

National Weather Service Medford

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



# June 2021 Weather Review

June 2021 was one for the record books. Three distinct periods of excessively hot temperatures resulted in well above normal temperatures for the month. In fact, the average temperature for June 2021 was the second warmest on record for the majority of the local climate sites (2015 holds first place). Despite a record warm June, a prolonged period of anomalous troughing brought impressive rain amounts (by June standards) for locations west of the Cascades, especially along the Curry County coast and coastal mountains. This resulted in near to above normal precipitation amounts for those areas for the month. Although locations east of the Cascades received some precipitation during this event, overall amounts for the month still fell in the below normal category.

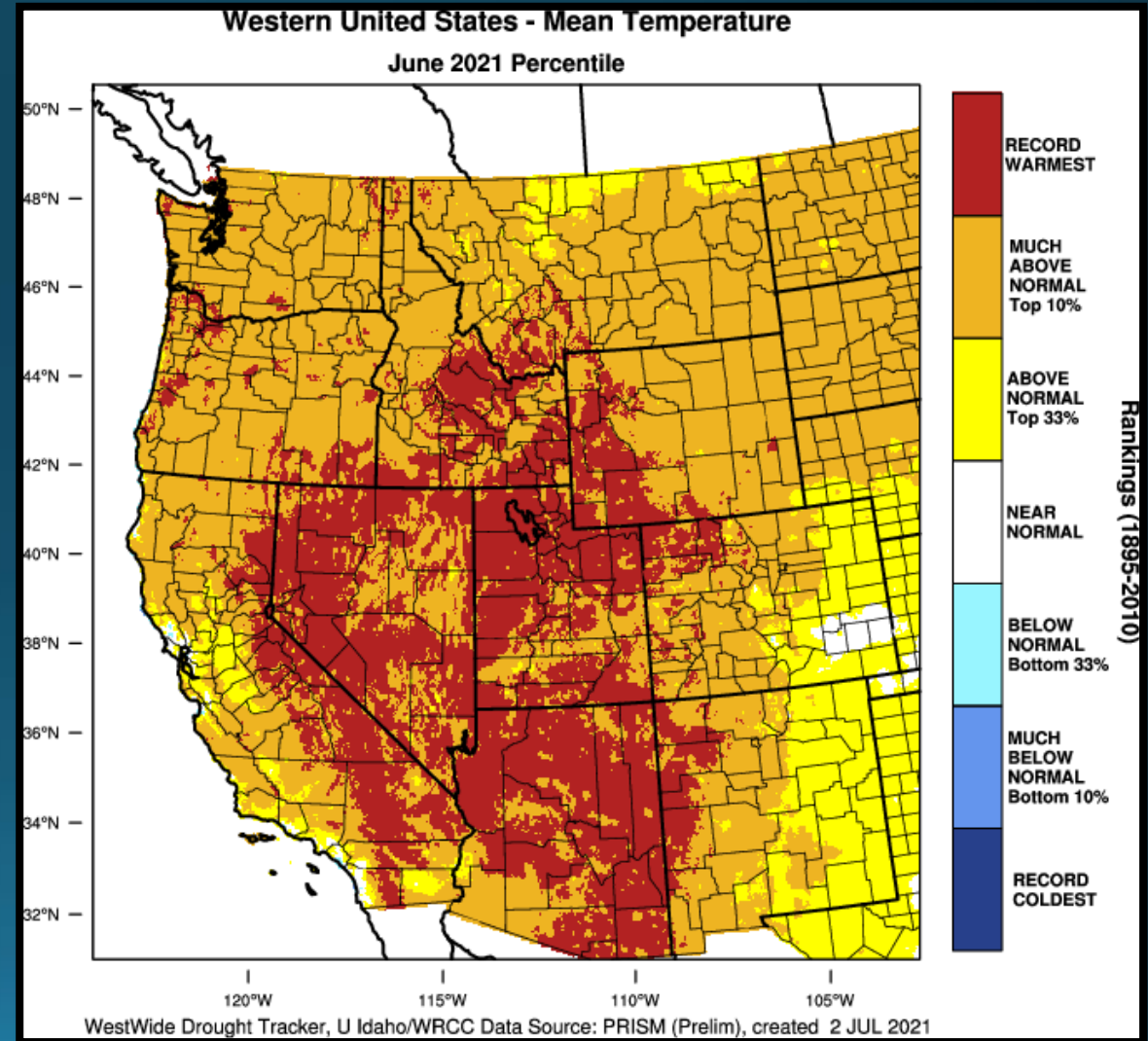
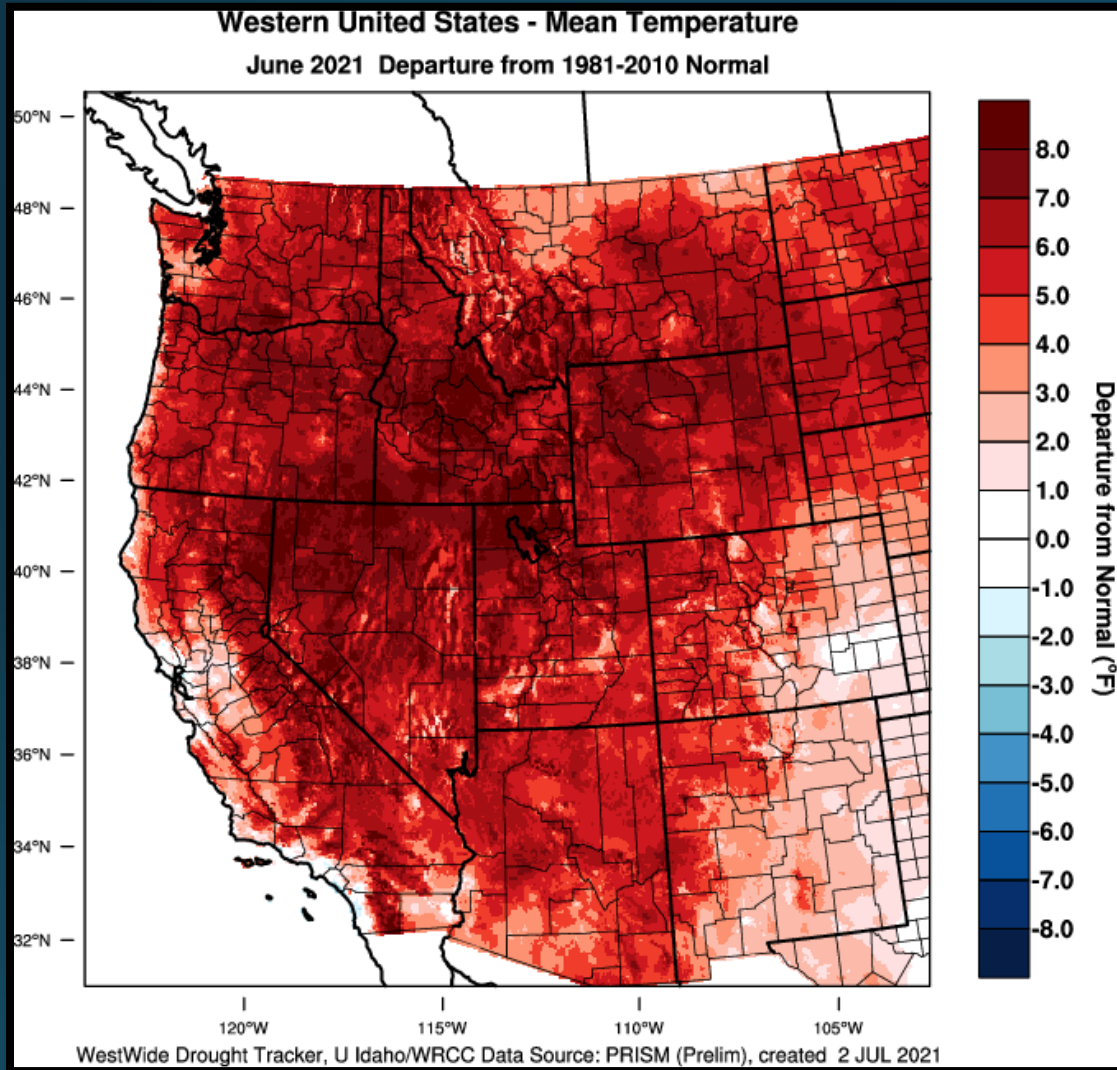
Strong high pressure was centered over the Pacific Northwest during early June, and this brought the first heatwave of the month to the area. At the time, the warmest temperatures of the year were felt across the area and numerous high temperature records were set during the first three days of June. Around the 5<sup>th</sup> of the month, a significant pattern change occurred as an anomalously strong trough settled over the Pacific Northwest. This brought a prolonged period of weather that resembled conditions of late April/early May with below normal temperatures and much needed beneficial rainfall. This trough lingered through the middle of month, during which it tapped into the Pineapple Express and brought a late season atmospheric river (AR) to the area. The entire month of June's average precipitation was delivered across the area from the Cascades westward during this event. Considering the preceding dry spring months, this amount of rain was significant and very much welcomed across the drought stricken area.

After the middle of the month, the upper trough gradually weakened and moved to the east while strong high pressure over the Desert Southwest expanded westward. This brought the second heatwave of the month with more daily high temperature records set across the area on the 20<sup>th</sup> and 21<sup>st</sup>. A slight cooling trend occurred shortly after as low pressure approached the area and stalled off the coast of Cape Mendocino. This is a classic pattern for thunderstorm development and daily thunderstorms occurred mainly east of the Cascades during the week of the 21<sup>st</sup>.

The pattern transitioned again on the 25<sup>th</sup> as the low pressure offshore retrograded and strong high pressure returned over the Pacific Northwest. A historic heatwave (the third and certainly most significant heatwave of the month) was felt across the entire Northwest from the 26<sup>th</sup> through the 29<sup>th</sup>. During this time, numerous daily high temperature records were set over consecutive days, several all time June high temperature records were broken, and three climate sites tied or broke their all time high temperature records! At the peak of the heat, the Medford Airport recorded 115 degrees, which tied the all time high recorded on July 20<sup>th</sup>, 1946. Montague also tied their all time high, while Roseburg shattered theirs by 5 degrees! This was a widespread event that affected the entire states of Washington and Oregon, including Portland and Seattle where triple digits were recorded multiple days in a row. While the extreme heat ebbed after the 28<sup>th</sup>, the heat wave continued through the end of the month and into the 4<sup>th</sup> of July weekend. This put the area on track for a record stretch of very hot temperatures, based on the Medford Airport data. The record stretch of high temperatures at or above 100 degrees held during this heat wave and stands at 10 days in late July of 1962 and again in August of 1967. However, using high temperatures of at or above 95 degrees, the Medford Airport was well on the way to breaking that record. As of this writing (7/7/2021), the record had been tied with 18 consecutive days of high temperatures at or above 95 degrees (which previously occurred in August of 1967). With the upcoming forecast calling for another 6 days of temperatures at or above 95 degrees, it's likely to be another record that will be broken by this historic period of heat.



# June 2021 Observed Temperatures





# Average Temperatures

	Average (°F)	Departure from Normal	Average Max (°F)	Departure from Normal	Average Min (°F)	Departure from Normal
North Bend	58.8	1.4°	64.9	1.4°	52.8	1.6°
Roseburg	70.2	5.6°	84.2	7.5°	56.2	3.7°
Medford	74.0	7.1°	89.0	7.5°	59.0	6.7°
Klamath Falls	65.0	6.2°	84.3	8.1°	45.7	4.3°
Montague, CA	72.6	7.7°	90.9	8.1°	54.3	7.3°
Mt. Shasta City, CA	69.5	7.9°	86.7	10.6°	52.2	5.1°
Alturas, CA	66.3	6.1°	87.9	9.7°	44.7	2.5°



# Monthly Max & Min Temperatures

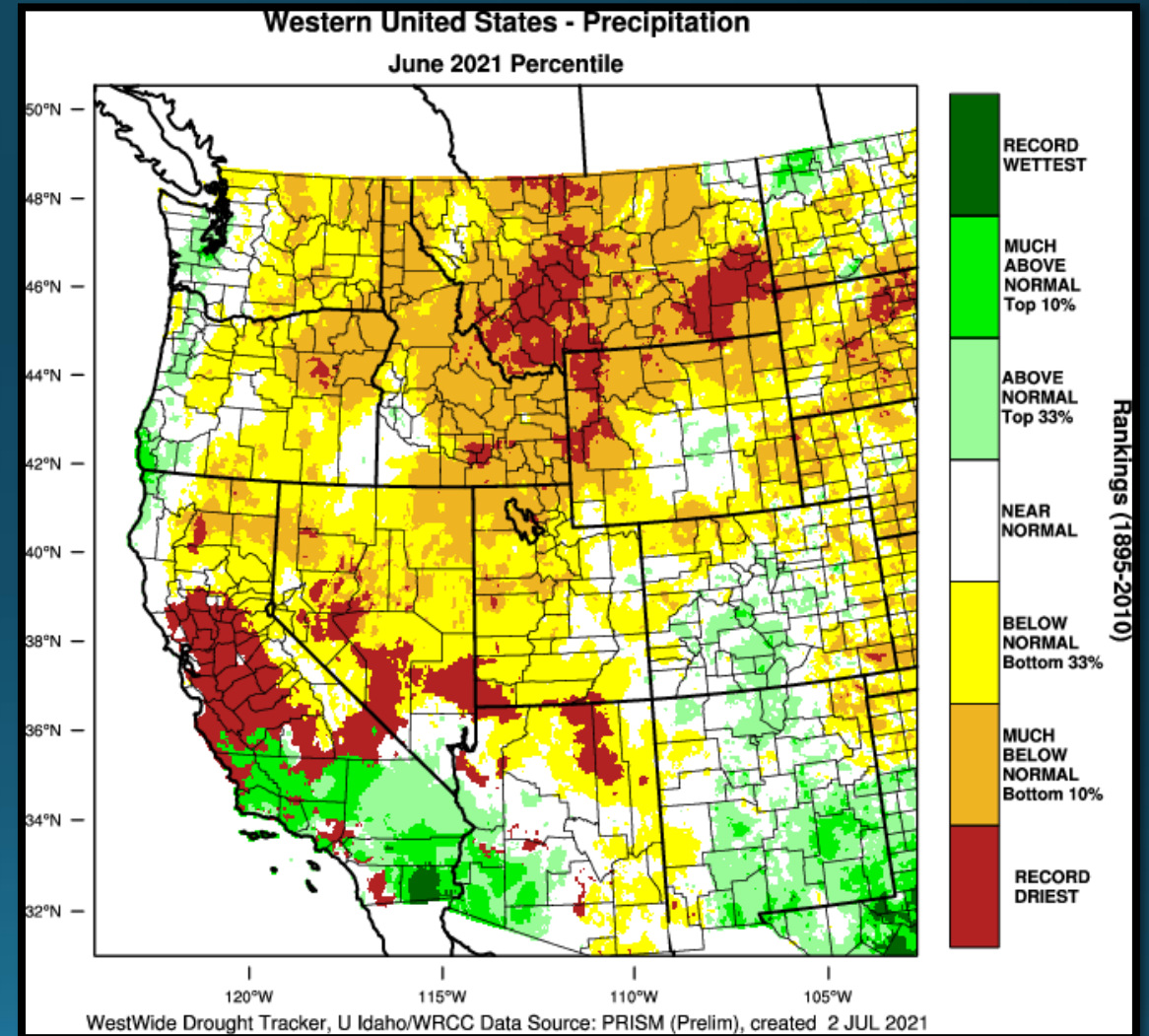
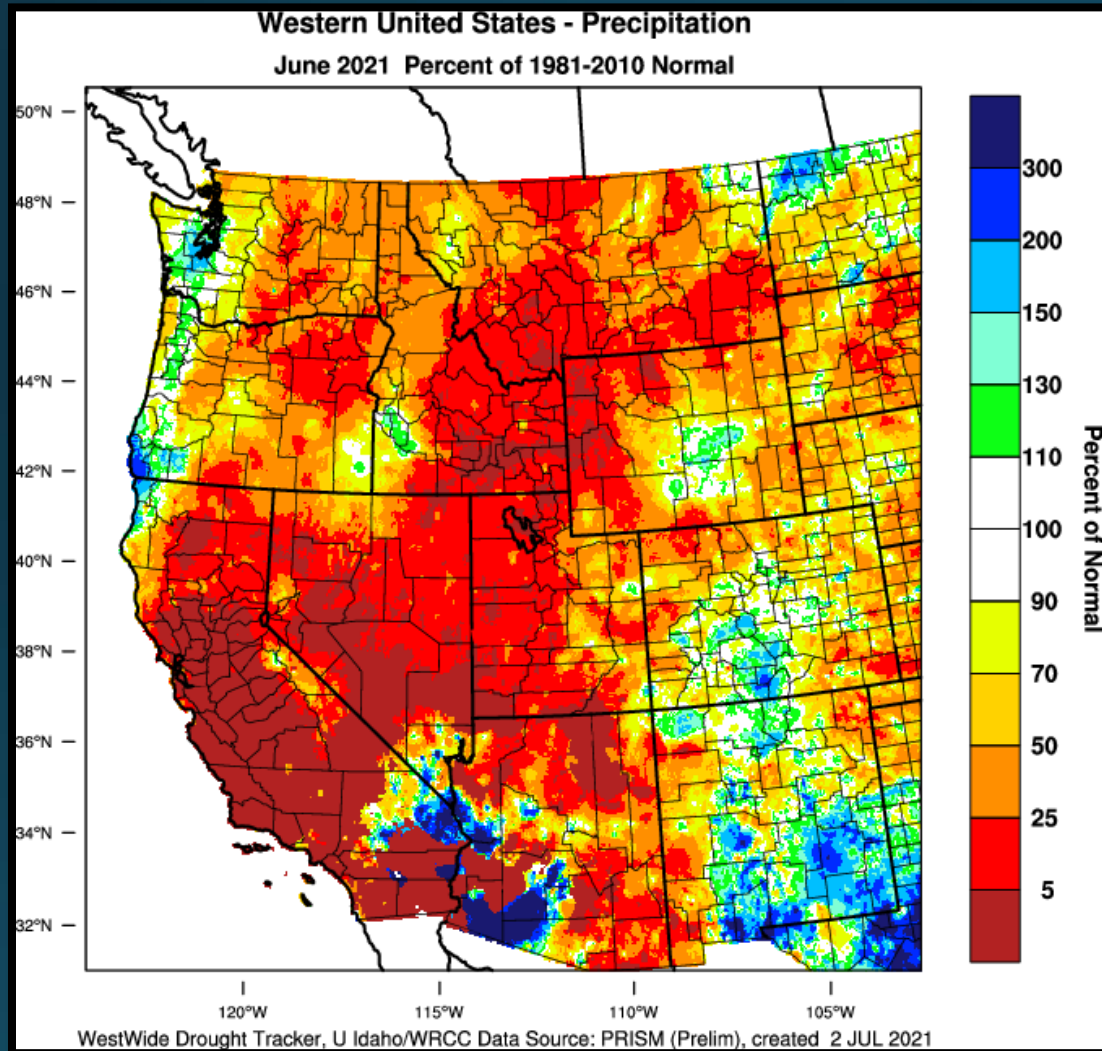
	<b>Max (°F)</b>	<b>Date(s)</b>	<b>Min (°F)</b>	<b>Date(s)</b>
<i>North Bend</i>	<b>73°</b>	27 <sup>th</sup>	<b>44°</b>	6 <sup>th</sup>
<i>Roseburg</i>	<b>114°</b>	27 <sup>th</sup>	<b>42°</b>	9 <sup>th</sup> & 10 <sup>th</sup>
<i>Medford</i>	<b>115°</b>	28 <sup>th</sup>	<b>47°</b>	6 <sup>th</sup> & 10 <sup>th</sup>
<i>Klamath Falls</i>	<b>103°</b>	28 <sup>th</sup>	<b>29°</b>	6 <sup>th</sup>
<i>Montague, CA</i>	<b>109°</b>	27 <sup>th</sup>	<b>44°</b>	6 <sup>th</sup> & 10 <sup>th</sup>
<i>Mt. Shasta City, CA</i>	<b>103°</b>	27 <sup>th</sup>	<b>41°</b>	9 <sup>th</sup>
<i>Alturas, CA</i>	<b>105°</b>	28 <sup>th</sup>	<b>32°</b>	7 <sup>th</sup>

	<b>Date</b>	<b>Record Low</b>	<b>Old Record/Year</b>
<b><i>Klamath Falls</i></b>	6 <sup>th</sup>	29°	30° / 1982

Numerous high temperature records were set throughout the month and are too many to list here. Please see the "Significant Weather" section for more information on record high temperatures.

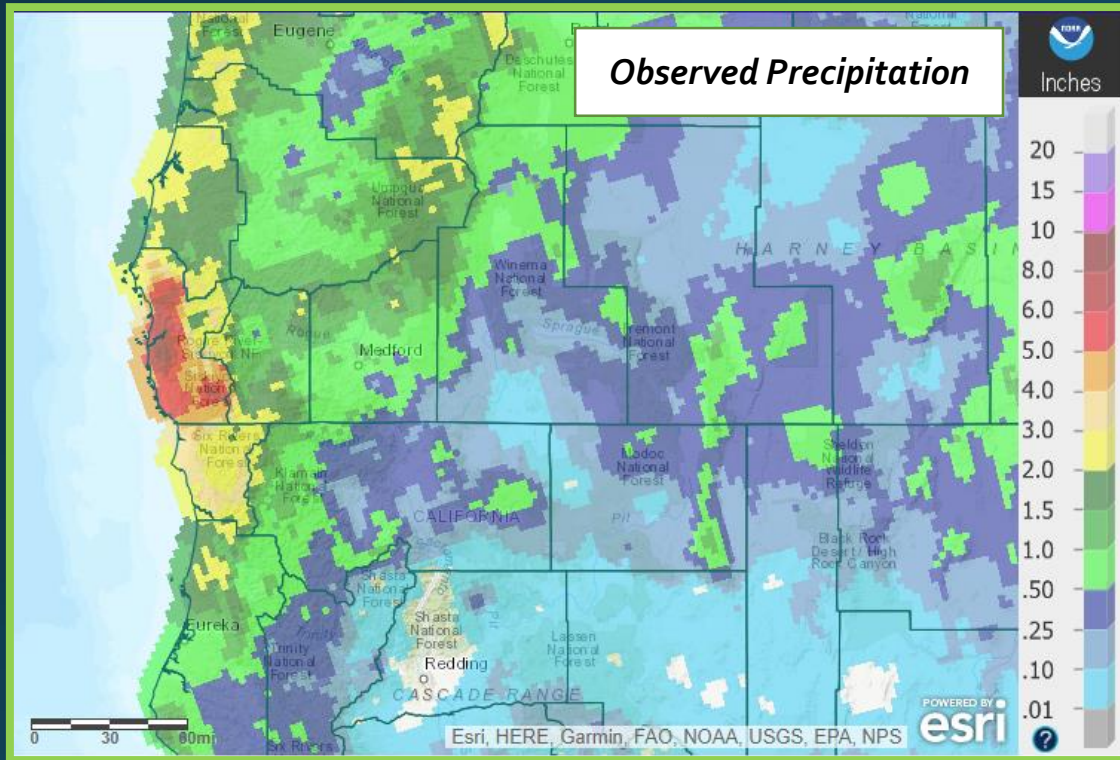


# June 2021 Observed Precipitation

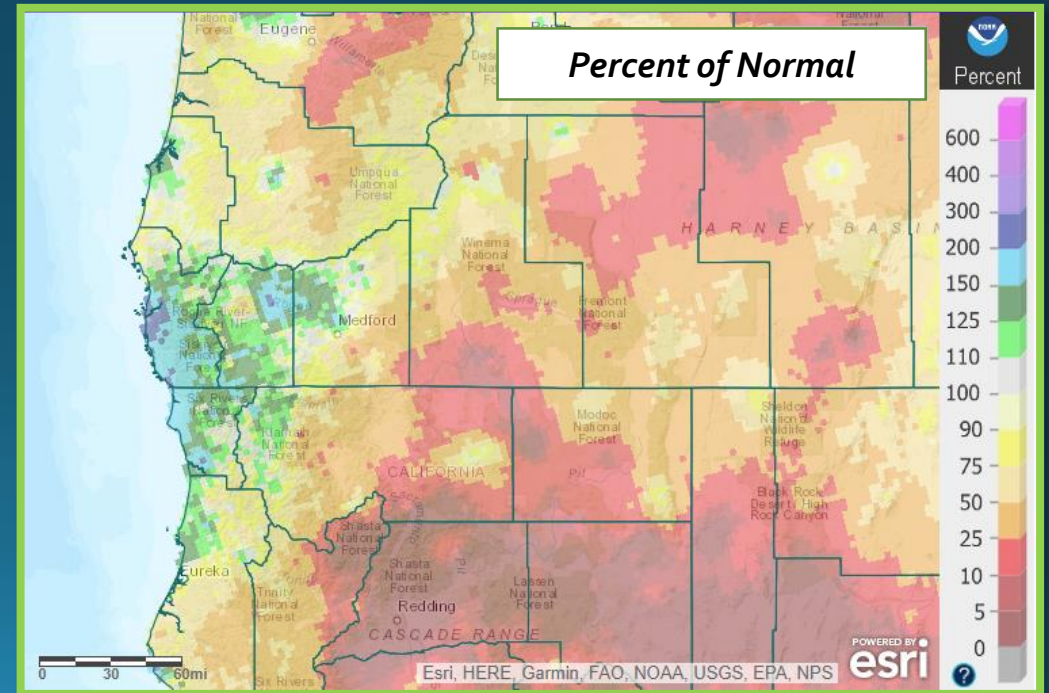




# Precipitation



	Total	Departure from Normal	Greatest 24-hr Total	Date(s)
North Bend	2.67"	1.12"	2.18"	12 <sup>th</sup> – 13 <sup>th</sup>
Roseburg	1.45"	0.52"	0.73"	13 <sup>th</sup> – 14 <sup>th</sup>
Medford	1.02"	0.34"	0.44"	11 <sup>th</sup>
Klamath Falls	0.07"	-0.59"	0.03"	9 <sup>th</sup>
Montague, CA	0.35"	-0.21"	0.20"	14 <sup>th</sup>
Mt. Shasta City, CA	0.20"	-0.92"	0.10"	14 <sup>th</sup>
Alturas, CA	0.26"	-0.44"	0.17"	9 <sup>th</sup> – 10 <sup>th</sup>

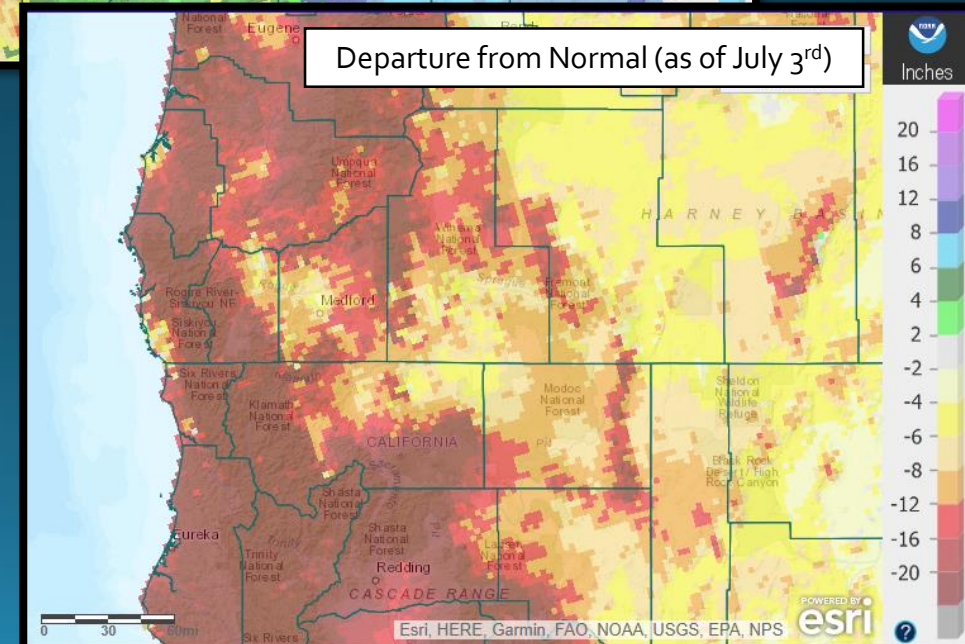
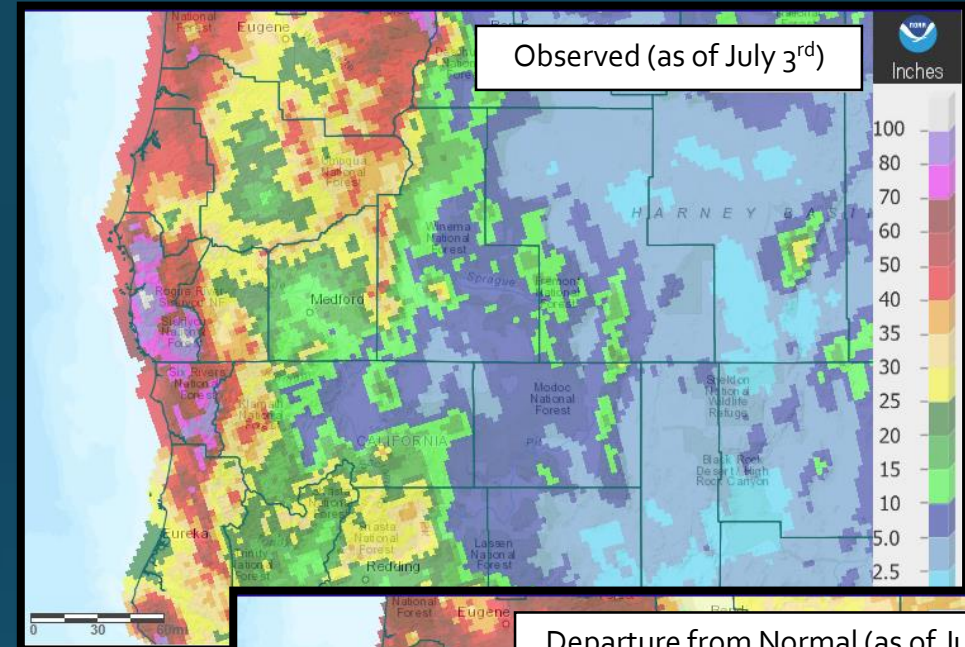
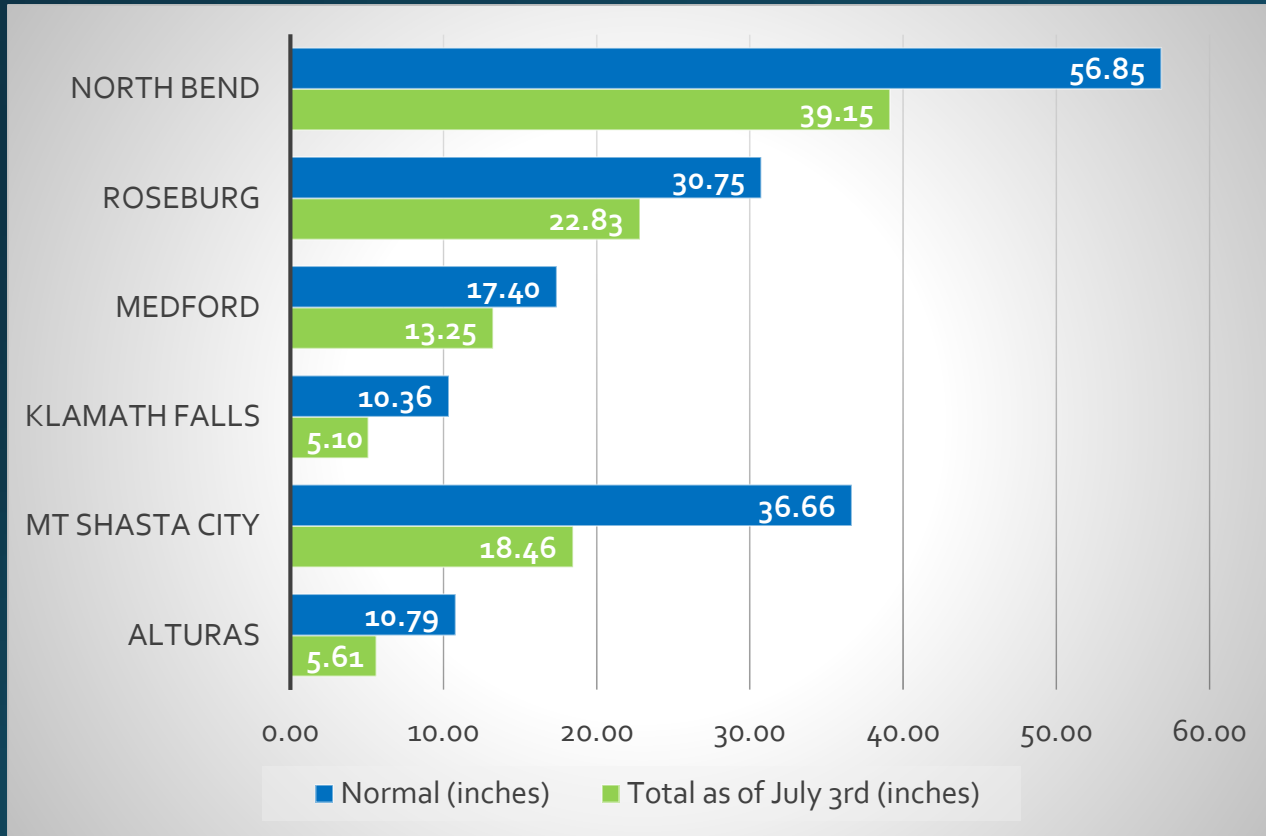


## Record Precipitation

	Date / Amount	Old Record / Year
North Bend	13 <sup>th</sup> / 1.29"	0.67" / 1992



# Water Year Status (As of July 3<sup>rd</sup>)





June 2021

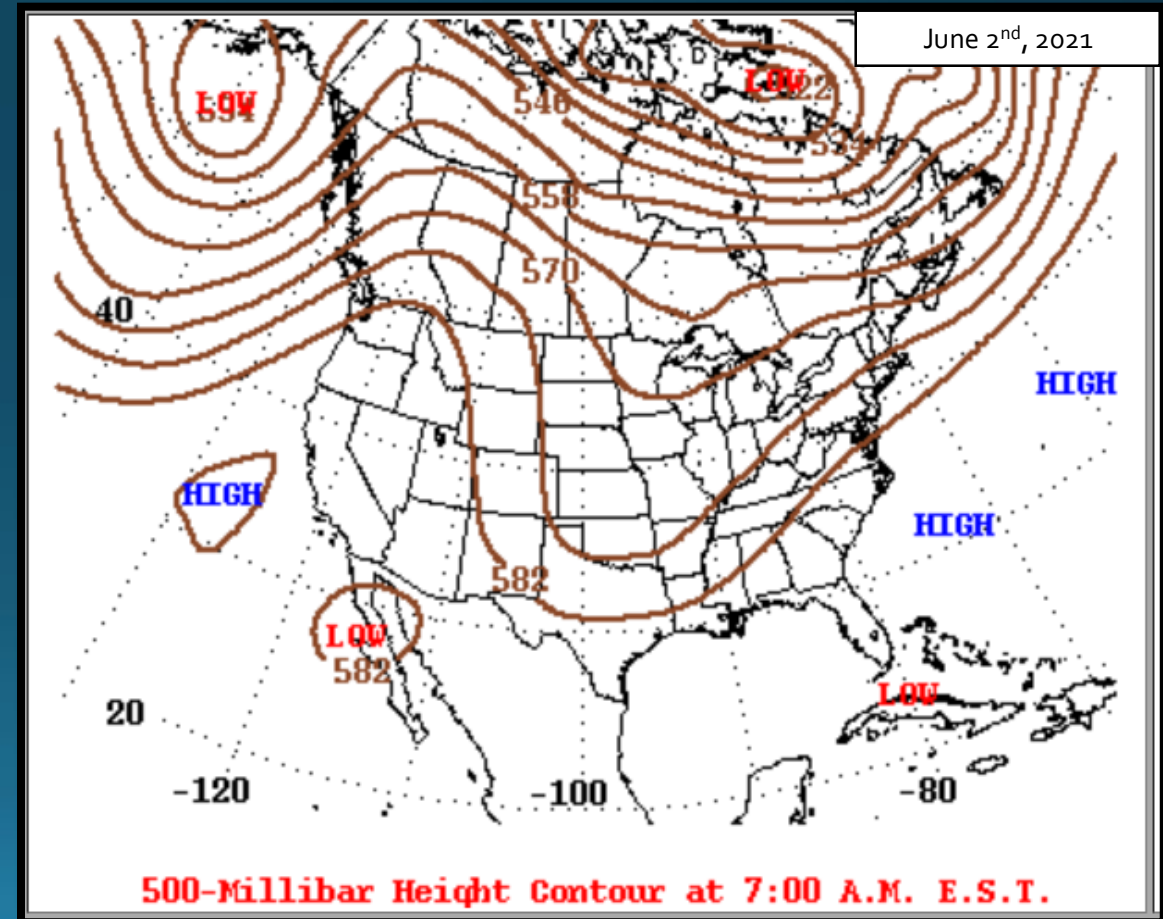
# Significant Weather



# Heatwave #1: June 1<sup>st</sup> – 3<sup>rd</sup>



Strong high pressure centered over the western US brought an early season heatwave. Numerous daily high temperature records were set across the region.

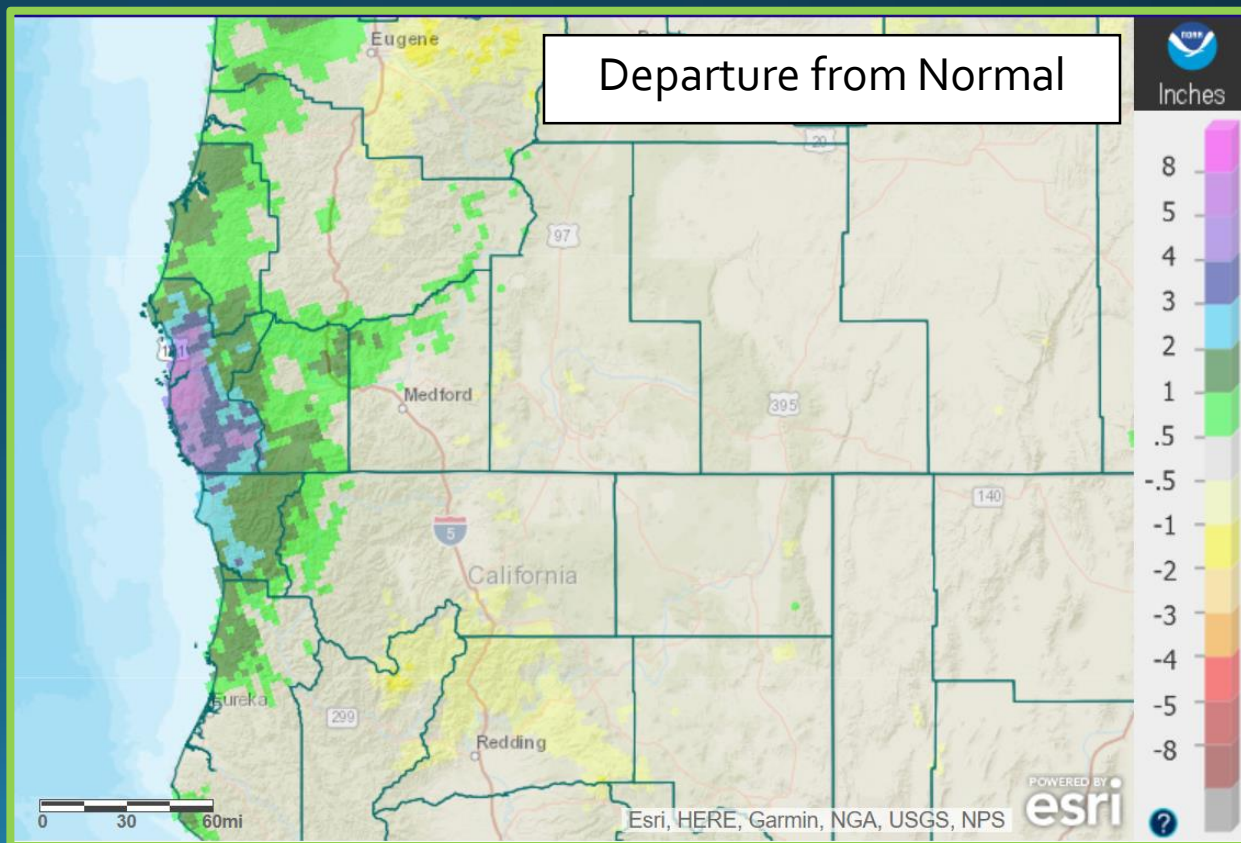
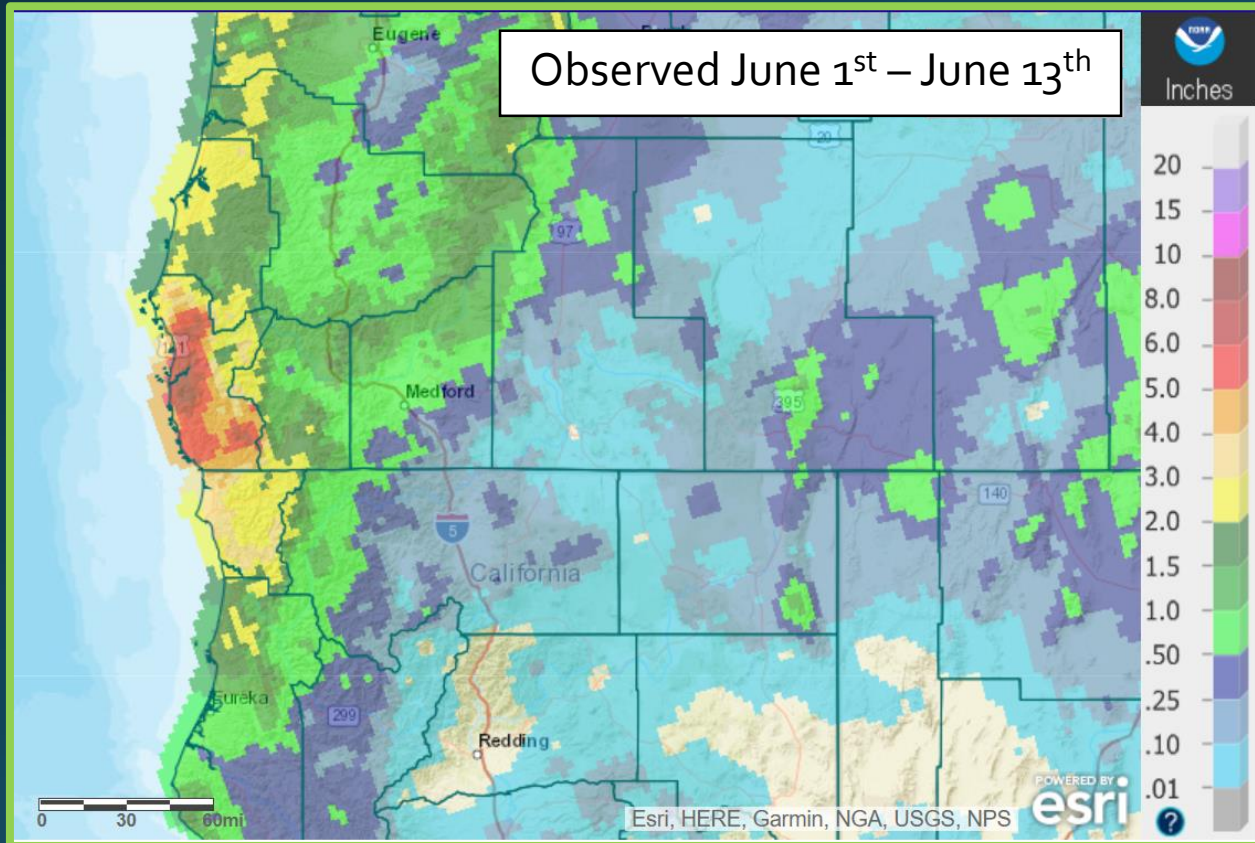


	<i>Date</i>	<i>Record High (F)</i>	<i>Old Record/Year</i>
<b>Roseburg</b>	1 <sup>st</sup>	99°	91° / 1937
	2 <sup>nd</sup>	94°	92° / 1937
<b>Medford</b>	1 <sup>st</sup>	102°	Ties with 1924
<b>Klamath Falls</b>	1 <sup>st</sup>	94°	92° / 1986
	2 <sup>nd</sup>	95°	92° / 1924
<b>Montague</b>	1 <sup>st</sup>	102°	98° / 1986
	2 <sup>nd</sup>	103°	96° / 1960
<b>Mt Shasta City</b>	3 <sup>rd</sup>	97°	Ties with 1992
	1 <sup>st</sup>	98°	94° / 1986
	2 <sup>nd</sup>	97°	93° / 1970
<b>Alturas</b>	3 <sup>rd</sup>	95°	93° / 2016
	1 <sup>st</sup>	94°	92° / 1992
	2 <sup>nd</sup>	95°	90° / 1986
	3 <sup>rd</sup>	94°	92° / 1960



# Anomalously Strong Trough: June 5<sup>th</sup> – June 15<sup>th</sup>

A prolonged period of anomalous troughing brought a period of much below normal temperatures and some much needed rainfall. Precipitation amounts were impressive by June standards for locations west of the Cascades, but especially so along the Curry County coast and coastal mountains. This resulted in near to above normal precipitation amounts for those areas for the month. Although locations east of the Cascades received some precipitation during this event, overall amounts for the month still fell in the below normal category. Temperatures during this time were more in line with conditions typical of late April/early May. The coldest temperatures were felt on the 11<sup>th</sup>, when high temperatures struggled to get past the 60 degree mark. In fact, Medford experienced it's second coldest daily high temperature on the 11<sup>th</sup>, when the high temperature only reached 58 degrees.



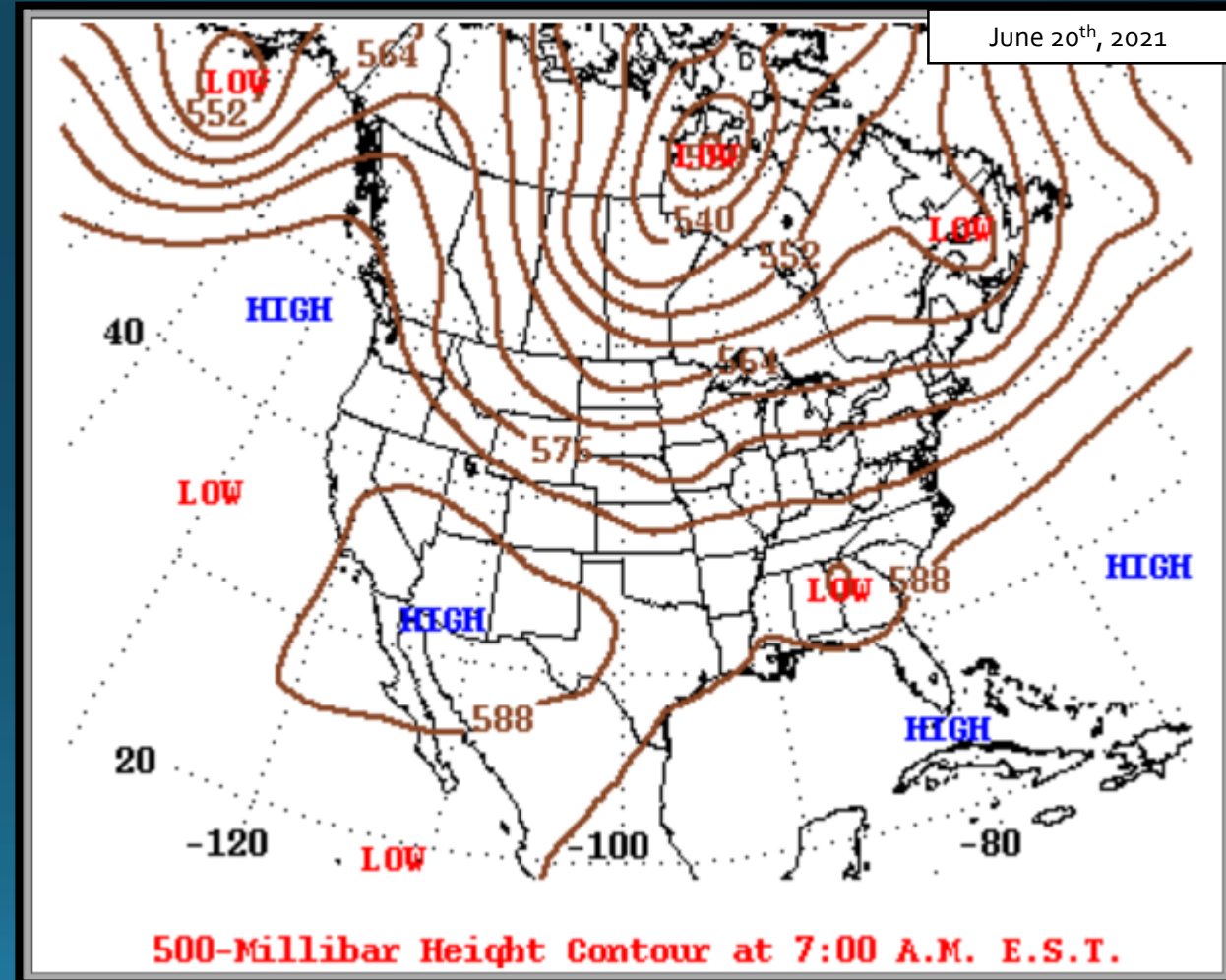
# Heatwave #2: June

## 19<sup>th</sup> – 21<sup>st</sup>



	<i>Date</i>	<i>Record High (F)</i>	<i>Old Record/Year</i>
<b>Roseburg</b>	20 <sup>th</sup>	93°	Ties with 1945
	21 <sup>st</sup>	97°	94° / 1958
<b>Klamath Falls</b>	20 <sup>th</sup>	97°	93° / 1945
<b>Montague</b>	20 <sup>th</sup>	104°	98° / 1970
<b>Mt Shasta City</b>	19 <sup>th</sup>	98°	Ties with 2017
	20 <sup>th</sup>	99°	95° / 1970
	21 <sup>st</sup>	95°	Ties with 1992

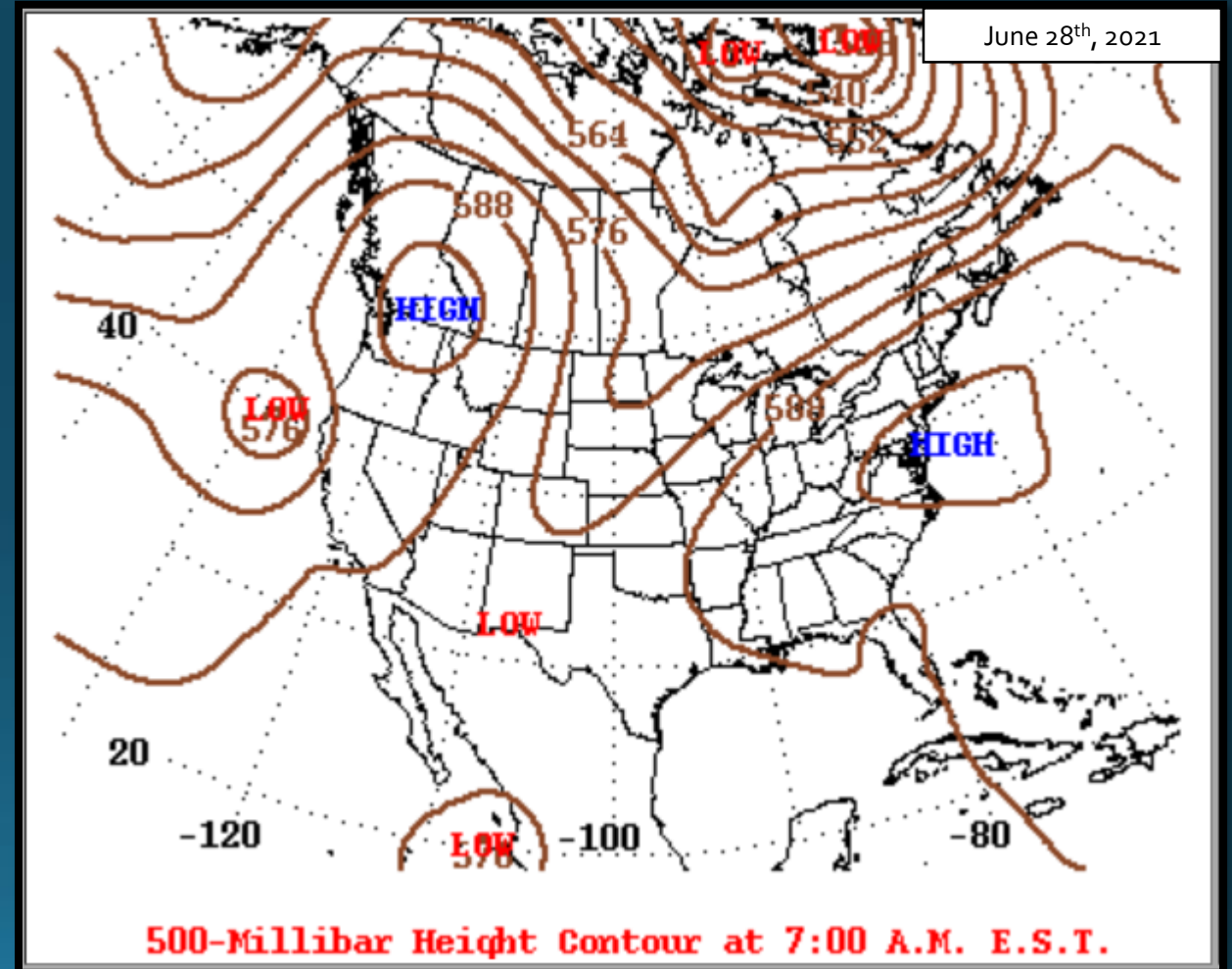
After a period of anomalously cooler temperatures with wet conditions, strong high pressure over the Desert Southwest expanded northeastward, bringing the return of well above normal temperatures. The area went from conditions typical of late April/early May to those more typical of late Summer with more high temperature records set during this period.





# Heatwave #3: June 26<sup>th</sup> – 29<sup>th</sup>

Historic heat was felt across southern Oregon and northern California during a late-June heat wave. Numerous records, daily, monthly and even ALL-TIME records, were set during this time. All local climate stations (except North Bend) set a daily record high temperature on Sunday, 6/27/2021. Each of these stations also set June monthly high temperature records either on the 27<sup>th</sup> or 28<sup>th</sup>. Notably, Roseburg set consecutive monthly (June) record high temperatures on both the 26<sup>th</sup> and the 27<sup>th</sup>, reaching 105, then 114 degrees, respectively. The 114 degrees on the 27<sup>th</sup> beat the all-time record of 109 set August 15<sup>th</sup>, 2020. Medford also notably set consecutive monthly record highs on both the 27<sup>th</sup> and 28<sup>th</sup>, with 113, then 115 degrees, respectively. The 115 degrees tied an all-time record high previously set on July 20, 1946. Klamath Falls set highest June temperature records on consecutive days 27<sup>th</sup> and 28<sup>th</sup>, but on the 29<sup>th</sup>, fell just one degree shy of the all-time record of 104 set on August 7, 1972. And, Montague, California tied an all-time record high with 109 degrees on the 27<sup>th</sup>, which was last reached on July 11, 2002. While the extreme heat ebbed after the 28<sup>th</sup>, unseasonably hot temperatures continued well into the July 4<sup>th</sup> weekend.





Medford, OR



# Record Watch

	Record Highs			Record High Lows			All of June	Chance of Reaching All of June	All Time	Chance of reaching All Time
	6/26 Sat	6/27 Sun	6/28 Mon	6/26 Sat	6/27 Sun	6/28 Mon				
<b>Medford</b>	107° (2015)	104° (2015)	103° (2008)	65° (2015)	74° (2015)	76° (2015)	111° 6/22/1992	67% (Sun)	115° 7/20/1946	37% (Sun)
<b>Klamath Falls</b>	98° (2015)	98° (2015)	96° (1937)	64° (1995)	60° (1995)	62° (1932)	100° 6/23/1992*	74% (Mon)	104° 8/7/1972	36% (Mon)
<b>Roseburg</b>	102° (2006)	101° (2015)	102° (2003)	66° (2015)	74° (2015)	68° (2015)	104° 6/30/1942	71% (Sun)	109° 8/15/2020*	55% (Sun)
<b>Montague</b>	104° (2015)	104° (2015)	99° (2013)	62° (2015)	68° (2015)	67° (2002)	104° 6/20/2021*	89% (Sun)	109° 7/11/2002	44% (Sun)
<b>Mt Shasta City</b>	99° (2015)	97° (2015)	97° (1948)	62° (1961)	62° (1973)	62° (1973)	99° 6/20/2021*	87% (Sun)	105° 8/7/1981	15% (Sun)
<b>Alturas</b>	101° (2015)	99° (2015)	99° (1956)	58° (1988)	57° (2015)	60° (2015)	102° 6/25/1961*	58% (Sun)	107° 7/11/2002*	7% (Mon)



# Heat Records Set

Actual Highs (Record in Red)

<i>*Record or previous record in parentheses</i>	6/26 Sat	6/27 Sun	6/28 Mon	6/29 Tues	All of June	All Time
<b>Medford</b>	104° (107 in 2015)	113° (104 in 2015)	115° (103 in 2008)	99° (106 in 1924)	115° on 6/28/2021 (113 on 6/27/2021)	115° (tie) (6/28/2021 & 7/20/1946)
<b>Klamath Falls</b>	94° (98 in 2015)	101° (96 in 2015)	103° (96 in 1937)	100° (97 in 1924)	103° on 6/28/2021 (101 on 6/27/2021)	104° (8/7/1972)
<b>Roseburg</b>	105° (102 in 2006)	114° (101 in 2015)	101° (102 in 2003)	91° (100 in 1942)	114° on 6/27/2021 (105 on 6/26/2021)	114° on 6/27/2021 (109 on 8/15/2020)
<b>Montague</b>	103° (104 in 2015)	109° (104 in 2015)	106° (100 in 1973)	104° (99 in 2015)	109° on 6/27/2021 (104 on 6/20/2021)	109° (tie) (6/27/2021 & 7/11/2002)
<b>Mt Shasta City</b>	96° (99 in 2015)	103° (97 in 2015)	101° (97 in 1948)	99° (96 in 1948)	103° on 6/27/2021 (99 on 6/20/2021)	105° (8/7/1981)
<b>Alturas</b>	96° (101 in 2015)	100° (99 in 2015)	105° (99 in 1956)	103° (96 in 2015)	105° on 6/28/2021 (102 on 6/25/1961)	107° (7/11/2002)



# Record Warm June - 2021

June 2021 goes down as the second warmest June on record, second only to 2015. Despite the three rounds of record heat during the month, the prolonged period of anomalous troughing was enough to keep average temperatures from being the warmest on record.

**Maximum 30-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	67.2	2015-06-30	0
2	66.3	2021-06-30	0
3	65.2	1961-06-30	0
4	64.5	1940-06-30	3
5	64.1	1960-06-30	0
6	63.8	2017-06-30	1
7	63.3	2006-06-30	0
8	63.3	1977-06-30	0
9	63.2	1992-06-30	1
10	63.0	1986-06-30	0

Period of record: 1935-05-01 to 2021-10-21

**Maximum 30-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	72.1	2015-06-30	0
2	70.2	2021-06-30	0
3	67.7	2019-06-30	0
4	67.3	2013-06-30	0
5	67.3	2003-06-30	0
6	67.1	2016-06-30	0
7	67.1	2000-06-30	1
8	67.0	1940-06-30	0
9	67.0	1951-06-30	0
10	66.9	2006-06-30	0

Period of record: 1900-04-01 to 2021-10-21

**Maximum 30-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	74.8	2015-06-30	0
2	74.0	2021-06-30	0
3	70.6	1926-06-30	0
4	70.5	1918-06-30	0
5	70.4	1987-06-30	0
6	70.4	1986-06-30	0
7	70.0	2016-06-30	0
-	70.0	1940-06-30	0
9	70.0	2017-06-30	0
10	69.9	2003-06-30	0

Period of record: 1911-03-11 to 2021-10-21

**Maximum 30-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	69.9	2015-06-30	0
2	69.5	2021-06-30	0
3	66.2	1960-06-30	0
4	66.0	1977-06-30	0
5	65.8	1986-06-30	0
6	65.7	1961-06-30	0
7	65.4	2016-06-30	0
8	65.2	2013-06-30	0
9	65.1	2003-06-30	0
10	65.0	2006-06-30	0

Period of record: 1948-04-15 to 2021-10-21



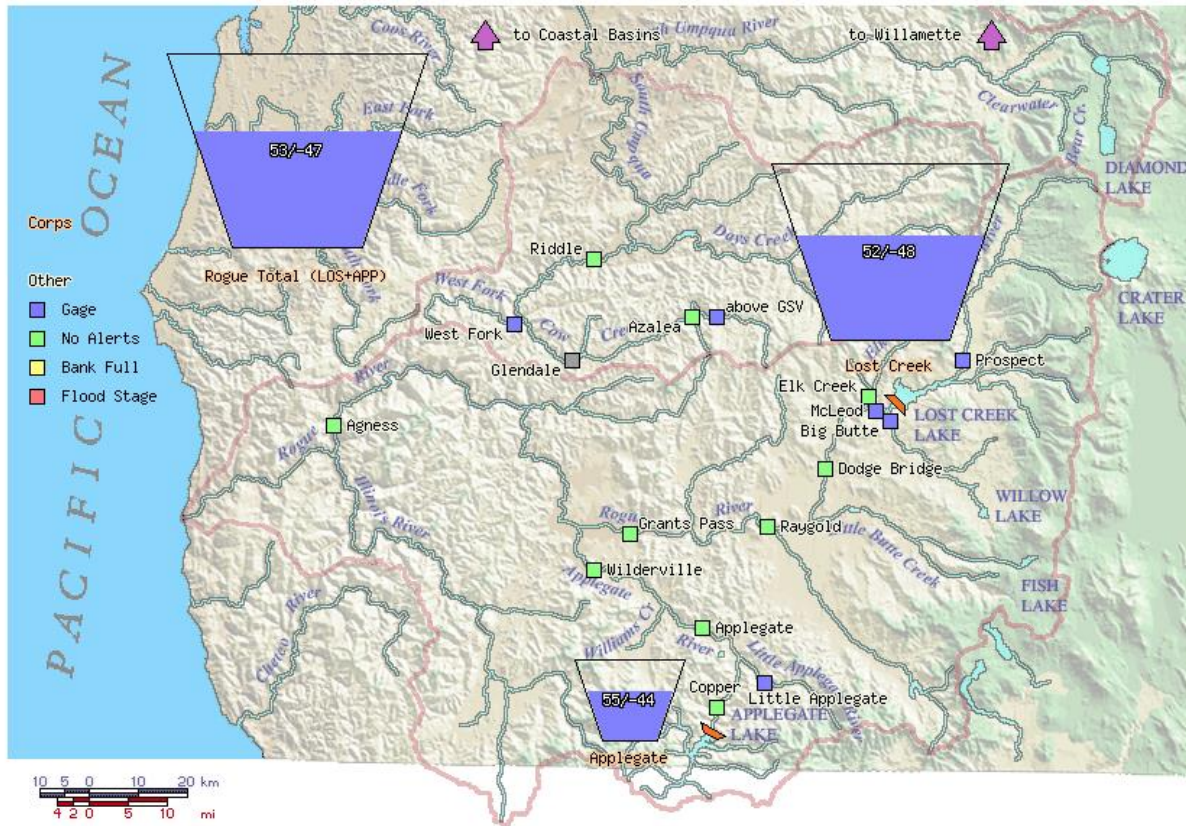


# Reservoir Status

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

Data courtesy of [Bureau of Reclamation](#)

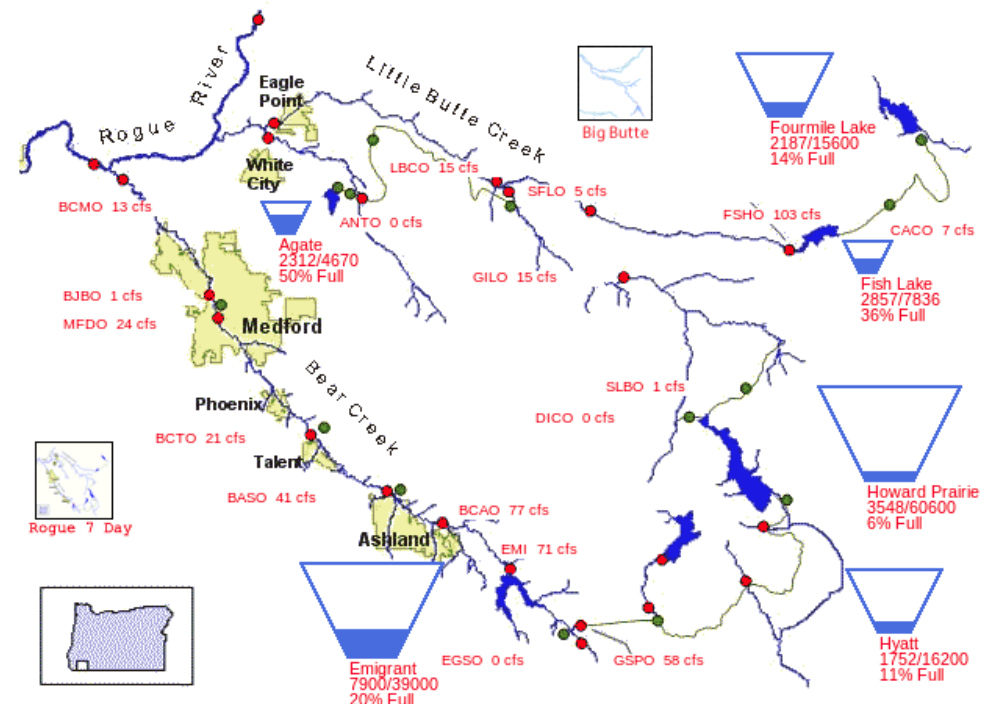
## Rogue Basin Teacup Diagram



Created: Sat Jul 3 11:40:23 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

07/02/2021



PROVISIONAL DATA - SUBJECT TO CHANGE!

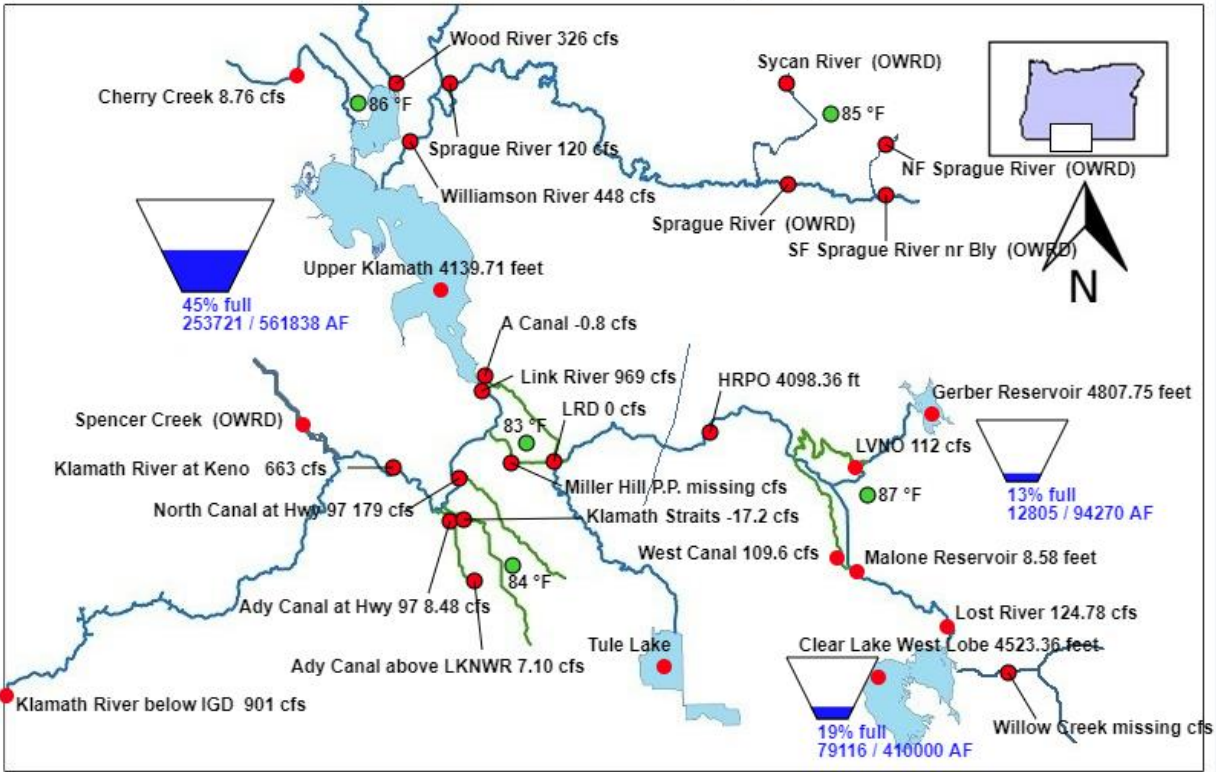


# Reservoir Status

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

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

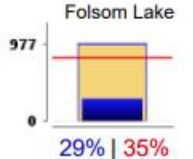
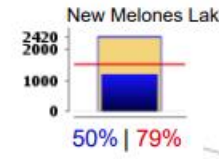
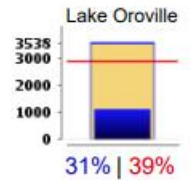
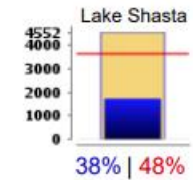
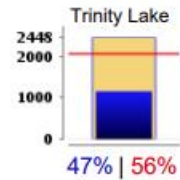
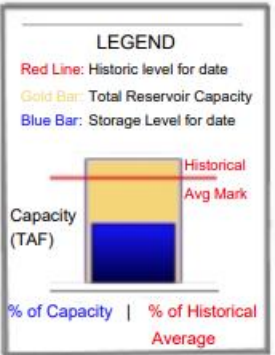
Sat Jul 03 2021 11:46:30 GMT-0700 (Pacific Daylight Time)



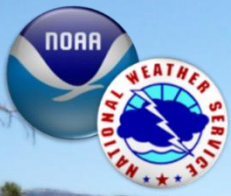
## CURRENT RESERVOIR CONDITIONS

SELECTED WATER SUPPLY RESERVOIRS

Midnight: July 2, 2021



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



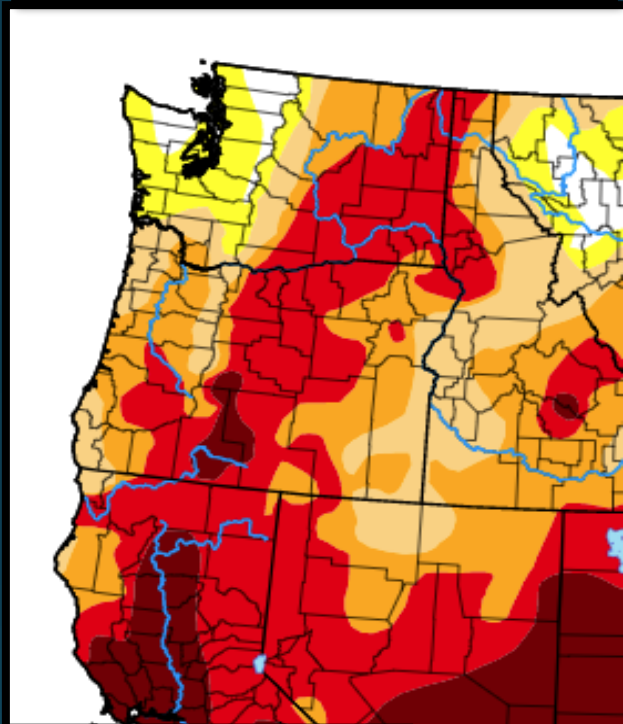
# Crater Lake

Image: NPS

	Average Max Temp (°F)	Average Min Temp (°F)	Total Precipitation	Total Snowfall	Snow Depth as of: 6/30/21	Highest Max/ Lowest Min
June	65.9°	42.8°	1.66"	1.4"	0"	88° on 29 <sup>th</sup> / 28° on 10 <sup>th</sup>
Normal (1991-2020)	57.0°	33.6°	2.27"	3.7"	5"	N/A

# Drought Monitor (Current) & Outlook (July)

United States Drought Monitor



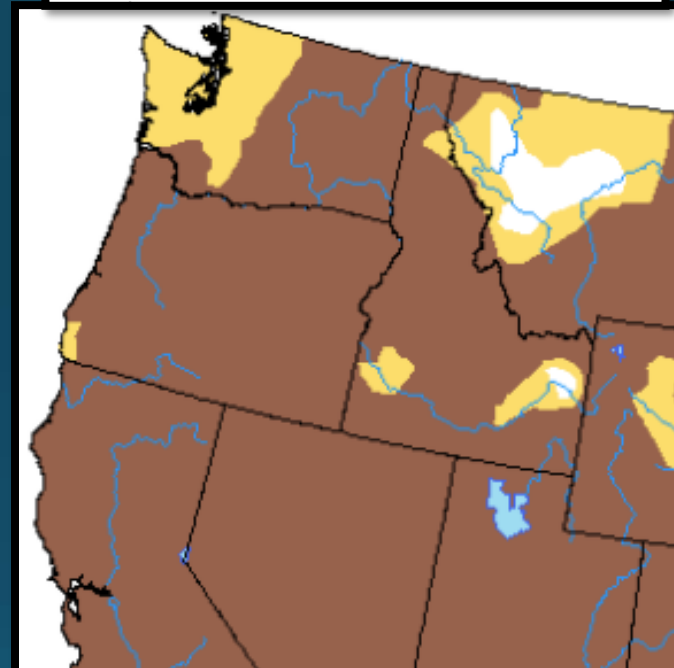
Map released: Thurs. July 1, 2021

Data valid: June 29, 2021 at 8 a.m. EDT

**Intensity**

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

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



Valid for July 2021  
Released June 30, 2021

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely

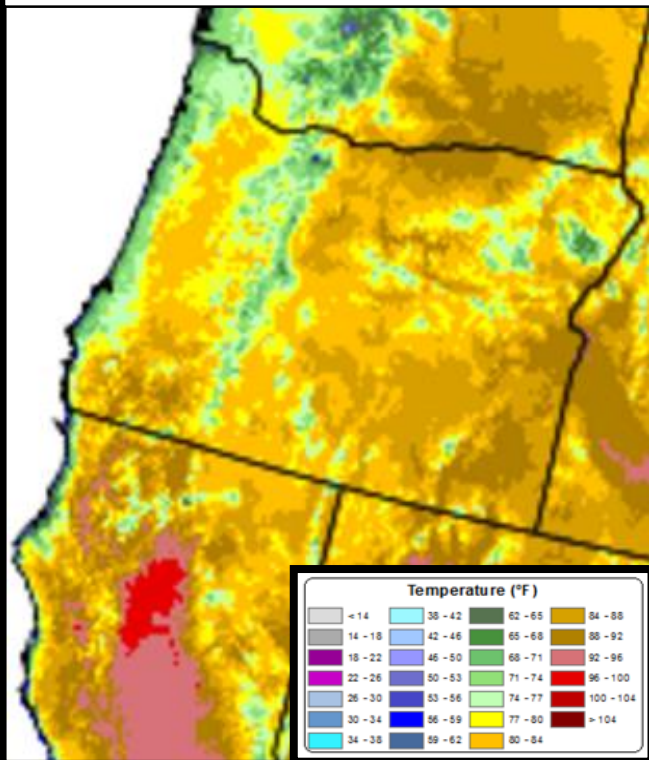




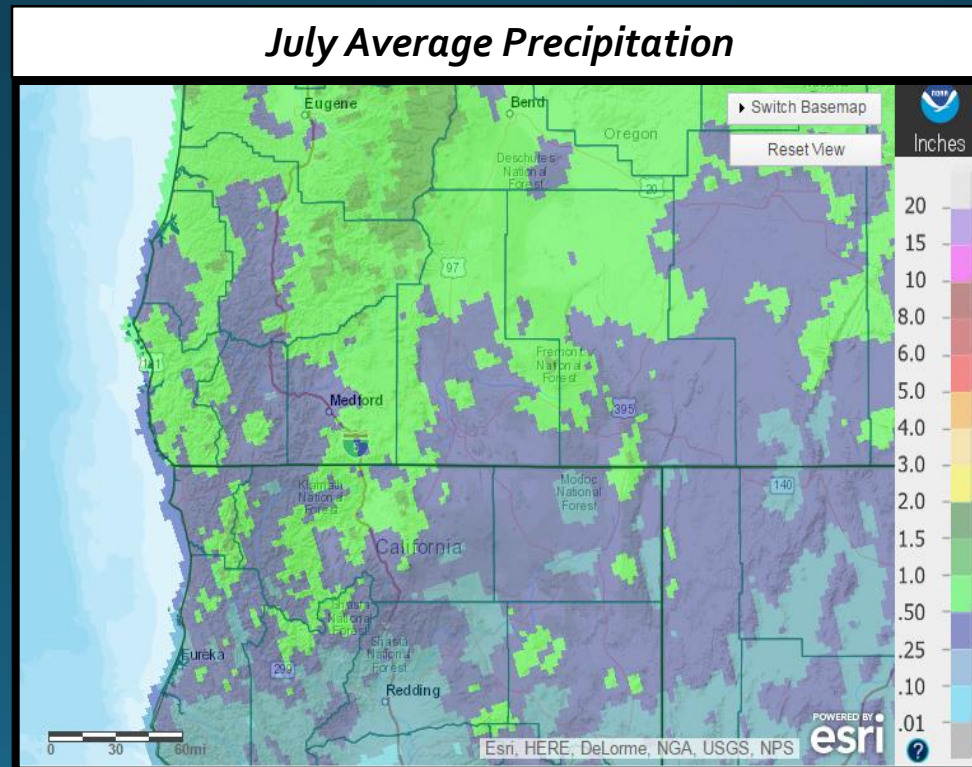
# Looking Ahead: Normals for July (1981-2010)

Typically, July, along with August, is one of the two driest and warmest dry season months. High temperatures are very warm to occasionally hot, low temperatures are cool to occasionally warm, and precipitation is minimal, yet locally intense, usually coming in the form of monsoonal showers and thunderstorms. Nearly all of the forecast area receives, on average, an inch or less of precipitation in July. Valley high temperatures are usually in the 80s to lower 90s. Nights are usually cool, with average minimum temperatures in the 40s for valleys east of the Cascades, and 50s in valleys west of the Cascades.

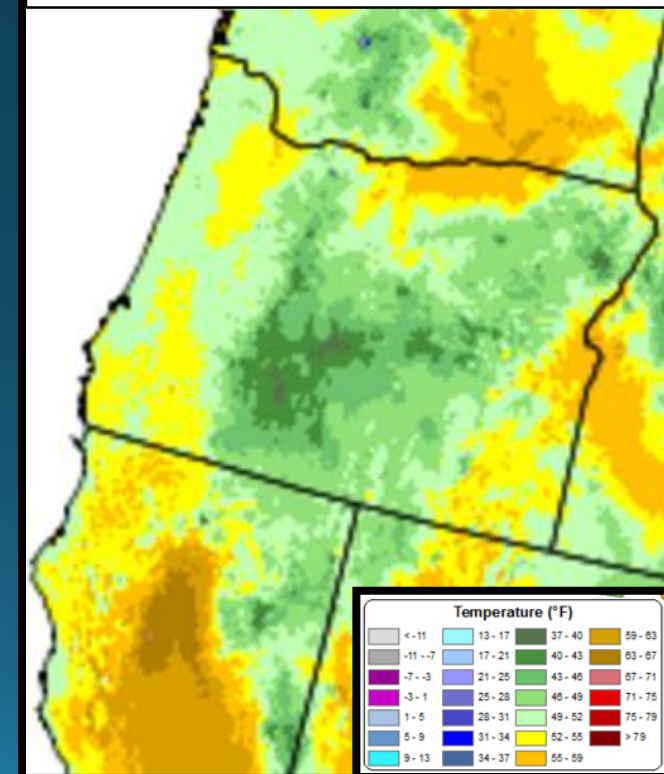
*July Avg Maximum Temperatures*



*July Average Precipitation*



*July Avg Minimum 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**