National Weather Service Medford

November 2016 Climate Summary

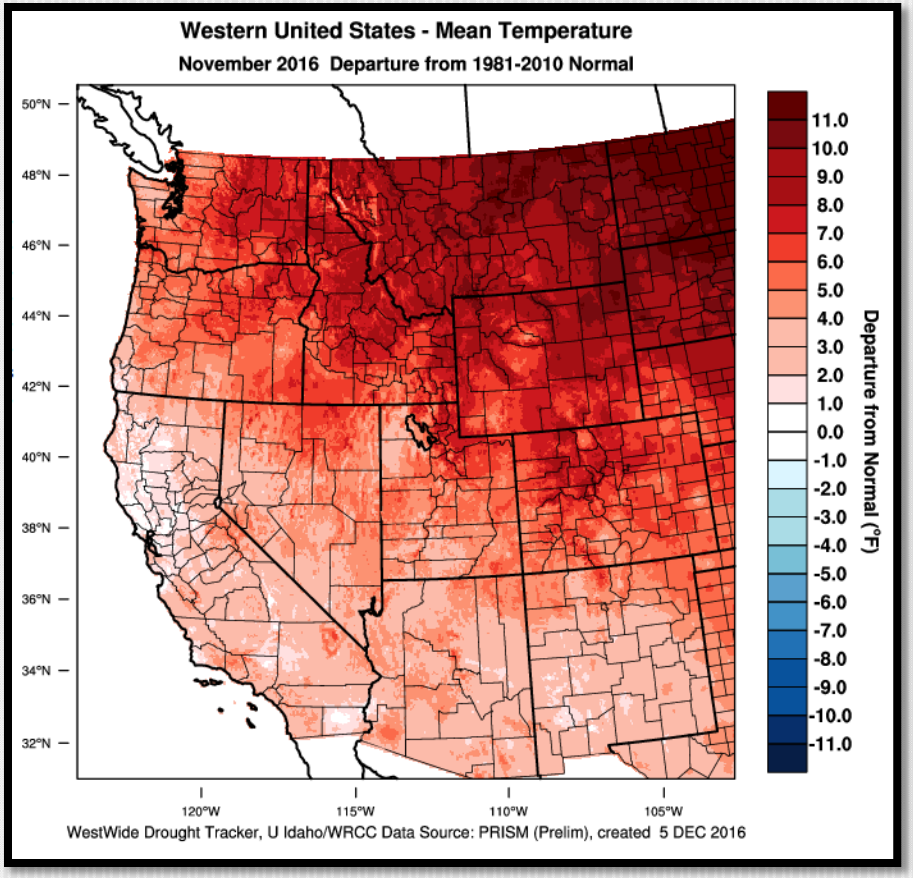
*These data are preliminary and have not undergone final QC by NCEI. Therefore, these data are subject to revision. Final and certified climate data can be accessed at the National Centers for Environmental Information (NCEI).

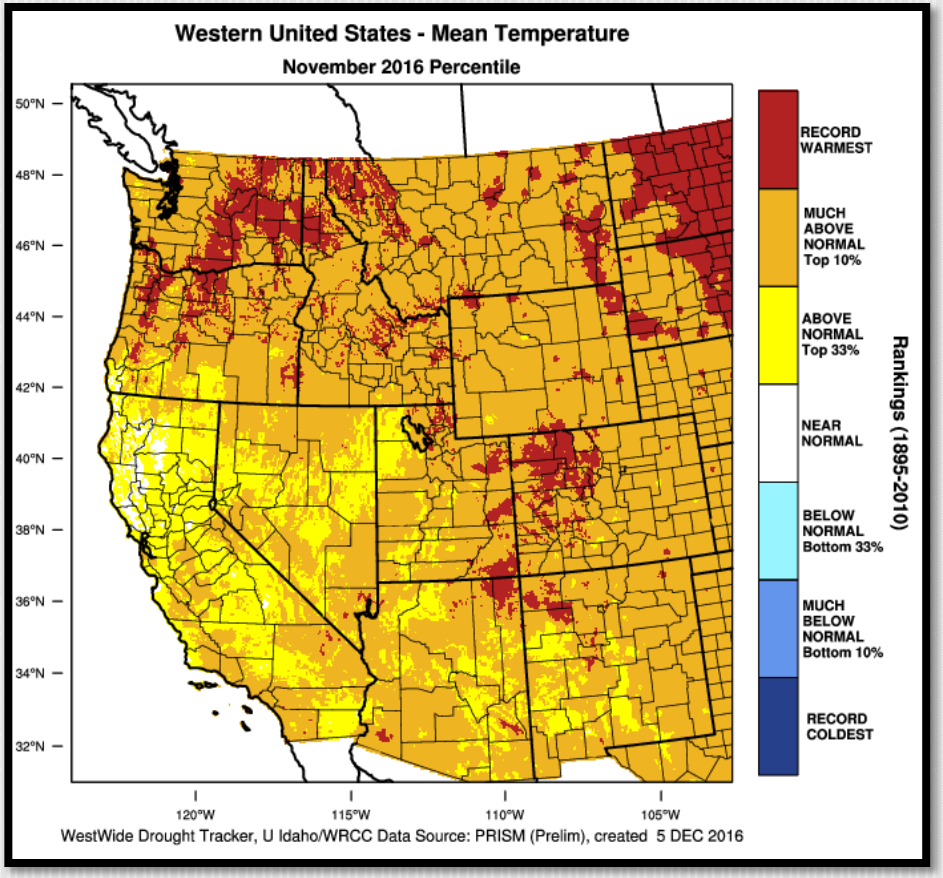
November 2016 Weather Review

After one of the wettest Octobers on record, the very active weather pattern continued into November 2016. Although it remained active, November turned out to be drier than normal for most climate sites. The exception here was our coastal climate site, North Bend, which closed out the month with 3.04 inches of precipitation above normal. November also took a warmer than normal turn compared to average. In fact, the average temperatures for November 2016 for all of the climate sites fell within the top 5 warmest Novembers on record. The exception was Mount Shasta City, which was the 8th warmest November on record. In addition, daily high temperatures were about 10-15 degrees above normal during the first half of the month and this led to multiple daily record highs being set or tied around the area. Another notable record set during November 2016, is that the Medford Airport had surpassed it's latest first freeze date on record. The old record for the latest first freeze was November 29th, and Medford did not reach freezing until December 5th. This also set the record for the most days between first and last freeze dates. Given that the last day to see freezing temperatures was February 29th, there were 279 days between first and last freeze dates for Medford.

Despite the warmer than normal and drier than normal conditions during the month, snow began to fall on a consistent enough basis to provide a good base for snowpack in the mountains. Thus a feeling of winter came with Mt Ashland and Crater Lake starting to see respectable snowpack with each passing storm system.

November 2016 Observed Temperatures





Average & Record Temperatures

	Average (°F)	Departure from Normal	Average Max (°F)	Departure from Normal	Average Min (°F)	Departure from Normal
North Bend	54.0	+5.2	59.7	+4.8	48.3	+5.6
Roseburg	52.5	+5.6	59.7	+6.2	45.4	+5.1
Medford	49.9	+5.2	58.8	+5.8	41.0	+4.6
Klamath Falls	41.2	+5.7	52.3	+6.4	30.2	+5.2
Montague, CA	45.0	+5.1	56.3	+5.9	33.8	+4.4
Mt. Shasta City, CA	44.6	+4.0	54.2	+2.9	35.0	+5.2
Alturas, CA	40.4	+4.3	54.4	+5.1	26.5	+3.6

Record November Warmth

Record November Warmth	Average Temperature	Average Max Temperature	Average Min Temperature (warmest)
North Bend	2nd	16th	2nd
Roseburg	1st	2nd	1st
Medford	1st	5th	1st
Klamath Falls	5th	5th	7th
Montague, CA	2nd	3rd	2nd
Mt. Shasta City, CA	8th	14th	3rd *
Alturas, CA	3rd	5th	5th

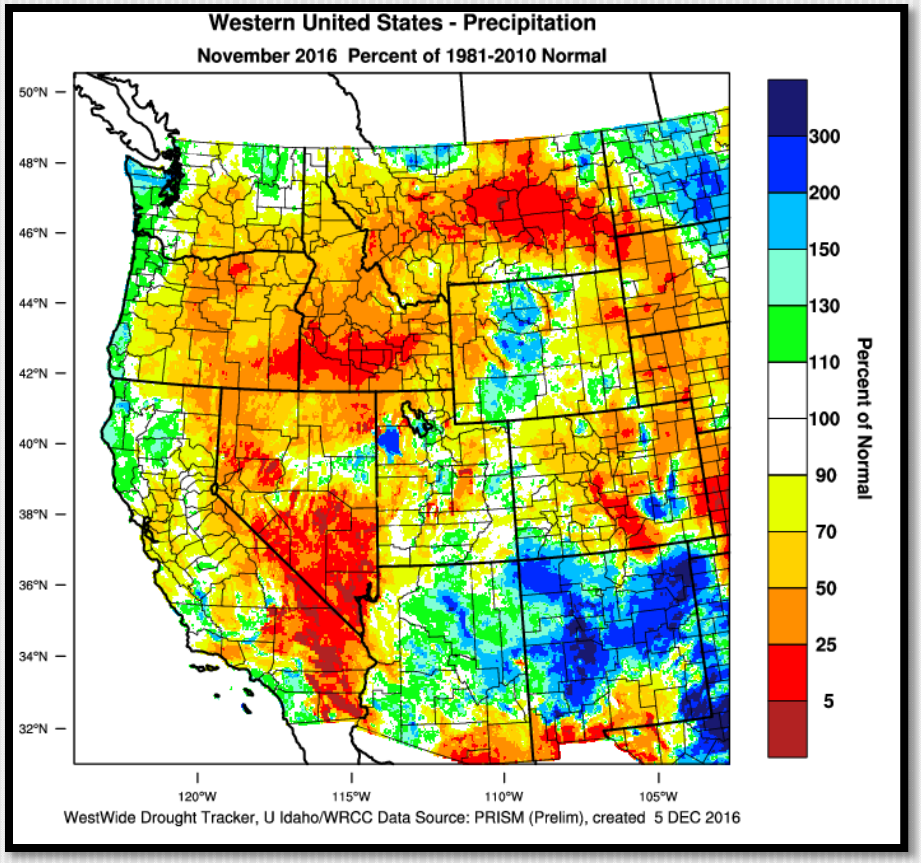
Record *High* Temperatures	Date/ Temperature (°F)	Date/ Temperature (°F)	Date/ Temperature (°F)
North Bend	8th / 72° *		
Roseburg	2nd / 72° *	4th / 76° *	9th / 70°
Klamath Falls	8th / 69°	9th / 69°	10th / 71°
Montague, CA	8th / 74° *	9th / 69° *	10th / 73°
Alturas, CA			10th / 74°

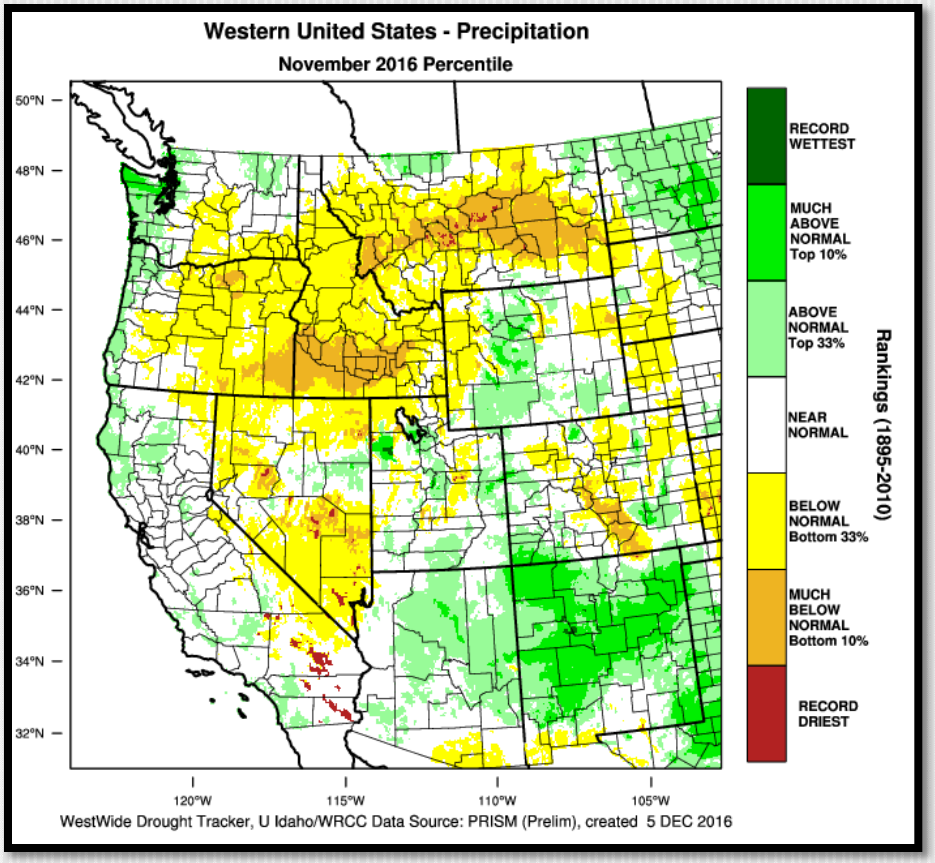
*ties with previous years

Monthly Max & Min Temperatures

	Max (°F)	Date(s)	Min (°F)	Date(s)
North Bend	72°	8th	43°	29th & 30th
Roseburg	76°	4th	38°	18th & 22nd
Medford	69°	4th & 8th	35°	18th
Klamath Falls	71°	10th	20°	29th
Montague, CA	74°	8th	25°	22nd
Mt. Shasta City, CA	70°	9th & 10th	26°	17th
Alturas, CA	75°	8th	14°	17th

November 2016 Observed Precipitation

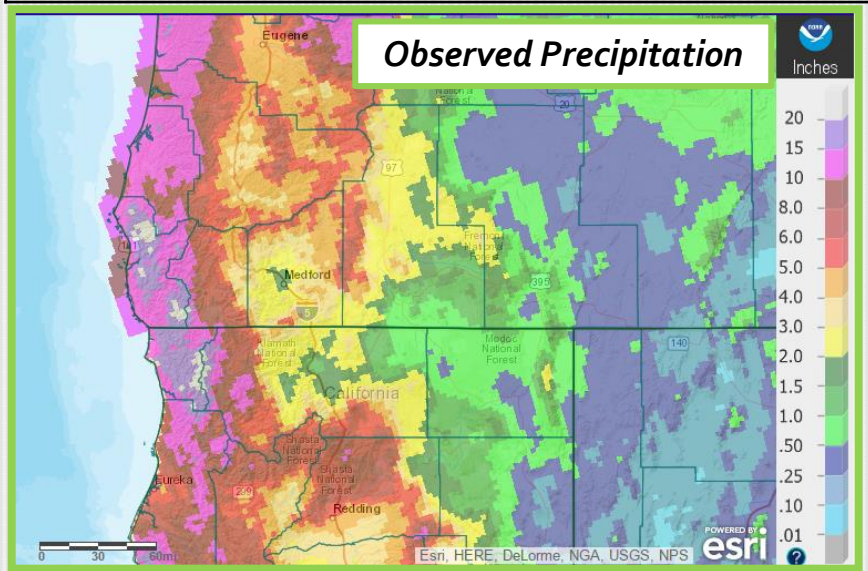


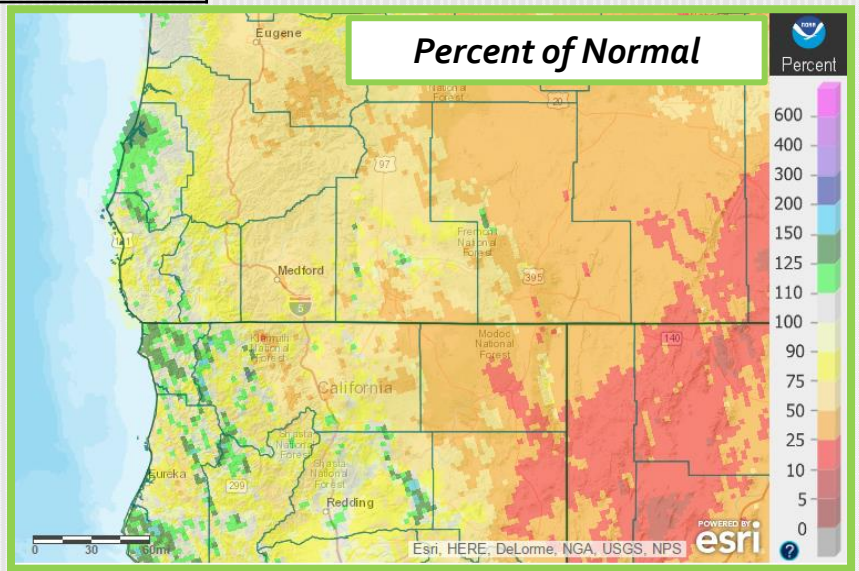


Precipitation

	Total	Departure from Normal	Greatest 24-hr Total	Date(s)
North Bend	13.27"	+3.04"	2.51"	25th
Roseburg	3.94"	-2.52"	1.00"	20th
Medford	1.64"	-1.38"	0.55"	14th – 15th
Klamath Falls	0.76"	-1.43"	0.19"	14th – 15th
Montague, CA	1.80"	-1.17"	0.67"	14th – 15th
Mt. Shasta City, CA	4.60"	-0.48"	1.68"	18th – 19th
Alturas, CA	0.53"	-1.26"	0.14"	10/31 – 11/1

North Bend set a new record daily rainfall on the 25th with 2.51 inches. This broke the old record of 1.70 inches set in 1946.





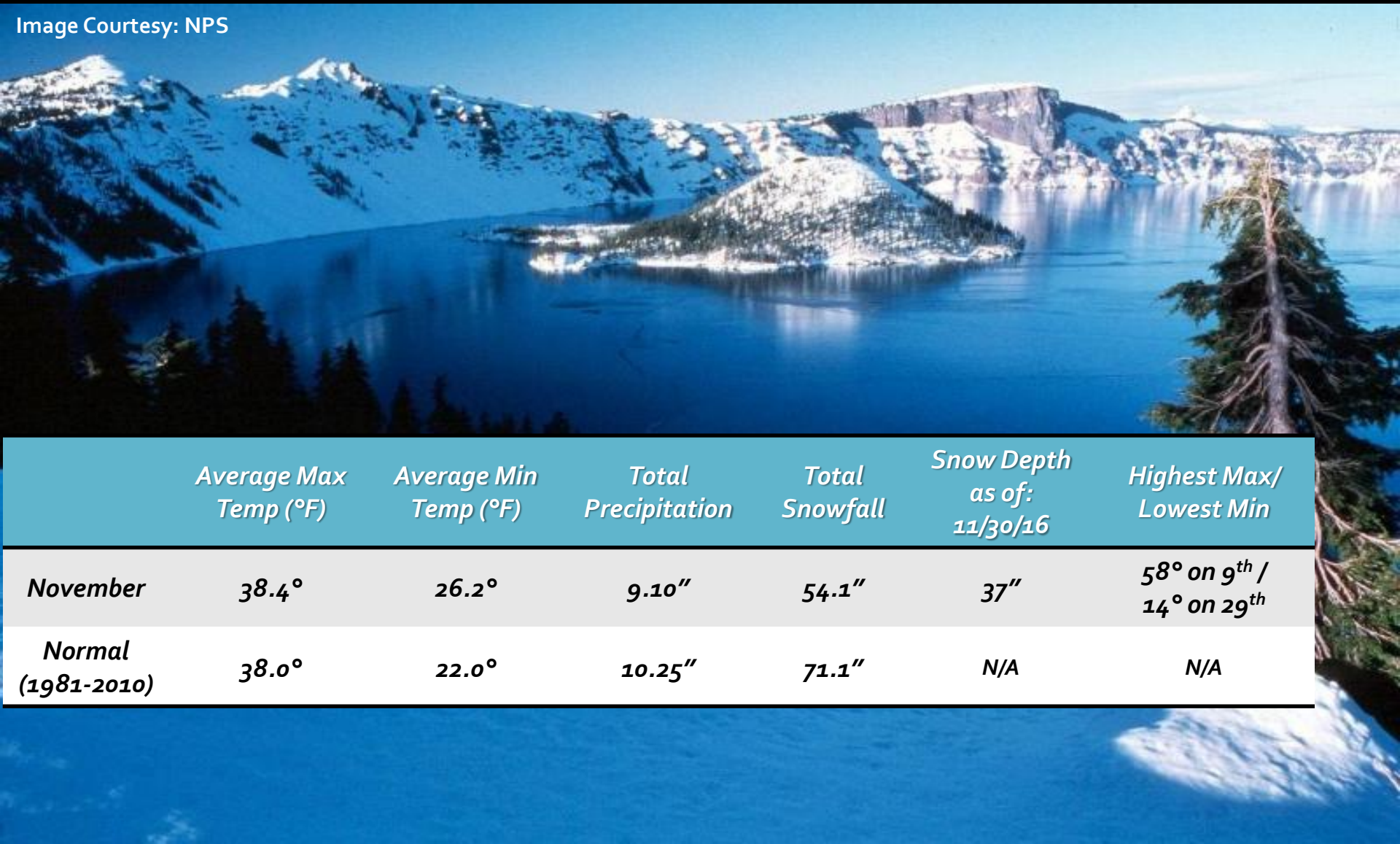
*A note about Period of Record (POR)

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 may 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 may 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*

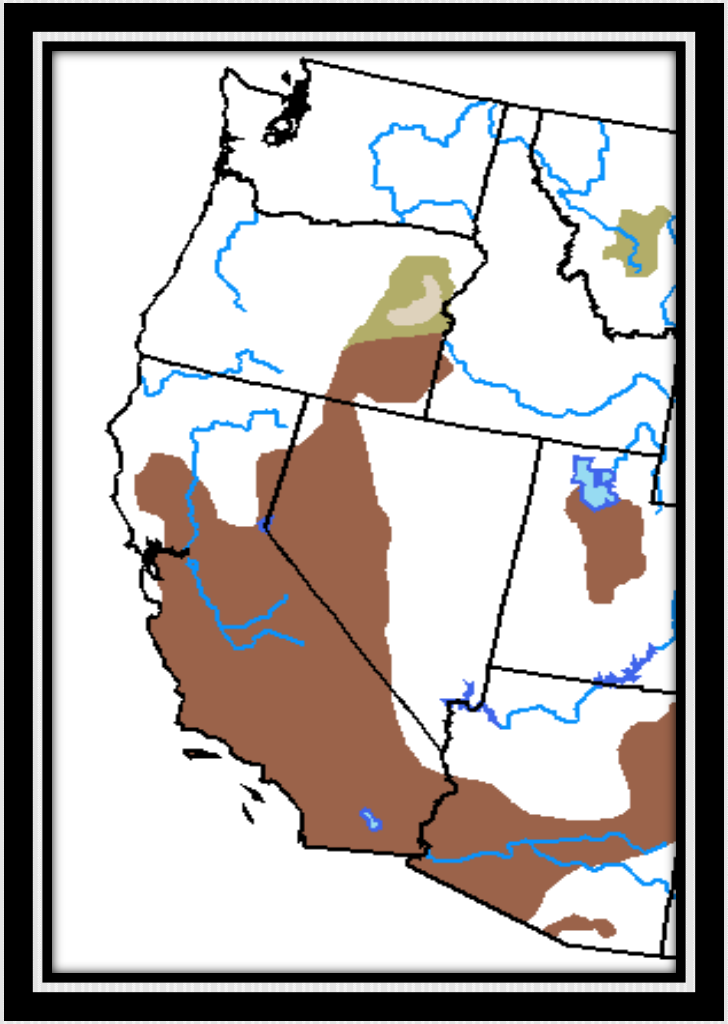
Crater Lake

Image Courtesy: NPS



	Average Max Temp (°F)	Average Min Temp (°F)	Total Precipitation	Total Snowfall	Snow Depth as of: 11/30/16	Highest Max/ Lowest Min
November	38.4°	26.2°	9.10"	54.1"	37"	58° on 9th / 14° on 29th
Normal (1981-2010)	38.0°	22.0°	10.25"	71.1"	N/A	N/A

Drought Outlook: December



Drought persists

Drought remains but improves

Drought removal likely

Drought development likely

Valid for December 2016
Released November 30, 2016

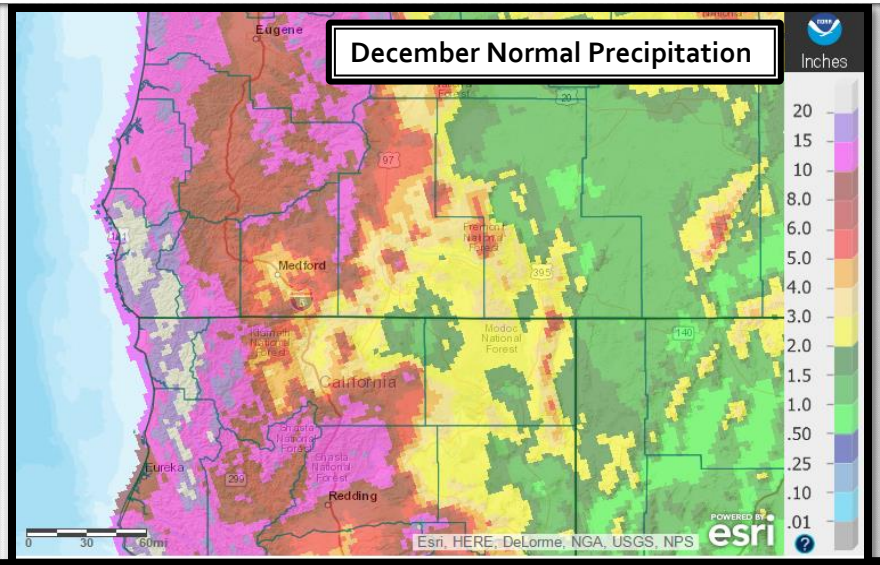
http://www.cpc.ncep.noaa.gov/products/expert_assessment/month_drought.png

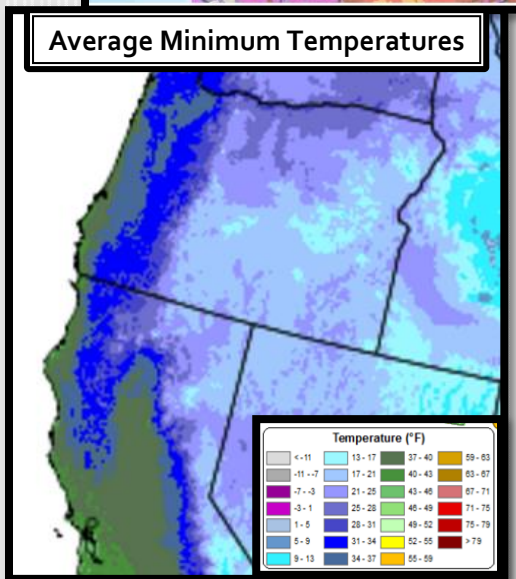
Looking Ahead: Normals for December (1981-2010)

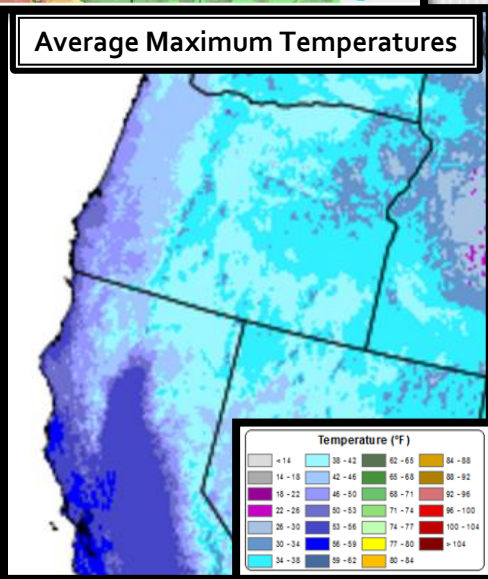
- December is typically the wettest month of the year, collectively, for southwest Oregon and far northern California. The driest locations of Lake County average only a half inch to an inch of water. Most valleys east of the Cascades typically receive 1-4 inches of water, while the mountains east of the Cascades typically see 3-9 inches of water. For the Cascades and Mount Shasta area, typical December totals are 8-15 inches. The drier West Side Valleys, like the Bear Creek drainage of the Rogue Valley and the Shasta and Scott Valleys in California, usually receive 2-5 inches. The remainder of the West Side receives 5-15 inches, although the wettest portions of the Umpqua Basin, the Coast and the Coast Range gets 15-20+ inches during an average December.

- Much of this water typically falls as snow above about 4,000 feet MSL. For instance, the 1981-2010 average snowfall for Crater Lake National Park Headquarters is 92.6". Snow depth there usually is 35.4" on December 1st and 67.5" on December 31st based on the same averages.

- Typical daily high temperatures are 30°F to near 40°F in the mountains above 5000 feet and across the East Side, in the mid 40s to mid 50s west of the Cascades. Daily low temperatures are in the mid teens in the coldest locations on the East Side and on Mount Shasta to the upper 20s in and near the Cascades. West of the Cascades to the coast, lower 30s to mid 40s are most typical from east to west.



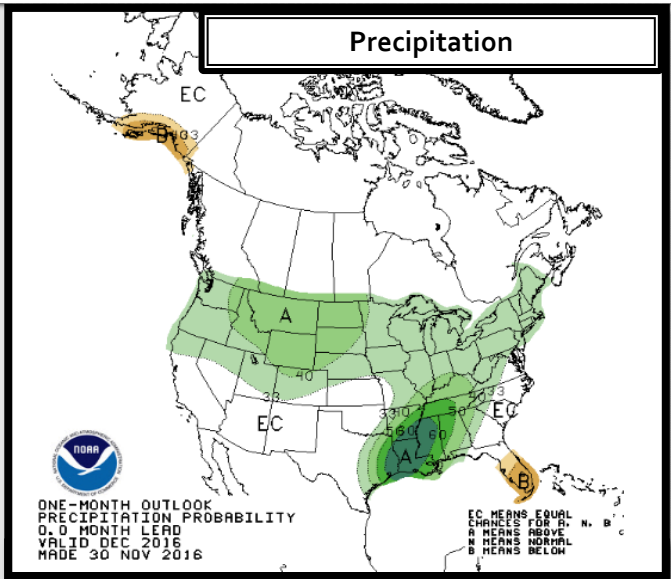


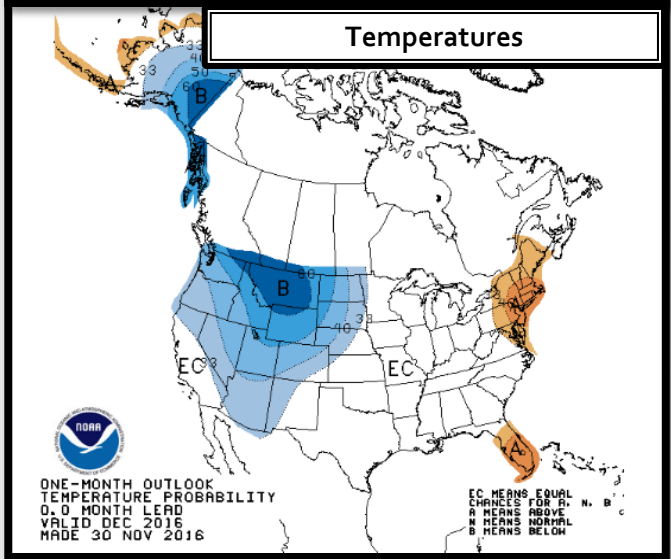


December 2016 Outlook

Outlook: December 2016:

The first week of December has gotten off to a near to below normal start for temperatures and near to below normal start for precipitation. For most of the month we expect high pressure ridging over the Eastern Pacific Ocean and low pressure troughing over Western Canada and the Pacific Northwest to result in a general northwest flow over the forecast area. While slight shifts in the flow to a more westerly (wetter) or a more northerly (drier) track will drastically affect the moisture of incoming storms, the expected overall flow pattern favors near to above average precipitation from about the Oregon Cascades and Siskiyous north and westward. East of these areas, net downslope flow is more likely to result in near to below average precipitation. Temperatures are expected to be near to below normal for all areas due to the general northwest flow expected through the month and the drier conditions possible east of the Cascades and south of the Siskiyous. The official CPC forecast calls for increased chances of below average temperatures and increased chances for above average precipitation for the entire forecast area.





Expected Impact, December 2016:

The general northwest flow expected for December is very favorable for the accumulation of snowpack across the forecast area above 4000 feet, especially in the Oregon Cascades and Siskiyous due to the orientation of the terrain. Thus, with near to above average snowfall expected across the area, we expect more travel impacts on area roadways and favorable conditions for winter outdoor recreation activities such as sledding, skiing, snowboarding, and snowmobiling. While model trends indicate increased chances of warmer storms the week before Christmas and high pressure ridging over the area the last week of the month, it currently appears that the snowpack will be large and cold enough to soak up any rain that falls into it and then refreeze without causing flooding. Overall, this month should be good for the accumulation of water supplies across the area. As usual, we do expect periods of gusty winds and heavy rainfall in the valley areas, along the coast and the typical locations in the mountains.