National Weather Service Medford

October 2017 Climate Summary

*These data are preliminary and have not undergone final QC by NCEI. Therefore, these data are subject to revision. Final and certified climate data can be accessed at the National Centers for Environmental Information (NCEI).

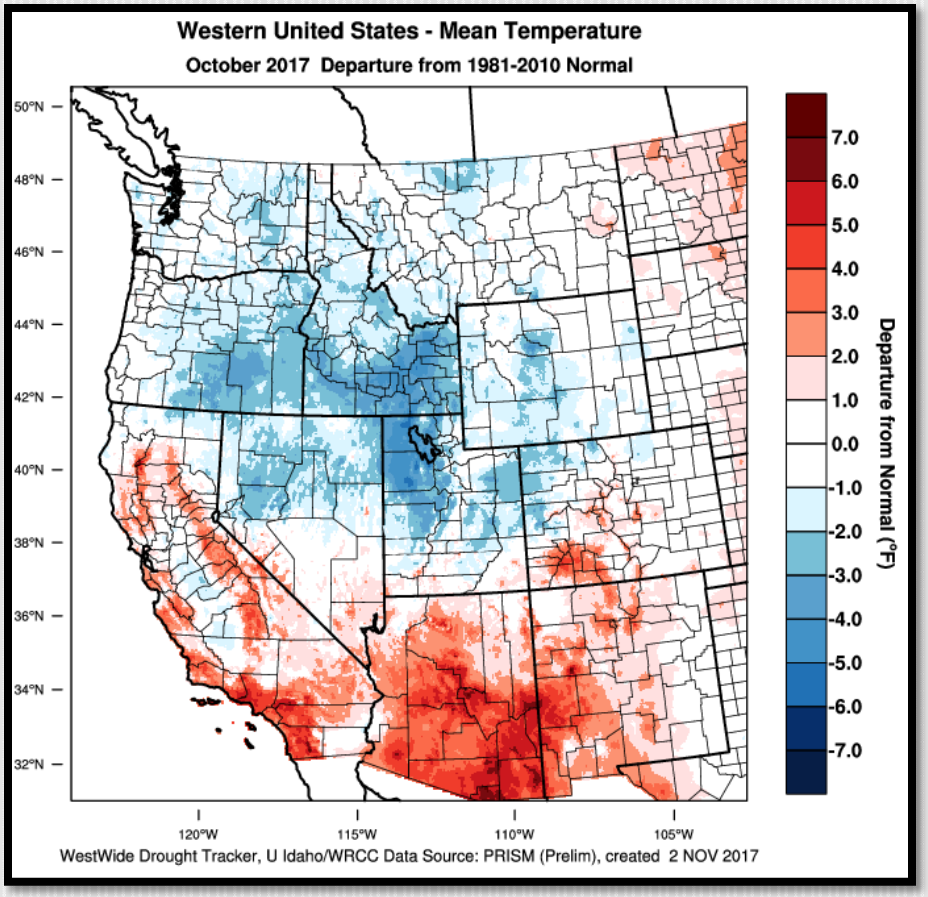
October 2017 Weather Review

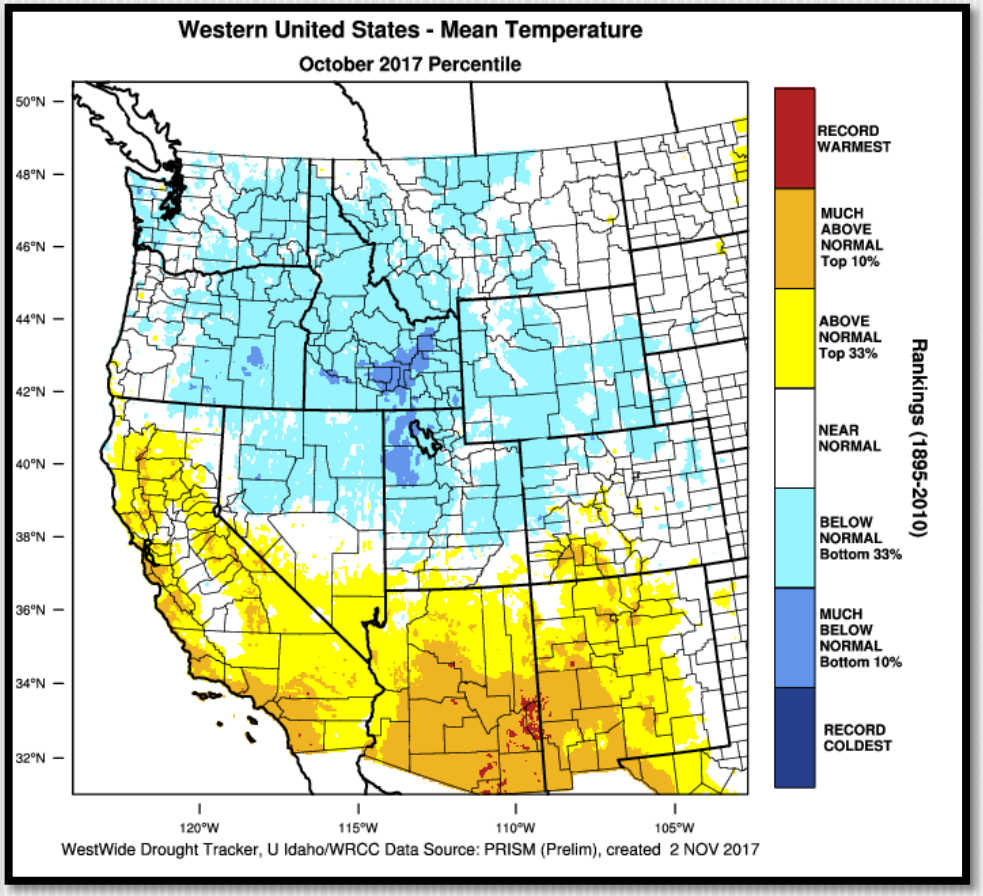
October 2017 was a relatively quiet month, especially compared to the record setting wet October of 2016. During the first few days of the month, a weak front moved through the area. Precipitation fell mainly along the coast and north of the Umpqua Divide and cooler, fall-like temperatures remained through the first week of the month. After that, high pressure dominated the weather until mid-October. Conditions remained dry with clear skies, resulting in warm daytime highs and cold overnight lows. Some locations even reported record low temperatures during the first half of the month. Without any significant rains, fire season continued until the latter part of October with smoky and hazy conditions continuing to affect the valley areas.

By mid-October, low pressure settled over the area, bringing a strong front through the forecast area. For most locations, this front brought the only precipitation recorded for the whole month. Daily precipitation records were set for North Bend, Roseburg, and Alturas. Much cooler temperatures accompanied this front and lower snow levels resulted in almost 18 inches of snow at Crater Lake National Park Headquarters over two days. The plentiful rain and cooler temperatures finally put an end to the long 2017 fire season.

The cooler, fall-like weather was short lived however, as a strong upper level ridge built in over the area. This brought much warmer than normal temperatures for the last part of October. North Bend, Medford, and Klamath Falls all set daily high temperature records during this time. Also, with the recent rainfall and high pressure aloft, morning valley fog was a common occurrence during the last part of October. There were even a few days when fog did not completely erode from the Umpqua Basin until late in the afternoon. Temperatures were on the downward trend as the month wrapped up and the high pressure weakened. Halloween was the last warm, dry day as we headed into November.

October 2017 *Observed Temperatures*





Average Temperatures

	Average (°F)	Departure from Normal	Average Max (°F)	Departure from Normal	Average Min (°F)	Departure from Normal
North Bend	54.8	***+1.4°***	63.9	***+3.0°***	45.7	***-0.3°***
Roseburg	54.6	***-0.9°***	65.2	***-1.1°***	44.1	***-0.7°***
Medford	55.1	***-0.9°***	70.4	***+0.5°***	39.9	***-2.1°***
Klamath Falls	46.0	***-1.0°***	63.3	***+0.4°***	28.7	***-2.3°***
Montague, CA	50.7	***-1.1°***	68.4	***+0.8°***	33.0	***-3.0°***
Mt. Shasta City, CA	51.2	***0.0°***	66.9	***+0.9°***	35.5	***-1.0°***
Alturas, CA	46.1	***-0.6°***	65.9	***+0.7°***	26.3	***-2.0°***

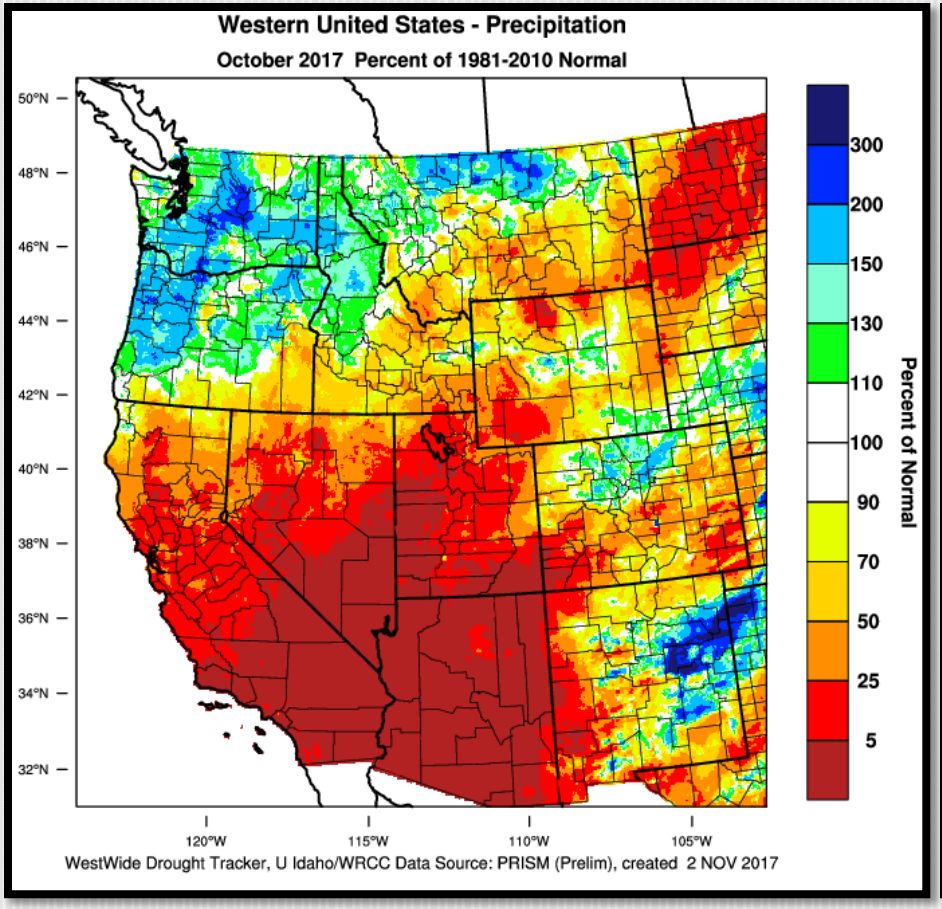
Monthly Max & Min Temperatures

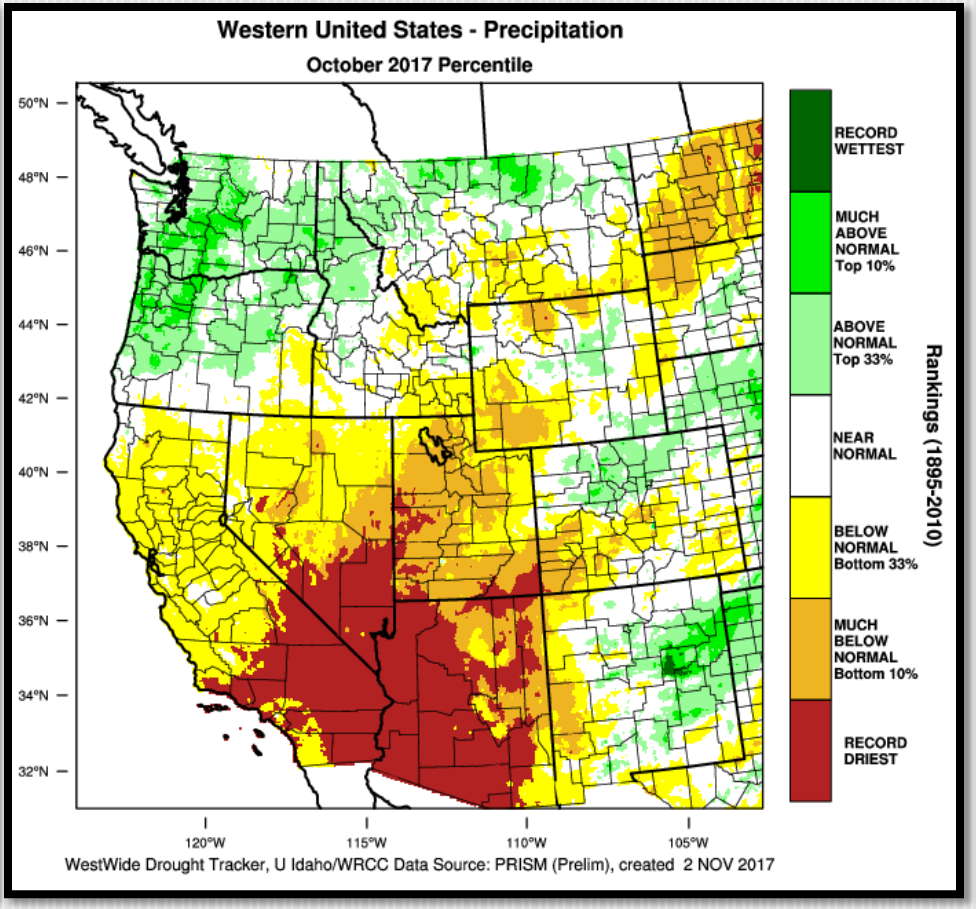
	Max (°F)	Date(s)	Min (°F)	Date(s)
North Bend	82°	24th	37°	14th
Roseburg	80°	6th	34°	31st
Medford	84°	24th	32°	12th & 14th
Klamath Falls	75°	6th & 16th	16°	12th
Montague, CA	80°	6th	24°	12th
Mt. Shasta City, CA	80°	6th	28°	9th & 15th
Alturas, CA	79°	28th	14°	12th

	Date	Record *Low*	Old Record/Year
Klamath Falls	2nd	21°	23° / 2016
	12th	16°	19° / 1985
Alturas	12th	14°	15° / 2008
Montague	15th	26°	Ties with 2013

	Date	Record *High*	Old Record/Year
Klamath Falls	29th	74°	72° / 1995
North Bend	24th	82°	81° / 1965
Medford	24th	84°	80° / 1965

October 2017 *Observed Precipitation*



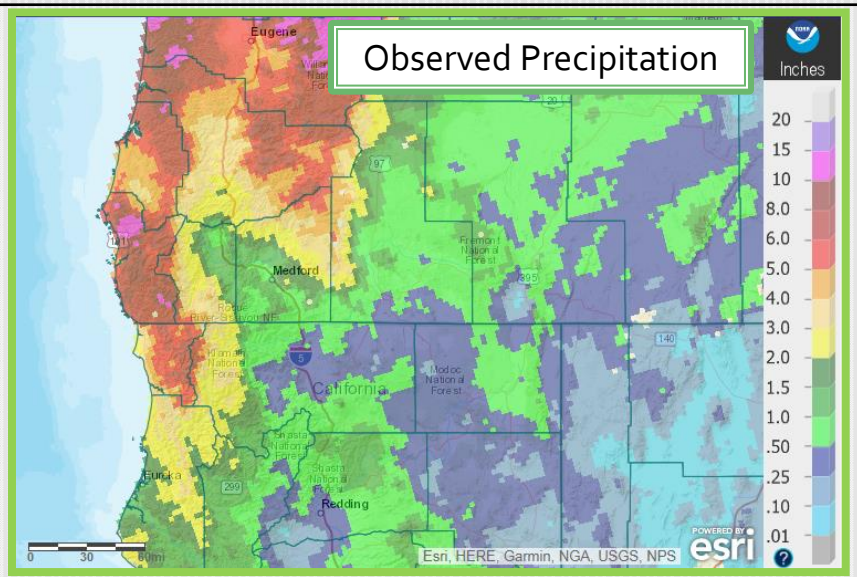


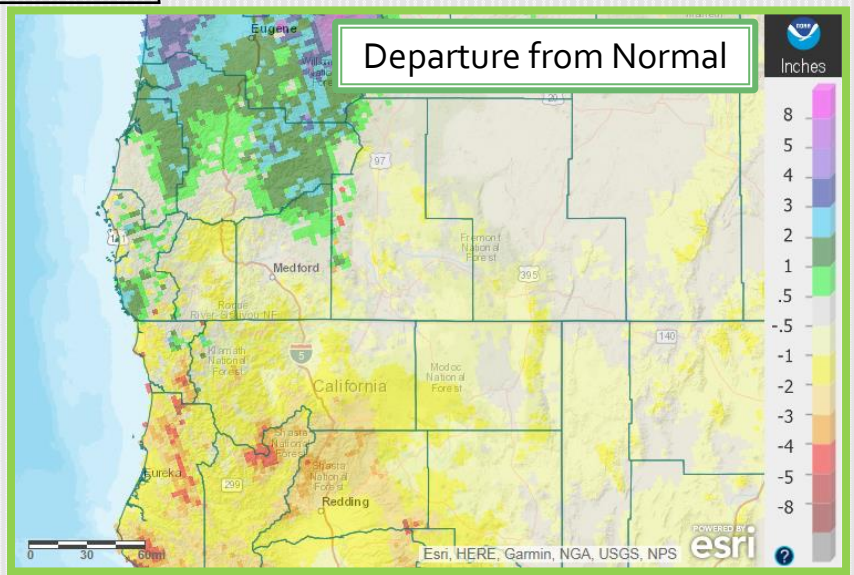
October Precipitation

	Total	Departure from Normal	Greatest 24-hr Total	Date(s)
North Bend	5.64″	+0.91″	1.64″	19th
Roseburg	2.92″	+0.25″	0.77″	22nd
Medford	0.89″	-0.24″	0.40″	19th
Klamath Falls	0.47″	-0.58″	0.22″	19th
Montague, CA	0.43″	-0.77″	0.40″	19th
Mt. Shasta City, CA	0.65″	-1.63″	0.65″	19th
Alturas, CA	0.92″	-0.09″	0.58″	20th

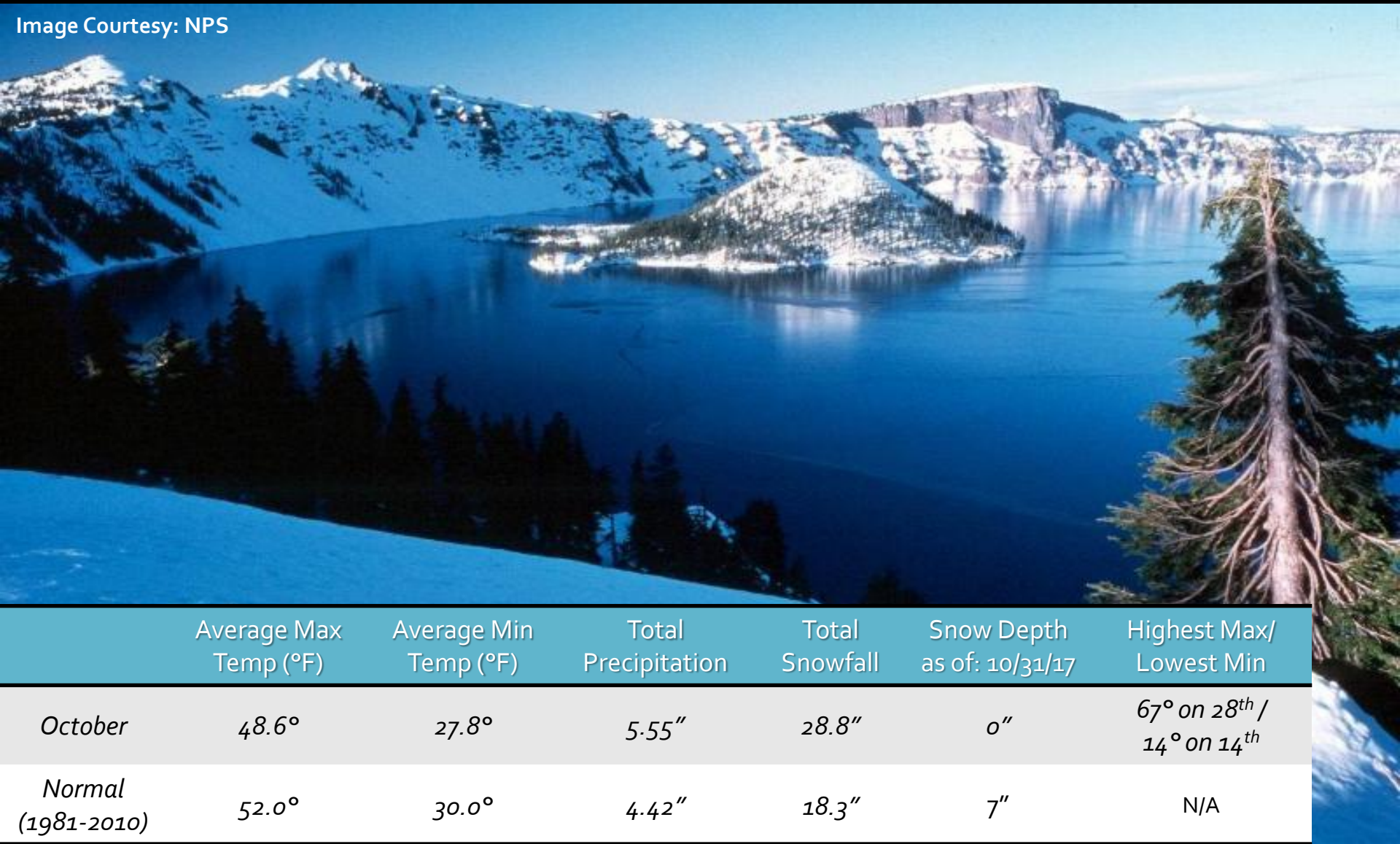
Record Daily Precipitation

	New Record	Date	Old Record	Year
North Bend	1.64″	19th	1.14″	1946
Roseburg	0.76″	20th	0.72″	1934
Alturas	0.58″	20th	0.52″	1941



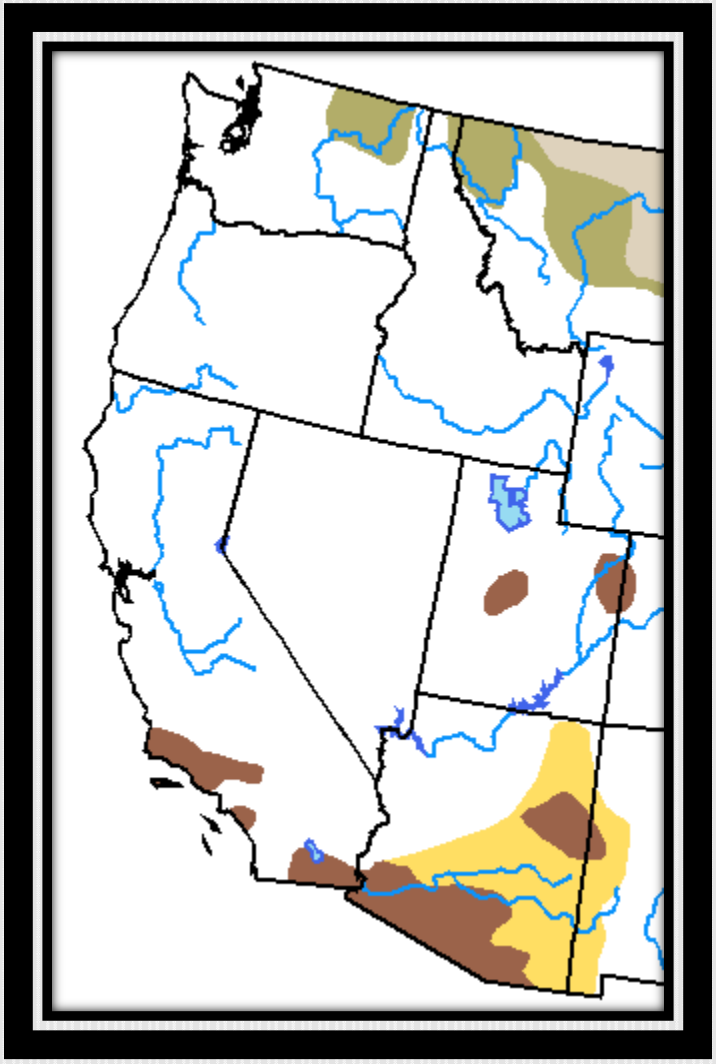


Crater Lake



	Average Max Temp (°F)	Average Min Temp (°F)	Total Precipitation	Total Snowfall	Snow Depth as of: 10/31/17	Highest Max/ Lowest Min
October	*48.6°*	*27.8°*	*5.55″*	*28.8″*	*0″*	*67° on 28th / 14° on 14th*
Normal (1981-2010)	*52.0°*	*30.0°*	*4.42″*	*18.3″*	*7″*	N/A

Drought Outlook: November



Drought persists

Drought remains but improves

Drought removal likely

Drought development likely

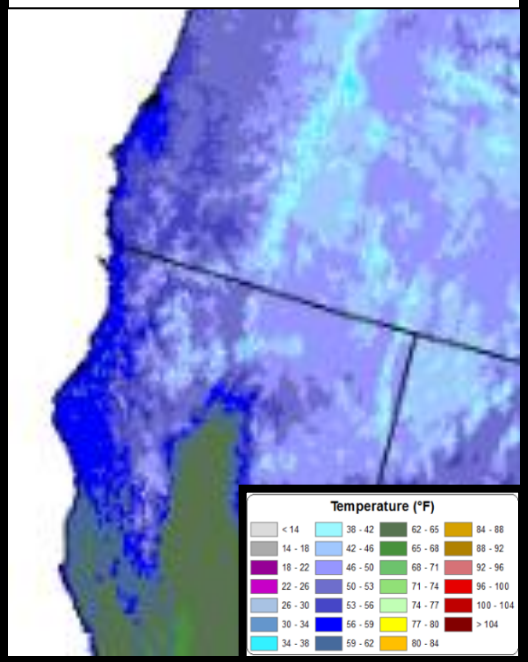
Valid for November 2017
Released October 31, 2017

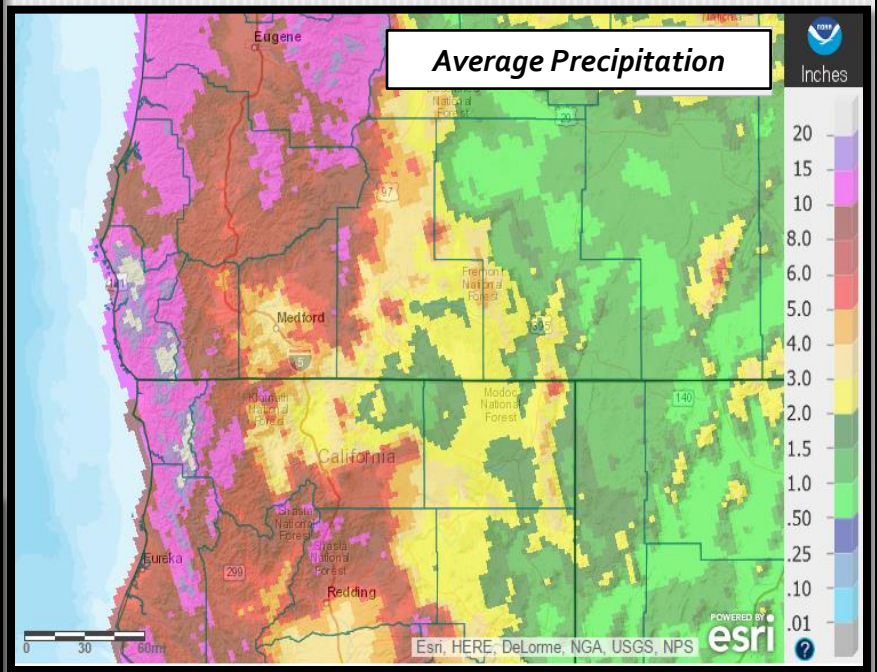
http://www.cpc.ncep.noaa.gov/products/expert_assessment/month_drought.png

Looking Ahead: Normals for November (1981-2010)

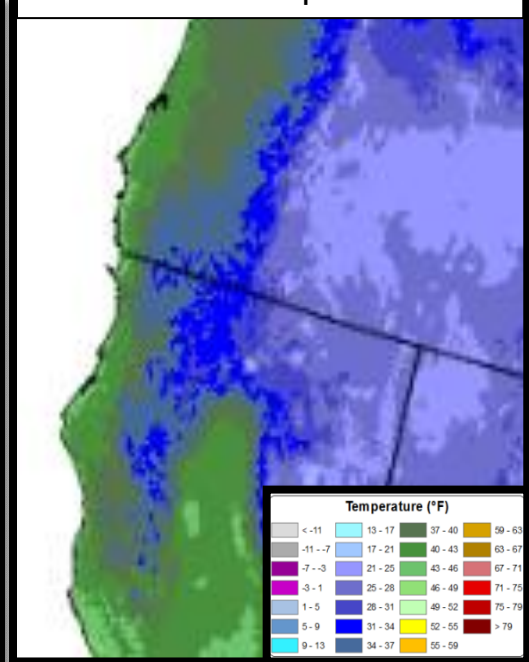
November is a key month for the wet season, resulting in, on average, the second greatest single month precipitation totals across the area. Typically, this is the month when snowpack starts to build in the mountains. The historical average snow depth (1931-2000) at Crater Lake NP Headquarters is 7 inches on the Nov 1st and grows to 29 inches by the 30th. More appreciable snowpack is typical above 7,000 feet in the Cascades. Daily high temperatures are typically in the 30s to lower 40s in the mountains, in the 40s for valleys east of the Cascades, and in the 50 to 60 degree range in the valleys west of the Cascades. Daily low temperatures are in the 20s east of the Cascades, in the 30s and 40s from the Cascades westward, and in the lower 50s along the immediate coast. Precipitation is usually an inch or more for most of the forecast area, with 8 inches or more for all mountainous areas from the Cascades westward. Valleys west of the Cascades generally get 2-8 inches of water, while the valleys east of the Cascades get 1-3 inches. The Cascades typically receive 8 inches or more of water, with 10 to 20+ inches in the Coastal Mountains.

Maximum Temperatures





Minimum Temperatures

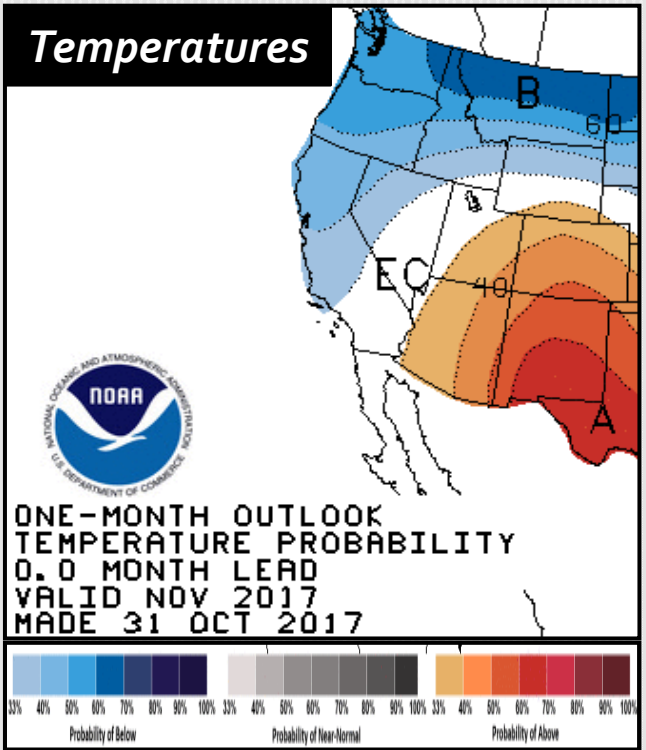


November 2017 Outlook

(Updated Nov 3rd)

The official CPC forecast for November 2017 predicts increased chances for both below normal temperatures and above normal precipitation across the Medford NWS Forecast Area. More specifically, model guidance indicates a return to cool and wet weather during the first week of the month due to highly anomalous low pressure troughing developing over the northwestern portion of the contiguous United States. While colder than normal conditions with appreciable mountain snow is expected during the next week, the bulk of the anomalous precipitation is expected to be southeast of our area in California. The mean trough is then expected to retrograde westward for the Nov 9-15th period directing the bulk of the moisture in a cool and moist flow into our forecast area. Thus, we expect week 2 to be the wettest week of the month. The trough is then expected to gradually drift southeastward during week 3 continuing wetter than normal weather and colder than normal conditions. The last week of the month is expected to be cooler than normal, but less so, and precipitation is expected to diminish.

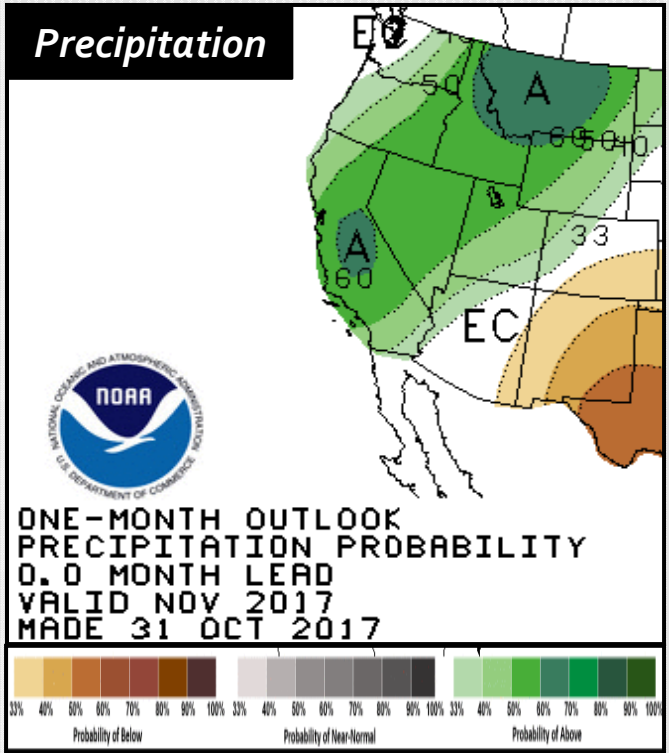
Temperatures



Expected Impact, Nov 2017:

Since November is typically the 2nd wettest month for our area, we expect this month to be ***very*** wet. Coupled with colder than normal conditions, mountain snowpack is expected to grow rapidly and is likely to be substantially above normal by month's end. Winter weather impacts are expected on the passes and east side this month, especially between the 9th and 21st. While main stem river flooding is possible, precipitation rates and lower snow levels are likely to prevent it. Increased stream flow and some wind damage is expected.

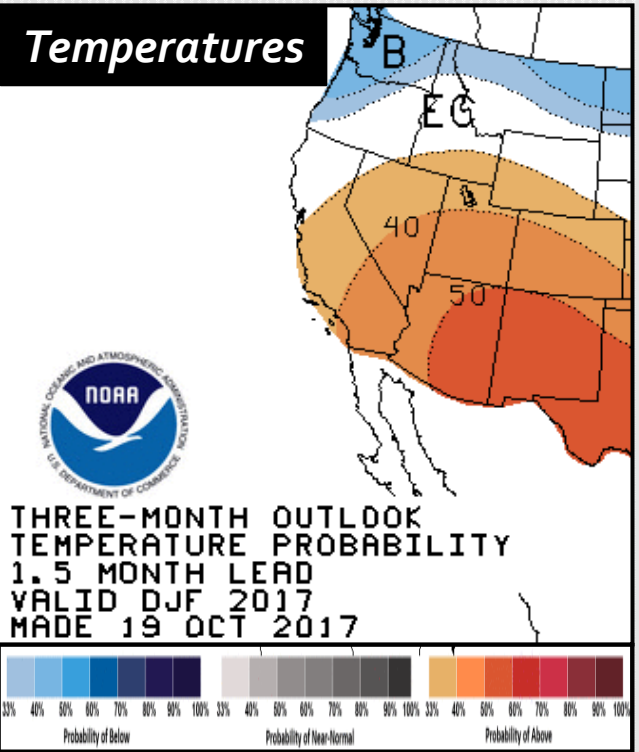
Precipitation



2017-18 Winter Season (DJF) Outlook (Updated 11/2/17)

The official CPC forecast for Dec, Jan, Feb, combined, is for increased chances for below normal temperatures in the northwestern 3rd of the forecast area, equal chances of above, near, and below normal temperatures elsewhere, and also equal chance for precipitation. A La Nina Watch remains in effect, which indicates a 55-65% chance of La Nina conditions developing during the fall and winter of 2017-18. Locally derived analog years for this season using the state of ENSO & the PDO indicate increased chances for near to below normal temperatures across the forecast area during DJF, with the greatest possibility of below normal temperatures for Oregon areas east of the Cascades. Locally derived analogous years also indicate increased chances for near to above normal precipitation, with above normal probabilities for mountainous areas, the Cascades westward, and N. California, highest for interior western Oregon. (Outlook continued on next page.)

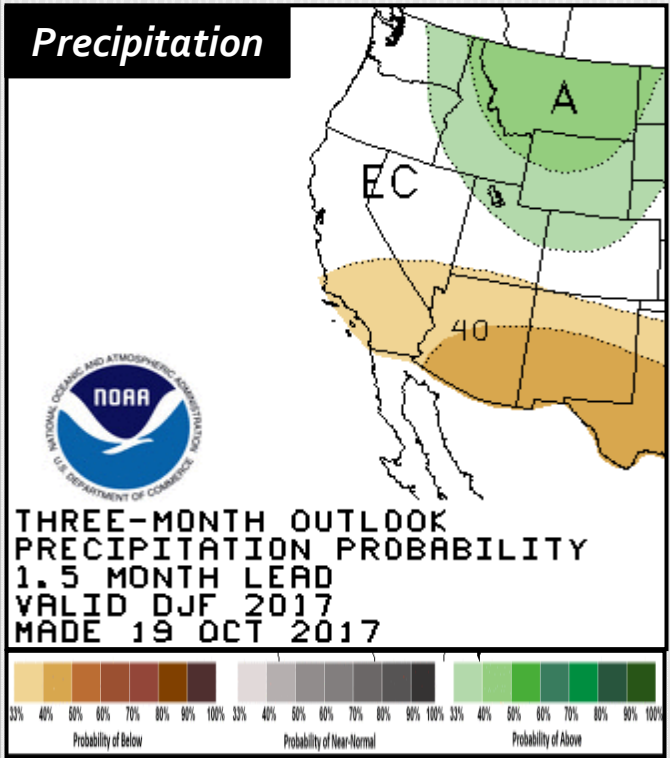
Temperatures



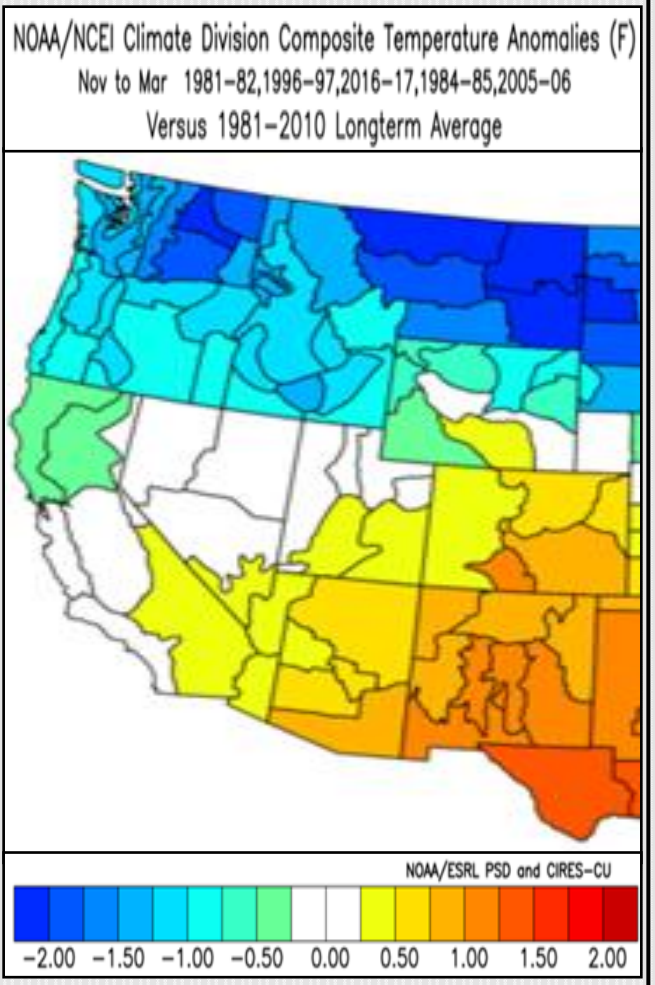
Expected Impact:

Growing confidence in the development of weak to moderate La Nina & a currently neutral PDO increase the chances of a colder and wetter DJF across the area, more than the official forecast indicates. At to above normal snowpack is expected for DJF, resulting in expected healthy water supplies for the 2018 dry season. Cold air outbreaks are also likely, as well as periods of strong winds, impacting snow, and minor main stem river flooding. Thus, we expect another active winter for DJF 2017-18.

Precipitation



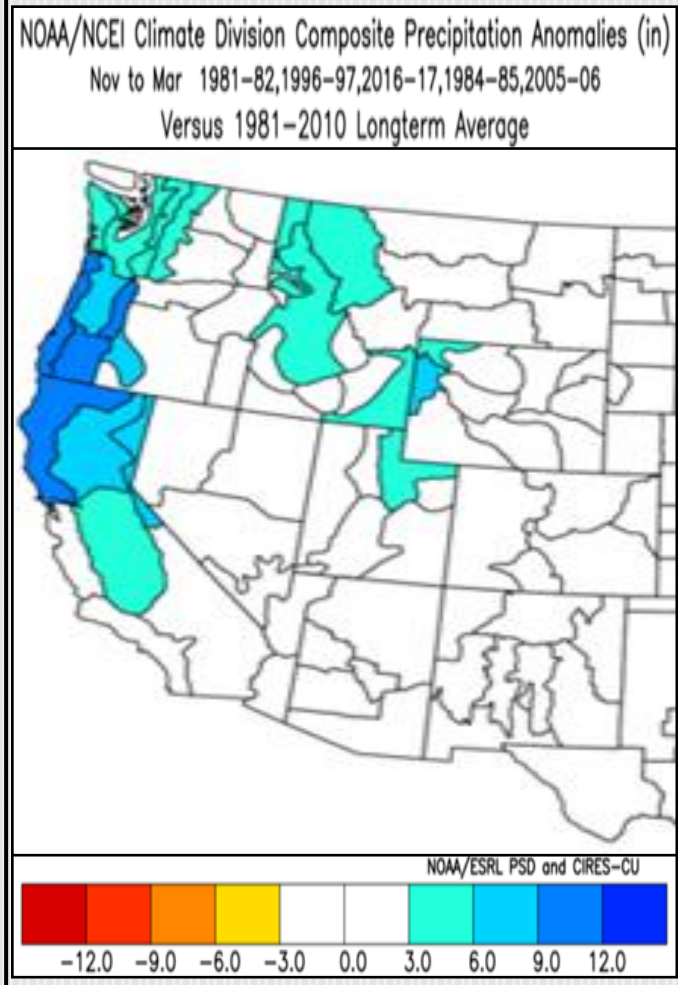
2017-18 November-March Wet Season Outlook (Updated 11/2/17)



Source: NOAA/ESRL & CRES-CU

Core Wet Season Outlook:

With a weak to moderate La Nina being forecast for the Nov-Mar time frame coupled with the current neutral state of the PDO, five analogous periods stand out since 1980. These analogous periods, when combined, indicate that below normal temperatures and above normal precipitation occurred. Therefore, we expect increased chances for colder and wetter conditions than normal across the forecast area. The signal from these analogous years is stronger over our area than is indicated by simply looking at weak and/or moderate La Ninas since 1980. Based on the combination of the expected cooler and wetter than normal conditions during this core wet season period, significant mountain snowpack is expected along with ample runoff for a healthy hydrological outlook.



Compiled by Brett Lutz
NWS Medford, OR

*A note about Period of Record (POR)

When looking at record setting events, it's important to consider the length and completeness of the site's period of record (POR). For example, a site October have records back to the early 1900's, but if there is a significant portion of the record missing, it's possible that the POR is not encompassing another significant event that October have surpassed the event in question. Therefore, "record setting" should be considered relative to the completeness/length of POR. To help keep records in context, the POR for each climate site is listed below:

- **North Bend: 1/1/1902 – Present**
- **Roseburg: 4/1/1900 – Present**
  - *Missing:*
    - *05/1900-01/1901*
    - *03/1901-06/1902*
    - *08/1902-12/1930*
    - *10/1965-06/1997*
- **Medford: 3/11/1911 – Present**
- **Klamath Falls: 1/1/1948 – Present**
  - *Missing:*
    - *08-10/1970*
    - *1971-10/1997*
- **Montague, CA: 7/1/1948 – Present**
  - *Missing:*
    - *08-09/1952*
    - *02/1953-06/2000*
- **Mount Shasta City, CA: 4/15/1948 – Present**
  - *Missing:*
    - *10/1984-01/1985*
    - *10/1985-03/1986*
    - *09/1986-07/1997*
- **Alturas, CA: 6/1/1998 – Present**
  - *Missing:*
    - *08/1998*