

National Weather Service Medford

2021: October 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 2021 Weather Review

October 2021 was a very active month in terms of weather. For the first time in a long while, the entire forecast area received above normal precipitation for the month and also recorded near to below normal temperatures. The above normal precipitation was much needed across the drought stricken region and helped set the water year off to a good start.

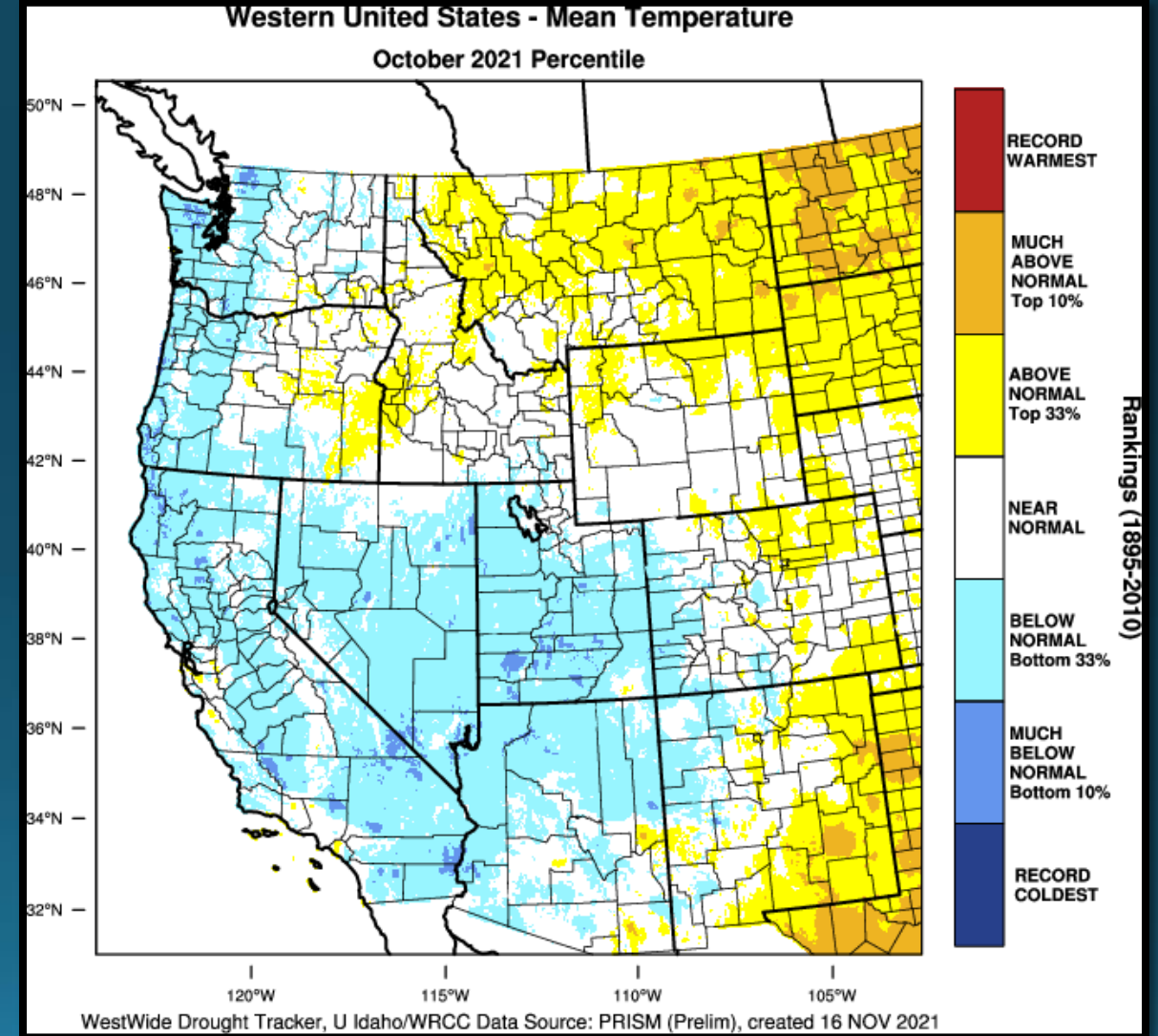
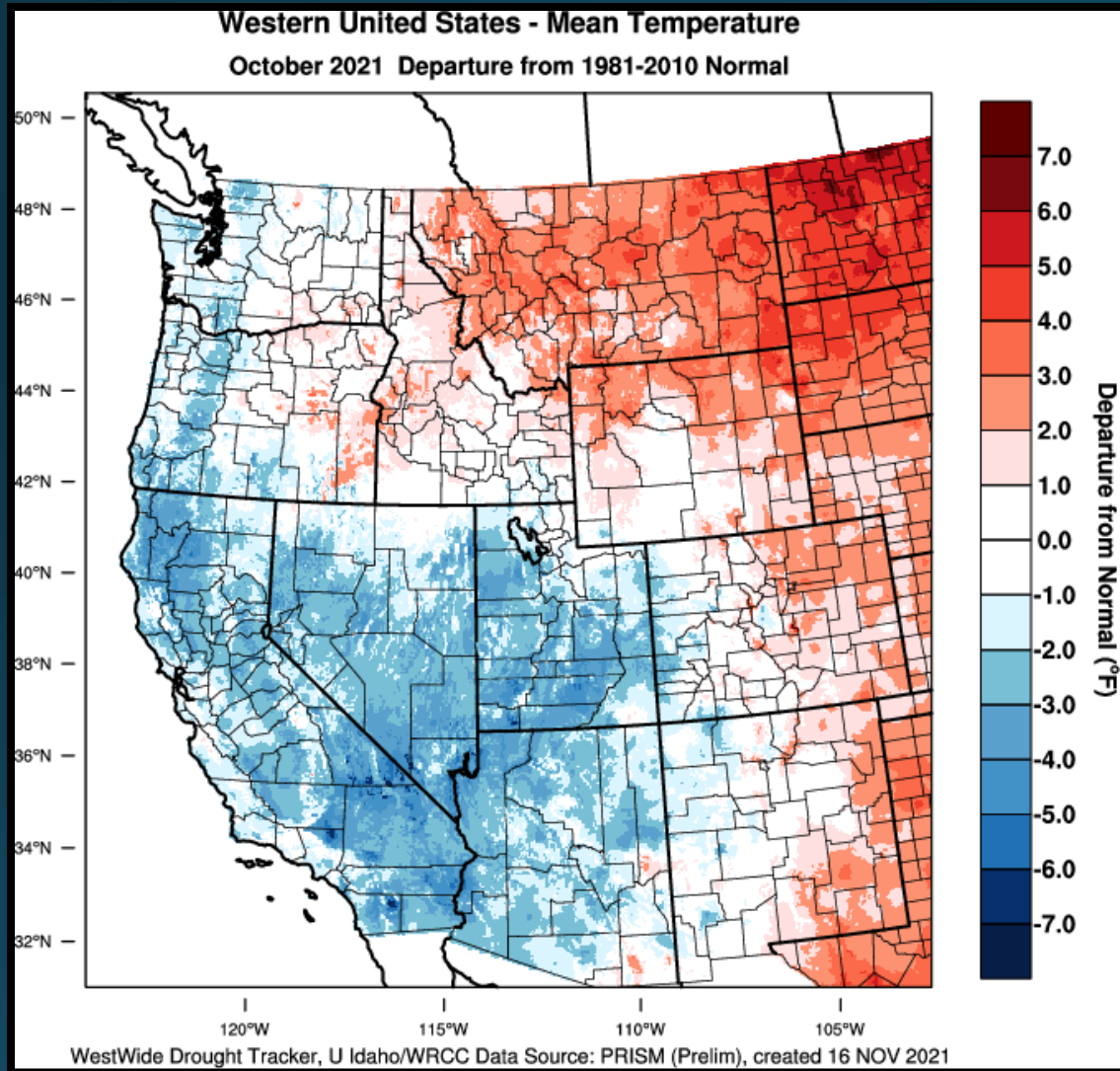
Dry conditions under zonal flow persisted through the first five days of the month with temperatures near to slightly above normal. After this, the first of multiple troughs settled over the region from the 6th through the 10th. It wasn't long after the first trough moved east that another took its place and remained over the region through the middle of the month. In addition to beneficial precipitation associated with these troughs, cold air masses accompanied these troughs and resulted in the end of the growing season for many valleys west of the Cascades due to freezing temperatures. These cold temperatures also aided in the start of building the region's snowpack in the higher elevations.

After a brief break in the weather, another period of troughing settled over the region around the 18th and generally persisted through the end of the month. Multiple fronts passed through the area under this trough with the most impactful weather of the month occurring from the 19th – 25th. During this time, heavy rain and strong winds affected the region. The Medford Airport recorded peak wind gusts over 35 mph on five separate days during this stretch. A significant atmospheric river event affected the region from the 23rd through the 25th. This event was significant for both its intensity and duration, and although the heaviest rain fell across central and northern California, the forecast area received its share of heavy rain and strong winds. In addition, a significant heavy, long period swell moved into the waters off the southern Oregon coast. The magnitude of this swell event was exceptionally high for October and brought dangerous surf and beach conditions with breaking wave heights of 30-40 feet.

The active and wet weather during the month finally brought about the end of fire season and was officially declared over on October 20th. Weak troughing persisted through the end of the month with a few weak fronts passing through. Despite the active weather, there was just enough of a break in the weather for conditions to be ideal for Halloween festivities.



October 2021 Observed Temperatures





Average Temperatures

	Average (°F)	Departure from Normal	Average Max (°F)	Departure from Normal	Average Min (°F)	Departure from Normal
North Bend	54.5	-0.4°	61.6	-1.2°	47.5	0.5°
Roseburg	55.2	-0.9°	64.2	-2.7°	46.3	1.1°
Medford	55.2	-0.9°	66.5	-3.6°	44.0	1.9°
Klamath Falls	46.2	-1.2°	60.8	-3.4°	31.6	0.9°
Montague, CA	52.2	-0.6°	66.0	-3.6°	38.4	2.4°
Mt. Shasta City, CA	50.2	-0.9°	61.5	-3.2°	38.9	1.4°
Alturas, CA	46.4	-1.1°	61.3	-4.4°	31.5	2.2°



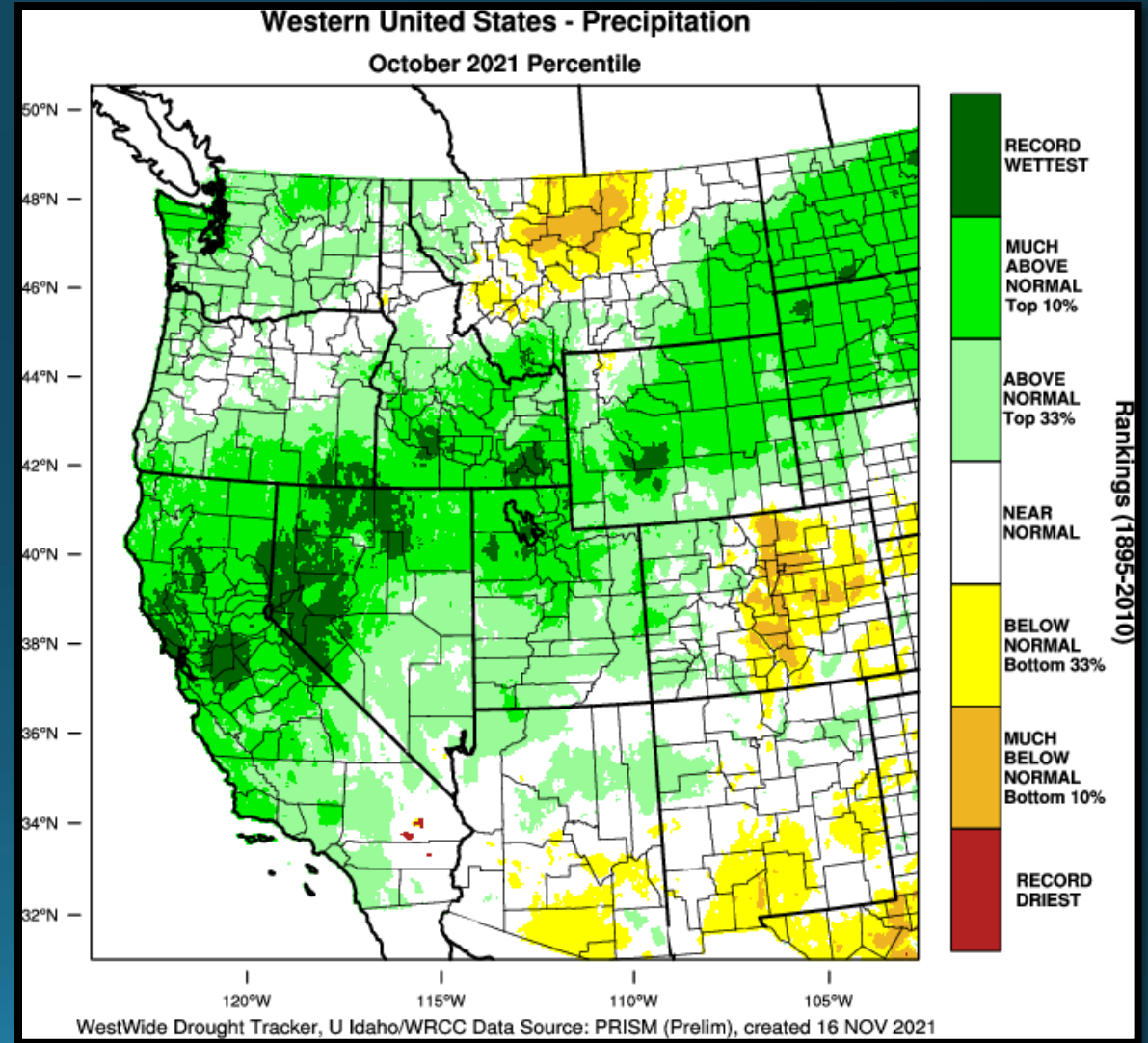
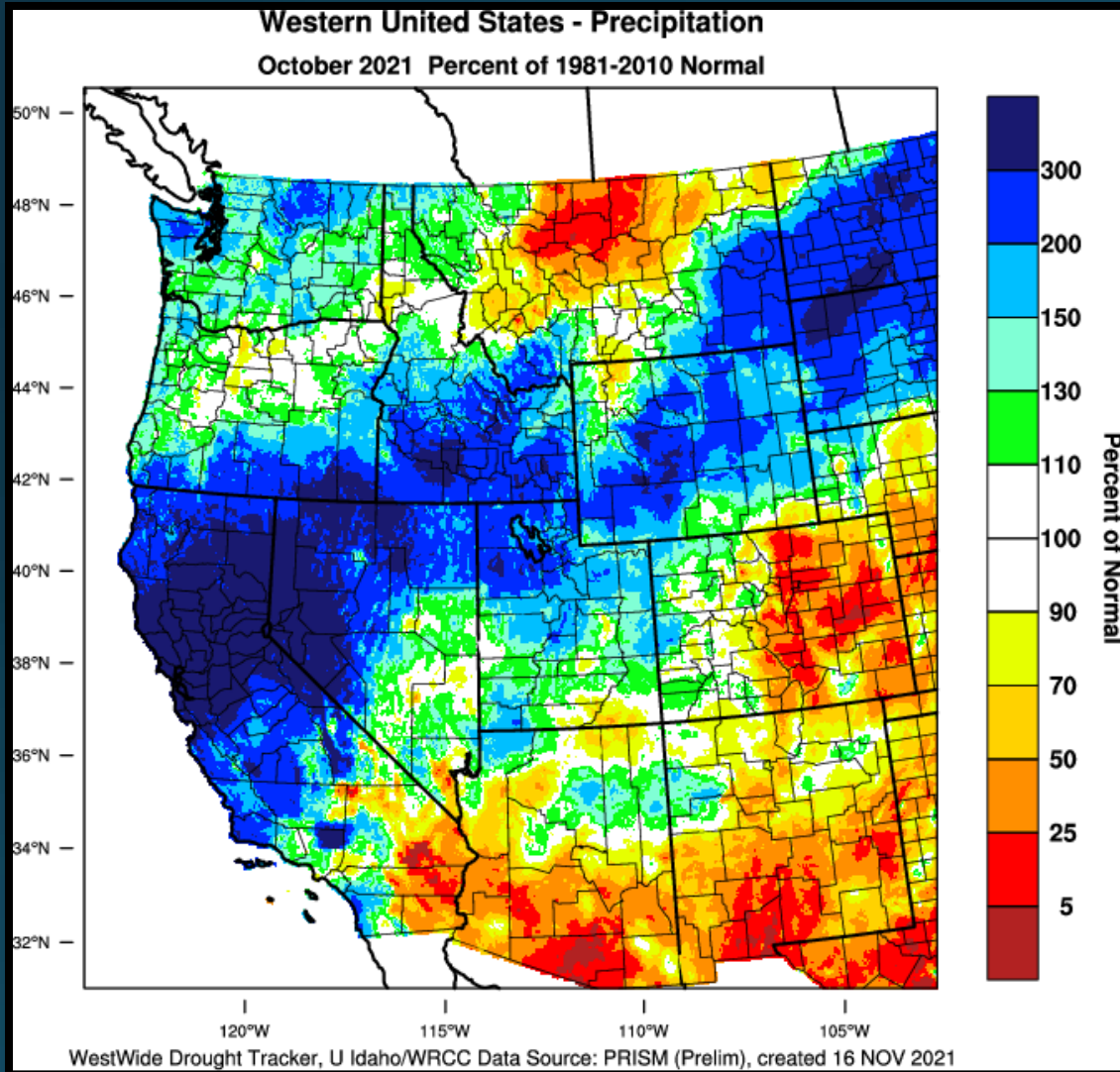
Monthly Max & Min Temperatures

	Max (°F)	Date(s)	Min (°F)	Date(s)
<i>North Bend</i>	76°	21st	39°	12th
<i>Roseburg</i>	78°	28th	35°	12th
<i>Medford</i>	84°	3rd	29°	12th
<i>Klamath Falls</i>	81°	3rd	17°	12th & 14th
<i>Montague, CA</i>	87°	4th	23°	12th
<i>Mt. Shasta City, CA</i>	86°	3rd	30°	8th & 15th
<i>Alturas, CA</i>	81°	3rd	16°	14th

	Record Low	Date	Old Record/Year
Klamath	22°	8 th	Ties with 2013
Falls	17°	14 th	19° / 1966

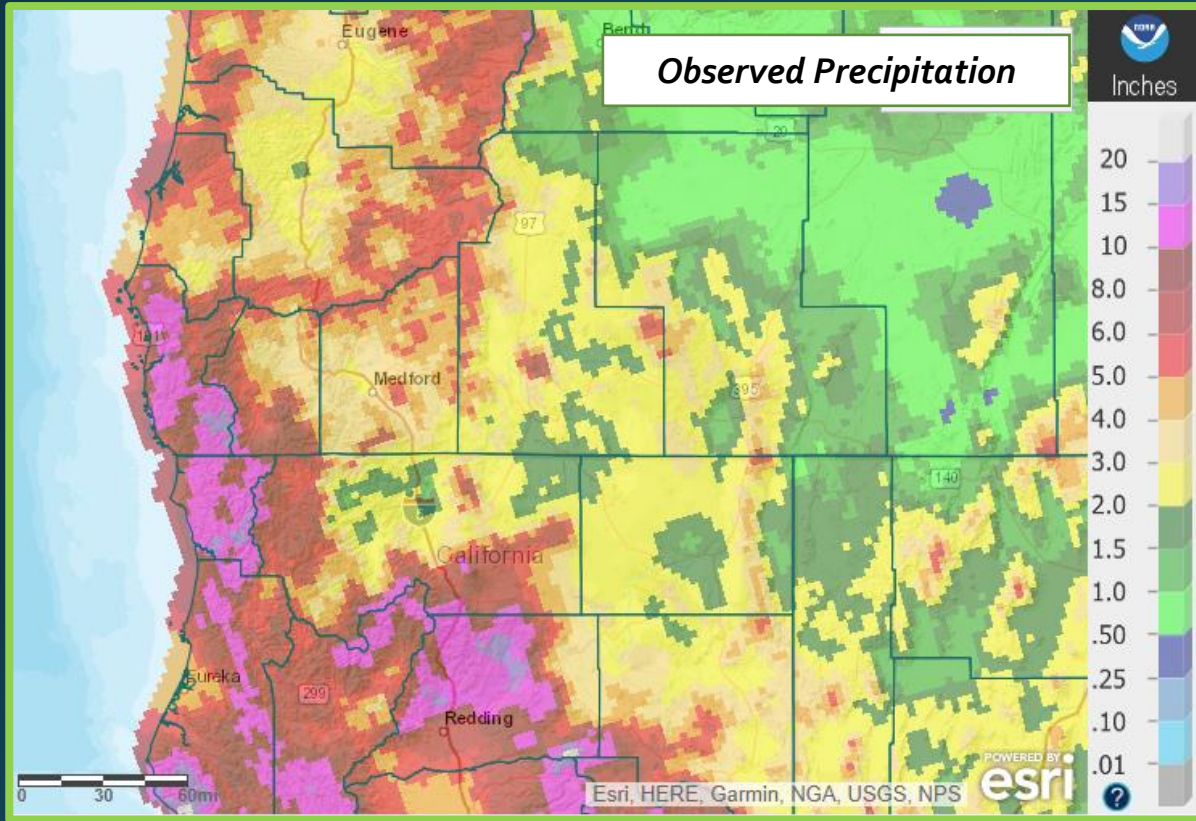


October 2021 Observed Precipitation

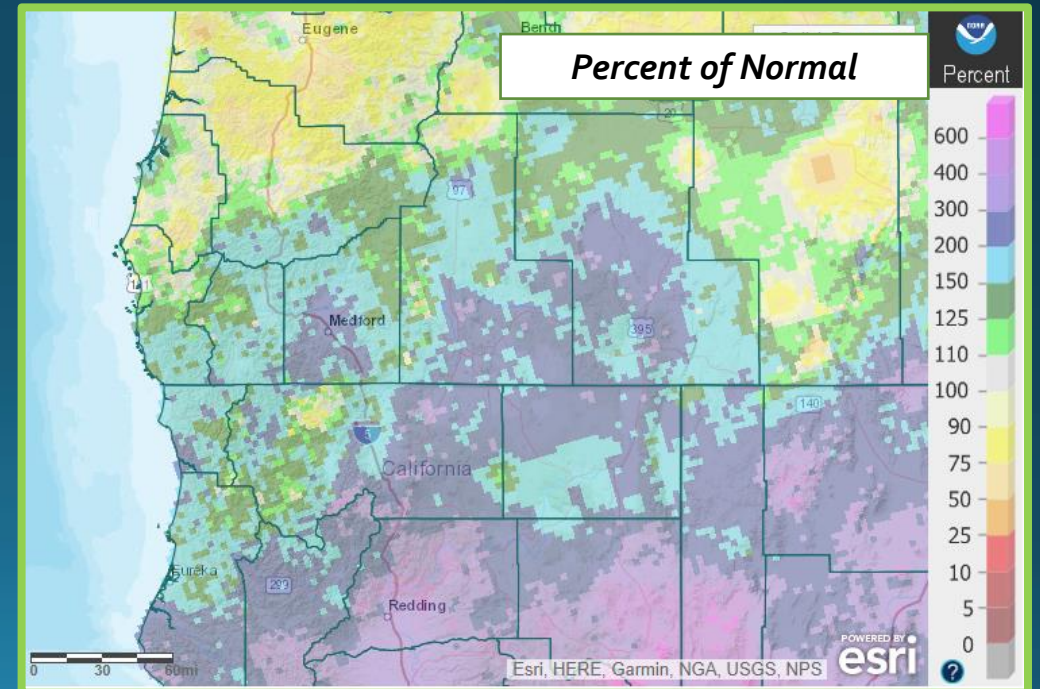




Precipitation



	Total	Departure from Normal	Greatest 24-hr Total	Date(s)
North Bend	6.38"	2.14"	0.97"	21 st – 22 nd
Roseburg	2.38"	0.06"	1.14"	21 st – 22 nd
Medford	2.87"	1.65"	0.93"	21 st – 22 nd
Klamath Falls	2.31"	1.57"	0.93"	22 nd
Montague, CA	1.73"	0.87"	1.04"	21 st – 22 nd
Mt. Shasta City, CA	6.19"	4.19"	2.08"	23 rd – 24 th
Alturas, CA	1.87"	0.98"	0.74"	24 th – 25 th

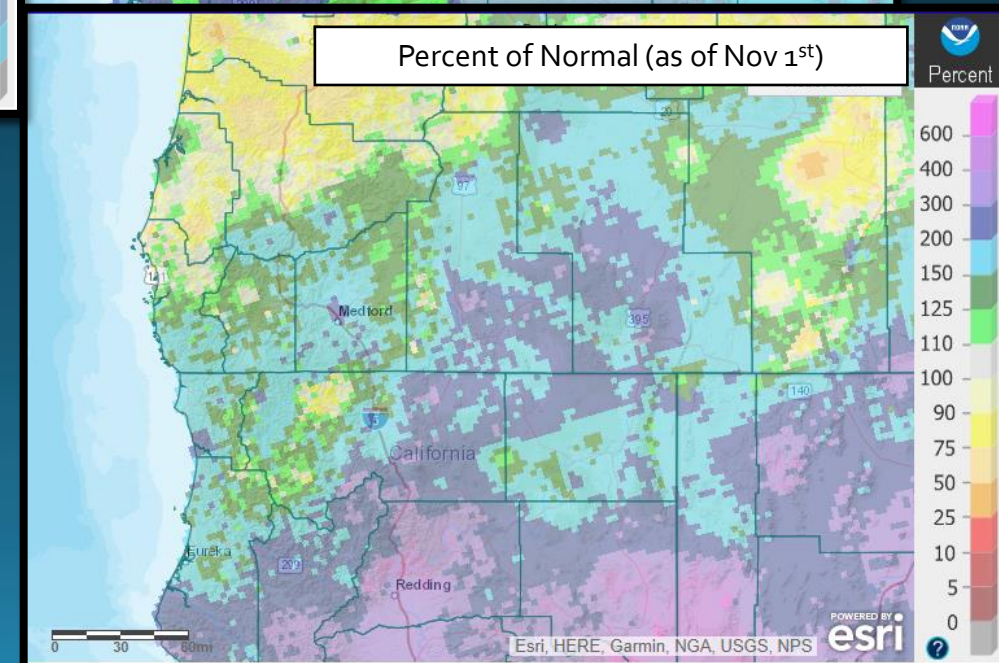
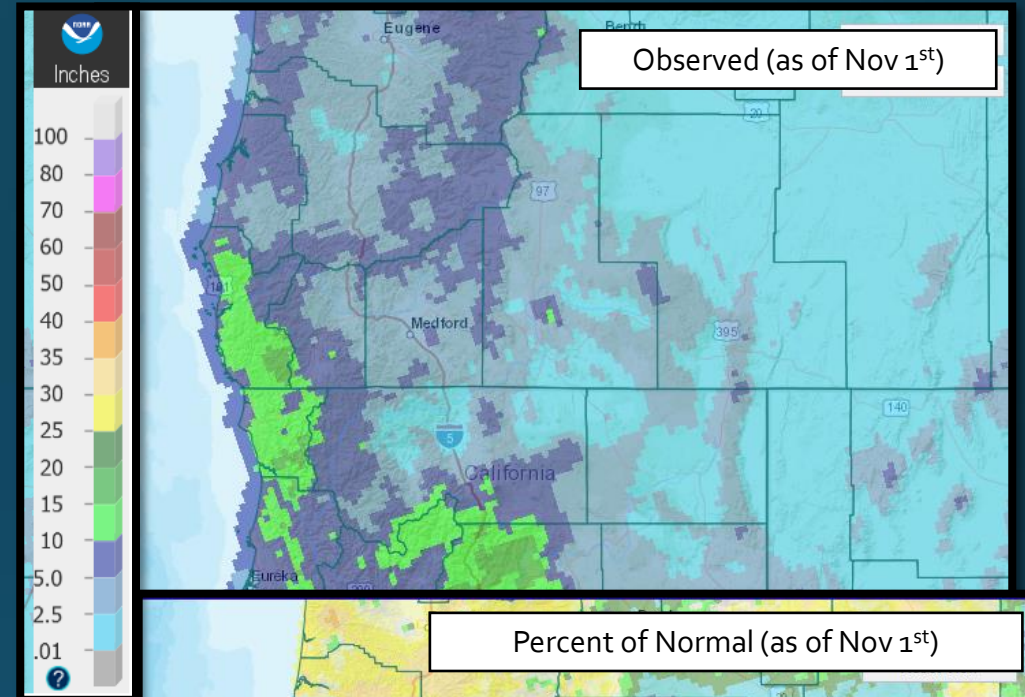
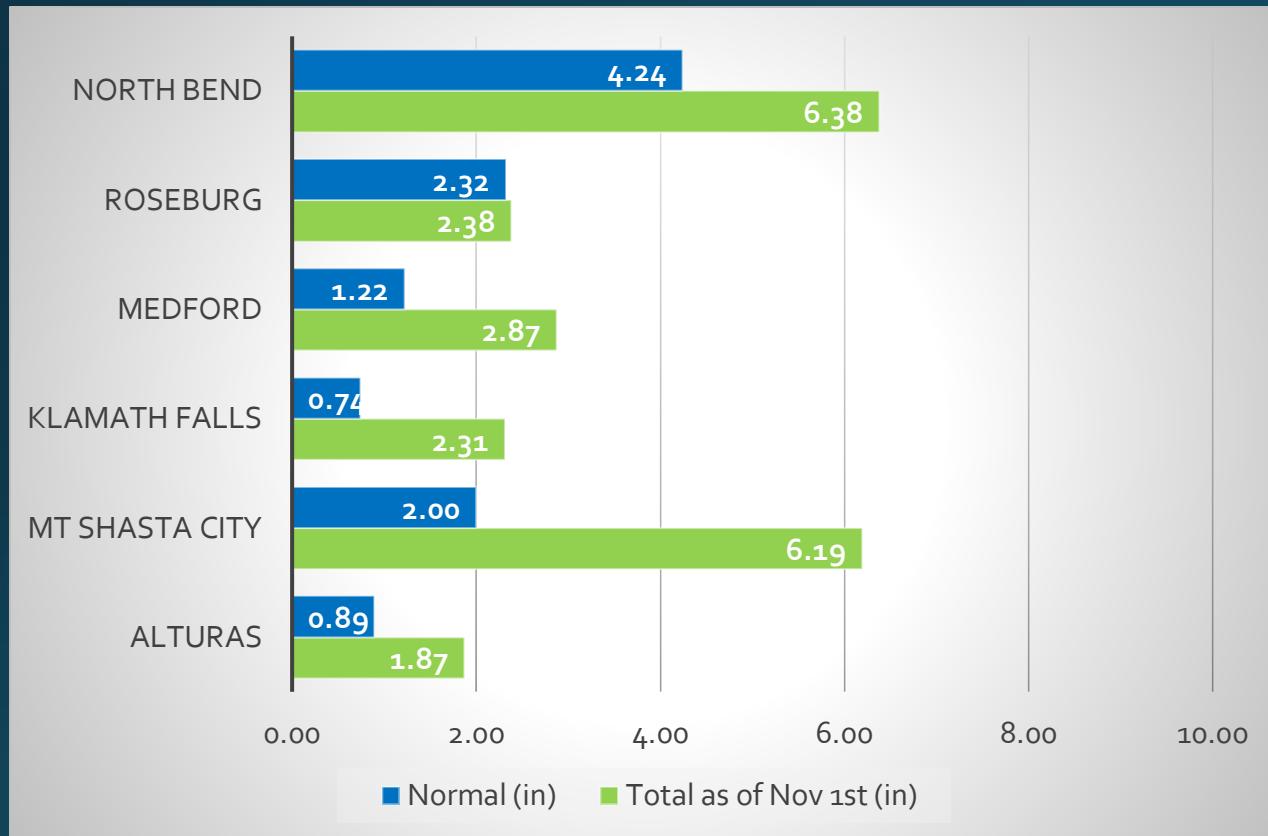


Record Precipitation

	Date / Amount	Old Record / Year
Alturas	22 nd / 0.60"	0.31" / 2004



2021-2022 Water Year Status (as of Nov 1st)



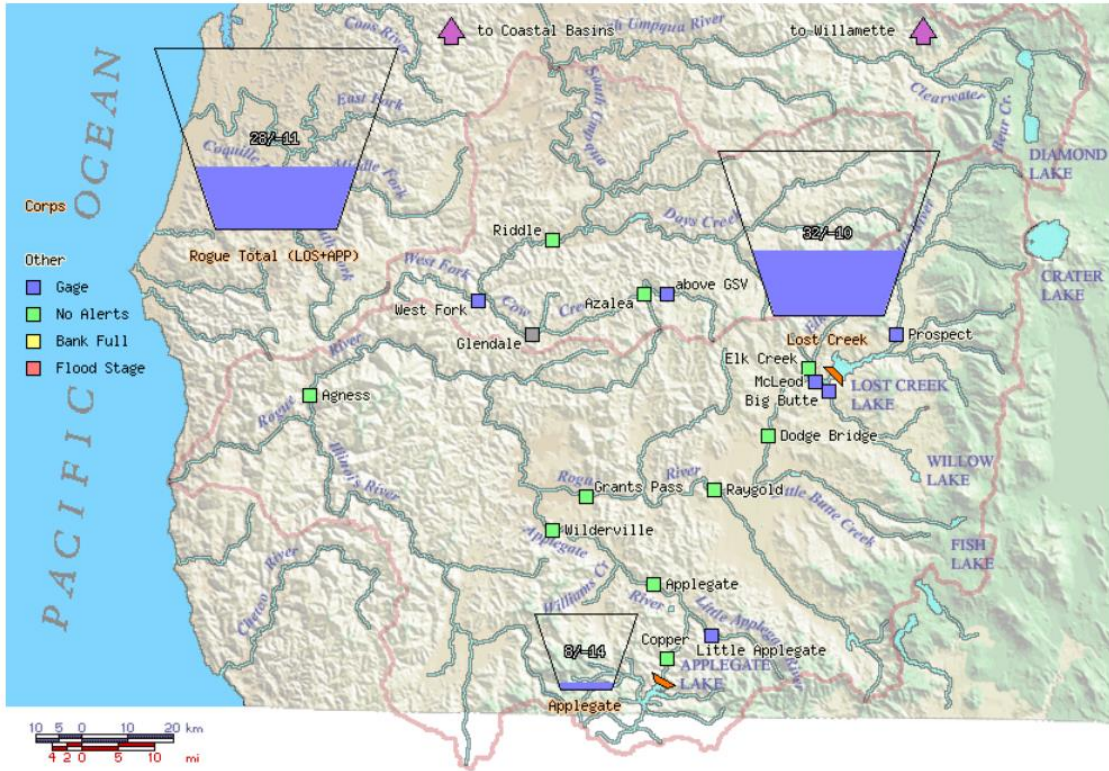


Reservoir Status

Data courtesy of [US Army Corps of Engineers](#)

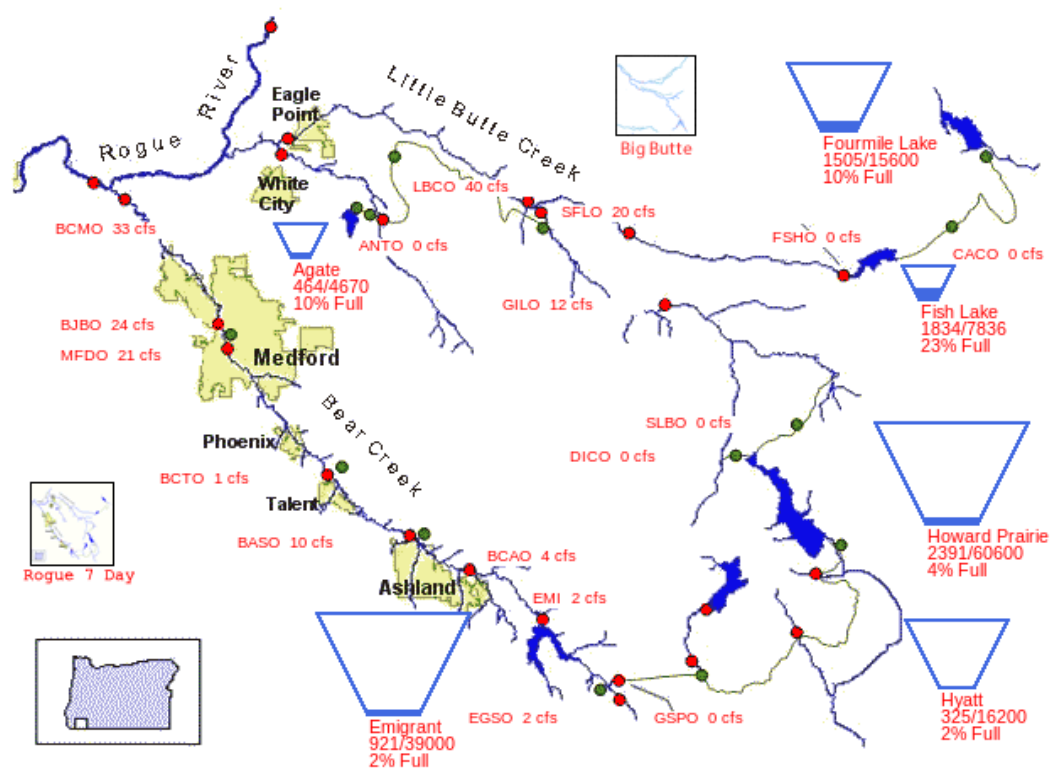
Data courtesy of [Bureau of Reclamation](#)

Rogue Basin Teacup Diagram



Created: Thu Nov 5 12:55:13 2020
 WCD: Water Control Diagram
 Project numbers: percent full / percent above WCD, where
 $\text{percent full} = (\text{current storage} - \text{minimum conservation storage}) / (\text{maximum conservation storage} - \text{minimum conservation storage})$
 $\text{percent above water control diagram} = (\text{current storage} - \text{WCD storage}) / (\text{maximum conservation storage} - \text{minimum conservation storage})$

11/02/2021



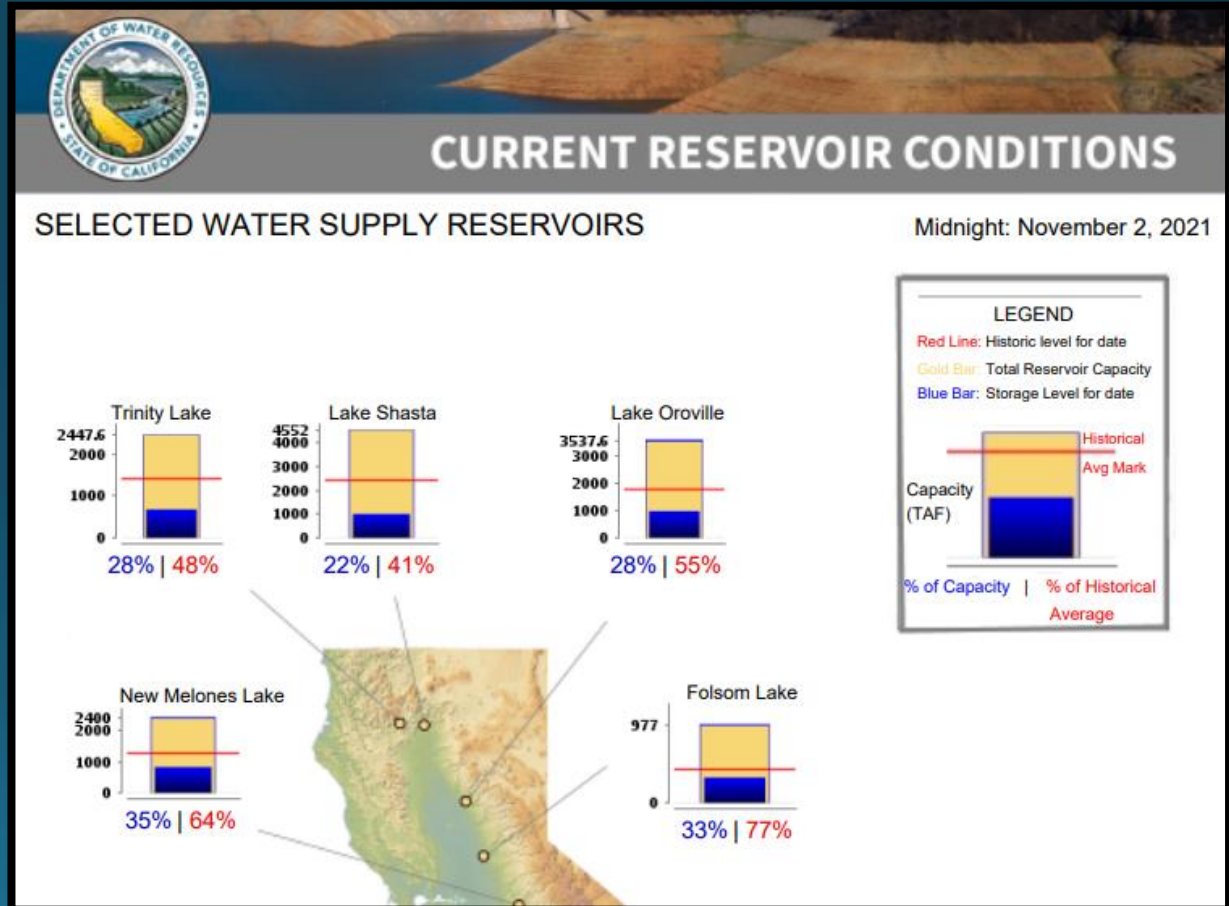
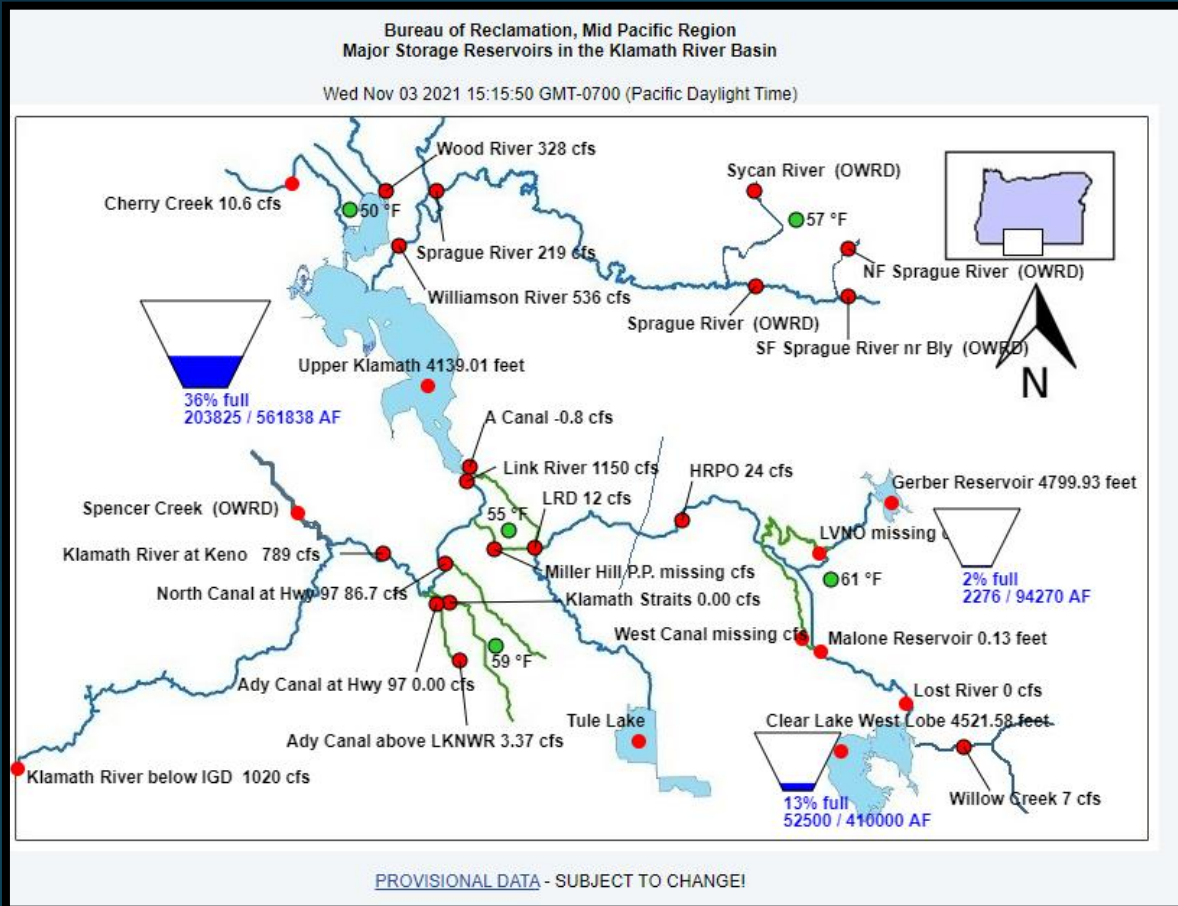
PROVISIONAL DATA - SUBJECT TO CHANGE!



Reservoir Status

Klamath River Basin. Data courtesy of [Bureau of Reclamation](#)

Northern California. [California Data Exchange Center](#)



Crater Lake

Image Courtesy: NPS



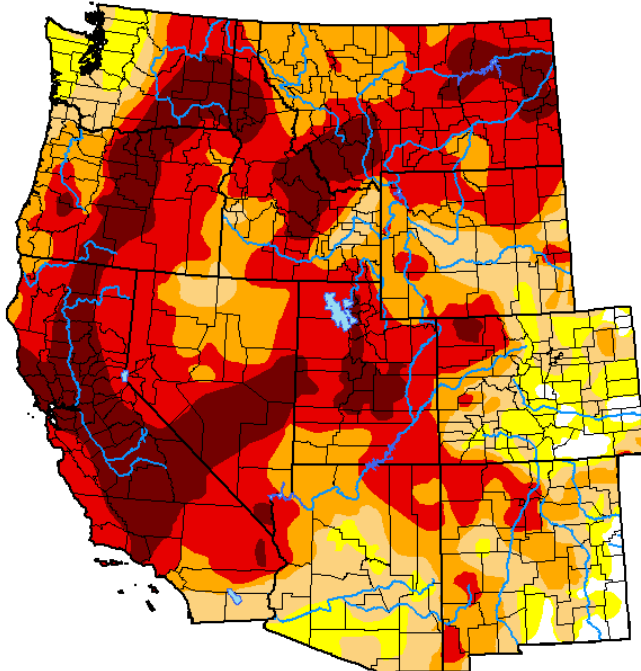
	Average Max Temp (°F)	Average Min Temp (°F)	Total Precipitation	Total Snowfall	Snow Depth as of: 10/31/21	Highest Max/ Lowest Min
October	46.1°	30.7°	6.69"	27.7"	2"	66° on 4 th & 5 th / 19° on 12 th
Normal (1991-2020)	50.7°	30.2°	4.80"	17.2"	5"	N/A



Monthly Change in Drought Conditions

U.S. Drought Monitor Western U.S.

October 5, 2021
(Released Thursday, Oct. 7, 2021)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	1.95	98.05	89.87	75.37	52.66	17.90
Last Week 09-28-2021	2.21	97.79	89.60	75.38	52.46	18.40
3 Months Ago 07-06-2021	5.62	94.38	88.34	76.62	53.18	23.35
Start of Calendar Year 12-29-2020	11.57	88.43	78.63	65.18	46.49	22.16
Start of Water Year 09-28-2021	2.21	97.79	89.60	75.38	52.46	18.40
One Year Ago 10-06-2020	7.96	92.04	77.48	56.22	35.20	4.50

Intensity:
 None (White) D2 Severe Drought (Orange)
 D0 Abnormally Dry (Yellow) D3 Extreme Drought (Red)
 D1 Moderate Drought (Light Orange) D4 Exceptional Drought (Dark Red)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

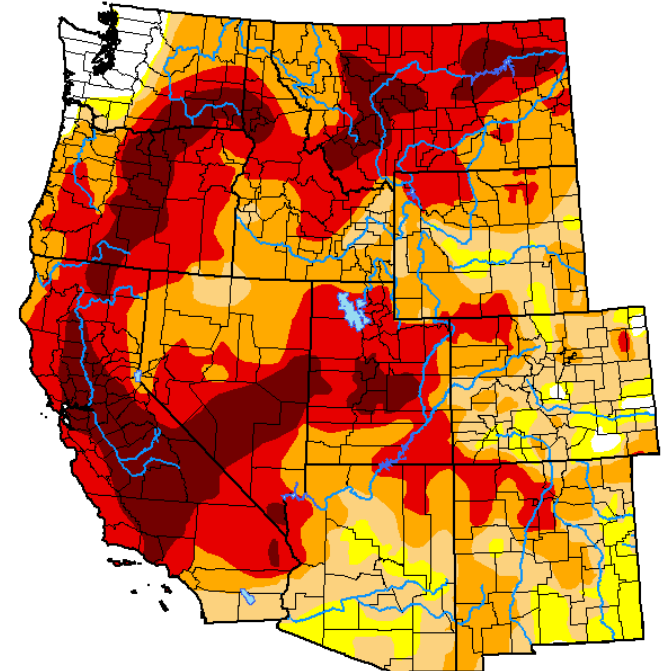
Author:
Brian Fuchs
National Drought Mitigation Center



droughtmonitor.unl.edu

U.S. Drought Monitor Western U.S.

November 2, 2021
(Released Thursday, Nov. 4, 2021)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2.46	97.54	90.41	74.63	44.39	14.56
Last Week 10-26-2021	2.16	97.84	90.73	74.61	47.11	15.31
3 Months Ago 08-03-2021	6.39	93.61	89.98	80.48	58.16	21.79
Start of Calendar Year 12-29-2020	11.57	88.43	78.63	65.18	46.49	22.16
Start of Water Year 09-28-2021	2.21	97.79	89.60	75.38	52.46	18.40
One Year Ago 11-03-2020	8.52	91.48	77.86	57.63	40.57	6.35

Intensity:
 None (White) D2 Severe Drought (Orange)
 D0 Abnormally Dry (Yellow) D3 Extreme Drought (Red)
 D1 Moderate Drought (Light Orange) D4 Exceptional Drought (Dark Red)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:
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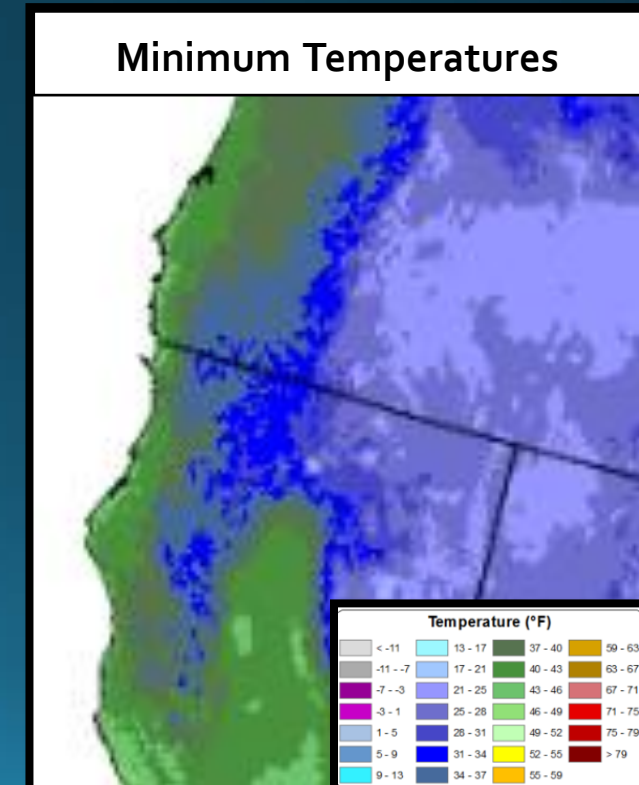
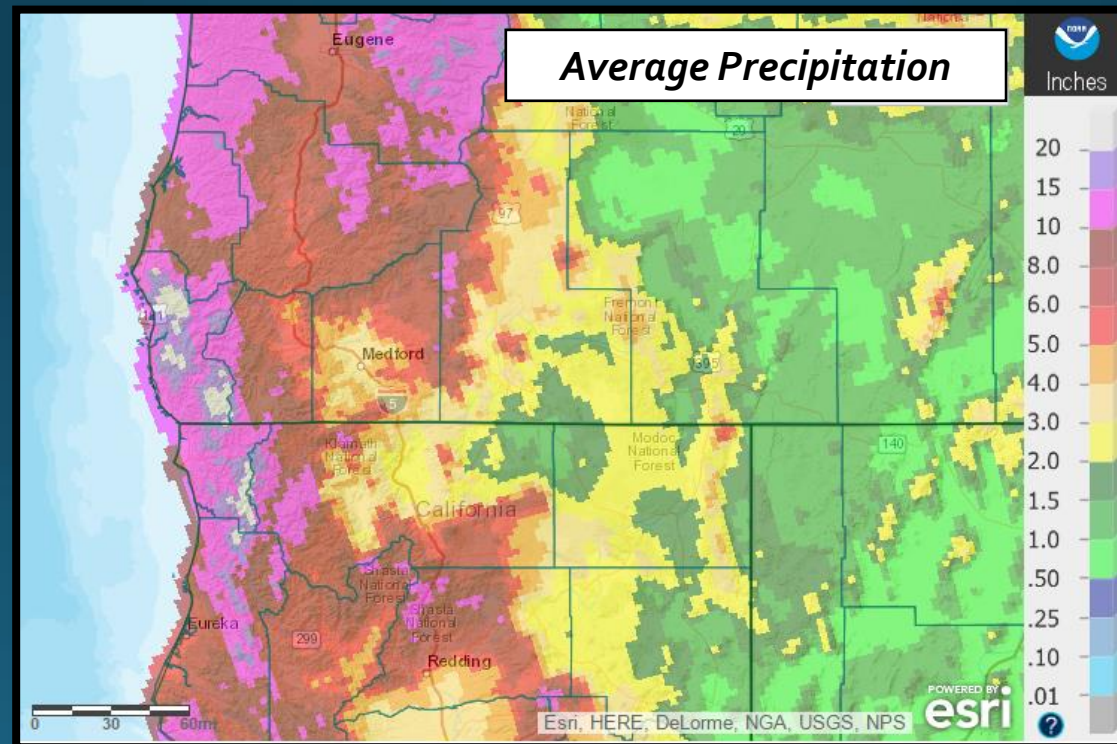
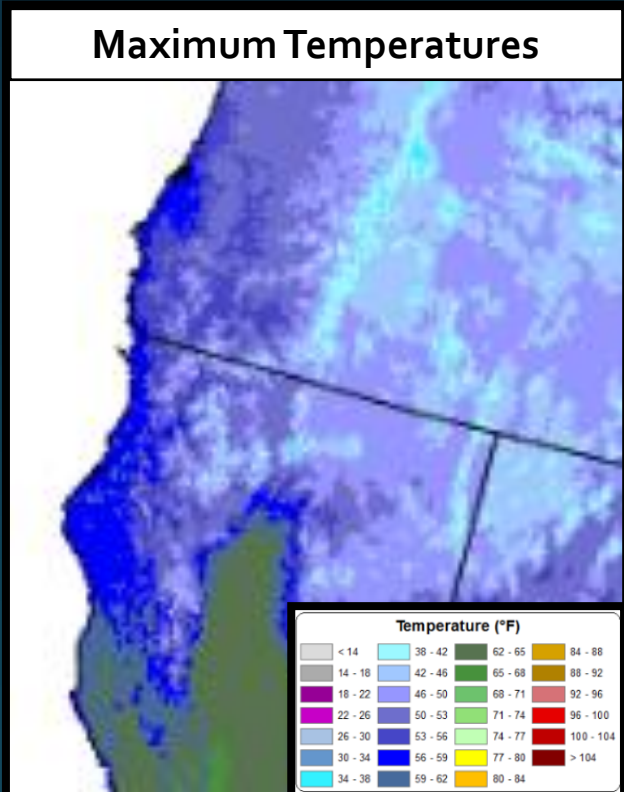
droughtmonitor.unl.edu

Despite the above normal precipitation received during October, the drought status remained largely unchanged across the Western US. Current drought conditions developed over many months to years, and while the above normal precipitation was certainly beneficial, it will take more than just one month of above normal precipitation to alleviate the extreme to exceptional drought conditions across the region. In our local area, the only change was to remove the "Exceptional Drought" status from Douglas County.



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.





*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**