National Weather Service Medford

November 2020 Climate Summary & December Outlook

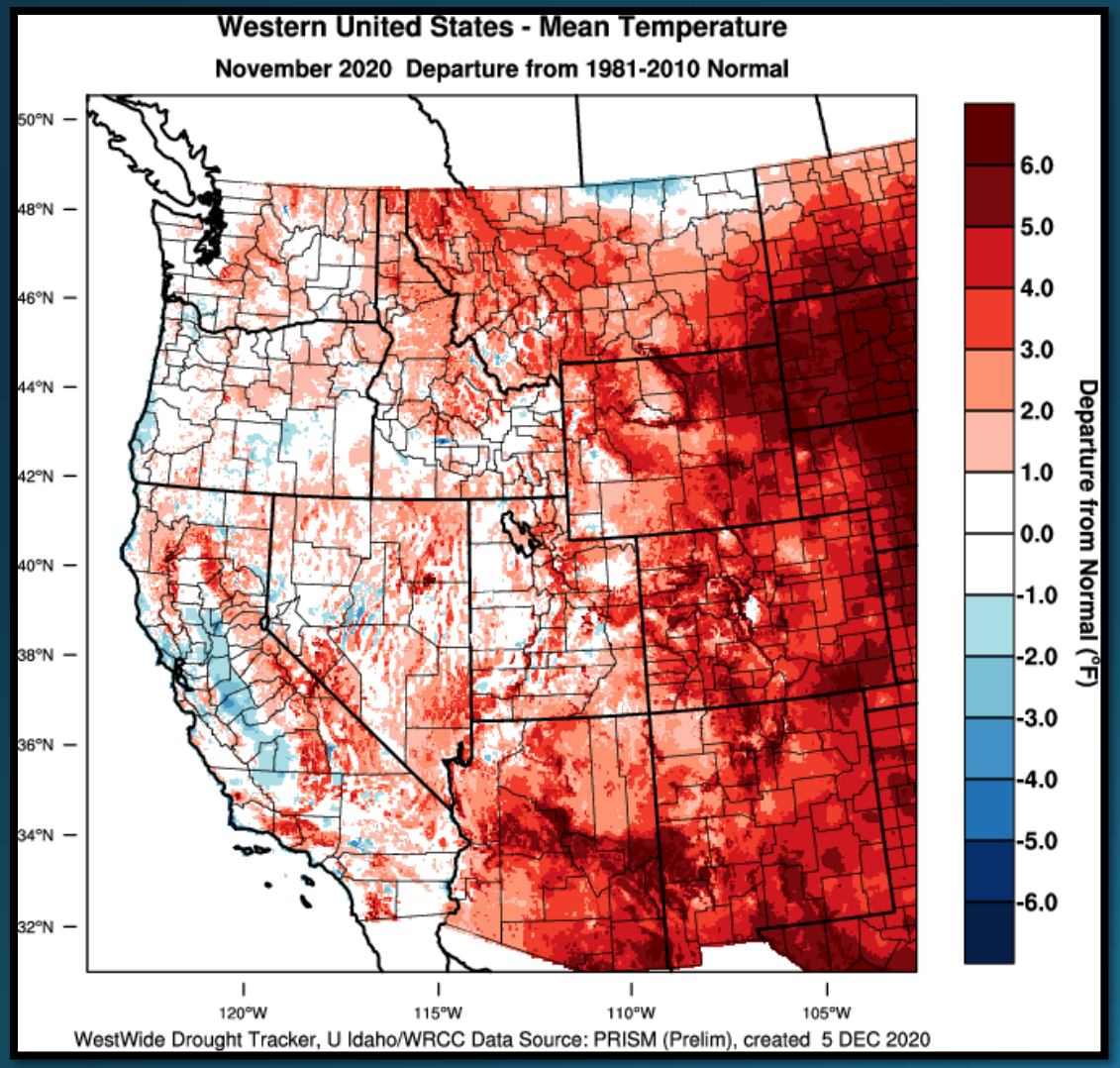
*These data are preliminary and have not undergone final QC by NCEI. Therefore, these data are subject to revision. Final and certified climate data can be accessed at the National Centers for Environmental Information (NCEI).

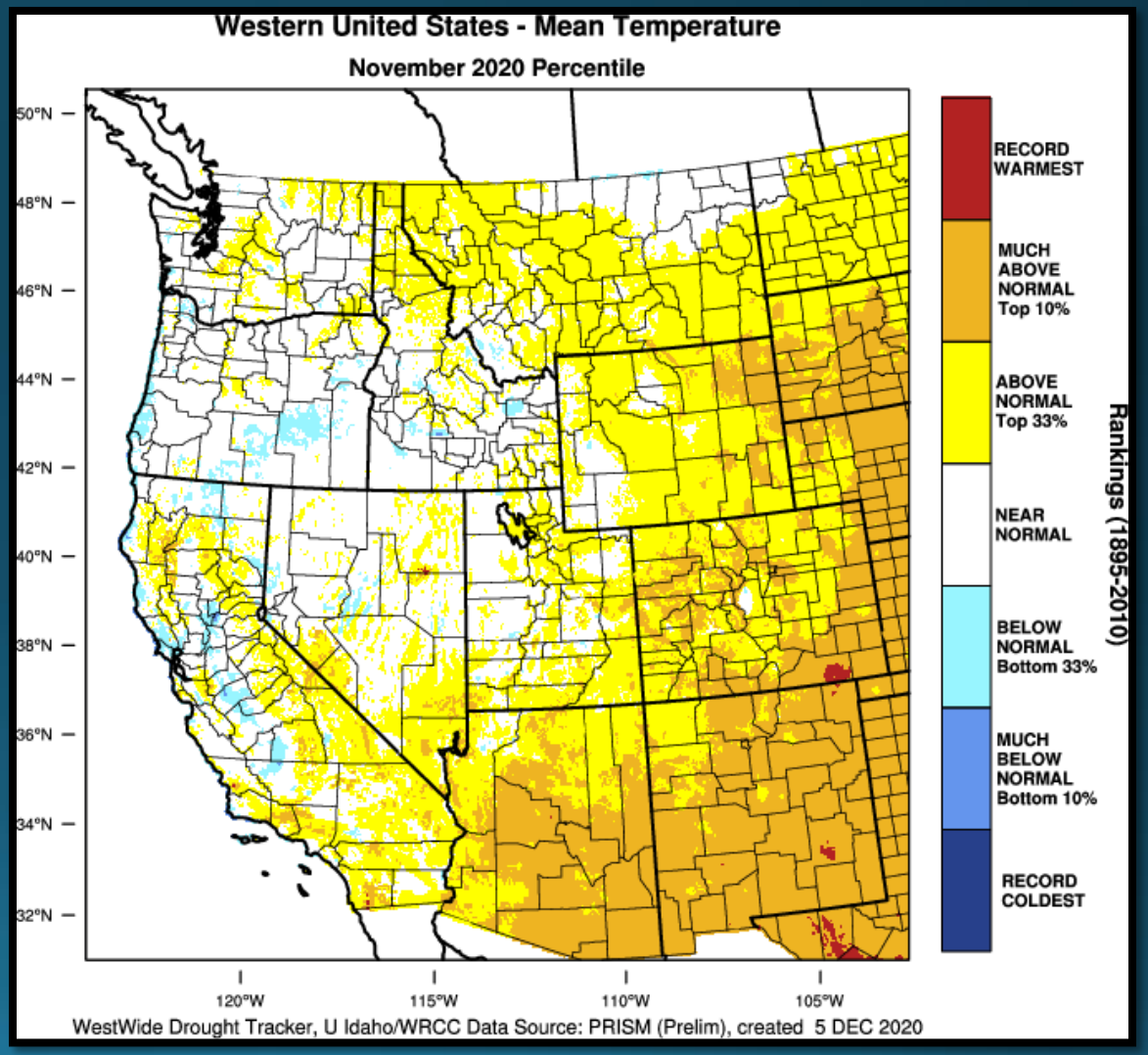
November 2020 Weather Review

The wet season finally made it`s appearance during November 2020 and the month was considerably more active than October, especially during the first half of the month. Unseasonably warm temperatures continued through the first week of the month, and numerous daily high temperature records were set across the area. The pattern quickly transitioned to an active winter like pattern on the 6th. The change was drastic, especially in terms of temperatures. Over the course of just three days, high temperatures across the area dropped by 40 – 50 degrees! Numerous systems moved through the region, bringing much needed beneficial rainfall and mountain snow. An atmospheric river affected the area on the 14th and 15th, and the Medford Airport recorded 1.75" of rain with this event on the 15th. This value was just shy of breaking the daily rainfall total record for November 15th. The current record stands at 1.78" set in 1966.

Following this atmospheric river event, the weather pattern remained active as a few more systems moved through. During Thanksgiving week, however, the progression of systems began to slow and the last week or so of the month saw periods of ridging alternating with weak fronts at times. This led to periods of stagnant air in the valleys as well as persistent valley fog and low clouds, especially west of the Cascades. There were a few days where the fog and low clouds never cleared from some of these valleys and this led to well below normal daytime temperatures. Upper level ridging persisted during the last few days of the month except for the very last day. A weak front moved through the area and while this wasn`t a big rain maker like previous systems (Medford Airport only recorded 0.04"), it did help to break up the stagnant air in the valleys.

November 2020 Observed Temperatures





Average Temperatures

	Average (°F)	Departure from Normal	Average Max (°F)	Departure from Normal	Average Min (°F)	Departure from Normal
North Bend	48.7	-0.1°	56.6	1.7°	40.8	-1.9°
Roseburg	46.9	0.0°	54.9	1.4°	38.9	-1.4°
Medford	43.8	-0.9°	51.8	-1.2°	35.7	-0.7°
Klamath Falls	36.1	0.6°	48.4	2.5°	23.8	-1.2°
Montague, CA	40.6	0.7°	53.3	2.9°	27.8	-1.6°
Mt. Shasta City, CA	40.9	0.3°	52.5	1.2°	29.2	-0.6°
Alturas, CA	36.7	0.6°	51.7	2.4°	21.6	-1.3°

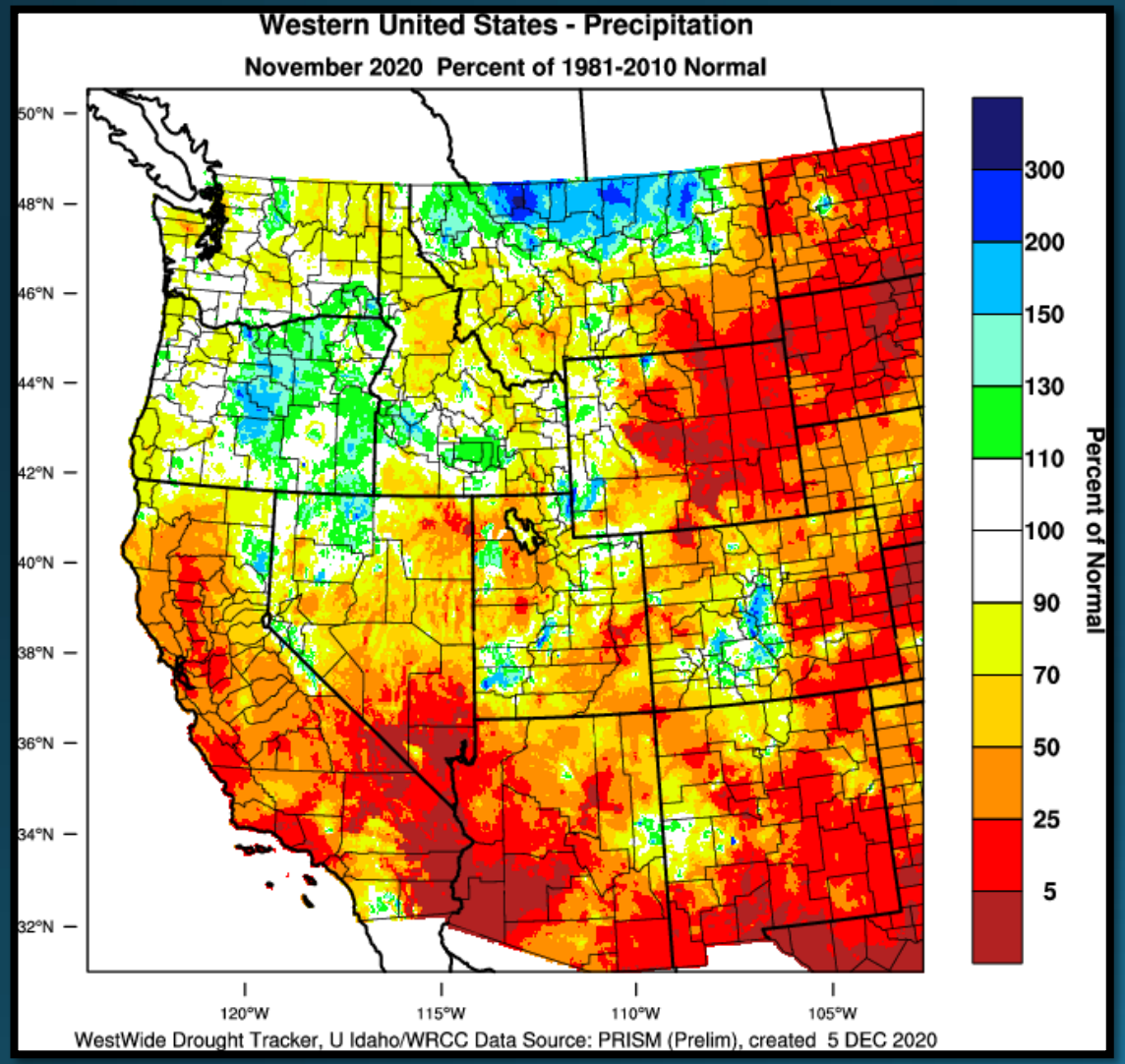
Monthly Max & Min Temperatures

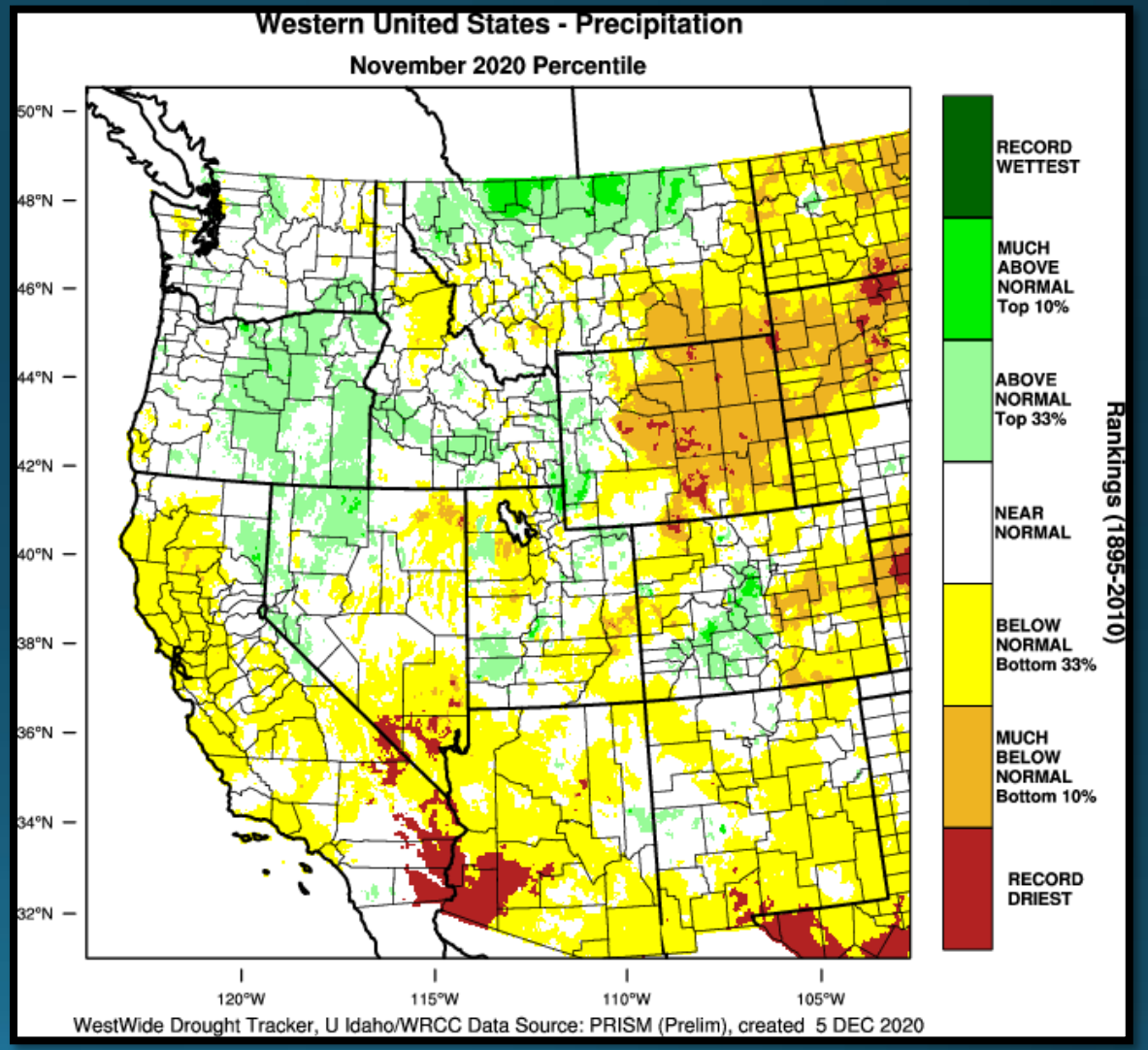
	Max (°F)	Date(s)	Min (°F)	Date(s)
North Bend	68°	4th	30°	9th
Roseburg	77°	4th	26°	9th
Medford	77°	4th	22°	9th
Klamath Falls	72°	2nd	10°	12th
Montague, CA	76°	4th	13°	12th
Mt. Shasta City, CA	78°	1st	18°	12th
Alturas, CA	78°	2nd	9°	12th

	Record High	Date	Old Record/Year
Klamath Falls	72°	2nd	70° / 1927
	71°	5th	69° / 1980
Montague	74°	3rd	73° / 1949
	76°	4th	Ties with 2009
Roseburg	73°	2nd	72° / 2010
	77°	4th	76° / 1975
	68°	16th	65° / 1999
Medford	77°	4th	73° / 1949

	Record Low	Date	Old Record/Year
Roseburg	26°	9th	28° / 1948

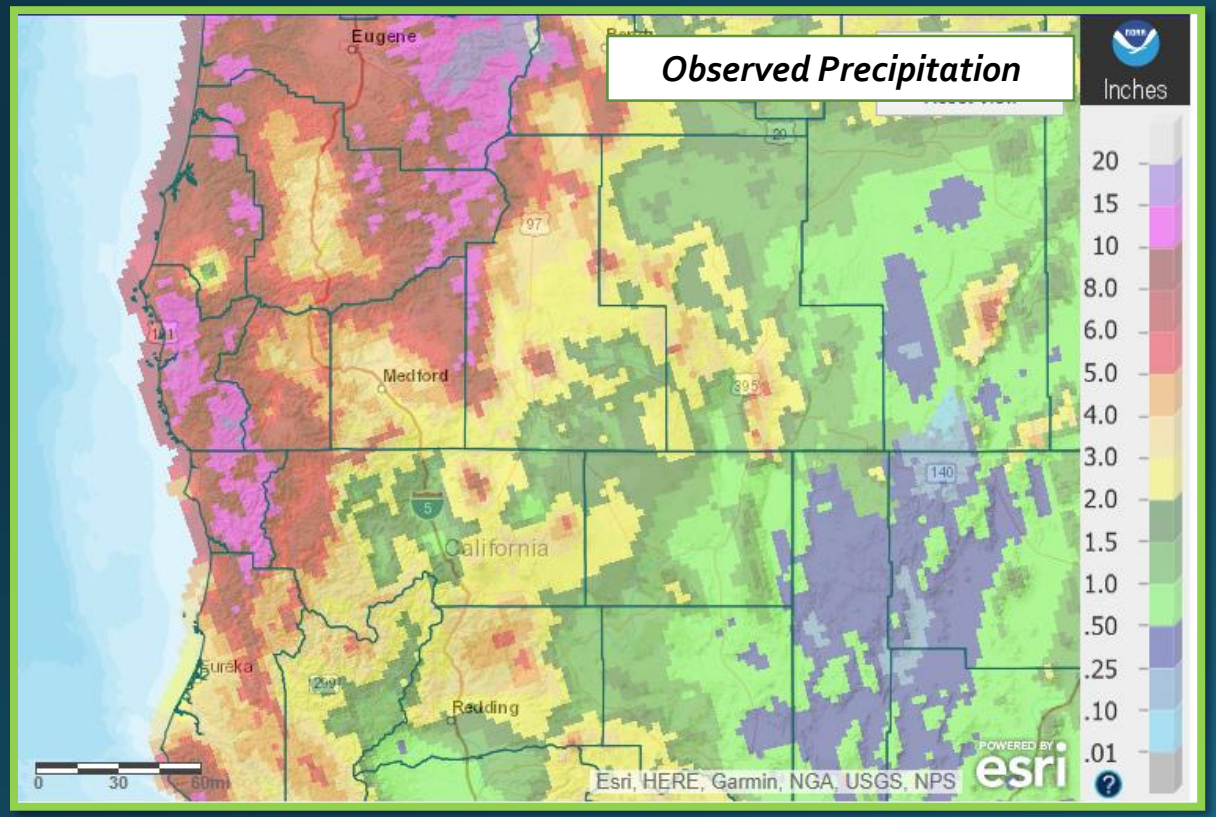
November 2020 Observed Precipitation

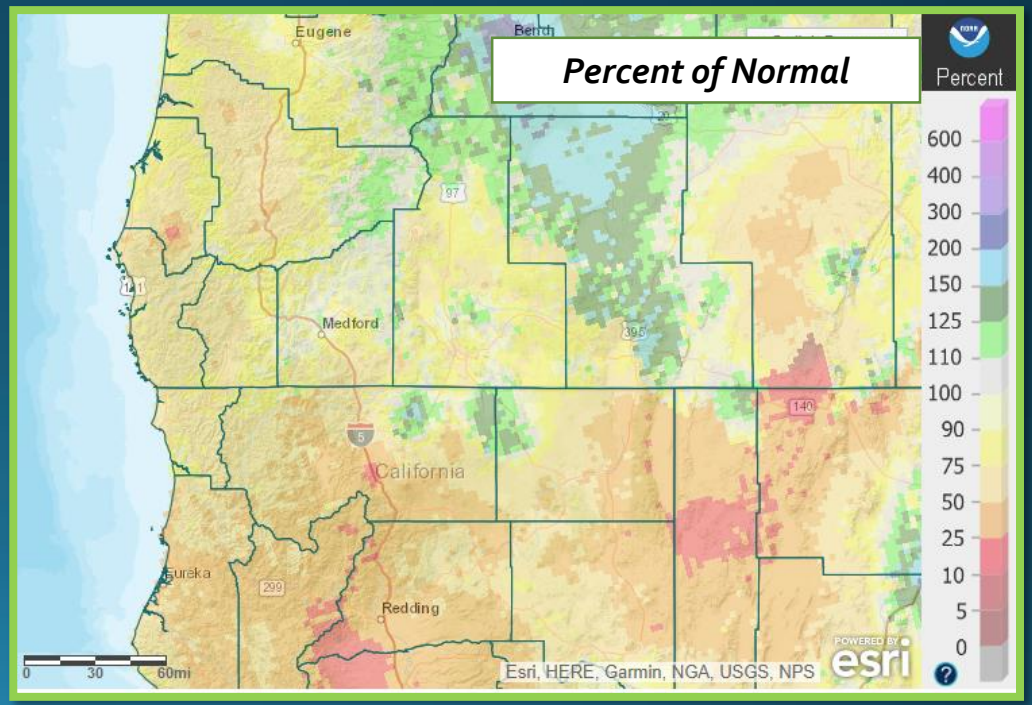




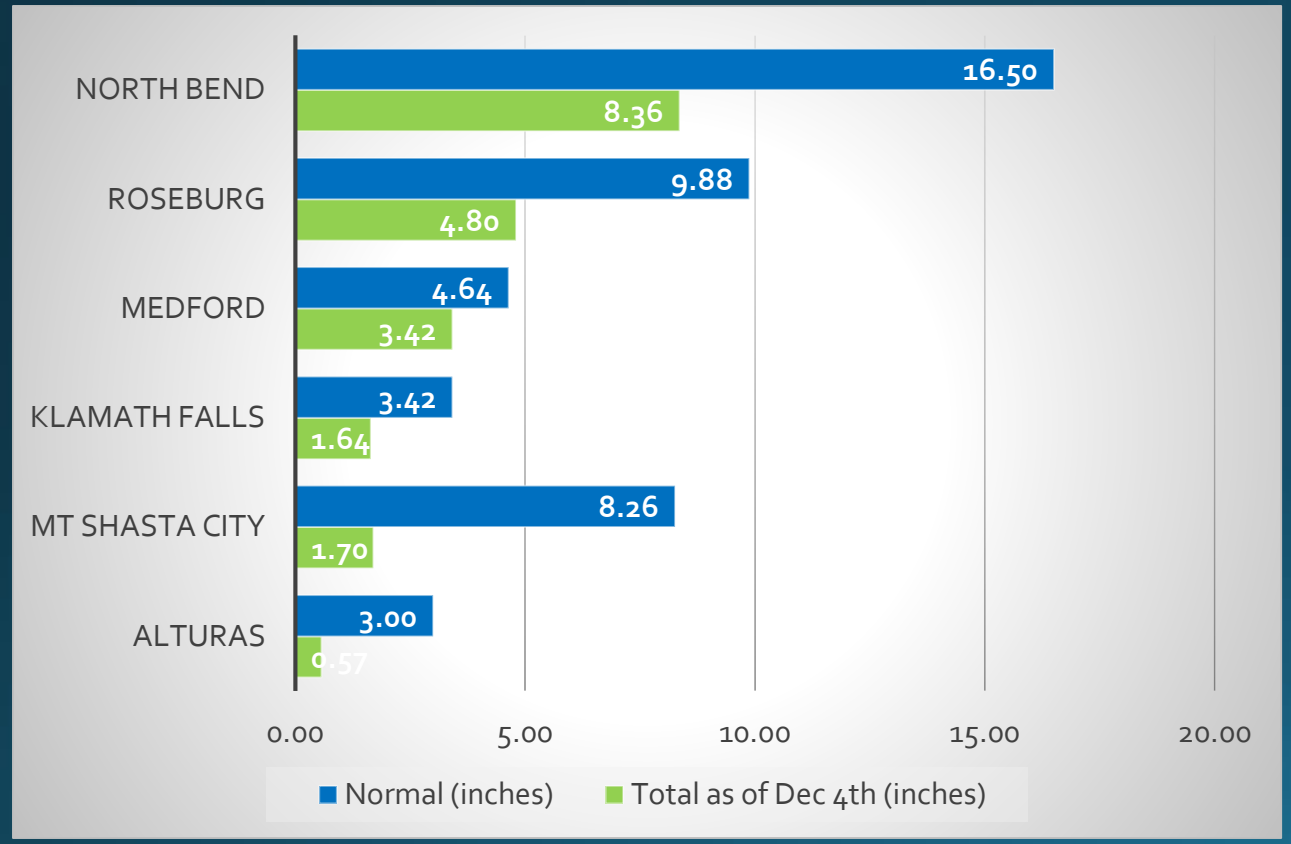
November Precipitation

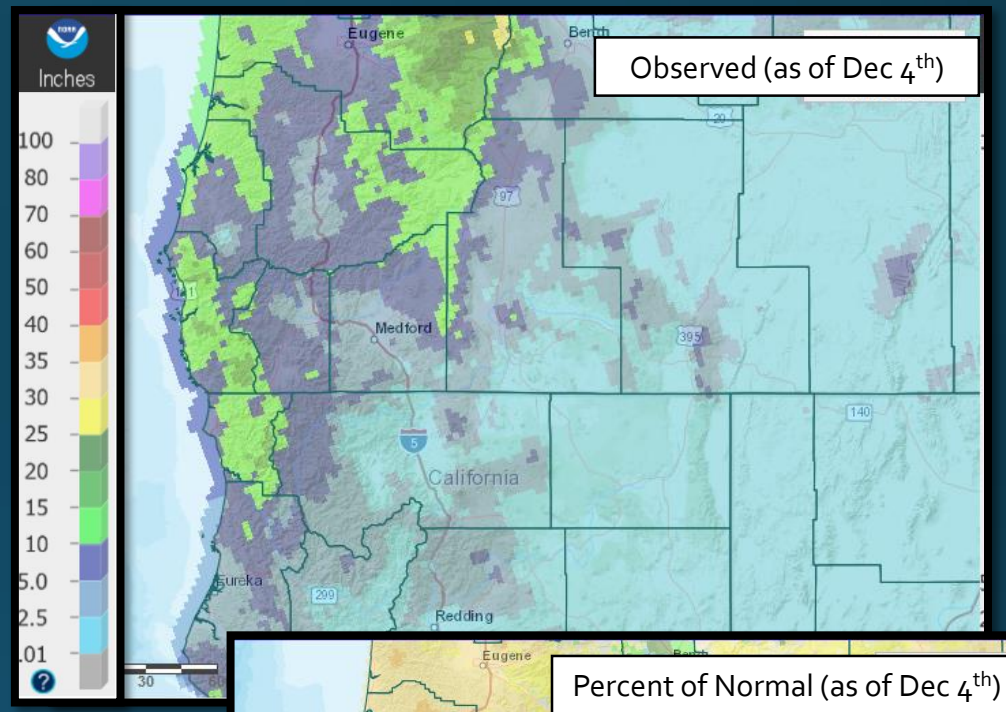
	Total	Departure from Normal	Greatest 24-hr Total	Date(s)
North Bend	6.79"	-3.44"	1.27"	18th – 19th
Roseburg	3.83"	-2.63"	1.05"	14th – 15th
Medford	3.26"	0.24"	1.77"	14th – 15th
Klamath Falls	1.58"	-0.61"	0.98"	15th
Montague, CA	1.46"	-1.51"	0.59"	15th
Mt. Shasta City, CA	1.69"	-3.39"	0.81"	17th – 18th
Alturas, CA	0.43"	-1.36"	0.21"	6th

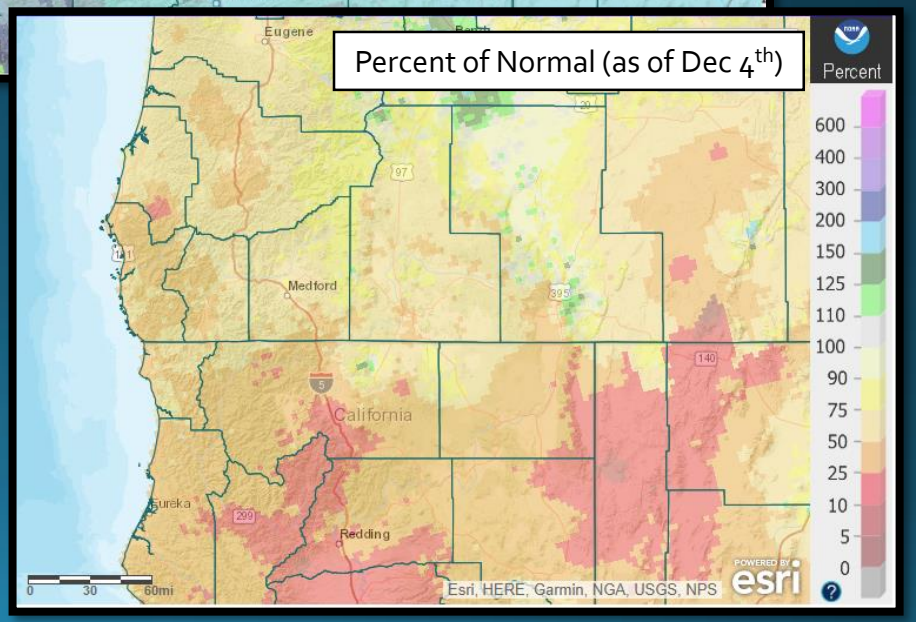




2020-2021 Water Year Status (as of Dec 4th)

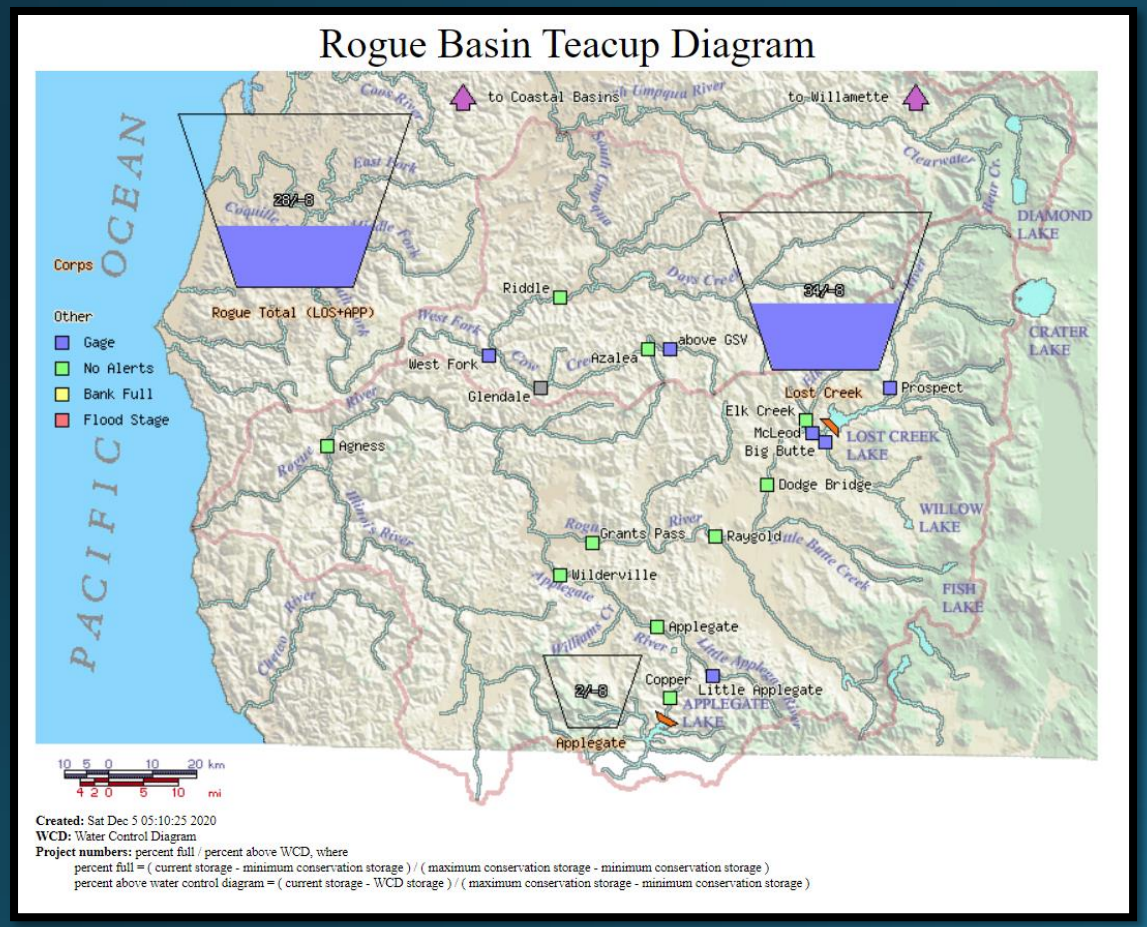




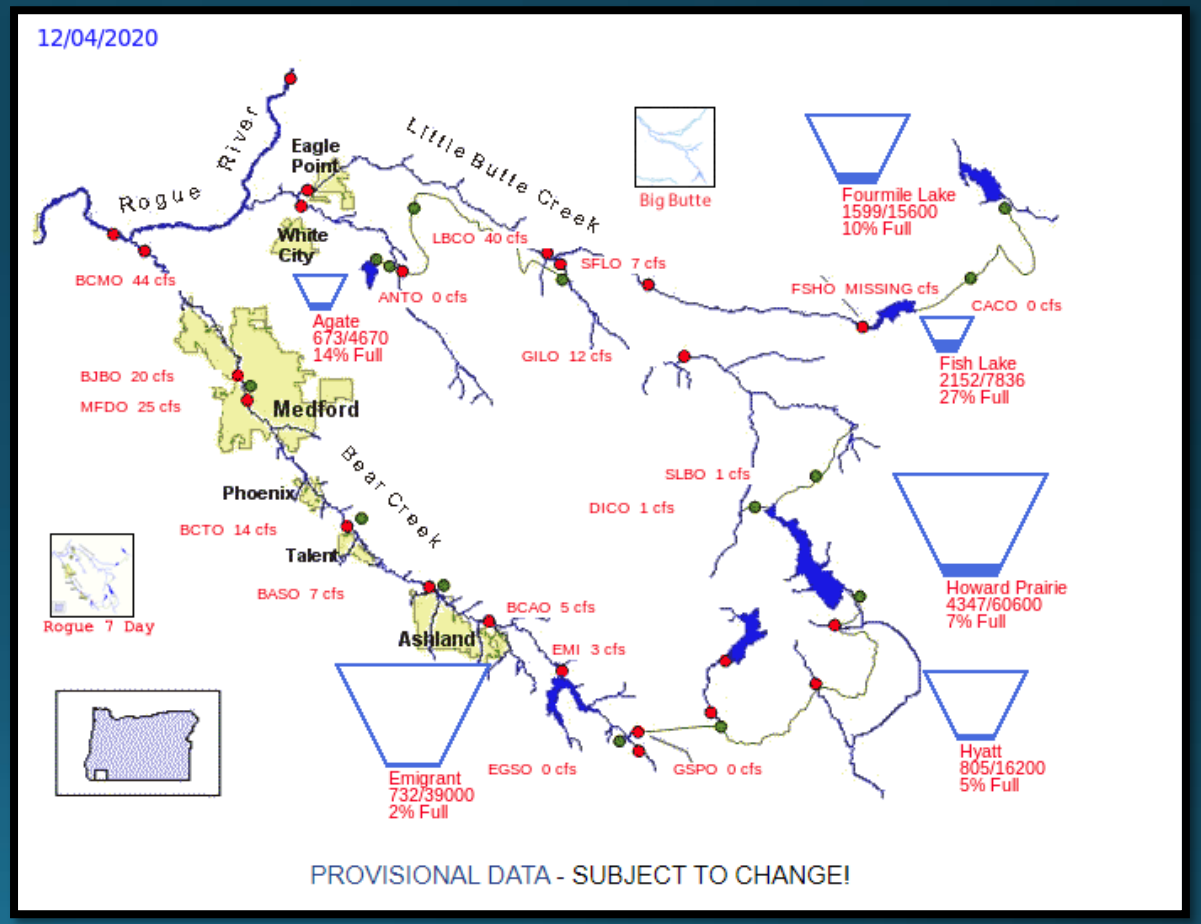


Reservoir Status

Data courtesy of US Army Corps of Engineers

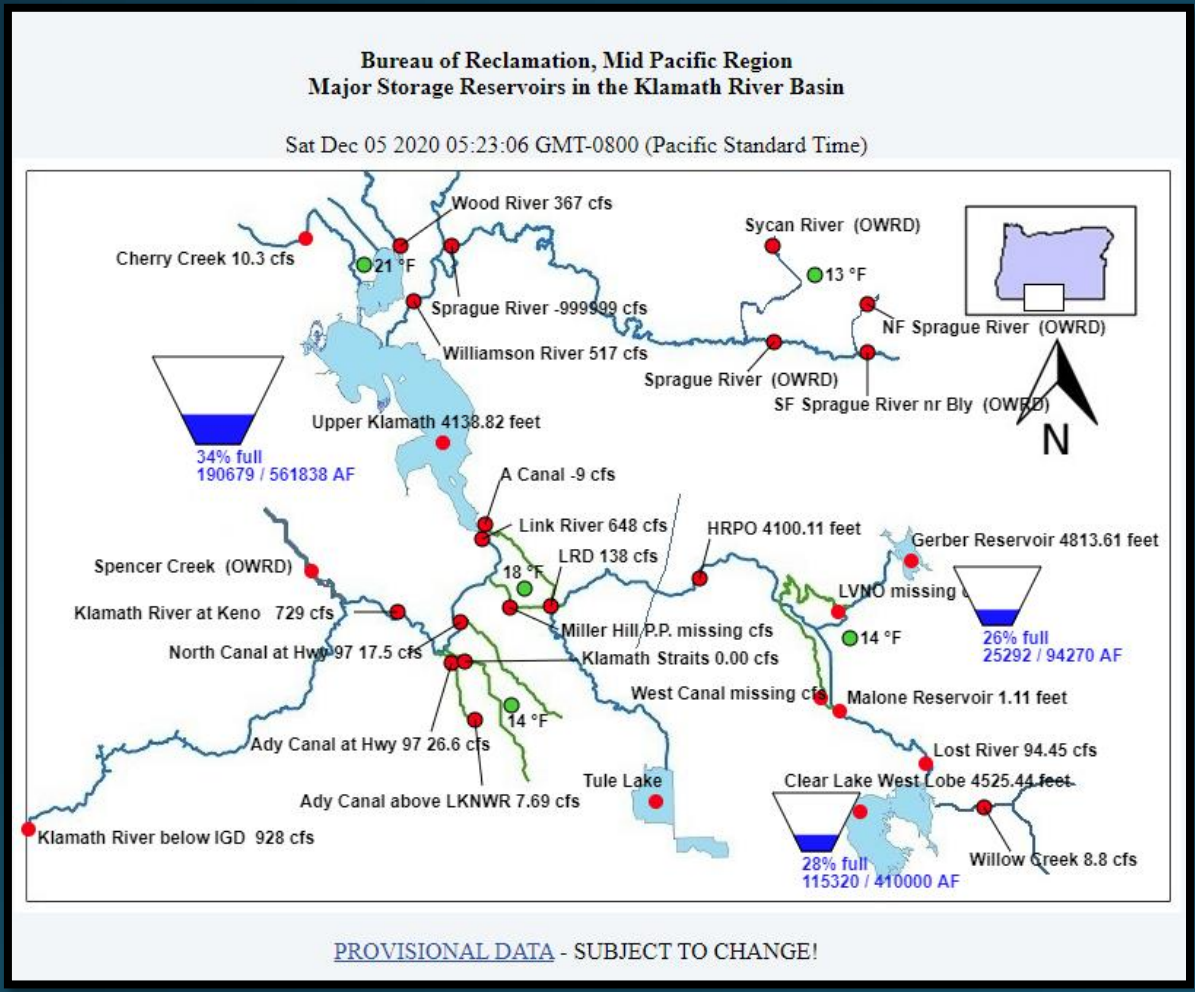


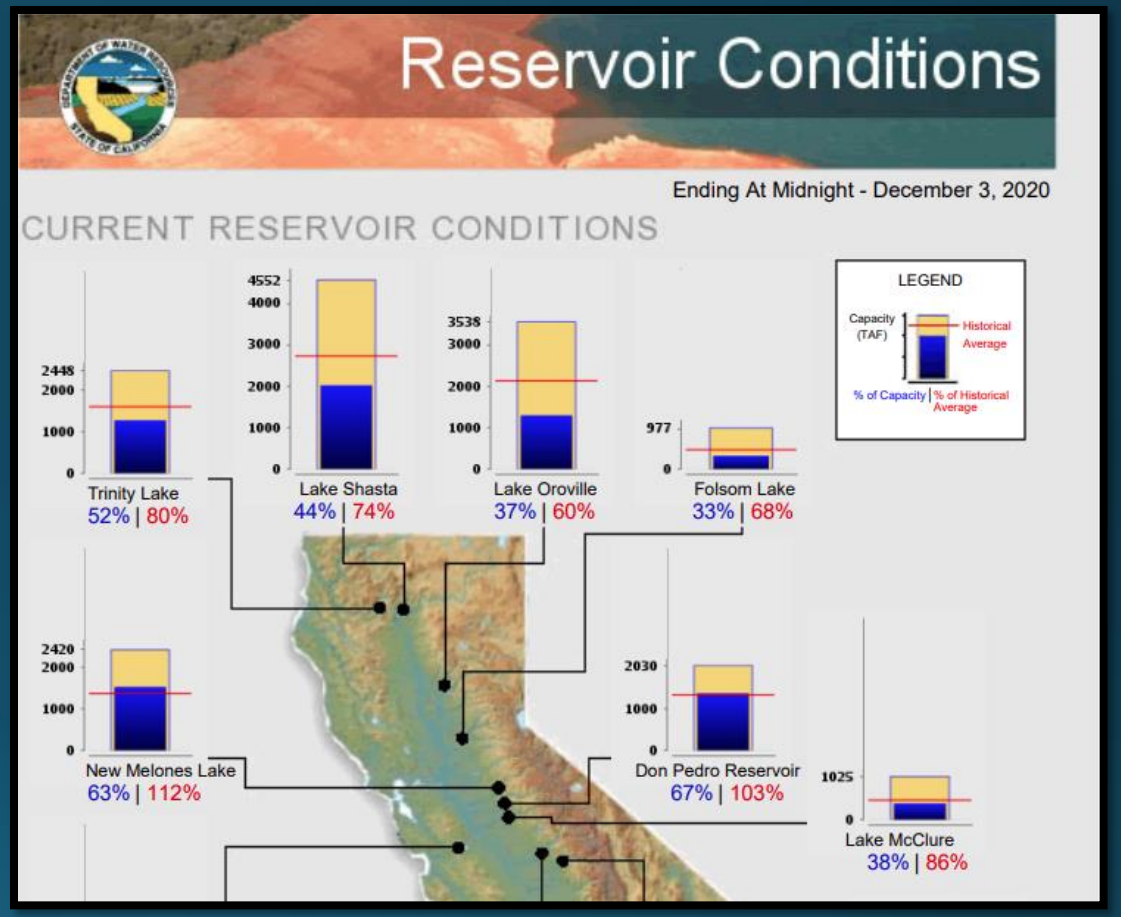
Data courtesy of Bureau of Reclamation



Reservoir Status

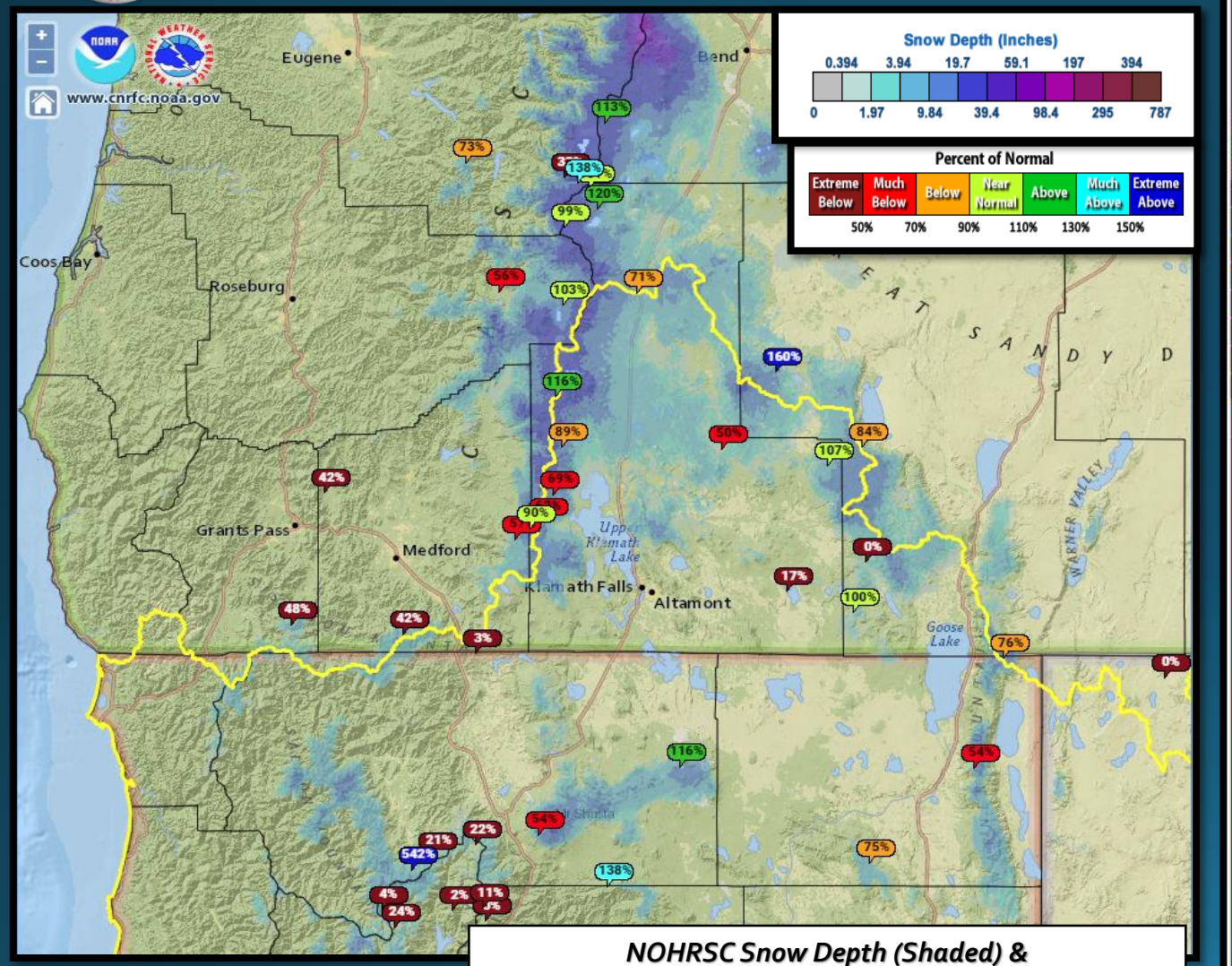
Klamath River Basin. Data courtesy of Bureau of Reclamation



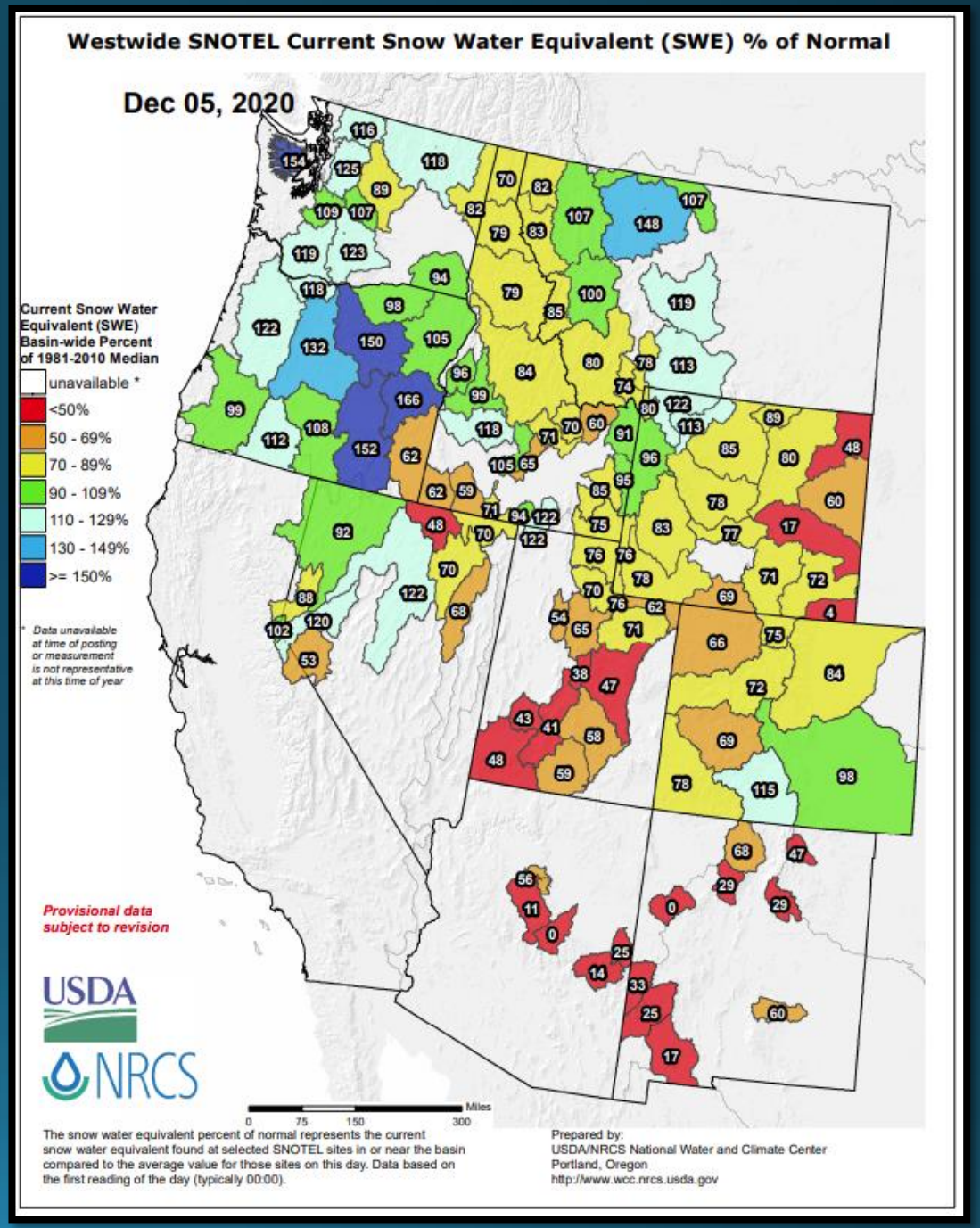


Northern California. California Data Exchange Center

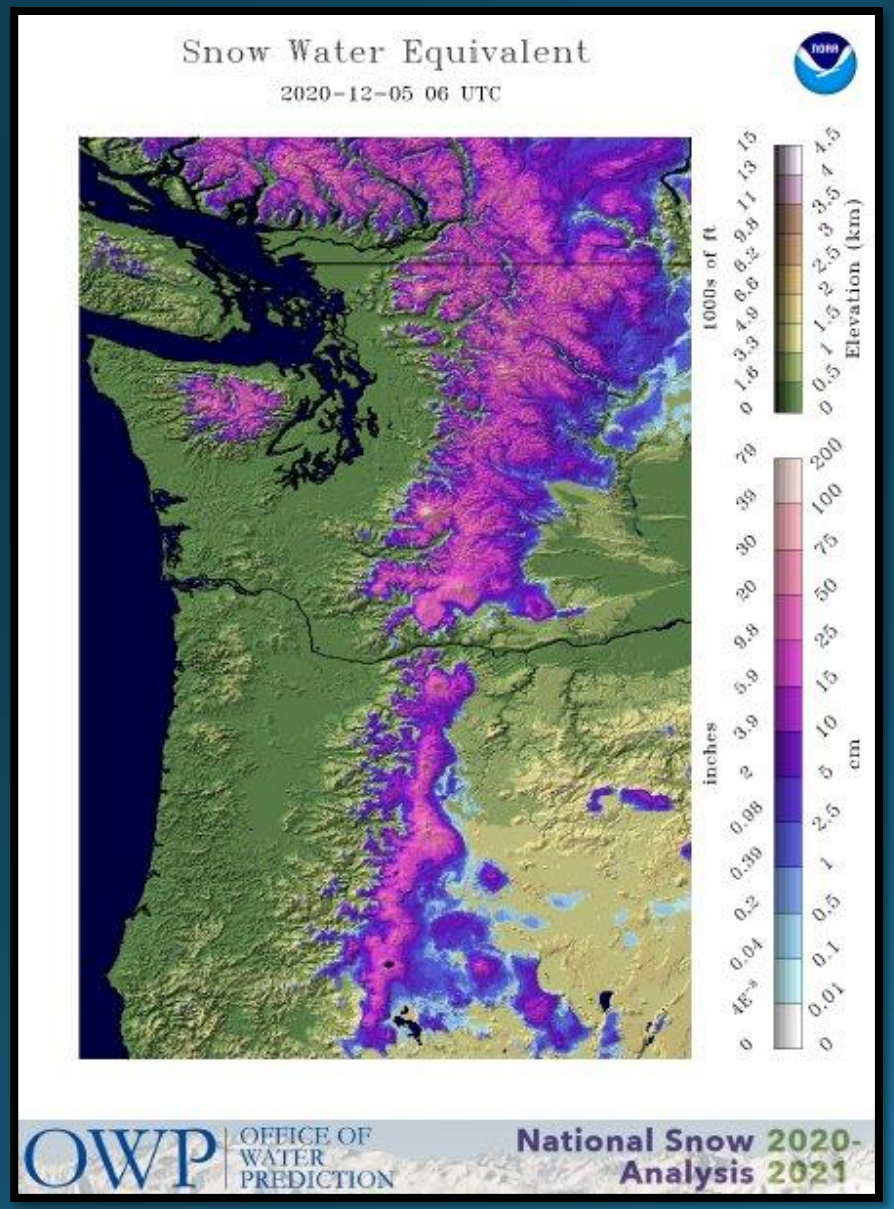
Snowpack Status

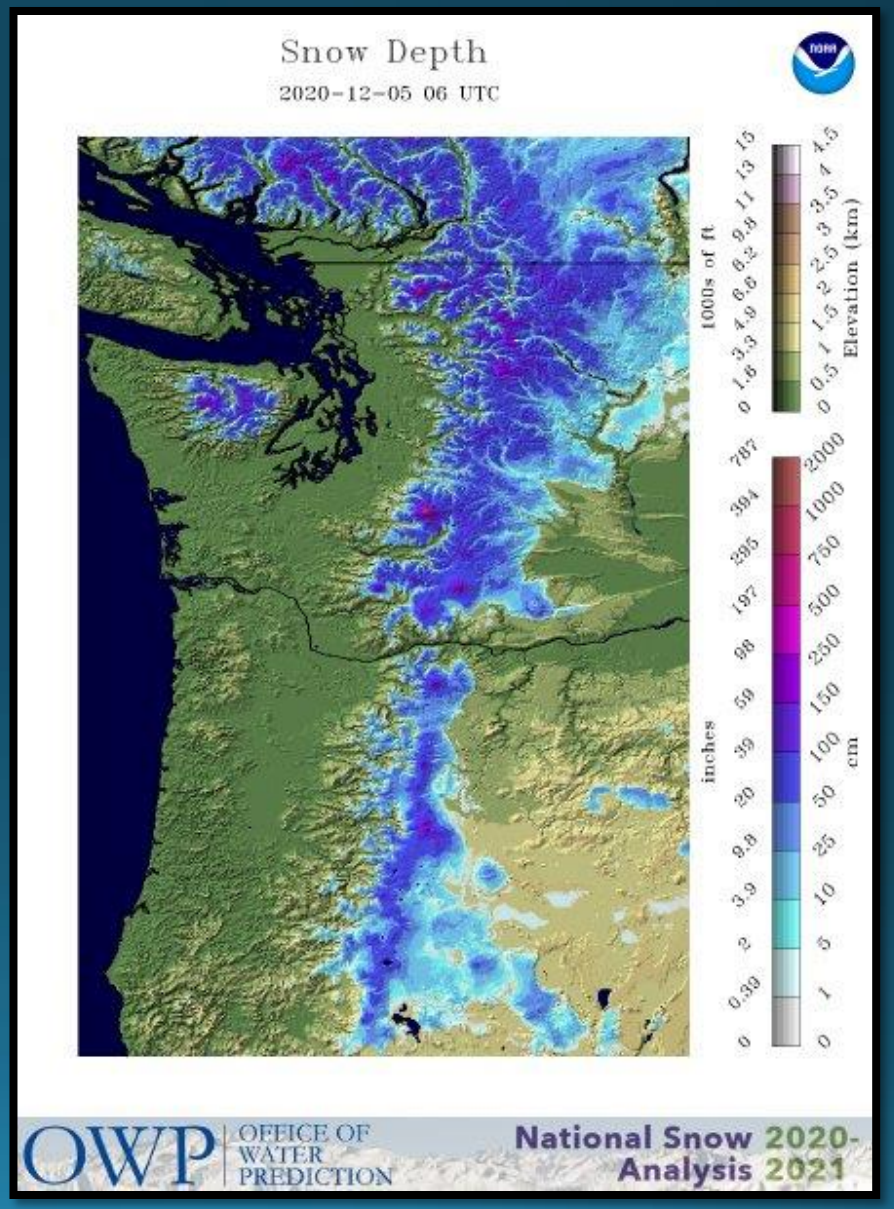


NOHRSC Snow Depth (Shaded) & Snow Water Equivalent (SWE) % of Normal (Bubble) as of 12/5/2020

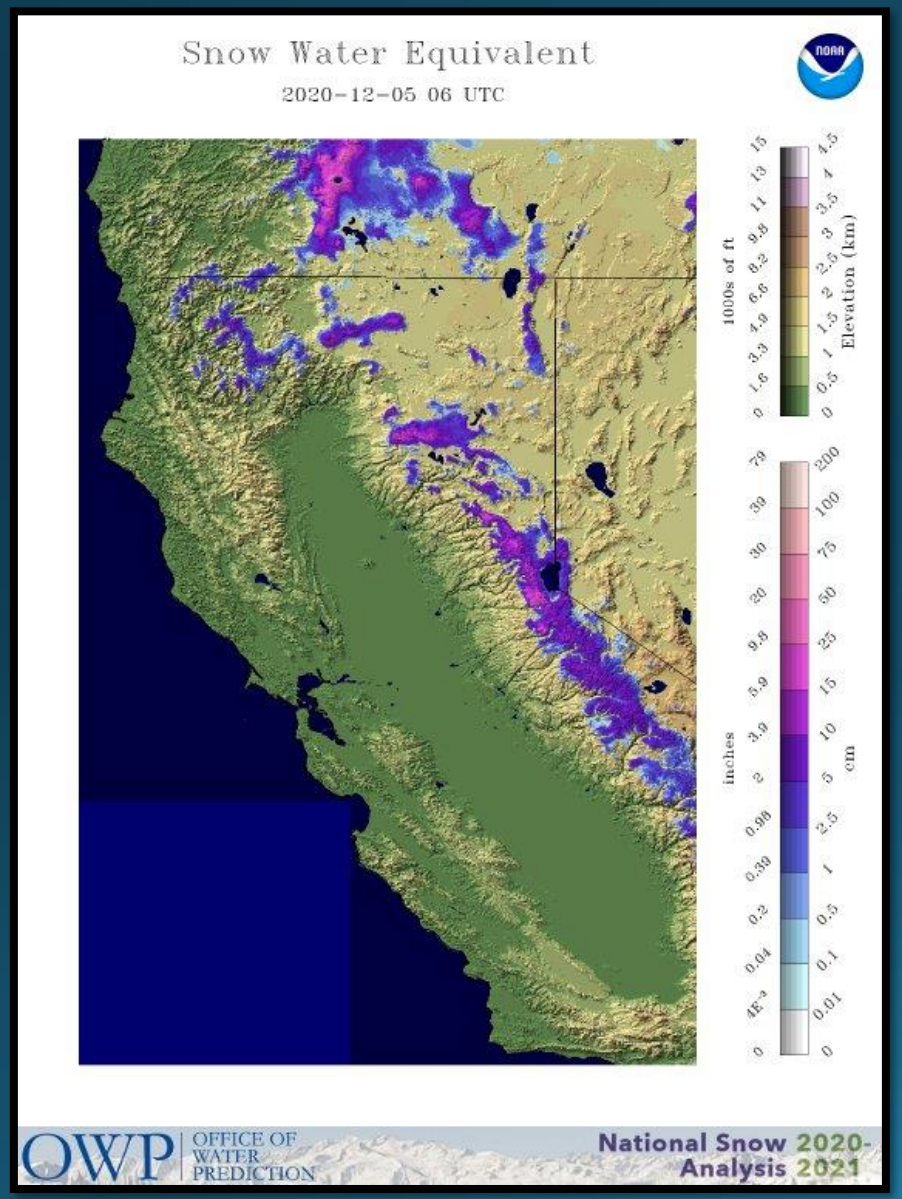


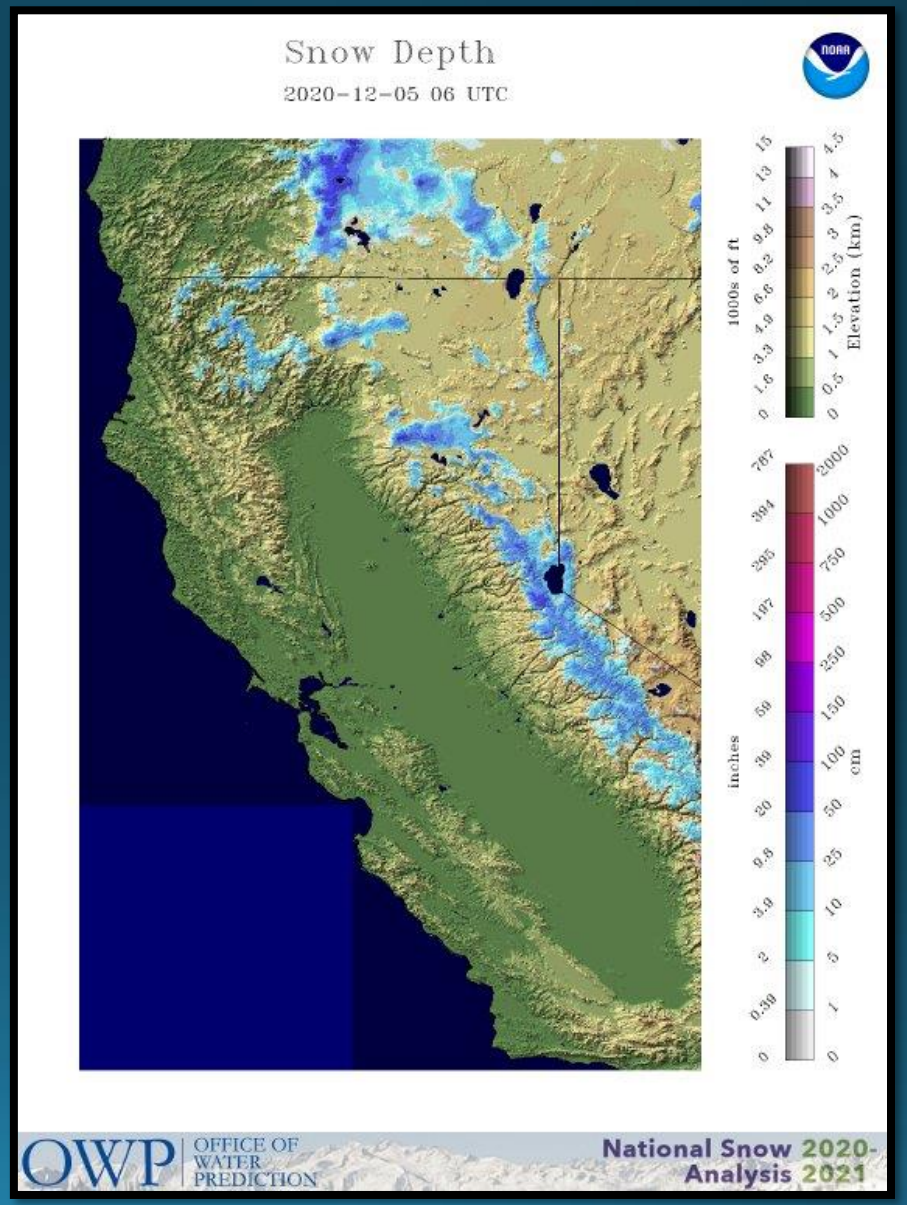
PacNW SWE & SD as of 12/5/2020





California SWE & SD as of 12/5/20



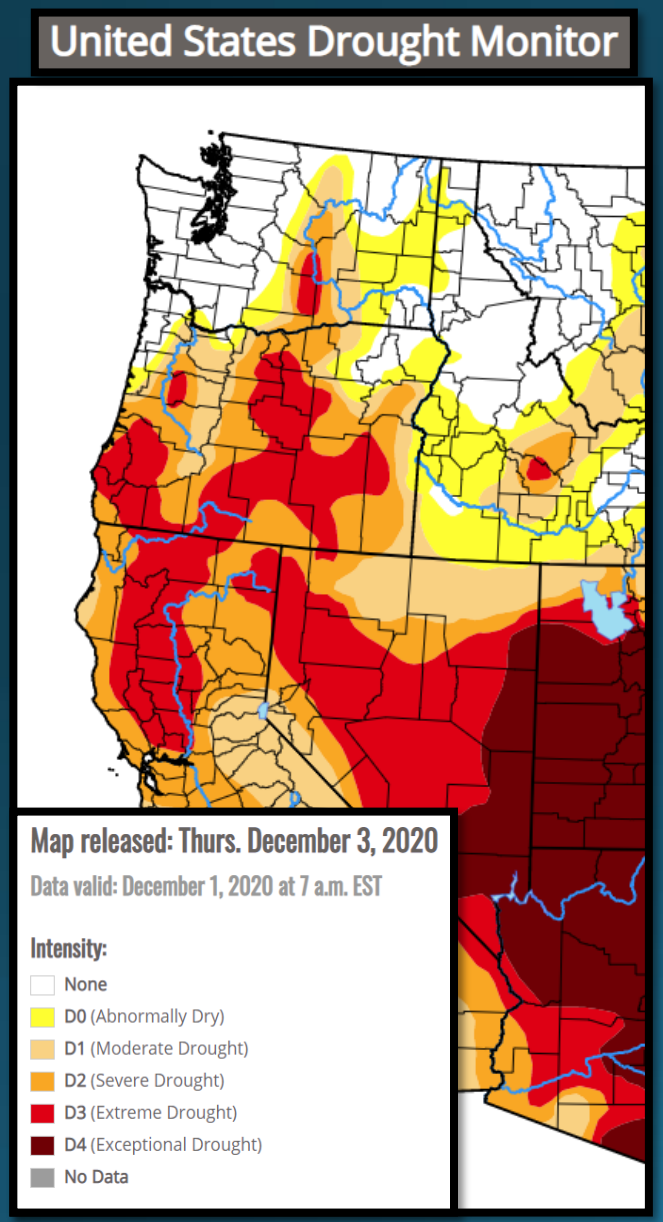


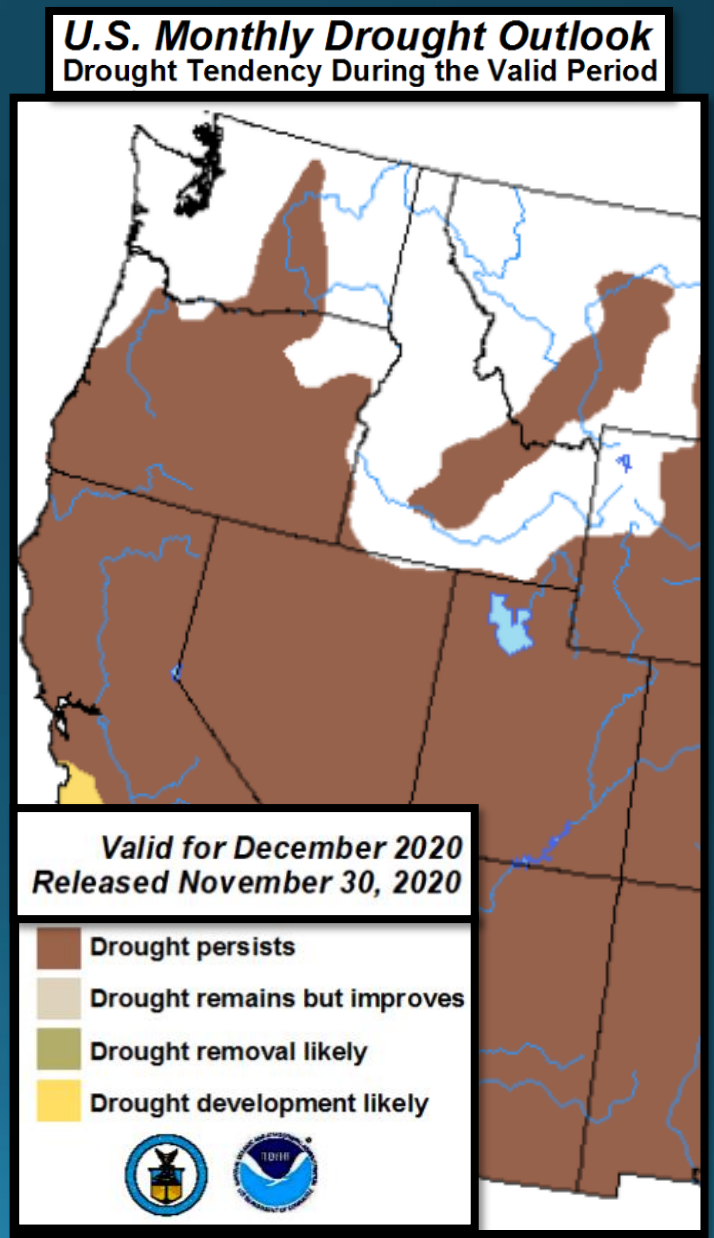
Crater Lake

Image Courtesy: NPS

	Average Max Temp (°F)	Average Min Temp (°F)	Total Precipitation	Total Snowfall	Snow Depth as of: 11/30/20	Highest Max/ Lowest Min
November	38.5°	22.3°	10.63"	*62.6"*	*32"*	65° on 2nd / 11° on 12th
Normal (1981-2010)	38.0°	22.0°	10.25"	71.1"	28"	N/A

Drought Monitor (Current) & Outlook (December)



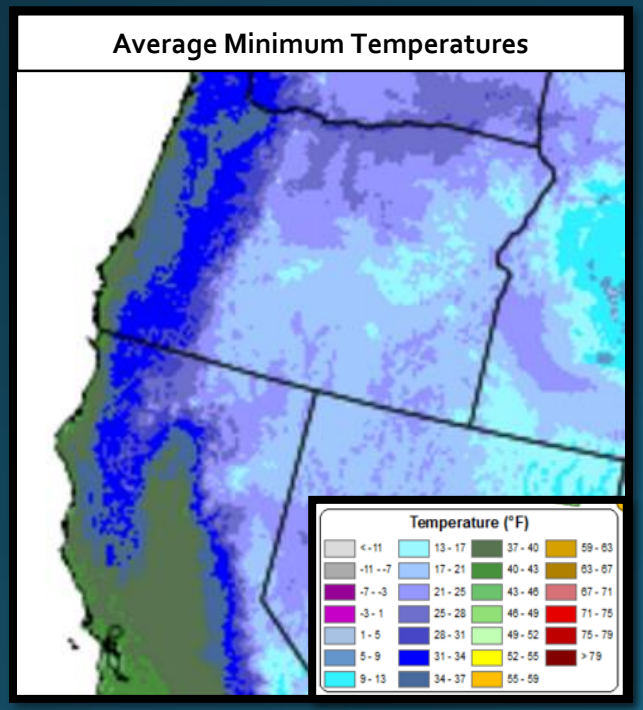


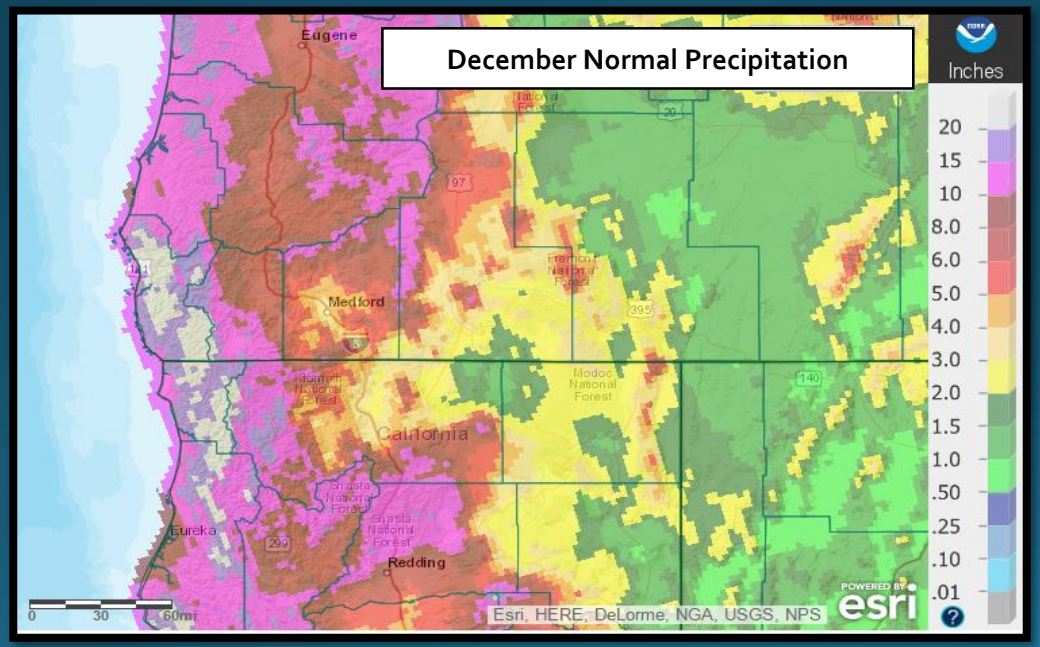
Looking Ahead: Normals for December (1981-2010)

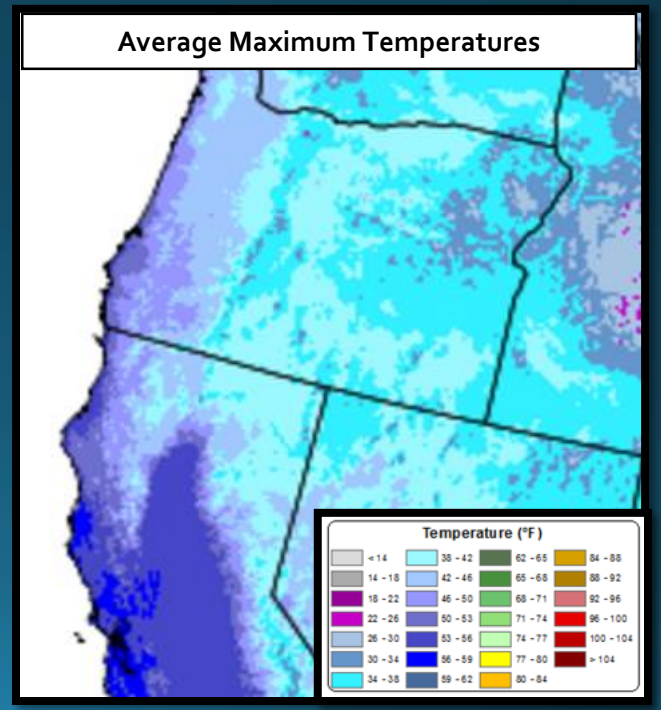
December is typically the wettest month of the year, collectively, for southwest Oregon and far northern California. The driest locations of Lake County average only a half inch to an inch of water. Most valleys east of the Cascades typically receive 1-4 inches of water, while the mountains east of the 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 get 15-20+ inches during an average December.

Much of this water often falls as snow above 4,500 feet MSL. For instance, the 1981-2010 average December 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 average period.

Typical daily high temperatures are 30°F to near 40°F in the mountains above 5000 feet and across the East Side and in the mid 40s to mid 50s west of the Cascades. Normal 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.







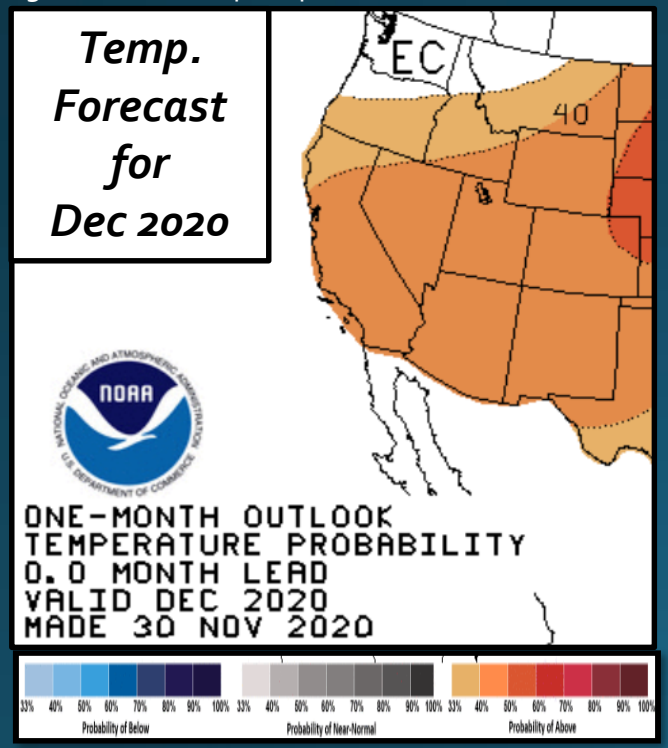
December 2020 Outlook *(Written 12/3/20)*

The official Climate Prediction Center forecast for December 2020 predicts increased probabilities for above normal temperatures (34-40%) and below normal precipitation (34-44%) across the Medford NWS forecast area.

- ***Downscaled December Temperature Forecast:*** An inversion pattern is likely to be apparent in temperature anomalies for the month, with ***ABOVE normal temperatures likely for the mountains and near normal temperatures for the interior valleys. Mountains are most likely to be between +2 and +4°F and valleys -2 and +2°F from 1981-2010 normals***.
- ***Downscaled December Precipitation Forecast:*** There's a ***high probability of below normal precipitation, most likely in 20% to 70% range, as compared to 1981-2010 climatology. NW portions, especially eastern Douglas County and the Cascades N of Hwy 140, are expected be the least anomalously dry, and SE portions, especially Modoc County, are likely to be the most anomalously dry.***

Summary: High pressure is expected to be more dominant than normal this December, especially for the first ten to twenty days of the month. Generally speaking, the dominant high pressure ridge is expected to flatten, weaken, and reorient more to our southwest over the Eastern Pacific as we go into the middle to latter portion of the month. A couple of weak frontal systems are likely through the 10th. Thereafter, in general, the frequency of frontal systems is expected to increase between the 11th and the 20th. The European Prediction System is suggesting that weekly precipitation is likely to gradually increase to near to above normal from NW to SE with time between the 16th and the 31st of the month. Thus, while the west side tends to get much more precipitation than the east side, we expect precipitation anomalies to be highest over NW sections and lowest over SE sections of the forecast area.

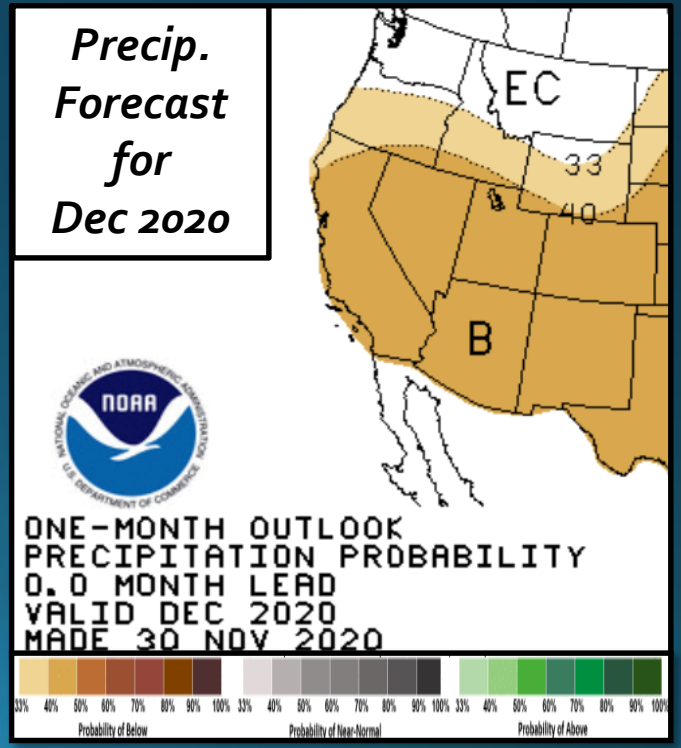
Temp. Forecast for Dec 2020



Expected Impact, December 2020:

While November 2020 brought some relief to our drought and wildfire affected area, we're still mostly in Severe to Extreme drought per the USDM. A moderate to strong La Nina event that's ongoing for this 2020-2021 Wet Season is most likely to bring at to above normal precipitation and near to colder than normal temperatures to our forecast area from approximately the Siskiyous northward. However, the forecast high pressure ridging this month will slow drought relief. The early part of this month is expected to bring dense valley fog and freezing fog under inversions. As we move into the middle to later part of the month, more typical winter impacts are likely, with mid-upper elevation snow and wind. With the transition from ridging to weak to moderate fronts, we'll need to be on the lookout for trapped cold air leading to freezing or frozen precipitation in the valleys. Overall, the snowpack is likely to fall behind normal, but then rebound late month into January.

Precip. Forecast for Dec 2020



*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 might have records dating 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 might 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: 01/1902 – Present**
- **Roseburg: 04/1900 – Present**
  - *Missing:*
    - *05/1900-01/1901*
    - *03/1901-06/1902*
    - *08/1902-12/1930*
    - *10/1965-06/1997*
- **Medford: 03/11/1911 – Present**
- **Klamath Falls: 12/1897 – Present**
- **Montague, CA: 07/1948 – Present**
  - *Missing:*
    - *08-09/1952*
    - *02/1953-06/2000*
- **Mount Shasta City, CA: 04/1948 – Present**
- **Alturas, CA: 05/1935 – Present**