

National Weather Service Medford

2021: July 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 \(NCEI\)](#).



July 2021 Weather Review

July 2021 continued the well above normal temperature trend that began in June. High pressure aloft, along with a thermal trough at the surface were the dominant weather drivers for the first half of the month. An active thunderstorm pattern continued during the first 5 days of the month before zonal flow arrived and brought a more stable environment through the roughly the 11th. Despite a more stable environment, hot temperatures continued and this combined with very dry and breezy conditions allowed a few lightning ignited fires to grow and become quite troublesome during the month. The Lava and Tennant fires in Siskiyou County just north of Mt. Shasta, both caused by lightning at the end of June, grew significantly under these prime fire weather conditions and resulted in numerous evacuations. The Jack Fire, which was human caused, started on July 5th in the Umpqua National Forest near Steamboat. The big winner in terms of acreage and growth rate was the Bootleg Fire in the Fremont-Winema National Forest of Klamath County, just northwest of Sprague River. This fire ignited on July 6th from lightning that occurred at the end of June, and quickly grew thousands of acres within the first few days of its existence.

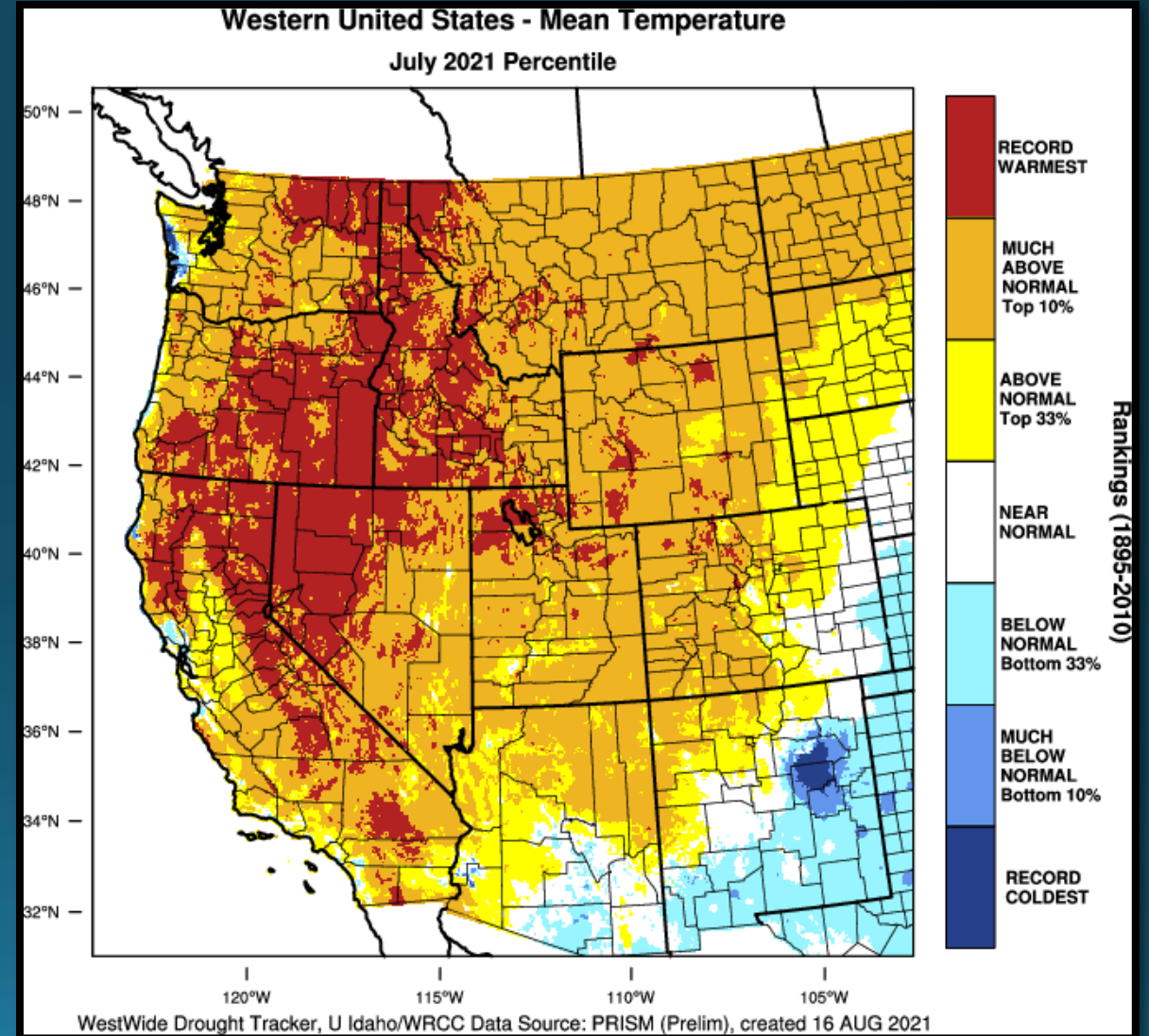
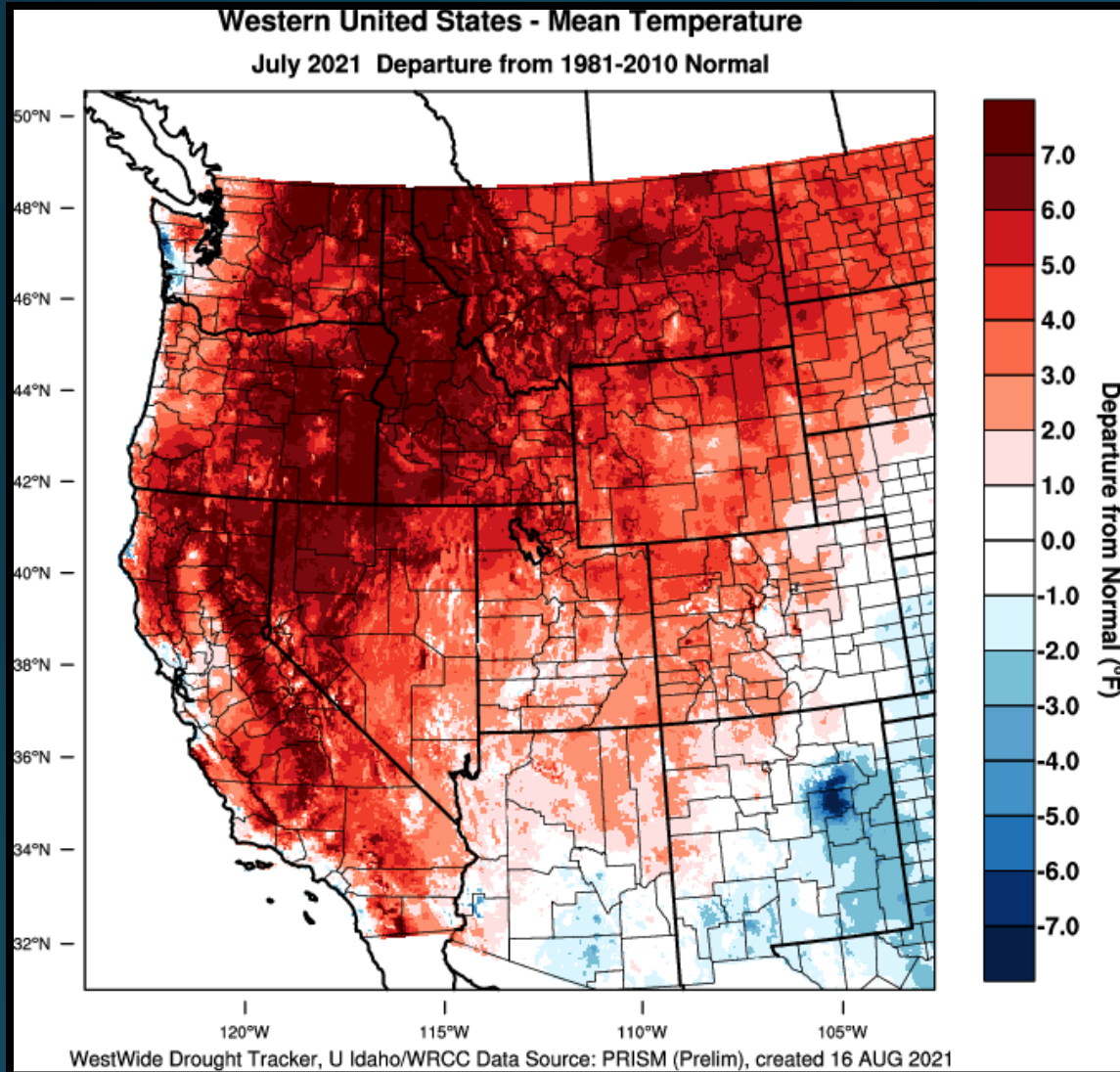
Around the middle of the month, low pressure settled off the British Columbia coast and high pressure was centered over the Four Corners Region. This left the area under southwest flow, allowing moist, unstable air to funnel into the region along with shortwaves to trigger daily thunderstorm development. This pattern persisted through the 20th before low pressure moved inland into Canada on the 21st and this brought a period of slightly cooler temperatures, but dry conditions persisted.

High pressure returned on the 23rd and temperatures rebounded through the 27th. By then, a similar pattern returned with low pressure off the coast of British Columbia and high pressure over the Four Corners Region. The area saw another round of thunderstorm days from the 27th through the 30th. However, on the 28th, a surge of monsoon moisture pushed into the region and brought a swath of steady rain. Rainfall amounts were significant by July standards and super beneficial for the drought stricken region. This swath of moisture was focused west of the Coast Range, with the heaviest amounts falling east of the Cascades across eastern Siskiyou County northward across Klamath and western Lake Counties. Thankfully, the Bootleg fire received a generous amount of precipitation with this event, and this significantly moderated fire activity on this 413,000 acre fire. Rainfall amounts on this fire ranged from 0.10" on the eastern side to 0.60" across the western portions. Thunderstorms continued through the end of the month, this time focused west of the Cascades. This lightning would ignite several fires that would continue through much of the remainder of fire season.

Overall July 2021 was a hot month with well above normal temperatures. In fact, July 2021 was the hottest July on record for the Medford area. In fact, most of the area climate sites recorded either the warmest or second warmest July on record. Most of the area received below normal precipitation for the month, with the exception of portions of the Klamath Basin which received the bulk of the moisture from the monsoon surge.



July 2021 Observed Temperatures





Average Temperatures

	Average (°F)	Departure from Normal	Average Max (°F)	Departure from Normal	Average Min (°F)	Departure from Normal
North Bend	59.3	-0.5°	65.5	-0.6°	53.1	-0.5°
Roseburg	75.1	3.5°	90.5	4.7°	59.8	2.4°
Medford	80.3	5.2°	96.7	5.1°	63.8	5.2°
Klamath Falls	71.0	3.9°	91.7	5.4°	50.2	2.4°
Montague, CA	80.1	6.1°	99.4	6.0°	60.8	6.3°
Mt. Shasta City, CA	74.8	6.4°	94.3	9.1°	55.3	3.6°
Alturas, CA	72.0	3.8°	94.5	5.4°	49.5	2.3°



Monthly Max & Min Temperatures

	Max (°F)	Date(s)	Min (°F)	Date(s)
North Bend	69°	23rd	49°	19th
Roseburg	99°	29th	53°	2nd
Medford	104°	29th	49°	2nd
Klamath Falls	99°	10th	32°	2nd
Montague, CA	106°	10th & 11th	42°	2nd
Mt. Shasta City, CA	103°	10th	44°	2nd
Alturas, CA	102°	11th & 12th	34°	2nd

	Date	Record High	Old Record/Year
Alturas	9 th	101°	Ties w/ 2002
Klamath Falls	6 th	96°	Ties w/ 1906
	9 th	98°	Ties w/ 1898
Montague	9 th	105°	103° / 2008
Mt. Shasta City	9 th	100°	96° / 1952
	10 th	103°	101° / 2002
	11 th	101°	100° / 2002
	12 th	101°	98° / 1961
	13 th	99°	Ties w/ 2014



Record Warm July – 2021

July 2021 goes down as either the warmest or second warmest July for many climate sites in the region.

Maximum 31-Day Mean Avg Temperature for Medford Area, OR (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date	Missing Days
1	80.3	2021-07-31	0
2	79.9	2014-07-31	0
3	78.9	2013-07-31	0
4	78.4	2015-07-31	0
5	78.3	2017-07-31	0
6	78.1	2018-07-31	0
7	77.9	2009-07-31	0
8	77.4	2003-07-31	0
9	77.2	2006-07-31	0
10	76.7	1996-07-31	0

Period of record: 1911-03-11 to 2021-11-02

Maximum 31-Day Mean Avg Temperature for Mount Shasta Area, CA (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date	Missing Days
1	74.8	2021-07-31	0
2	74.0	2014-07-31	0
3	72.6	2018-07-31	0
4	72.4	2017-07-31	0
5	72.2	1960-07-31	0
6	72.0	2013-07-31	0
7	71.1	1973-07-31	0
8	71.0	2003-07-31	0
9	70.8	1959-07-31	0
10	70.7	2006-07-31	0

Period of record: 1948-04-15 to 2021-11-02

Maximum 31-Day Mean Avg Temperature for ROSEBURG REGIONAL AP, OR

Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date	Missing Days
1	76.1	2015-07-31	0
2	75.1	2021-07-31	0
3	74.6	2013-07-31	0
4	74.6	2018-07-31	0
5	74.4	2014-07-31	0
6	74.2	2009-07-31	1
7	74.1	2003-07-31	0
8	72.7	2002-07-31	0
9	72.7	2020-07-31	0
10	72.6	1938-07-31	0

Period of record: 1900-04-01 to 2021-11-02

Maximum 31-Day Mean Avg Temperature for Alturas Area, CA (ThreadEx)

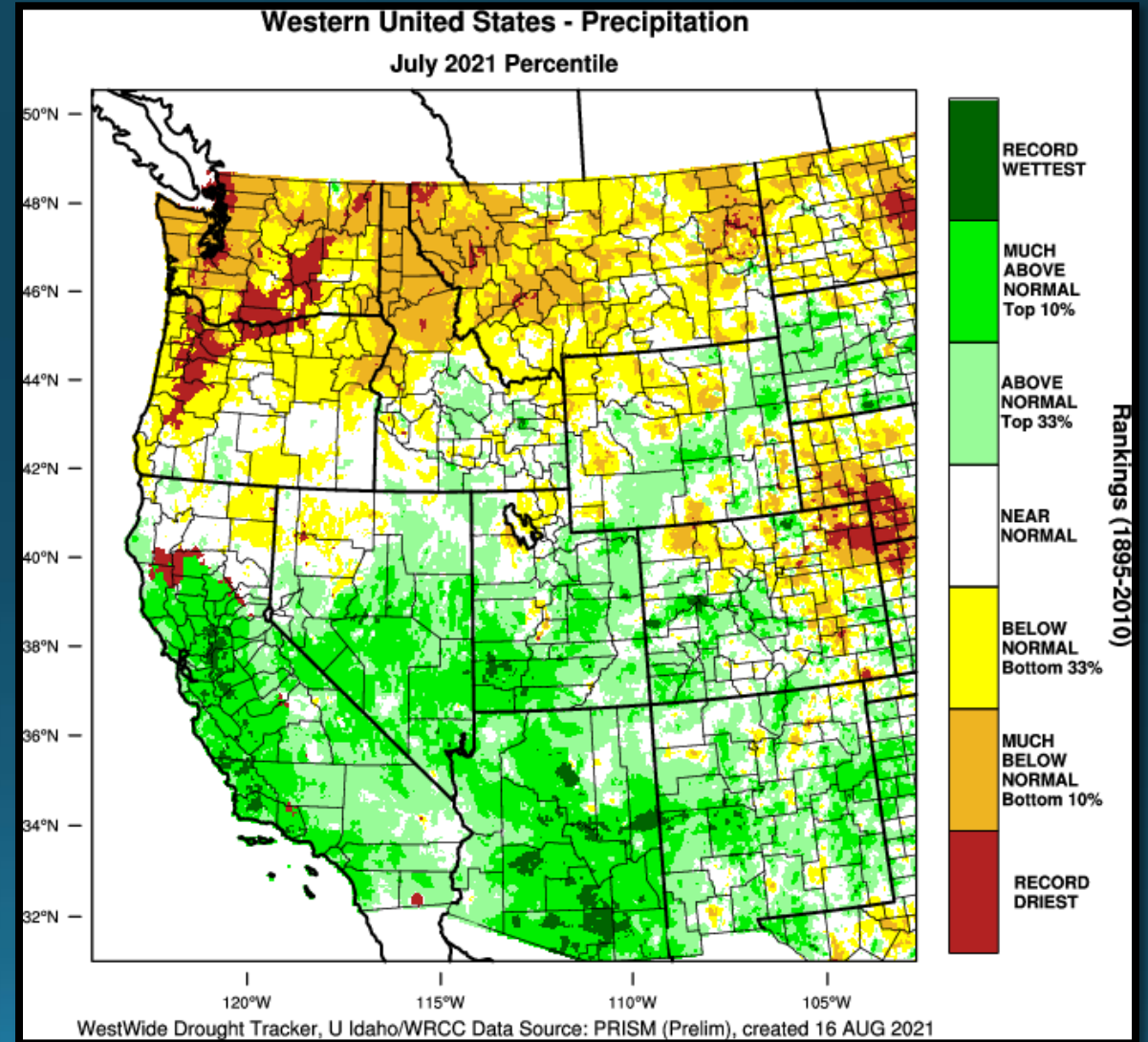
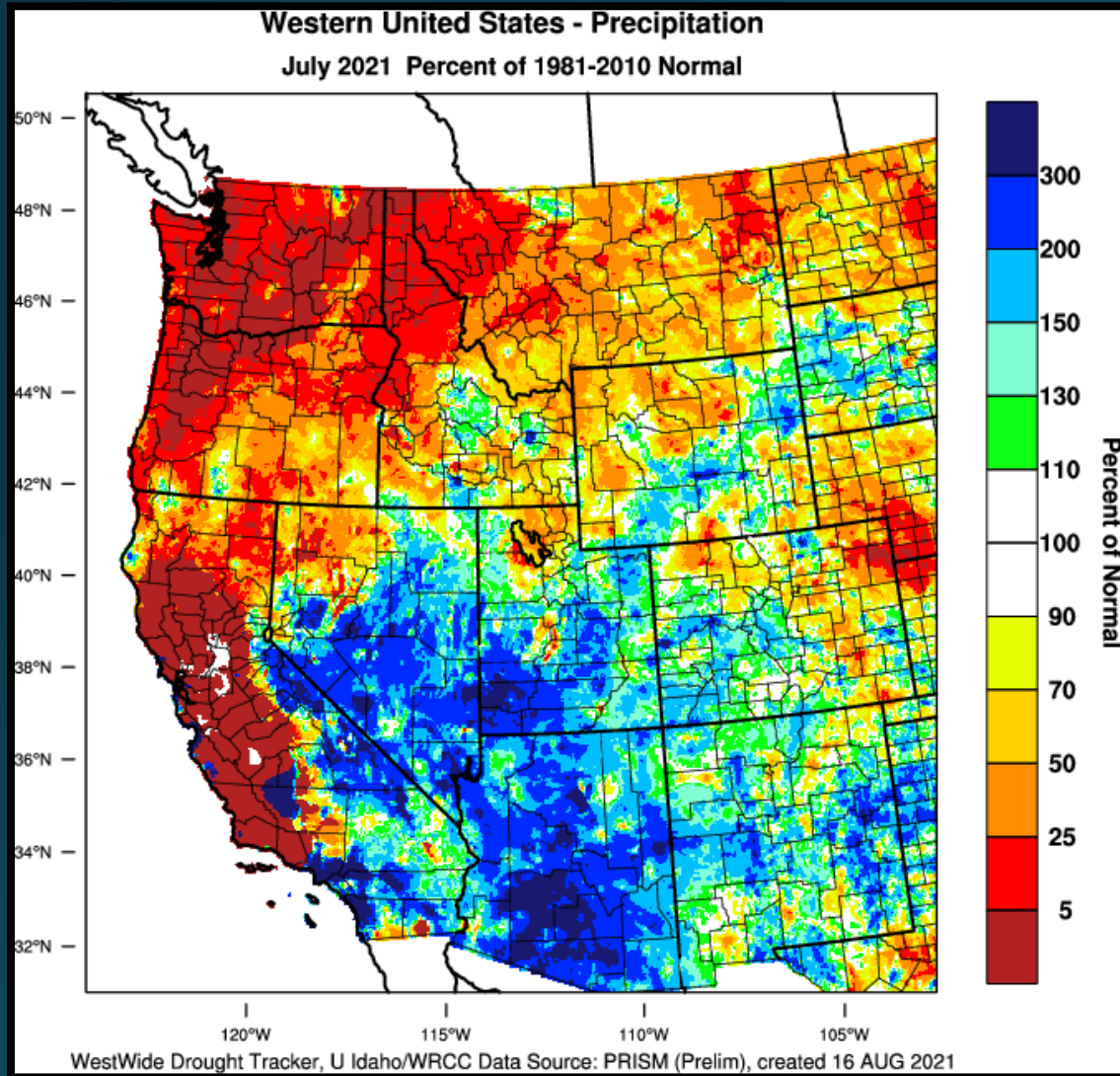
Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date	Missing Days
1	72.7	2014-07-31	0
2	72.0	2021-07-31	0
3	70.9	2017-07-31	2
4	70.3	2003-07-31	0
5	70.2	2018-07-31	0
-	70.2	2002-07-31	0
7	70.2	2013-07-31	0
8	70.0	2006-07-31	0
9	69.9	1996-07-31	1
10	69.8	1988-07-31	0

Period of record: 1935-05-01 to 2021-11-02



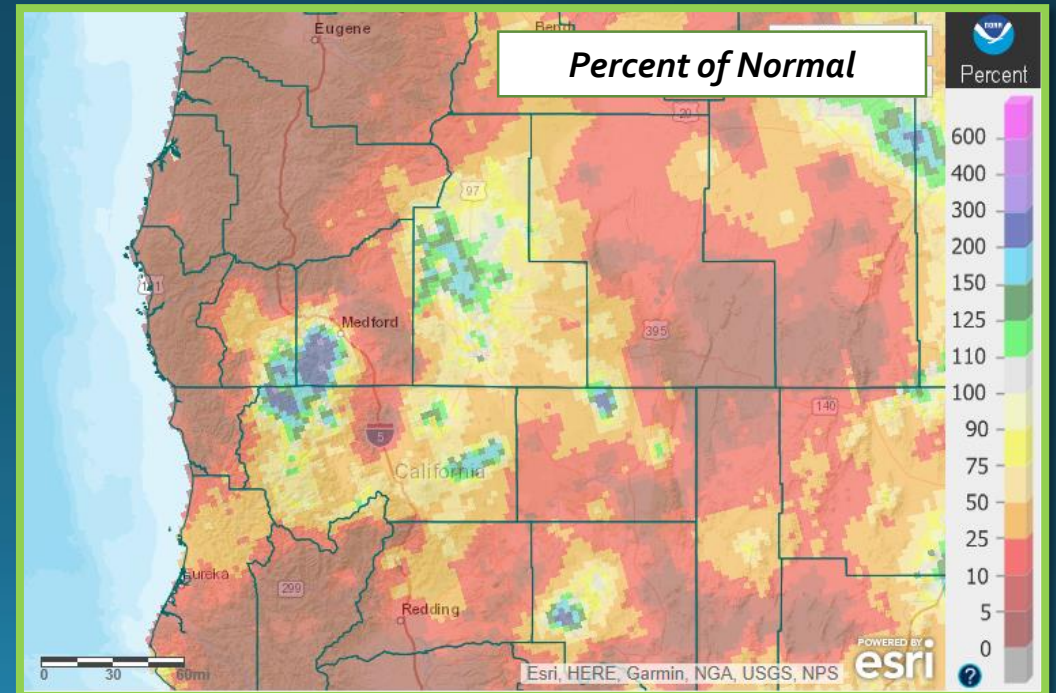
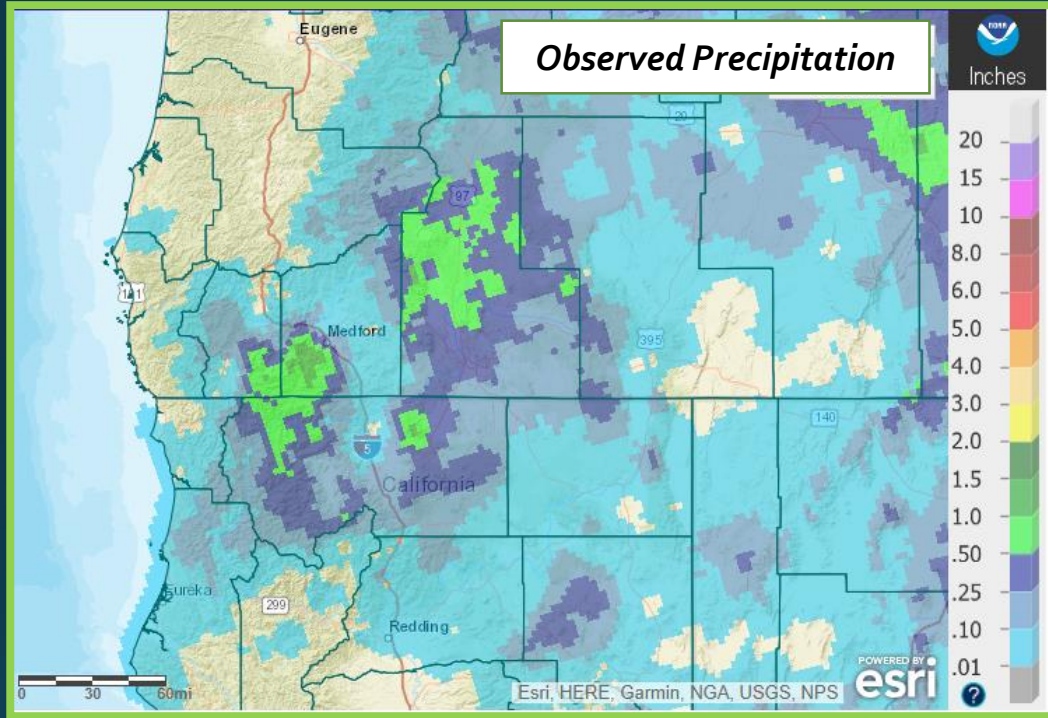
July 2021 Observed Precipitation





Precipitation

	Total	Departure from Normal	Greatest 24-hr Total	Date(s)
North Bend	0.05"	-0.30"	M	M
Roseburg	Trace	-0.26"	T	28 th
Medford	0.04"	-0.20"	0.02"	27 th
Klamath Falls	0.41"	0.19"	0.38"	27 th
Montague, CA	0.01"	-0.15"	0.01"	30 th – 31 st
Mt. Shasta City, CA	0.24"	-0.04"	0.20"	27 th
Alturas, CA	0.07"	-0.22"	0.07"	27 th

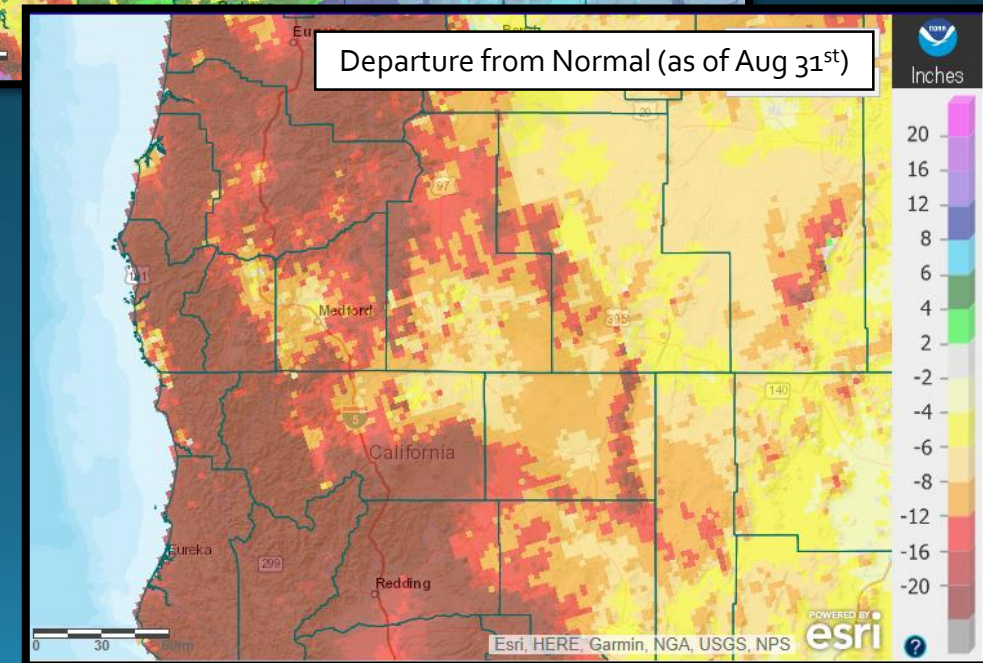
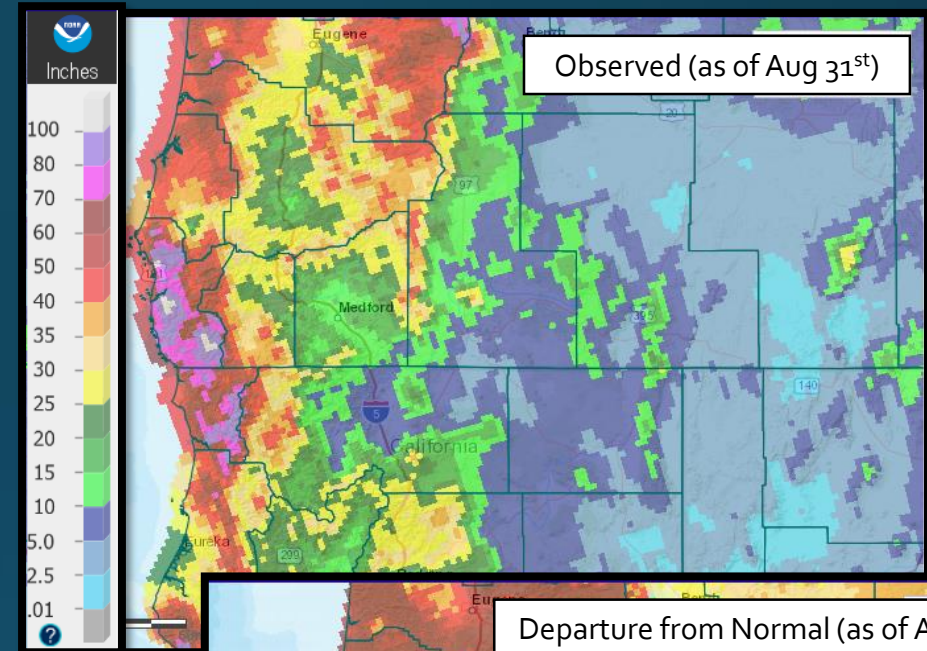
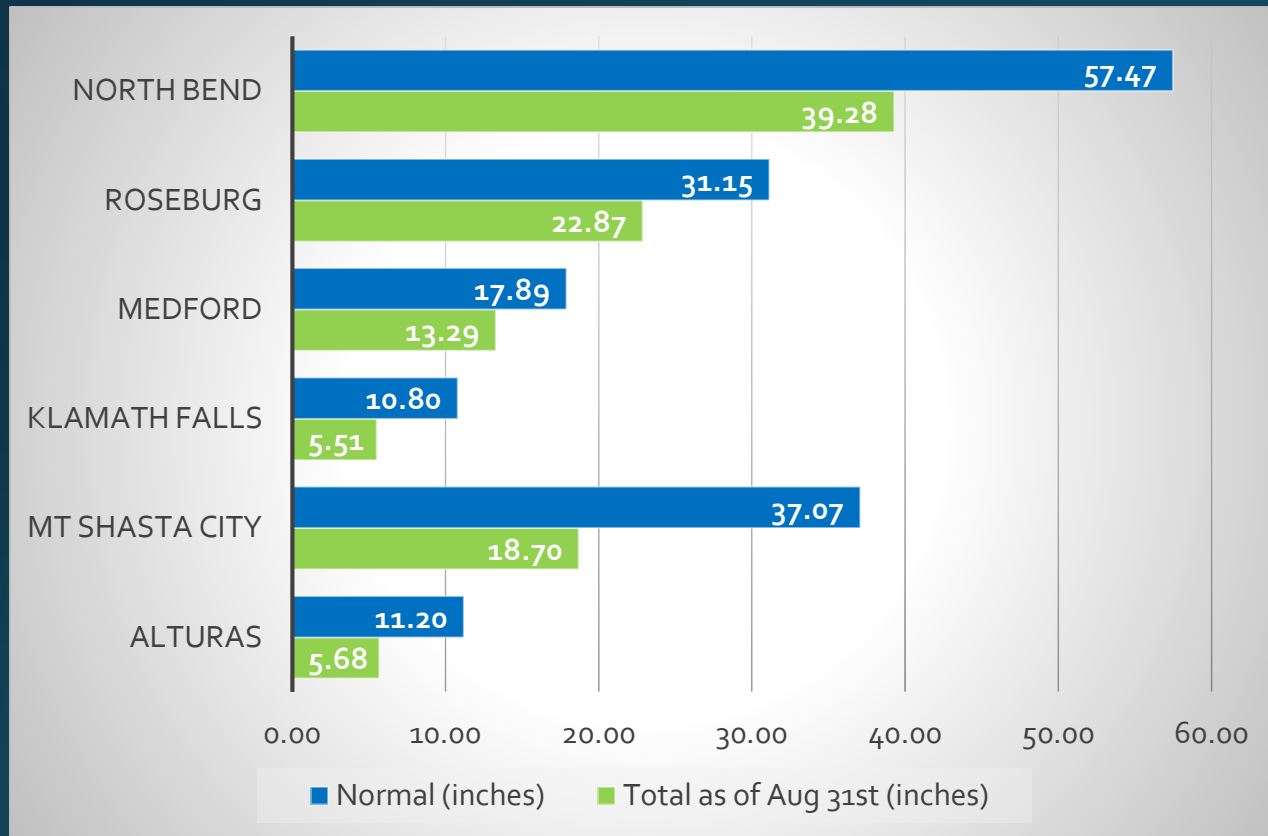


Record Precipitation

	Date/Amount	Old Record/Year
Klamath Falls	27 th / 0.38"	0.33" / 1947
Mt Shasta City	27 th / 0.20"	Ties w/ 2020
Medford	30 th / 0.02"	Ties w/ 1980



Water Year Status (As of August 31st)



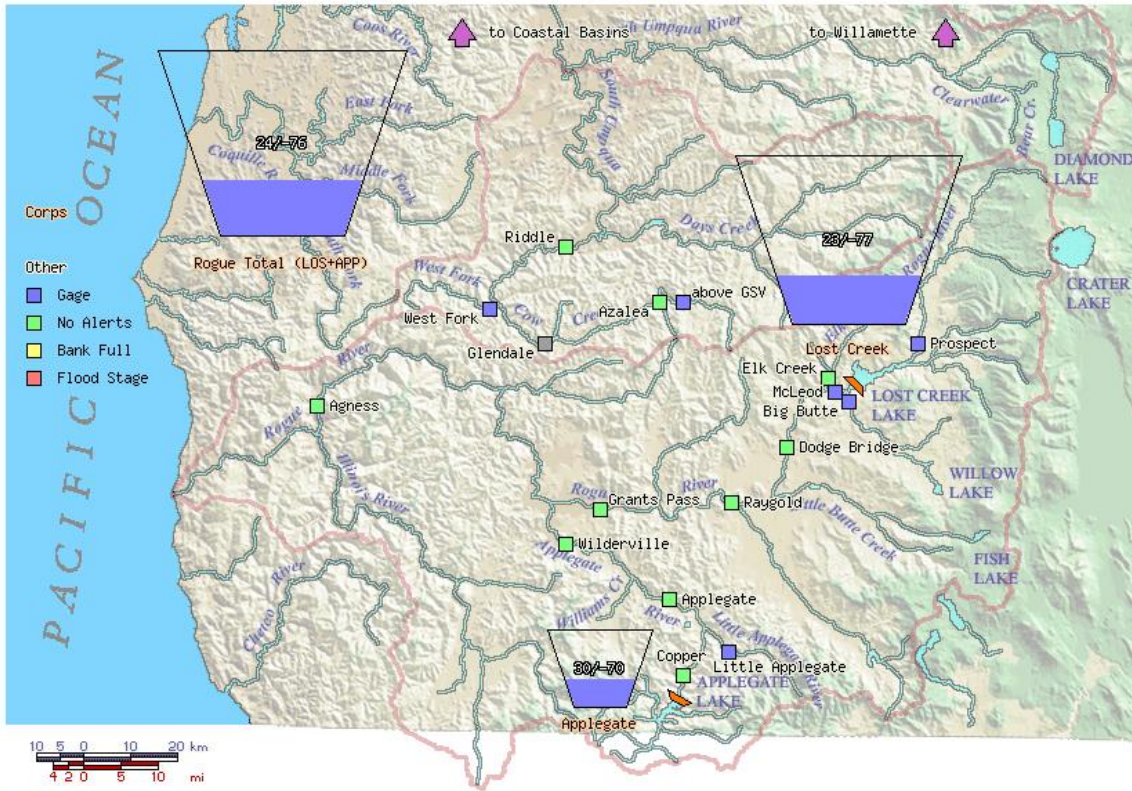


Reservoir Status

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

Data courtesy of [Bureau of Reclamation](#)

Rogue Basin Teacup Diagram

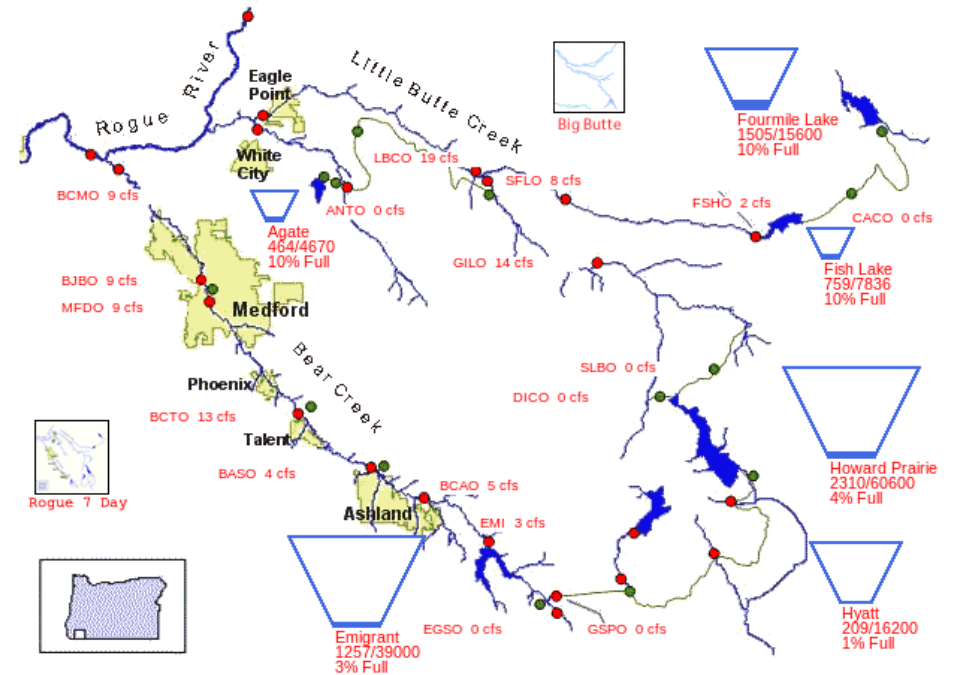


Created: Tue Aug 31 12:25:21 2021
WCD: Water Control Diagram

Project numbers: percent full / percent above WCD, where
 $\text{percent full} = \frac{\text{current storage} - \text{minimum conservation storage}}{\text{maximum conservation storage} - \text{minimum conservation storage}}$
 $\text{percent above water control diagram} = \frac{\text{current storage} - \text{WCD storage}}{\text{maximum conservation storage} - \text{minimum conservation storage}}$

US Bureau of Reclamation, Pacific Northwest Region Bear Creek and Little Butte Creek Basins

08/30/2021



PROVISIONAL DATA - SUBJECT TO CHANGE!

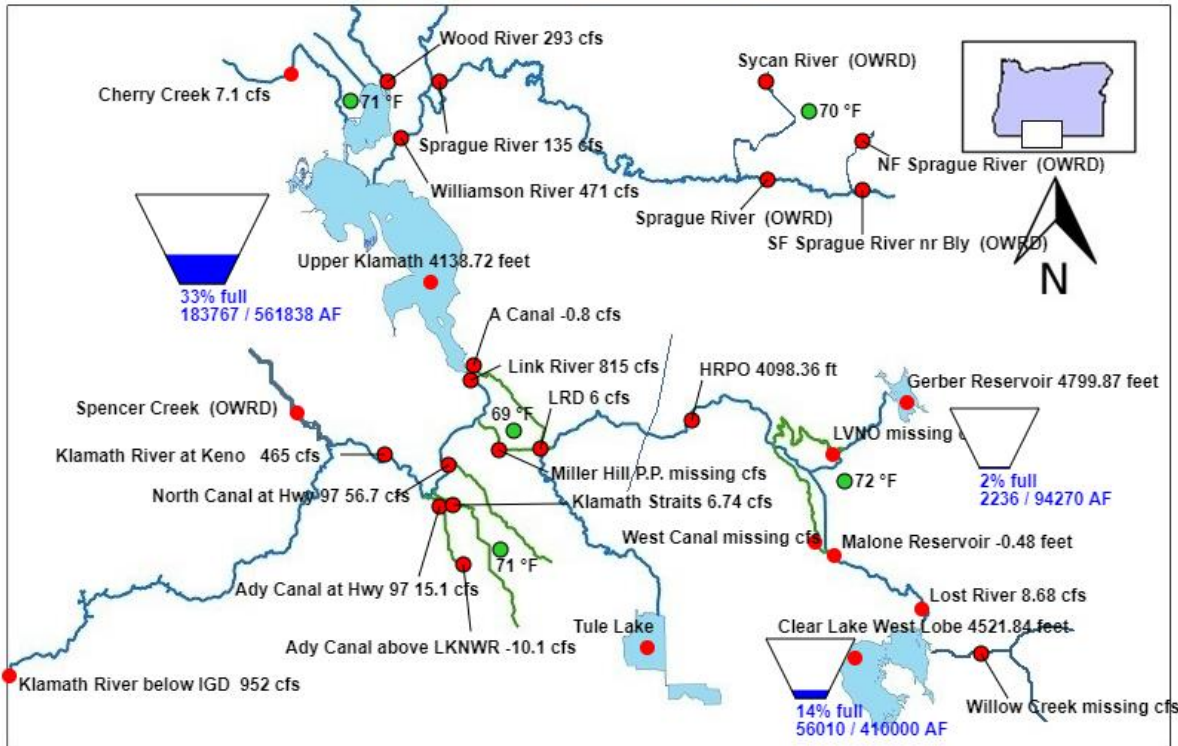


Reservoir Status

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

Bureau of Reclamation, Mid Pacific Region
Major Storage Reservoirs in the Klamath River Basin

Tue Aug 31 2021 12:35:00 GMT-0700 (Pacific Daylight Time)



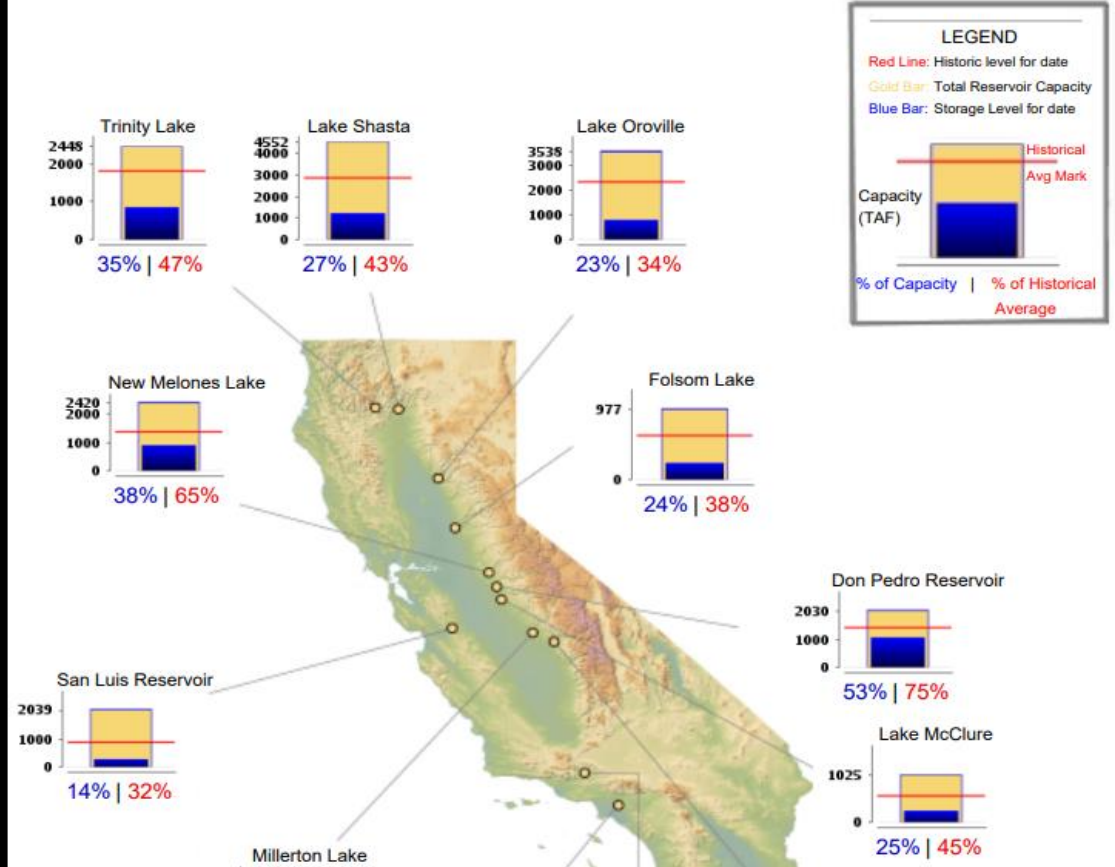
PROVISIONAL DATA - SUBJECT TO CHANGE!



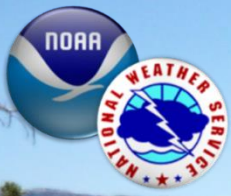
CURRENT RESERVOIR CONDITIONS

SELECTED WATER SUPPLY RESERVOIRS

Midnight: August 30, 2021



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



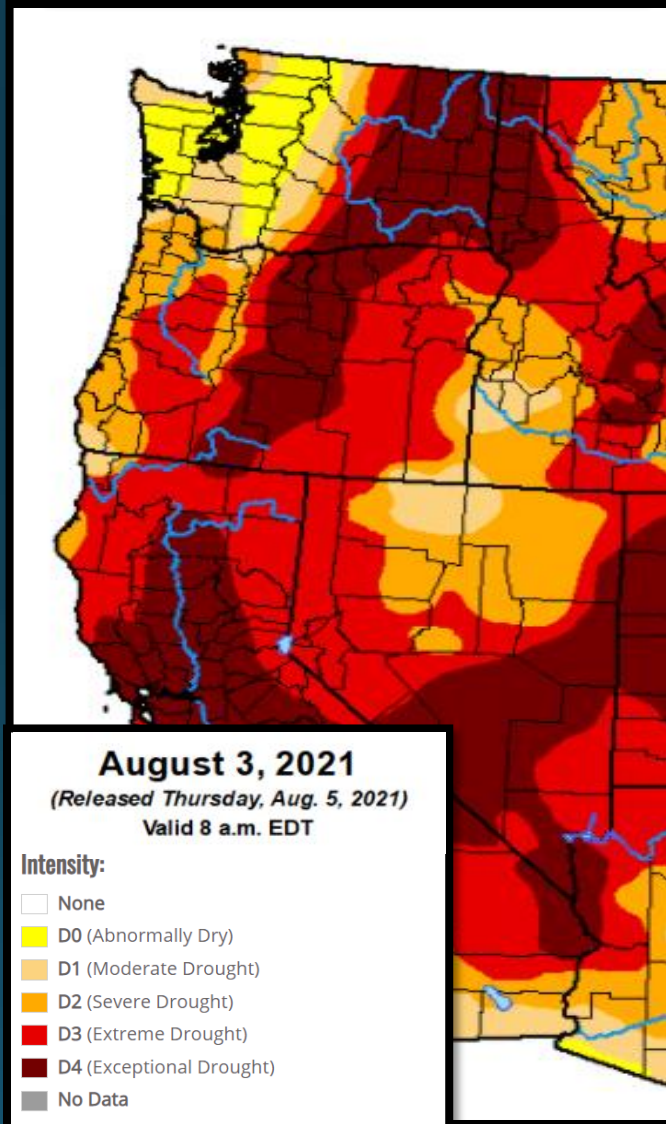
Crater Lake

Image: NPS

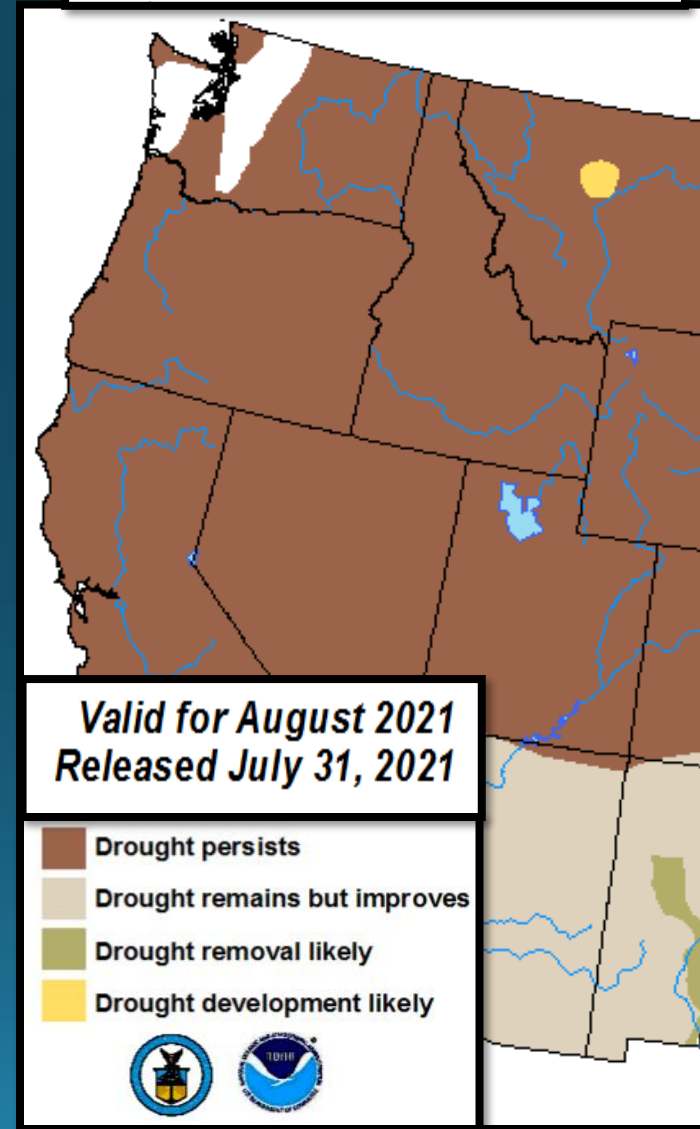
	Average Max Temp (°F)	Average Min Temp (°F)	Total Precipitation	Total Snowfall	Snow Depth as of: 7/31/21	Highest Max/ Lowest Min
July	75.3°	50.1°	0.23"	0.0"	0"	81° on 10 th & 12 th / 42° on 22 nd
Normal (1991-2020)	68.9°	41.4°	0.80"	0.0"	0"	N/A

Drought Monitor (Current) & Outlook (August)

United States Drought Monitor



U.S. Monthly Drought Outlook
Drought Tendency During the Valid Period

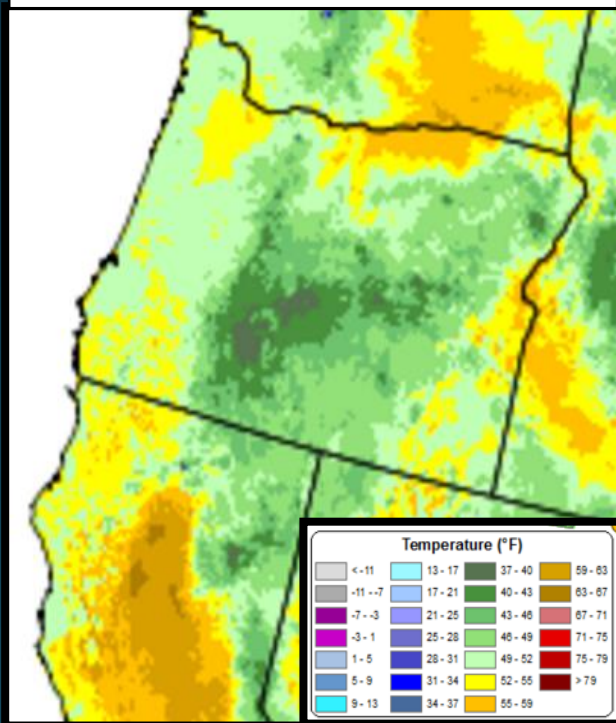




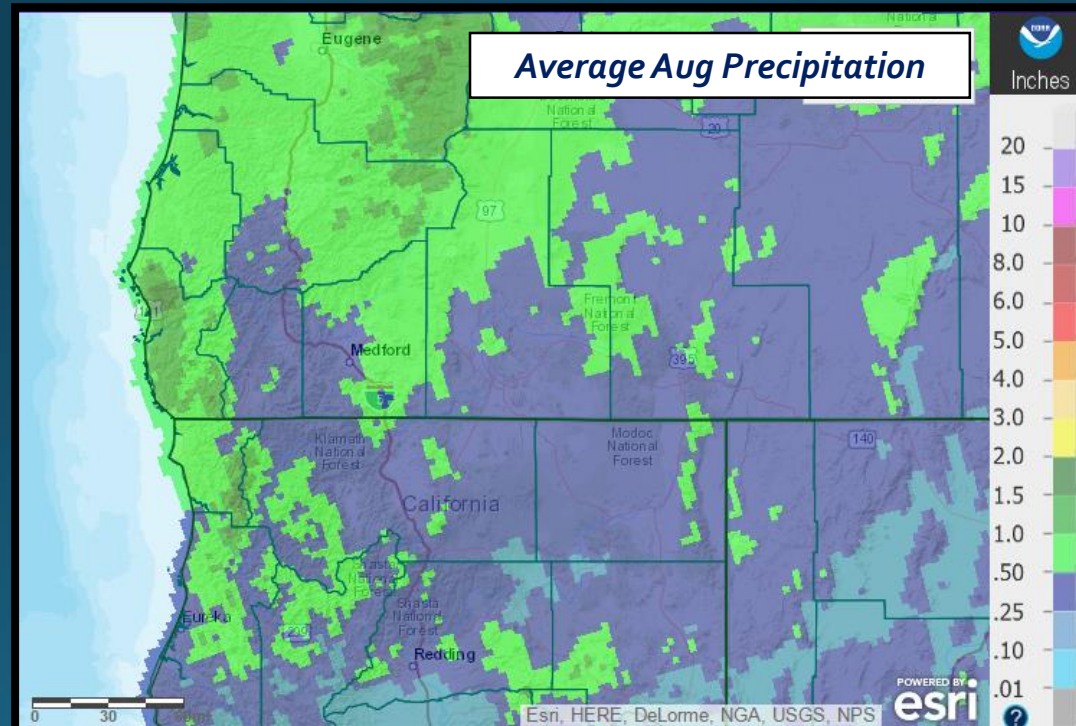
Looking Ahead: Normals for August (1981-2010)

August is typically one of the two driest dry months across the forecast area, but is not as dry as July for areas west from the coastal mountain ranges westward. Lightning (see next slide) and fire activity usually peaks in August. High temperatures are typically at their warmest of the year, generally very similar to July's normals. Valley high temperatures are typically in the 80s to lower 90s. Average minimum temperatures are slightly cooler than those of July as nights become increasingly longer. Average minimum temperatures are mostly in the 40s for east side valleys, and in the 40s and 50s for west side valleys. Most of the forecast area usually receives an inch or less of precipitation. Exceptions include portions of the coastal mountain ranges and the higher terrain of eastern Douglas county.

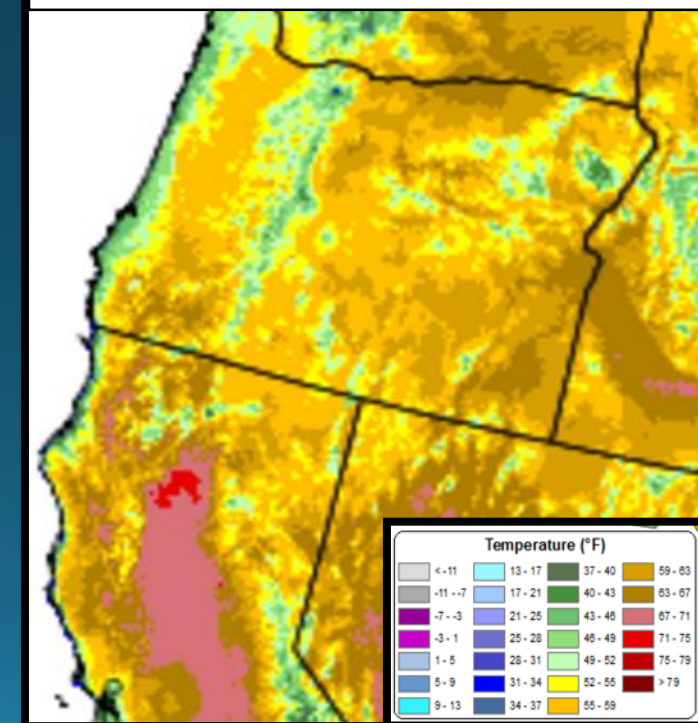
Average Aug Minimum Temperatures



Average Aug Precipitation



Average Au Maximum Temperatures





*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**