

The Month In Review

March 2018

National Weather Service
Pendleton, Oregon

March, 2018 Climate Summary

The climate over the forecast area, during March 2018, can be described as, overall, near normal maximum temperatures, but below normal minimum temperatures and below normal precipitation. The very beginning of the month was cold with a burst of snow in a few locations, including at the Pendleton Regional Airport. This produced almost an inch of snow in a short time. The snow was heavy during that brief time. The rest of the month had no snow in the lower elevations and the rains that occurred during the month caused “green-up” to begin. There were some very mild days, but also there have been some very cool to cold days, especially at night. The following report will summarize the weather for the Pendleton, OR County Warning Area (CWA) for the month of March.



Burst of snow on March 1st
at the Pendleton Reg. Airport



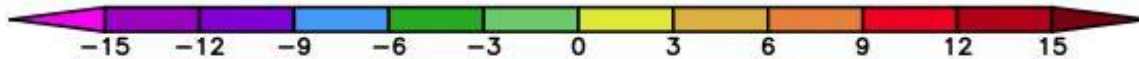
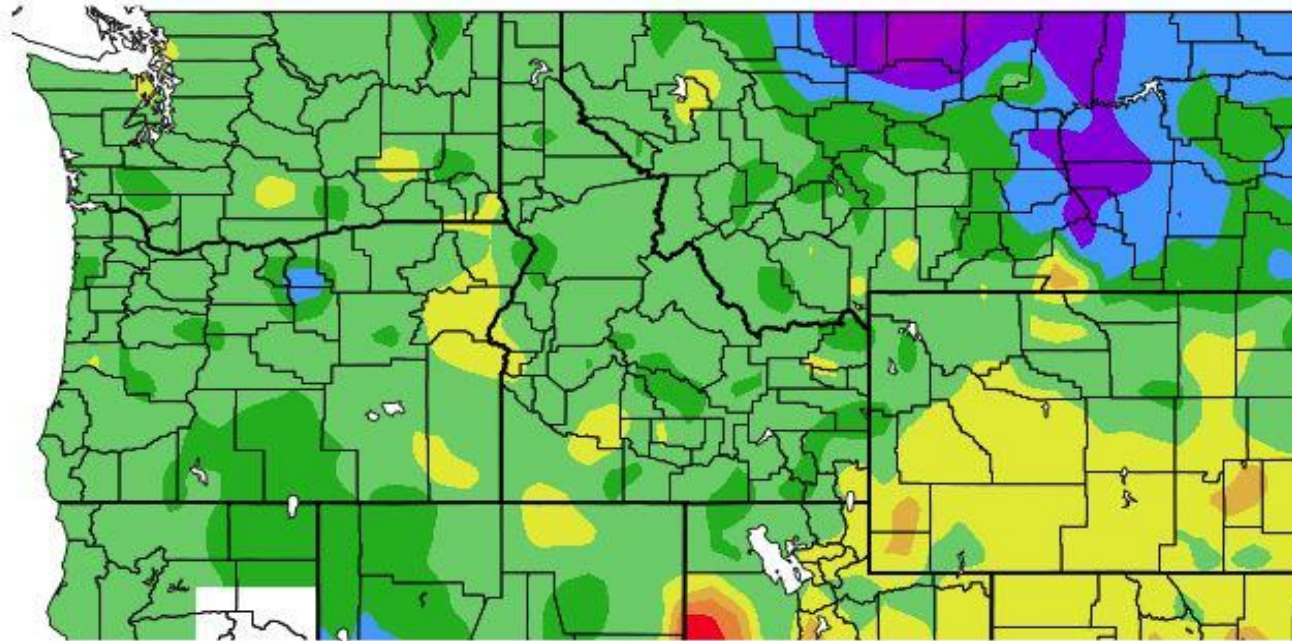
Still snow in the higher terrain



Spring blossoms in low lands

Departure from Normal Temperatures

Departure from Normal Temperature (F)
3/1/2018 – 3/31/2018



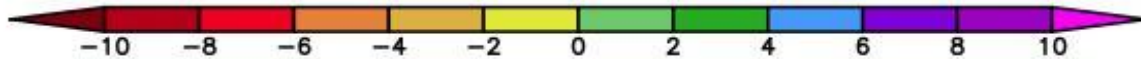
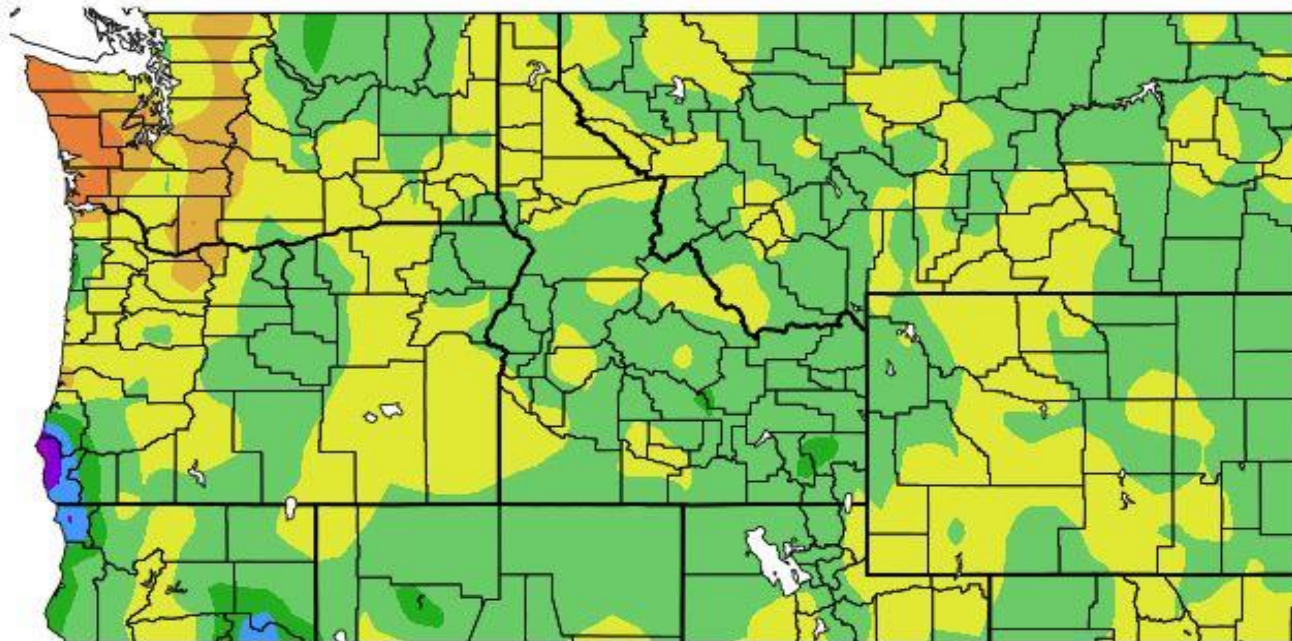
Generated 4/2/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

As the map shows, most of the Pacific Northwest and CWA had Slightly below normal temperatures.

Departure from Normal Precipitation

Departure from Normal Precipitation (in)
3/1/2018 – 3/31/2018



Generated 4/2/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

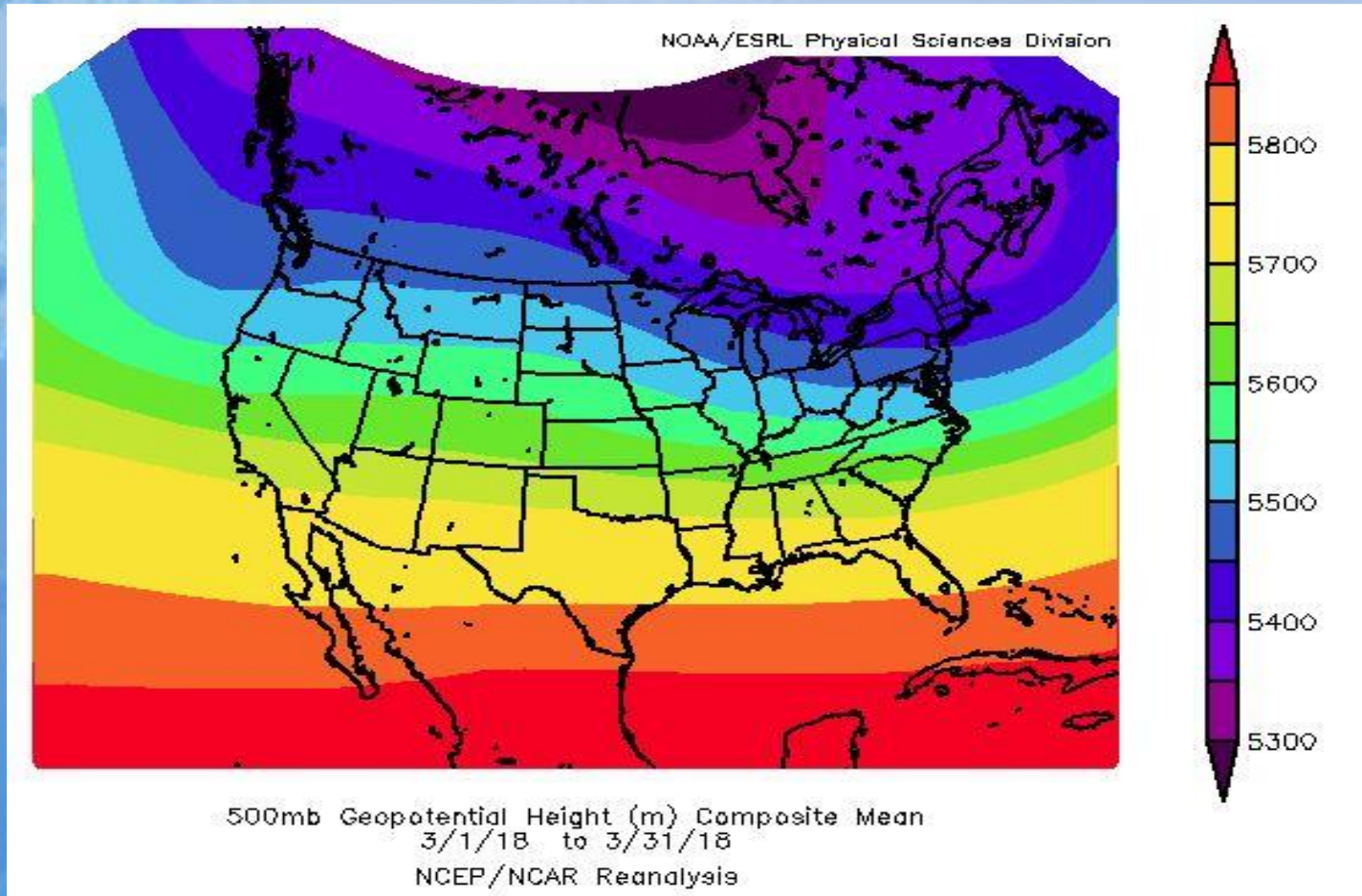
As the map shows, most of the Pacific Northwest and CWA had near to slightly above normal precipitation for the month.

Select February, 2018 Averages and Departures

	Max T	Max T D	Min T	Min T D	Ave T	Ave T D	PCPN	PCPN D
Yakima	68	4.1	21	-13.1	44.5	-4.5	0.38	-0.16
Kennewick	68	2.2	26	-16.1	46.2	-7.7	0.53	-0.07
Walla Walla	68	4.5	29	-14.1	46.2	-7.1	2.22	0.54
The Dalles	65	-0.7	25	-17.3	43.0	-11.0	0.91	-0.08
Redmond	67	3.5	16	-15.3	39.9	-7.5	0.73	0.08
Pendleton								
Airport	73	9.3	24	-16.1	44.2	-7.7	1.38	0.37
La Grande	64	1.7	6	-29.2	40.0	-8.7	1.07	-0.22

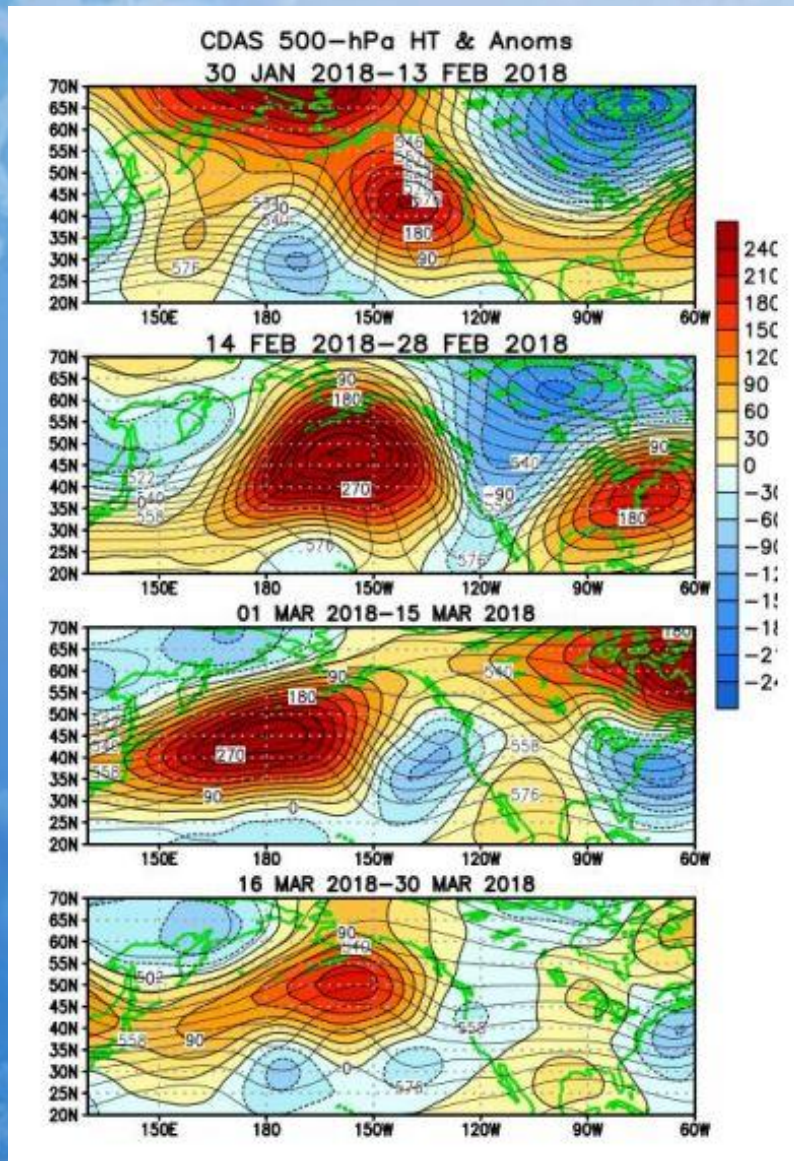
Average maximum temperatures were mostly above normal, except The Dalles, which was slightly below average. Average min temperatures were much below normal. Precipitation was mixed with some stations above and some stations below normal for the month.

March 2018 Average 500 MB Weather Pattern



This image shows a 500 MB upper trough anomaly over the Pacific Northwest and west coast, and over the Northeast USA, and an upper ridge over the Rocky Mountain Region. The trough over the northeast has produced multiple Nor'easters during the month, while the trough over the west coast produced storms which brought snow to the higher Elevations and mainly rain in the lower elevations along with colder than normal temperatures.

Detailed 500 MB Analysis for Feb - Mar, 2018



This graphic shows a comparison of detailed 15 day sets of 500 MB analysis and anomalies for February vs March 2018.

The first two images from the top you can see that the Pacific Northwest was dominated by an upper ridge during the first half of February, and an upper trough over the western USA during the latter half of February (land boundaries are shown in green). During March, the 500 MB pattern was more zonal with a hint of an upper trough over the western USA. As a result the forecast area experienced a colder than normal latter half of February, and a more typical pattern during March, though there were warmer and colder than normal periods during March over the Pacific Northwest region.

Significant Weather Events – March 1 & 2, 2018

During the month of March, 2018, there were several smaller events and two larger events. The larger event Local Storm Reports are shown below. The first one was a heavy snow event during the first two days of the month while the second was a high wind event, which was later in the month.

PRELIMINARY LOCAL STORM REPORT...SUMMARY				
NATIONAL WEATHER SERVICE PENDLETON OR				
102 PM PST FRI MAR 02 2018				
..TIME...	..EVENT...	..CITY LOCATION...	..LAT.LON...	
..DATE...	..MAG....	..COUNTY LOCATION..ST..	..SOURCE....	
..REMARKS..				
0200 PM	HEAVY SNOW	18 ENE SENECA	44.21N 118.64W	
03/01/2018	E5.0 INCH	GRANT	OR MESONET	
LAKE CREEK SNOTEL. SINCE 10 PM WEDNESDAY.				
0300 PM	HEAVY SNOW	13 SW MITCHELL	44.43N 120.33W	
03/01/2018	E7.0 INCH	CROOK	OR MESONET	
SINCE 0300 THIS MORNING. OCHOCO MEADOWS SNOTEL.				
0400 PM	HEAVY SNOW	6 ESE PAULINA	44.10N 119.85W	
03/01/2018	M4.5 INCH	CROOK	OR COCORAHS	
4.5 INCHES SNOW FELL FROM 2 PM TO 4 PM.				
0417 PM	HEAVY SNOW	7 ENE PAULINA	44.18N 119.84W	
03/01/2018	M6.0 INCH	CROOK	OR TRAINED SPOTTER	
6 INCHES SNOW FELL FROM 1430 PM TO 1617 PM. VIA SOCIAL MEDIA REPORT.				
1220 PM	HEAVY SNOW	7 NNE LOSTINE	45.59N 117.37W	
03/02/2018	M7.0 INCH	WALLOWA	OR TRAINED SPOTTER	
7 INCHES OF SNOW SINCE YESTERDAY AFTERNOON.				
1235 PM	HEAVY SNOW	1 SSE JOSEPH	45.34N 117.22W	
03/02/2018	M5.0 INCH	WALLOWA	OR TRAINED SPOTTER	
RECEIVED 5 INCHES OF SNOW SINCE YESTERDAY AFTERNOON.				

This is a list of Local Storm Reports (LSRs) during a heavy snow event on The 1st and 2nd of March. Most of the Snow fell over Grant, Crook and Wallowa counties of Oregon (i.e. Central and northeast Oregon).



Photo by Johnny Blagg

Significant Weather Events – High Winds on March 27th, 2018

This was a high wind event which took place on March 27th, 2018

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PRELIMINARY LOCAL STORM
REPORT
NATIONAL WEATHER SERVICE PENDLETON
OR
844 AM PDT WED MAR 28 2018

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

1010 AM   NON-TSTM WND GST 4 SW HARRAH      46.36N 120.60W
03/27/2018 M55 MPH      YAKIMA      WA MESONET

      MESONET STATION AR622, 4 SW HARRAH.

0715 PM   NON-TSTM WND GST 4 ENE RUFUS      45.73N 120.65W
03/27/2018 M54 MPH      SHERMAN     OR MESONET

      MESONET STATION ODT17, 4 ENE RUFUS.

1130 AM   NON-TSTM WND GST 1 WNW KENNEWICK   46.22N 119.20W
03/27/2018 M54 MPH      BENTON      WA MESONET

      MESONET STATION HVSTA, 1 WNW
KENNEWICK.

0501 PM   NON-TSTM WND GST HERMISTON MUNICIPAL AIR 45.83N
119.26W
03/27/2018 M51 MPH      UMATILLA    OR ASOS

      ASOS STATION HRI, HERMISTON MUNICIPAL
AIRPORT.
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Even though High Wind Events have a criteria of wind gusts of 58 mph or more, the conditions of this event was mainly strong wind gusts that were just shy of a High Wind event, but sustained winds could, and probably were greater than 40 mph or greater at times, which also meets High Wind event criteria.



Some Records for March, 2018

Though there were not any recorded record high or low temperatures for the month that were reported in a Record Event product (RER) in the climate data base, there were some records set for significant rainfall, which are listed below.

	New	Old	Date of Old of Old	Records Began
March 1 st , 2018:				
Walla Walla, WA	0.48"	0.40"	1991	1930
Pendleton Airport, OR	0.49"	0.43"	1940	1934
March 14, 2018:				
Redmond, OR	0.28"	0.21"	1984	NA
March 18, 2018:				
Walla Walla, WA	0.59"	0.31"	2006	NA

Observed Monthly Max & Min Temperatures

Location	Highest Maximum Temperature	Lowest Minimum Temperature
Pendleton, OR	73	24
Redmond, OR	67	16
Pasco, WA	70	20
Yakima, WA	68	21
Walla Walla, WA	68	29
Bend, OR	64	19
Ellensburg, WA	63	20
Hermiston, OR	67	21
John Day, OR	64	18
La Grande, OR	64	6
The Dalles, OR	65	25
MT Adams RS, WA	61	19

There was not much of a change in maximum temperatures, but lowest minimum temperatures were considerably warmer than February.

Monthly Total Precipitation and Snowfall

Location	Total Monthly Precip	Total Snowfall
Pendleton, OR	1.38 ”	0.6 ”
Redmond, OR	0.73 “	1.6 “
Pasco, WA	0.49 ”	0.0 ”
Yakima, WA	0.38 ”	0.3 ”
Walla Walla, WA	2.22 ”	T “
Bend, OR	M ”	M “
Ellensburg, WA	0.65 ”	0.4 ”
Hermiston, OR	0.75 ”	0.0 ”
John Day, OR	0.96 ”	0.2 ”
La Grande, OR	1.07 ”	1.1 ”
The Dalles, OR	0.91 ”	M ”
Mt Adams RS, WA	3.25 ”	9.5 ”

March, 2018 Current Drought Monitor

U.S. Drought Monitor West

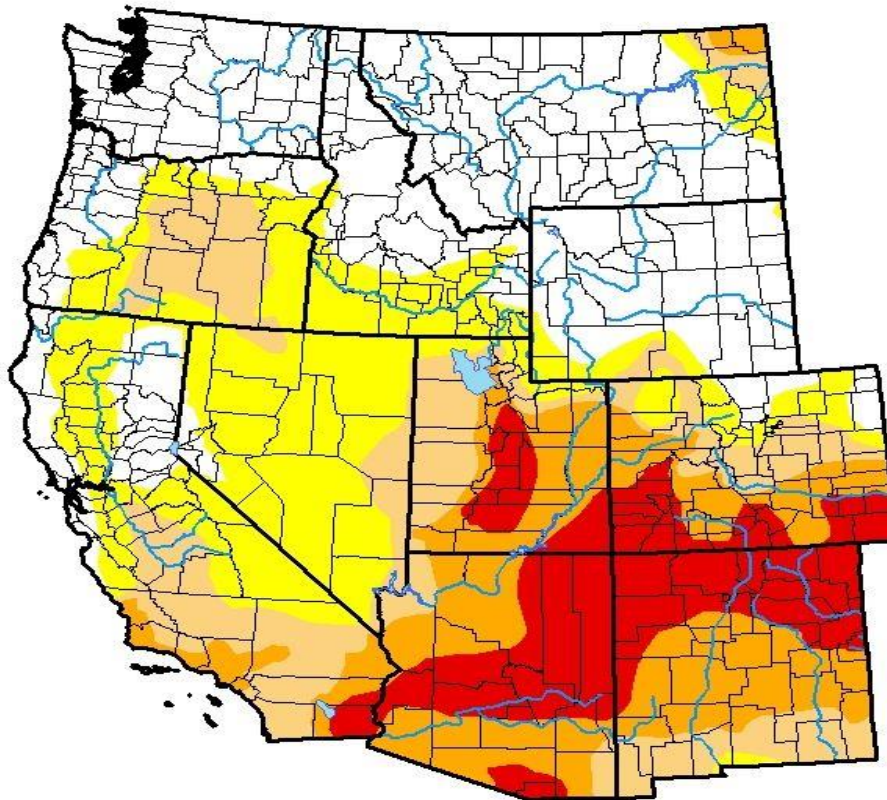
April 3, 2018

(Released Thursday, Apr. 5, 2018)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	34.81	65.19	43.02	27.63	12.46	0.00
Last Week <i>03-27-2018</i>	34.17	65.83	43.34	27.02	11.53	0.00
3 Months Ago <i>01-02-2018</i>	48.76	51.24	29.03	8.60	1.52	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>04-04-2017</i>	81.41	18.59	5.49	0.43	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:

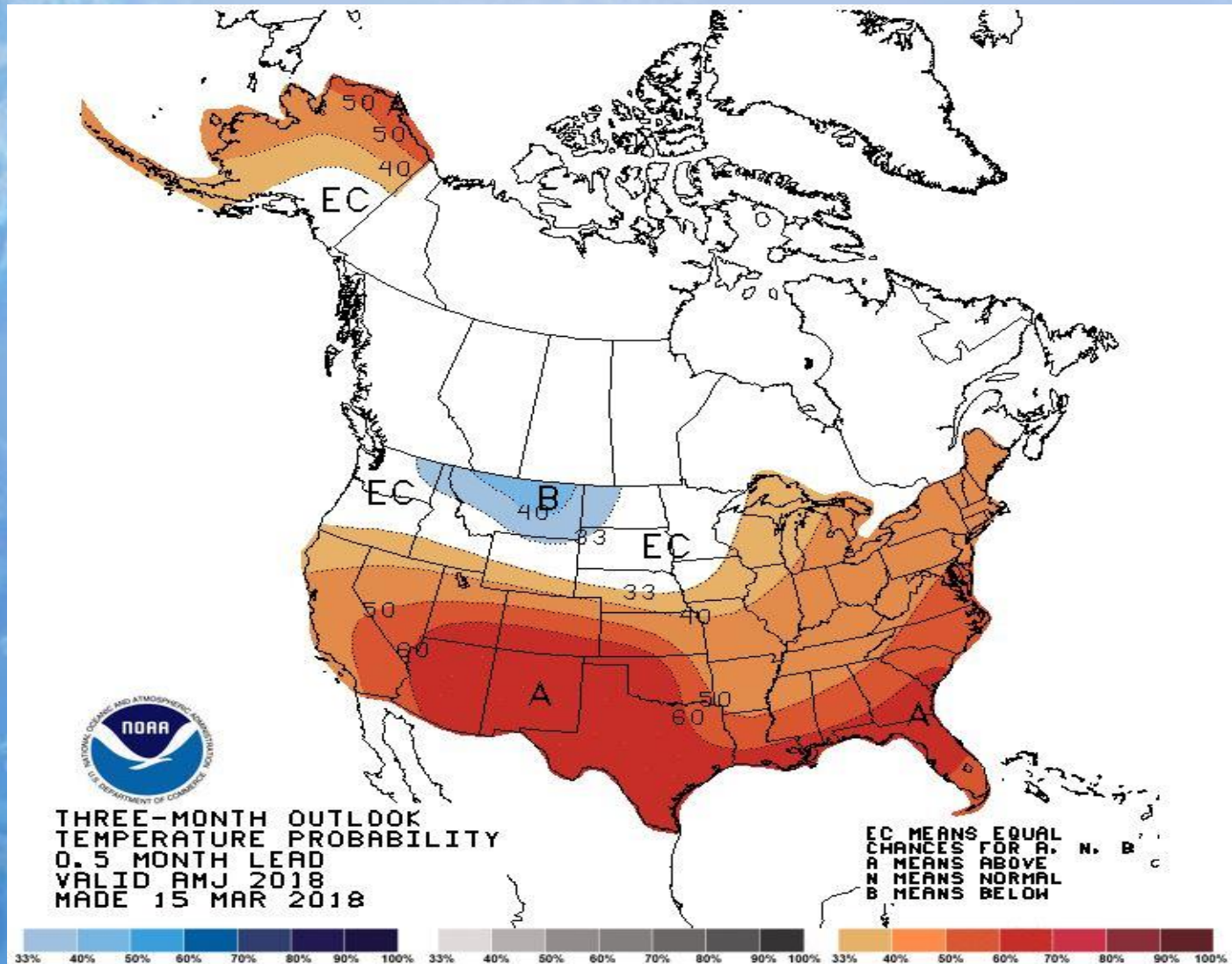
David Miskus
NOAA/NWS/NCEP/CPC



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

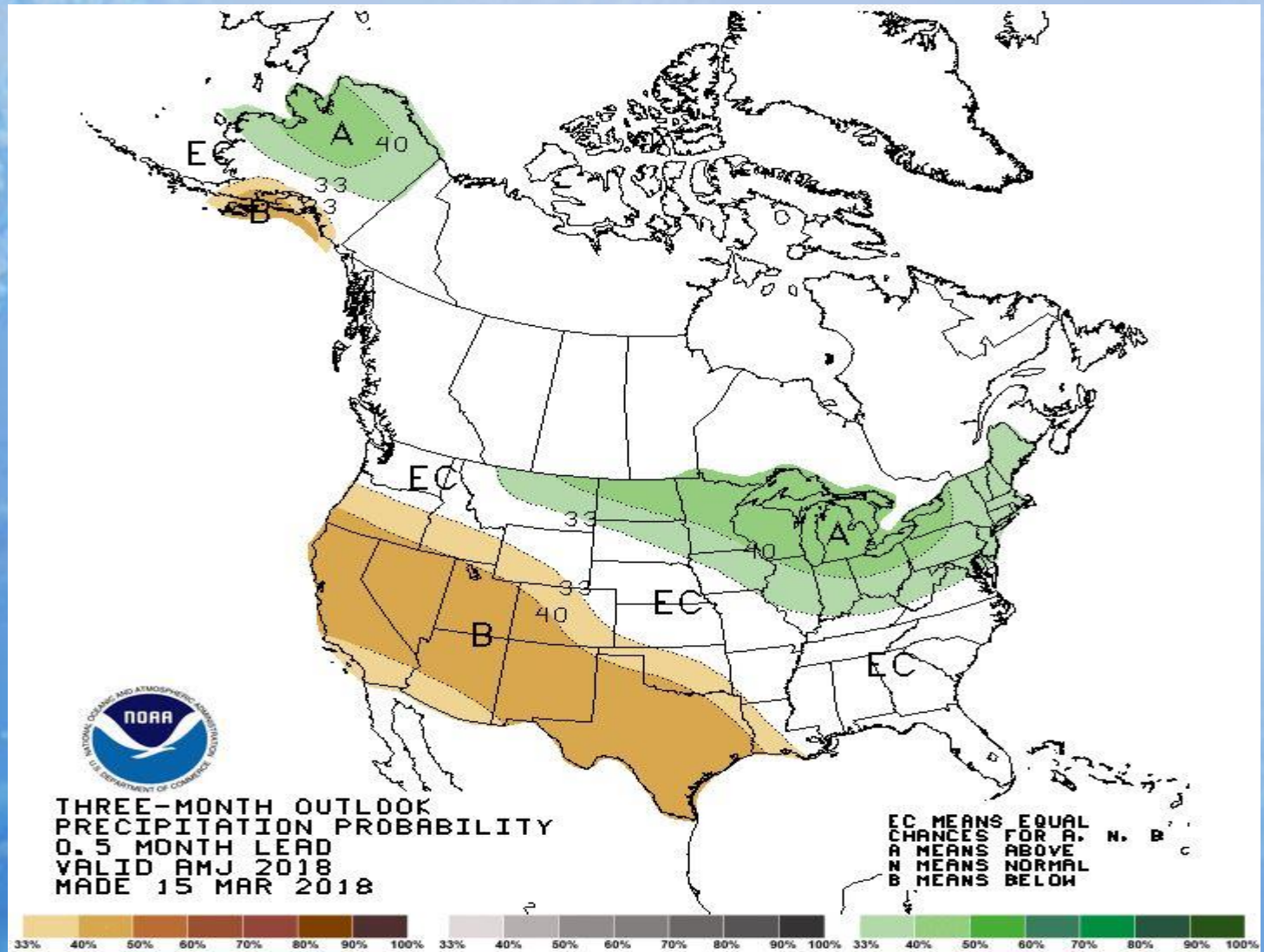
At the end of the month the map shows that the Pacific Northwest was under a slight to moderate drought.

USA Three Month Temperature Outlook (April, May & June)



The temperature outlook for the next three months (April, May & June) shows equal chances of above or below normal temperatures.

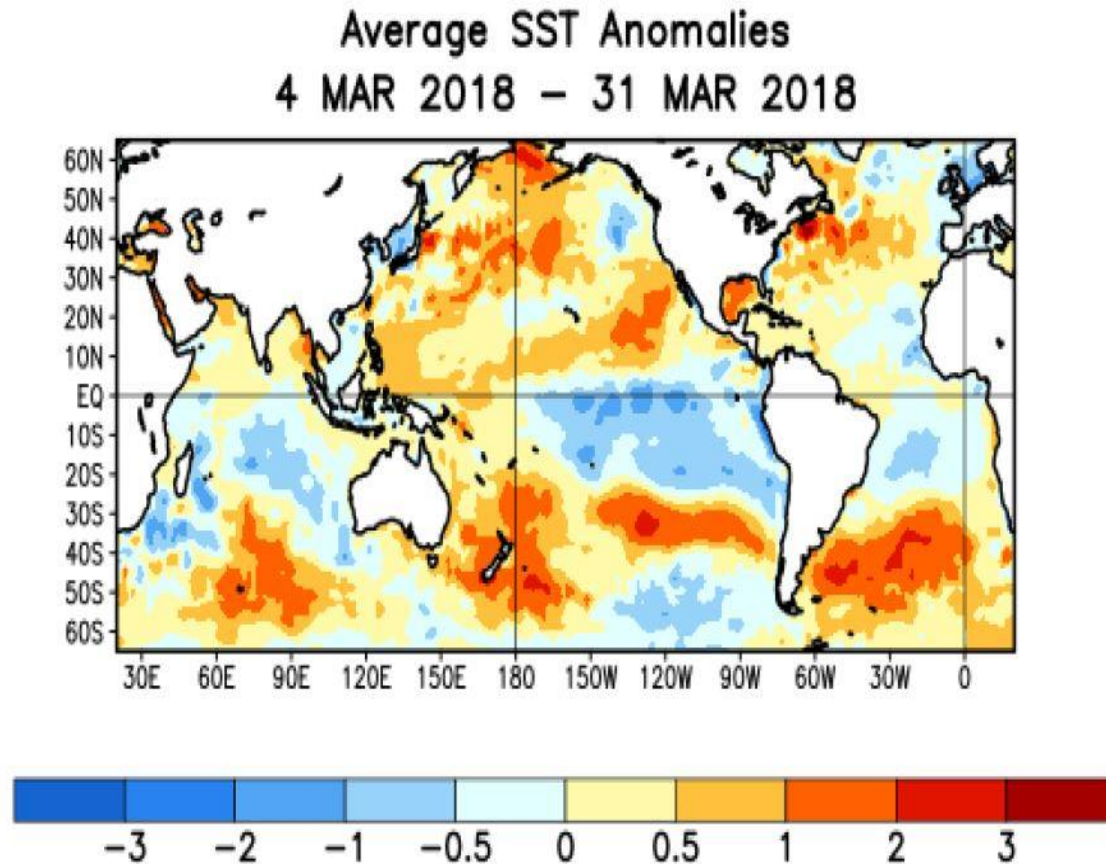
USA Three Month Precipitation Outlook (April, May & June)



The precipitation outlook for the next three months (April, May & June) shows equal chances to slightly below normal precipitation over the CWA.

El Nino/La Nina Index 4 March 2018 – 31 March 2018

During the last four weeks, equatorial SSTs were above average in the western Pacific. SSTs were below average in the central and eastern Pacific Ocean.





Thank You!