30	0

End of May, 2018 - Current Drought Monitor

U.S. Drought Monitor West

May 29, 2018

(Released Thursday, May. 31, 2018)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	39.22	60.78	44.05	31.50	18.83	4.35
Last Week <i>05-22-2018</i>	39.37	60.63	44.60	31.61	18.83	4.56
3 Months Ago <i>02-27-2018</i>	28.13	71.87	45.57	25.09	3.01	0.00
Start of Calendar Year <i>01-02-2018</i>	48.76	51.24	29.03	8.60	1.52	0.00
Start of Water Year <i>09-26-2017</i>	55.72	44.28	21.01	8.72	5.30	2.17
One Year Ago <i>05-30-2017</i>	82.62	17.38	4.46	0.16	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

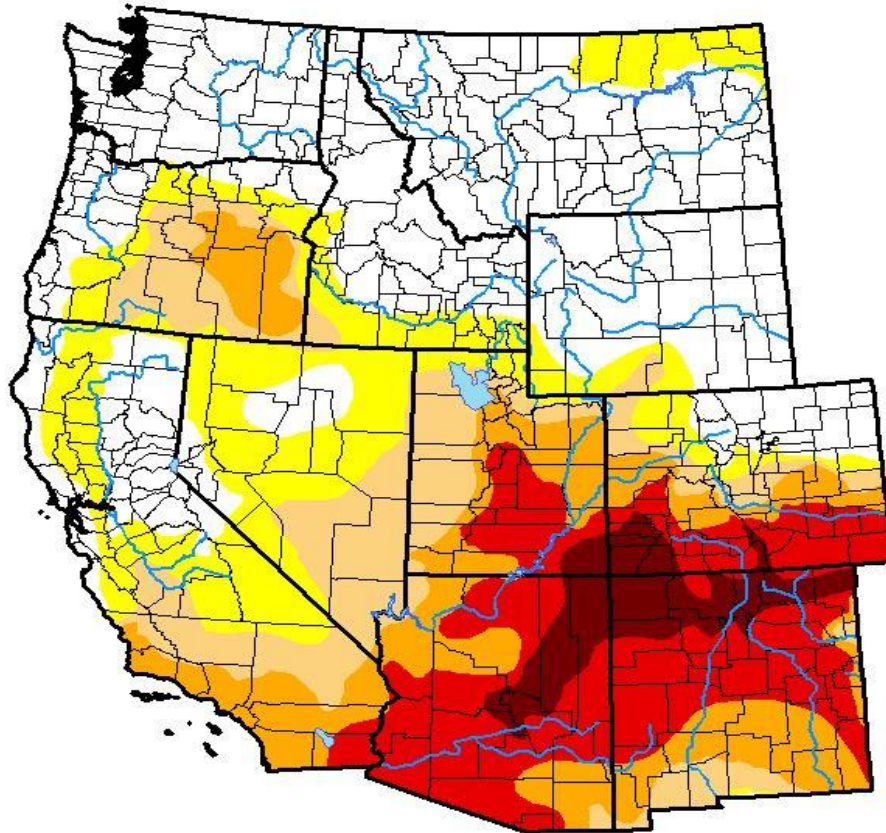
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Anthony Artusa
NOAA/NWS/NCEP/CPC

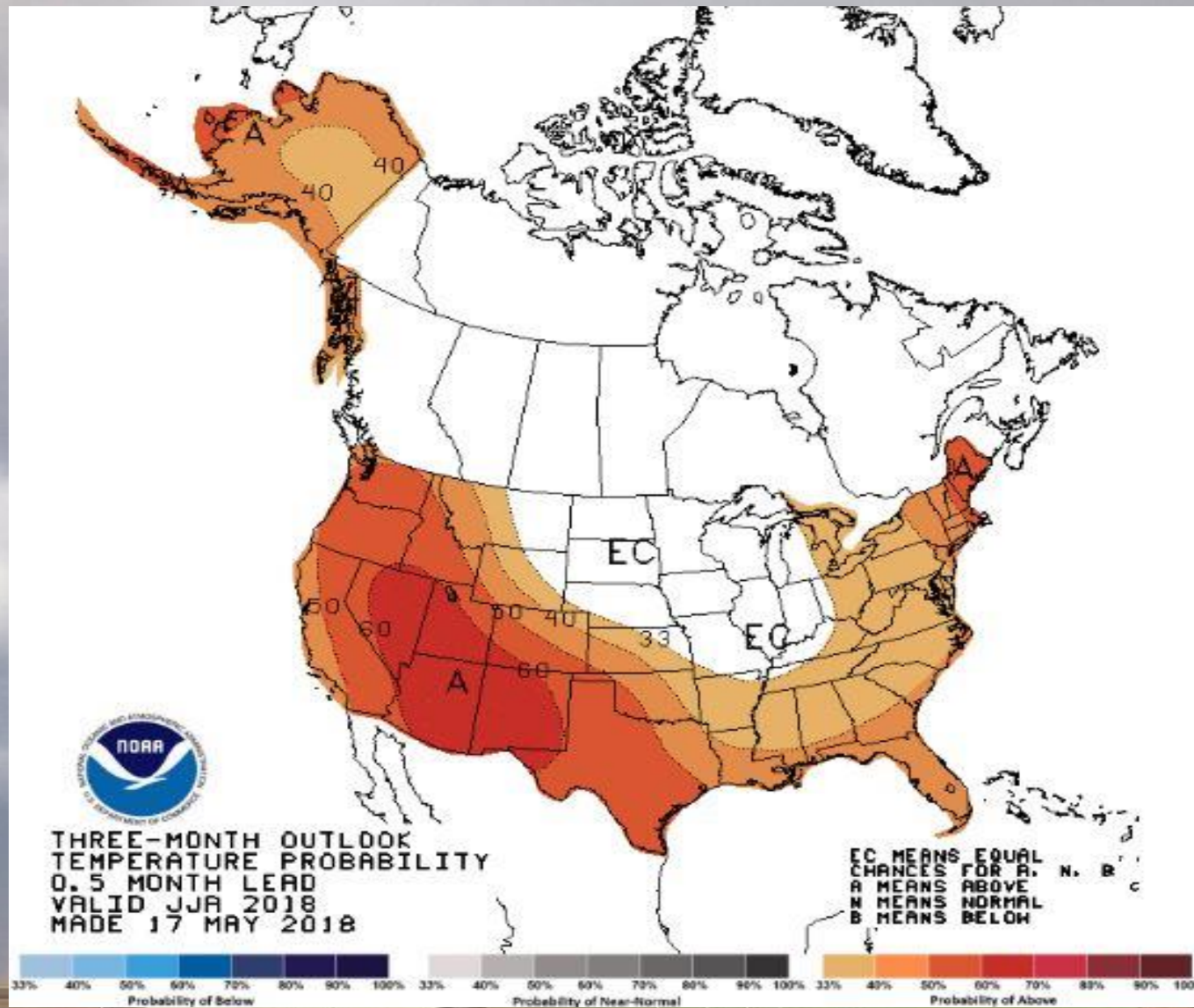


<http://droughtmonitor.unl.edu/>



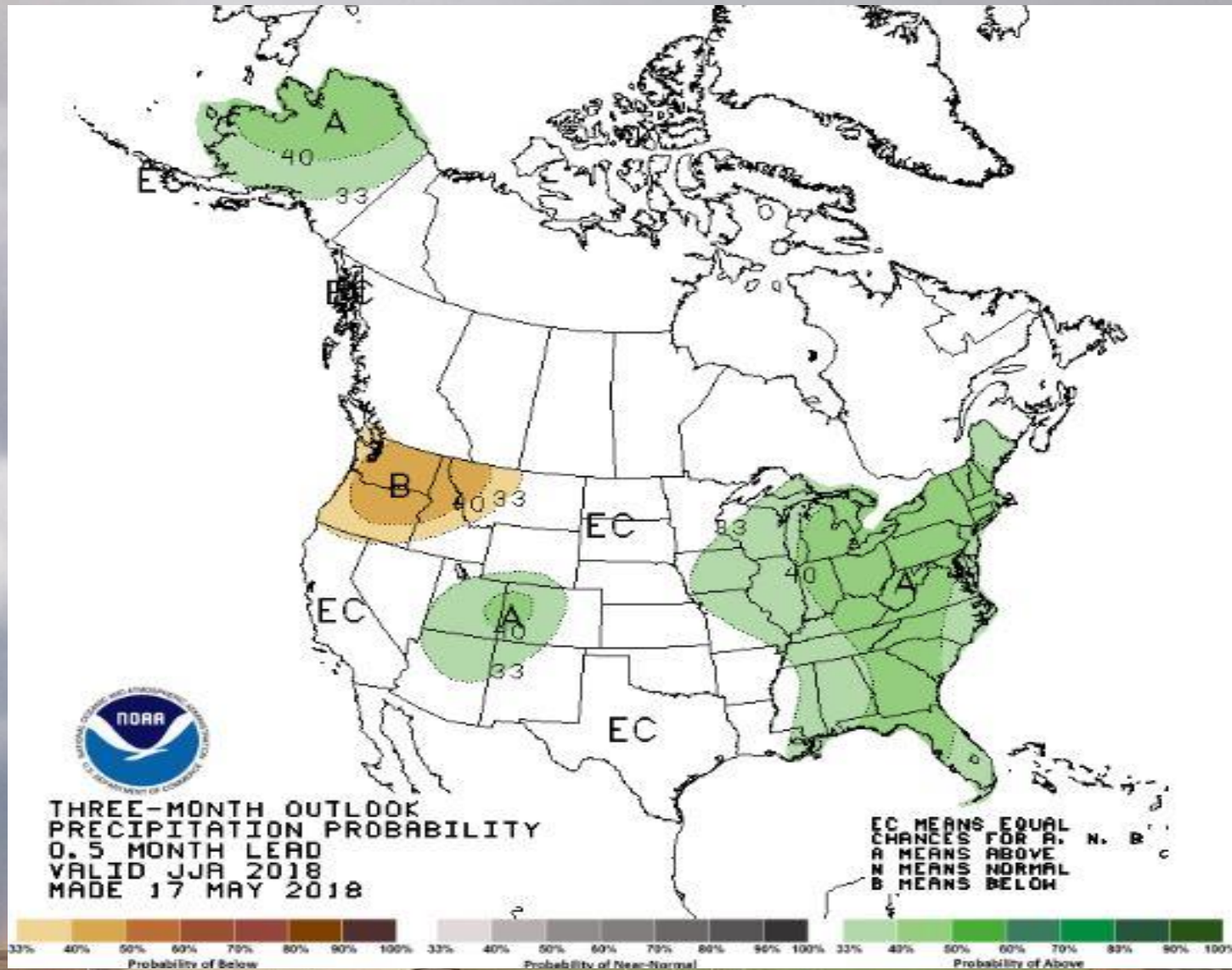
At the end of the month of May, 2018, the map shows that a good portion of mainly southeast Oregon has moderate to severe drought in areas, while Washington is neutral.

USA Three Month Temperature Outlook (June, July & August)



The temperature outlook for the next three months (June, July & August) shows above normal temperatures for the Pacific Northwest and CWA.

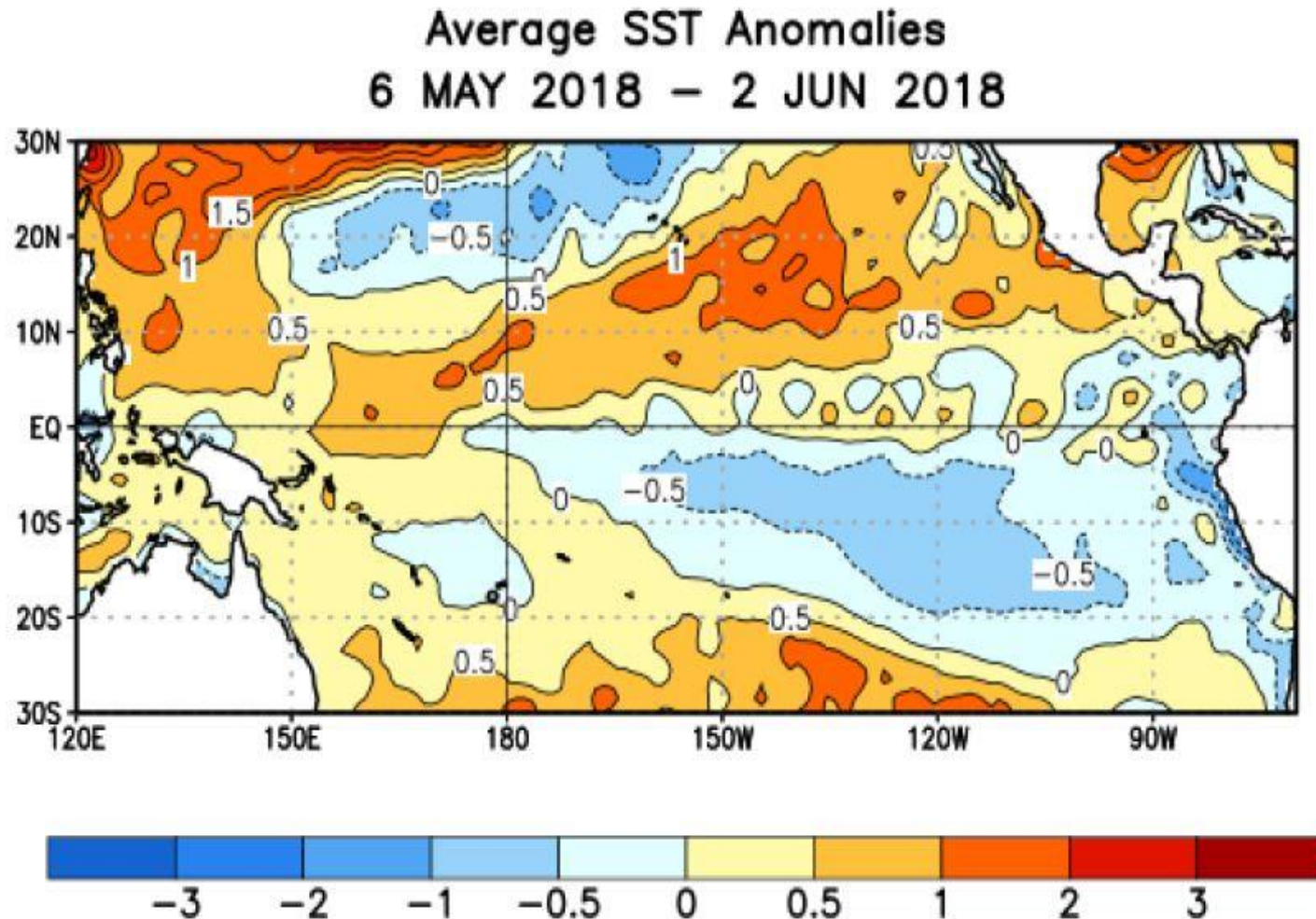
USA Three Month Precipitation Outlook (June, July & August)



The precipitation outlook for the next three months (June, July & August) shows below normal precipitation over the Pacific Northwest & CWA.

El Nino/La Nina Index for 6 May, 2018 – 2 June, 2018

During the last four weeks, equatorial SSTs were near average across most of the Pacific Ocean, except remaining above average in the western Pacific.





Thank You!