

The Month In Review

May 2019

National Weather Service
Pendleton, Oregon

May, 2019 Climate Summary

May has been an interesting month. With the exception of the first three days, the first half of May was mainly dry with above normal temperatures. Then beginning on May 15th, a series of Pacific weather systems moved into the Pacific Northwest, with each one bringing a period of rain along with cooler than normal temperatures. For example, the Pendleton Airport was dry with daily average temperatures ranging from +2 to +12 degrees above normal. Then beginning on May 15th, the average daily temperatures were below normal and ranged from -2 to -6, which was accompanied by clouds and frequent periods of rainfall. This pattern persisted until May 26th, and then temperatures were above normal again with very little if any precipitation. There were a few thunderstorm events, with only one severe thunderstorm warning being issued during the month. There were several SPS's issued for strong storms that did not reach severe thunderstorm criteria.



Late season fog bank rolling in from the Lower Columbia Basin (from the west)



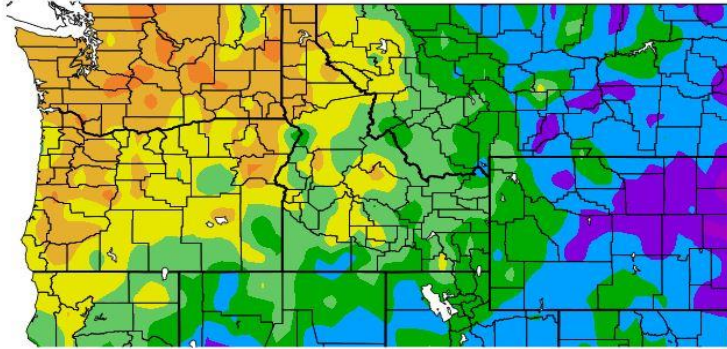
Early morning thunderstorm developing over Pendleton, Oregon



Bright double rainbow after early morning thunderstorm in Pendleton, Oregon

May, 2019 Departure from Normal Temperatures

Departure from Normal Temperature (F)
5/1/2019 – 5/31/2019

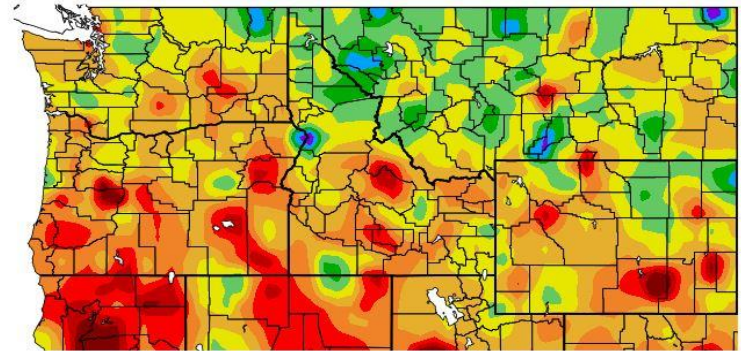


Generated 6/2/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from normal for May, 2019

Departure from Normal Temperature (F)
4/1/2019 – 4/30/2019



Generated 5/1/2019 at HPRCC using provisional data.

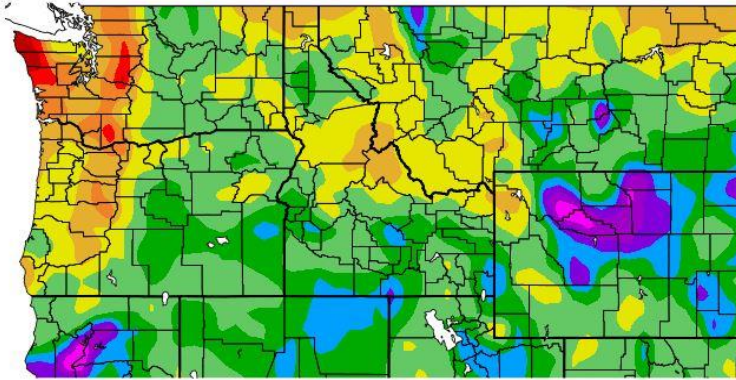
NOAA Regional Climate Centers

Departure from normal for April, 2019

The images above show that, overall, May had near to above normal temperatures during the month on average. Compared to April, it was not quite as “above normal” as April was. The month was balanced out by the cool and showery weather from May 15th through May 26th and May 1st – 3rd, while the rest of the month was above normal.

May, 2019 Departure from Normal Precipitation

Departure from Normal Precipitation (in)
5/1/2019 – 5/31/2019

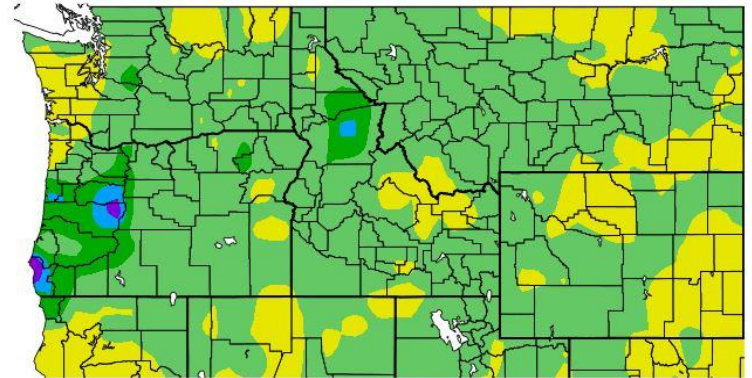


Generated 6/2/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from normal precipitation for May

Departure from Normal Precipitation (in)
4/1/2019 – 4/30/2019



Generated 5/1/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from normal precipitation for April

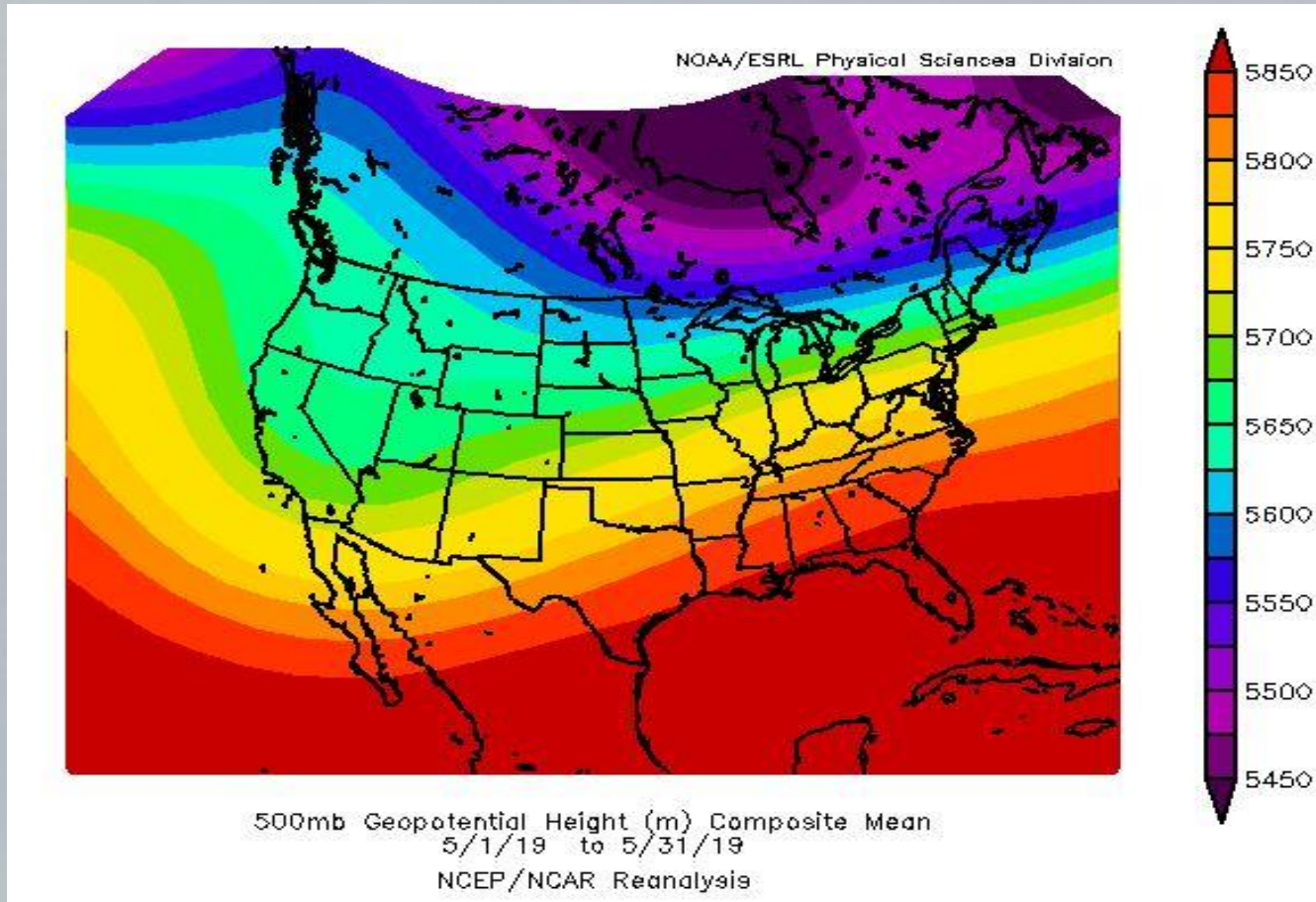
The above images show a comparison of May vs. April, 2019 departure from normal precipitation. As can be seen, May was similar to April with rainfall being near to above normal. Much rain has fallen from May 1st – 3rd and 15th – 26th, while the rest of the month was nearly all dry. These differences balanced out the month, overall, as far as precipitation is concerned.

May, 2019 Average Highs, Average Lows, Average Monthly Temperatures, Precipitation Totals and Departures For Select Cities

	Max T	Max T D	Min T	Min T D	Ave T	Ave T D	PCPN	PCPN D
Yakima	76.4	4.0	46.9	5.0	61.6	4.5	0.77	0.19
Kennewick	76.9	2.4	51.6	2.1	64.3	2.3	3.30	2.66
Walla Walla	74.2	3.8	51.5	3.2	62.8	3.4	1.95	-0.18
The Dalles	75.1	2.2	51.0	2.4	63.1	2.3	0.48	-0.21
Redmond	70.7	3.2	39.6	4.2	55.1	3.7	1.61	0.58
Pendleton Airport	72.0	2.0	46.5	0.9	59.2	1.4	1.52	0.17
La Grande	69.5	2.8	43.0	0.9	56.3	1.9	2.08	0.09

The data above shows that all locations had above normal temperatures (as indicated in light red). Walla Walla and The Dalles had below normal precipitation for the month (light blue). Kennewick had very much above normal precipitation, which is suspect, to be corrupt data. Therefore it was highlighted in bright red, and subject to further investigation. All other stations had above normal precipitation.

May, 2019 Average 500 MB Weather Pattern



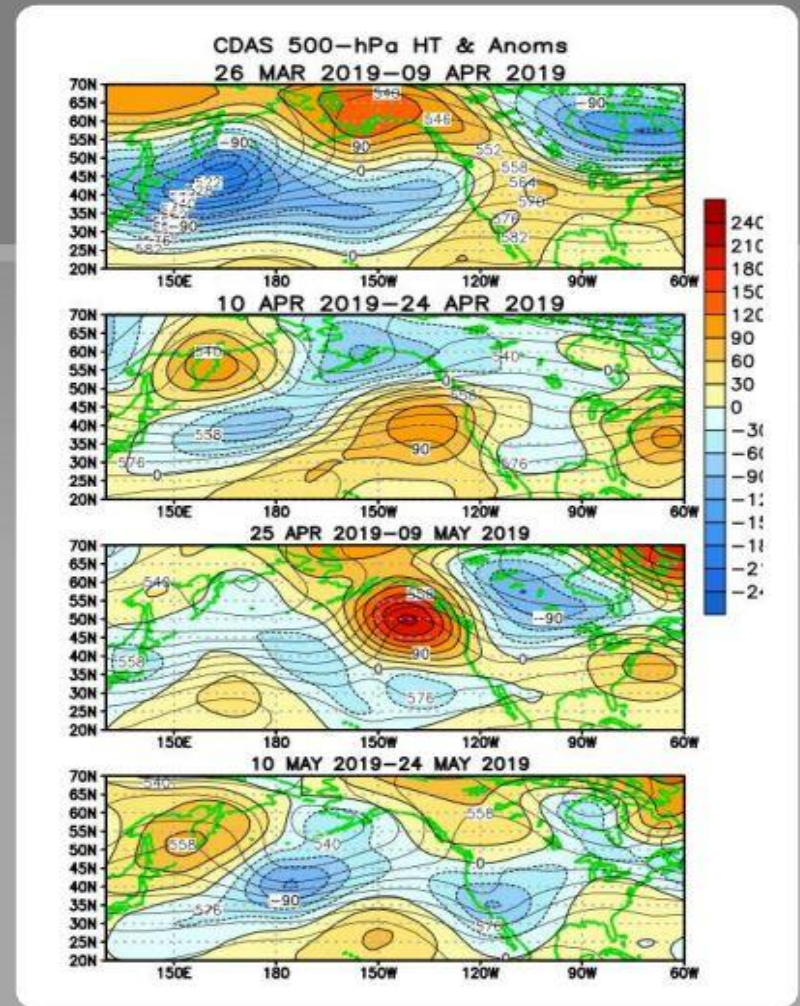
Overall, the Pacific Northwest had a split flow over the region with a ridge in southwest Canada and an upper trough over California and the Great Basin. This split flow is likely the result of vast differences in weather patterns during the first half vs. most of the last half of the month. There was mostly an upper ridge during the first half and mostly an upper trough during the second half of the month. Being spring time and with the battle between cold air to the north and warmer air to the south, this was not really that unusual.

More Detailed 500 MB Plots for April & May, 2019

Atmospheric anomalies over the North Pacific and North America During the Last 60 Days

During April and early May, an anomalous ridge persisted over the western and eastern U.S., associated with above-average temperatures.

Since early May, anomalous troughing and negative temperature anomalies expanded into the central and southwestern U.S., while above-average temperatures have prevailed over the eastern U.S.



Note that during the month of April through mid May, there was mainly an upper ridge over the Pacific Northwest, and an upper trough during the latter half of May.

Local Storm Reports (LSRs) of Significant Weather Events

PRELIMINARY LOCAL STORM REPORTS

NATIONAL WEATHER SERVICE PENDLETON OR

..TIME...	...EVENT...	...CITY LOCATION...	...LAT..LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
..REMARKS..			

0340 PM	HAIL	1 SE ELLENSBURG	46.99N 120.53W
05/28/2019	M0.50 INCH	KITTITAS	WA TRAINED SPOTTER

SPOTTER REPORTED DIME SIZE HAIL AND WINDS 25 TO 35 MPH.

0340 PM	HAIL	1 E ELLENSBURG	47.00N 120.53W
05/28/2019	M0.75 INCH	KITTITAS	WA TRAINED SPOTTER

SPOTTER REPORTED UP TO PENNY SIZED HAIL WITH THE AVERAGE AT DIME SIZE.

0340 PM	HAIL	1 SE ELLENSBURG	46.99N 120.53W
05/28/2019	M0.50 INCH	KITTITAS	WA TRAINED SPOTTER

SPOTTER REPORTED DIME SIZE HAIL AND WINDS 25 TO 35 MPH.

0755 PM	HAIL	BENTON CITY	46.27N 119.49W
05/28/2019	M1.00 INCH	BENTON	WA PUBLIC

A MEMBER OF THE PUBLIC SENT A VIDEO TO ONE OF THE LOCAL MEDIA FACEBOOK PAGES. HE WAS CONTACTED AND STATED THE HAIL WAS AT LEAST THE SIZE OF A QUARTER.

0340 PM	HAIL	3 NNE BINGHAM SPRINGS	45.79N 118.21W
05/30/2019	E0.25 INCH	UMATILLA	OR TRAINED SPOTTER

There were only a few significant weather events in the month of May, 2019. They were all reports of hail with thunderstorms during the last 4 days of the month. There was only one Severe Thunderstorm Warning, in which there was a storm report of 1 inch hail on May 28th near Benton City, WA, which was caused by an outflow boundary. The rest of the storm reports were only strong, but not severe thunderstorms with hail sizes ranging from a quarter of an inch to three quarters of an inch.

Note: There were no records broken during the month.

May 2019 Observed Monthly Highest Max & Min Temperatures

Location	Highest Maximum Temperature	Lowest Minimum Temperature
Pendleton, OR	85	35
Redmond, OR	87	23
Pasco, WA	93	37
Yakima, WA	89	28
Walla Walla, WA	85	38
Bend, OR	83	30
Ellensburg, WA	90	28
Hermiston, OR	89	31
John Day, OR	82	21
La Grande, OR	85	26
The Dalles, OR	90	34
MT Adams RS, WA	83	26

In the month of May, many stations will typically see the first days with the highest temperatures in the 80s to lower 90s. However, it's not unusual to still have a day or a couple of days with lowest readings near or below freezing.

May, 2019, Monthly Total Precipitation Totals

Location	Total Monthly Precip	Total Snowfall or Hail
Pendleton, OR	1.52	0
Redmond, OR	1.61	0
Pasco, WA	0.63	0
Yakima, WA	0.77	0
Walla Walla, WA	1.95	0
Bend, OR	0.91	M
Ellensburg, WA	0.95	M
Hermiston, OR	0.54	0
John Day, OR	1.86	0
La Grande, OR	2.08	0
The Dalles, OR	0.48	M
Mt Adams RS, WA	0.52	0

About half of the stations had total precipitation amounts below an inch and the other half over an inch. The extreme amounts were likely due to thunderstorm cores or slow moving heavy rain bands directly over that station.

End of May, 2019 - Drought Monitor

U.S. Drought Monitor West

May 28, 2019

(Released Thursday, May. 30, 2019)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	87.15	12.85	5.41	0.00	0.00	0.00
Last Week <i>05-21-2019</i>	86.58	13.42	5.07	0.00	0.00	0.00
3 Months Ago <i>02-26-2019</i>	47.01	52.99	26.50	9.76	1.40	0.09
Start of Calendar Year <i>01-01-2019</i>	28.03	71.97	53.25	27.22	8.35	2.88
Start of Water Year <i>09-25-2018</i>	13.91	86.09	59.57	39.68	18.15	4.36
One Year Ago <i>05-29-2018</i>	39.22	60.78	44.05	31.50	18.83	4.35

Intensity:

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

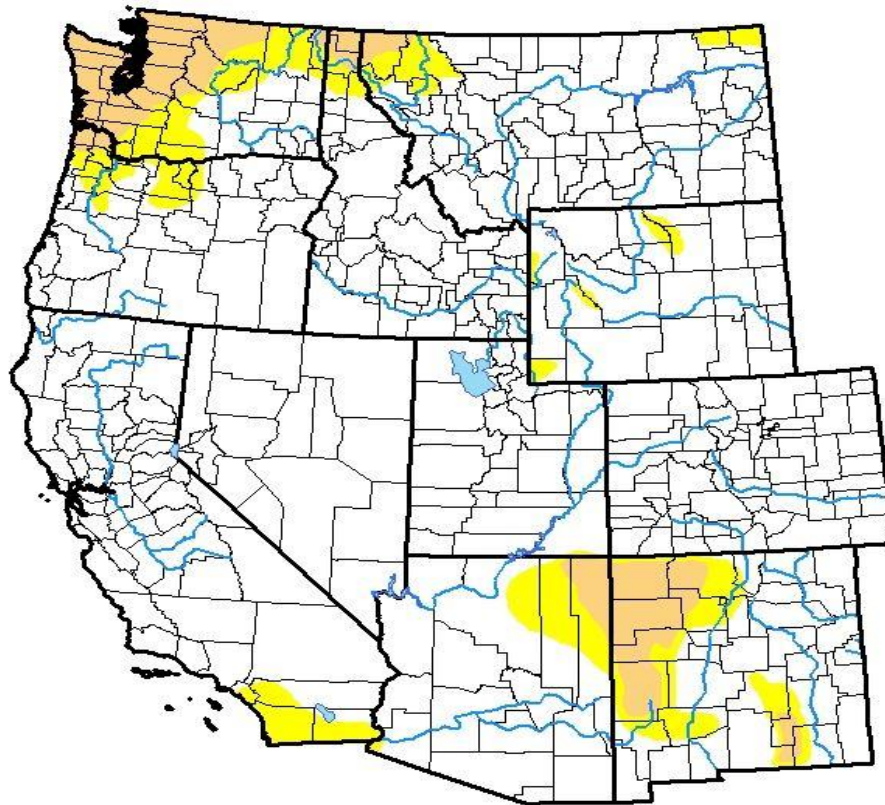
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

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NCEI/NOAA

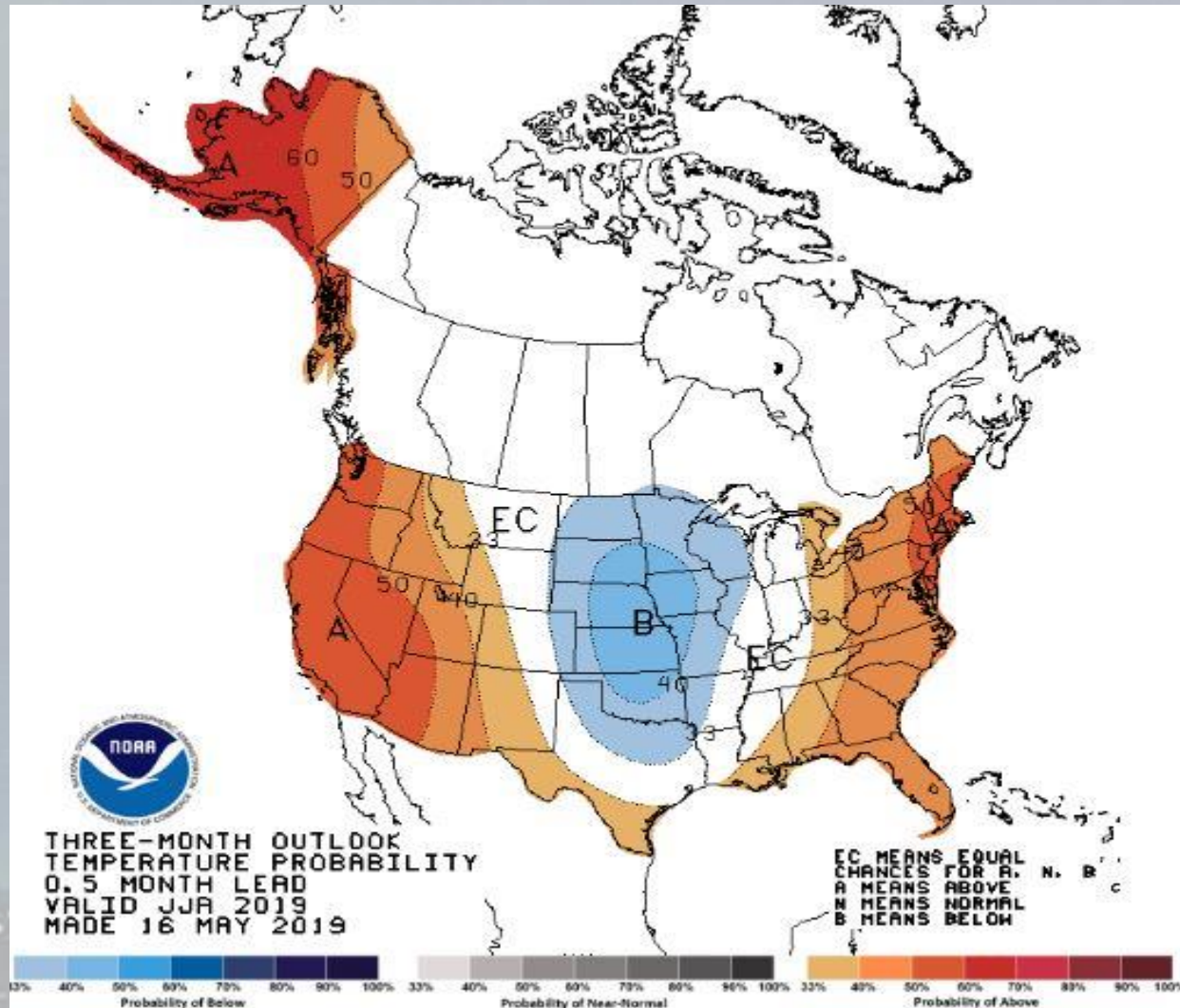


<http://droughtmonitor.unl.edu/>



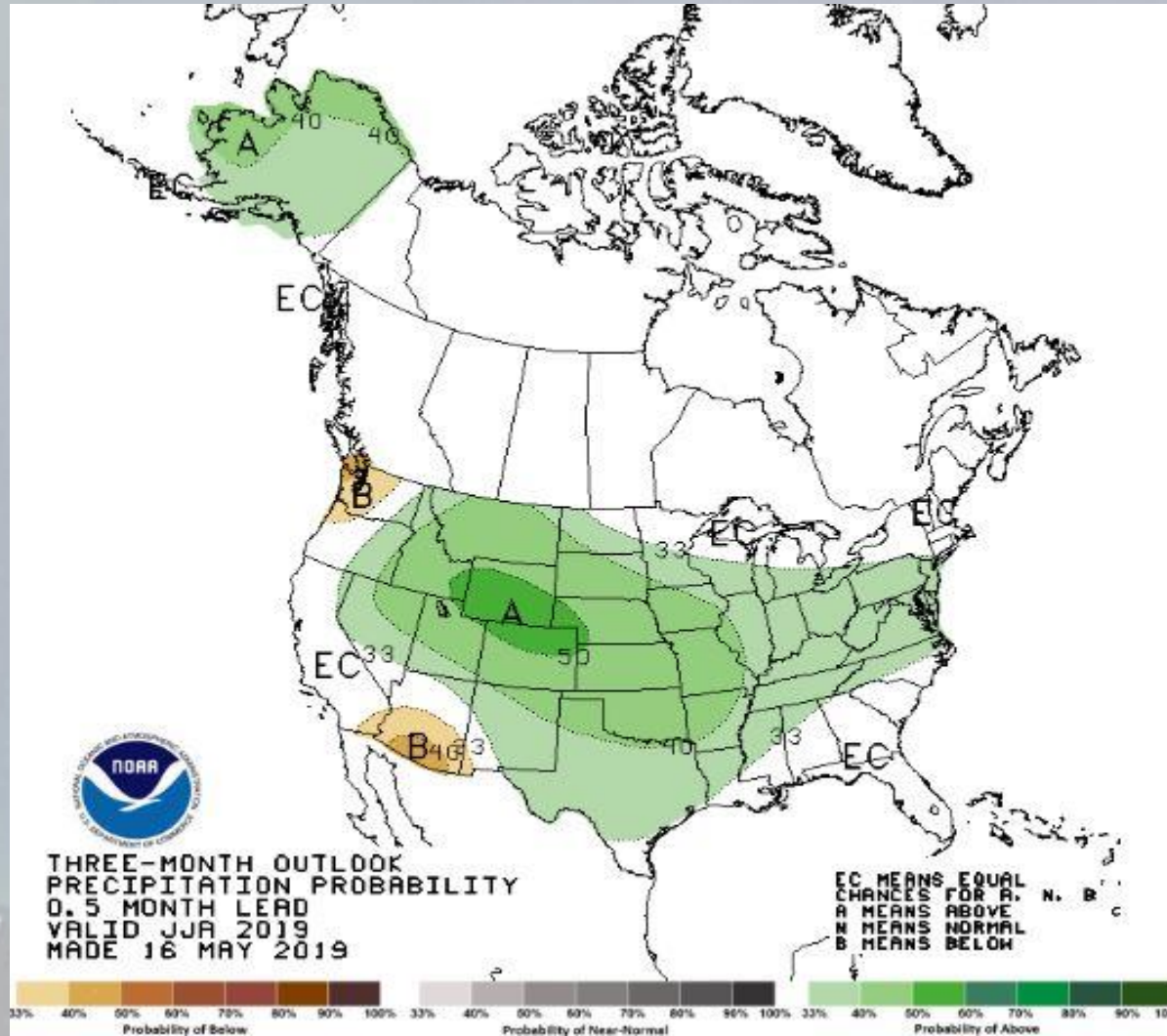
At the end of May, 2019, the Pacific Northwest was near to slightly drier than normal, which resulted in mostly “no drought” conditions to “abnormally dry” drought conditions. The driest areas were mostly in the western portion of the forecast area.

Three Month Temperature Outlook (June, July & August)



The temperature outlook for the next three months shows that there is about a 40-60 % probability of having above normal temperatures over the Pacific Northwest and much of the Forecast Area (northeast OR, southeast WA).

Three Month Precipitation Outlook (June, July & August)

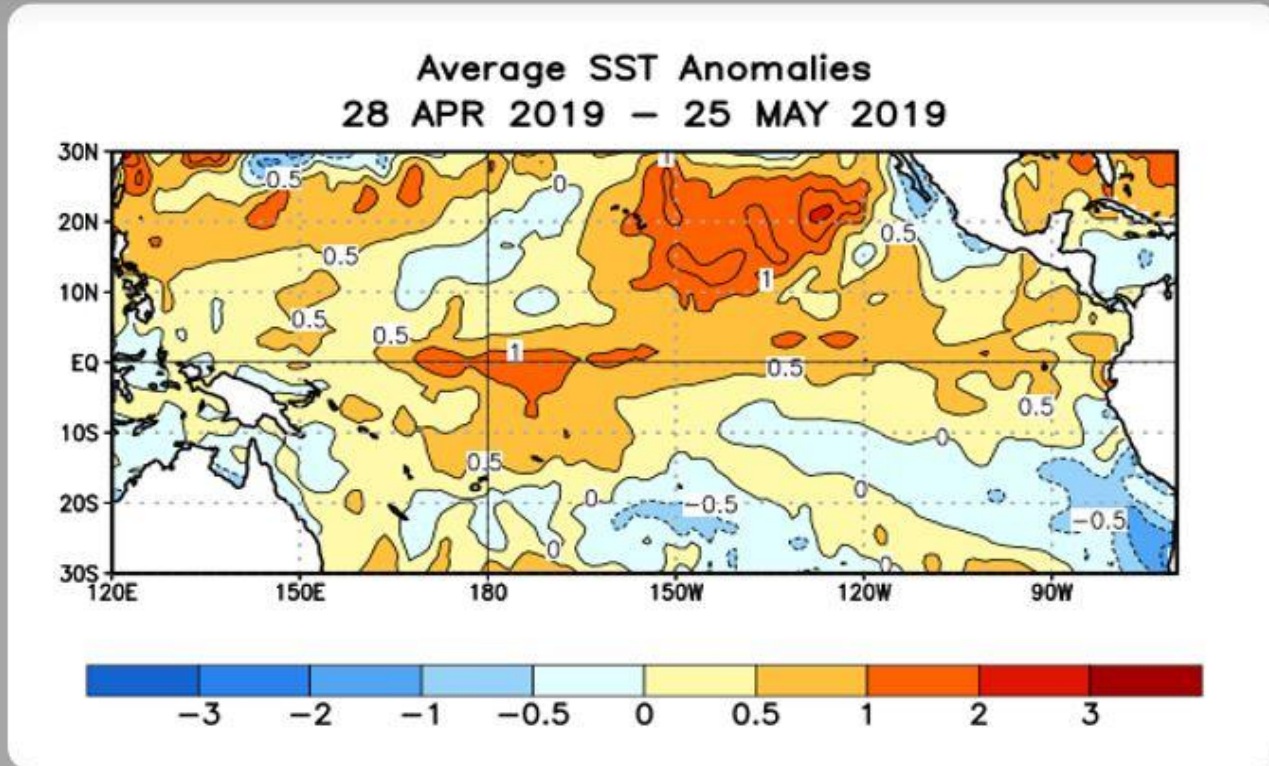


The precipitation outlook for the next three months shows that there is mostly an equal chance of above or below normal amount of precipitation for the next 3 months (June, July & August) for most of the forecast area.

Sea Surface Temperatures from April 28th through May 25th , 2019

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

During the last four weeks, equatorial SSTs were above average across most of the Pacific Ocean, with the largest departures near the Date Line. SSTs were near-to-below average around Indonesia.



This shows that the region is still under El-Nino conditions, except for some slightly cooler than normal sea surface temperatures on the Mexican coast...indicating a possible change to come.



Thank You!