

National Weather Service Medford

2021: April Climate Summary & May 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 \(NCEI\)](#).



April 2021 Weather Review

April 2021 featured conditions more typical of early summer than mid spring with above normal temperatures and below normal precipitation. High pressure remained in control for much of the month and this kept the storm track well north of the area. Summer like temperatures and dry conditions enhanced fire weather concerns through the month and brought worsening drought conditions. April 2021 ranked in the top 5 driest Aprils for many sites west of the Cascades, and well below normal precipitation was recorded across the whole forecast area.

The warm and dry conditions that were around for the end of March, continued into April with high pressure aloft and a thermal trough at the surface. This brought summer like temperatures and a dry air mass to the region. This dry air mass allowed for efficient radiational cooling at night during the beginning of the month, and this resulted in frost and freezing conditions critical to agricultural interests.

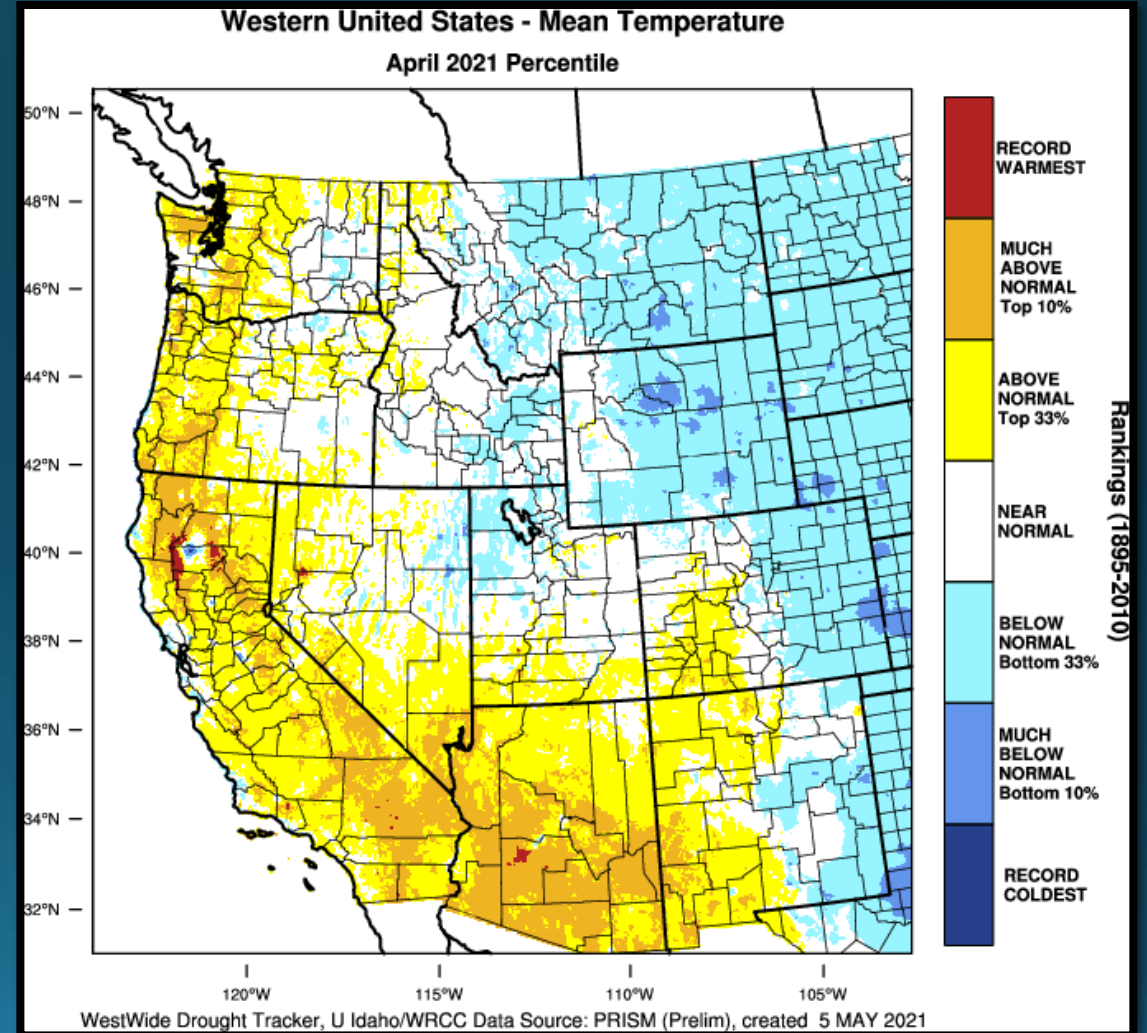
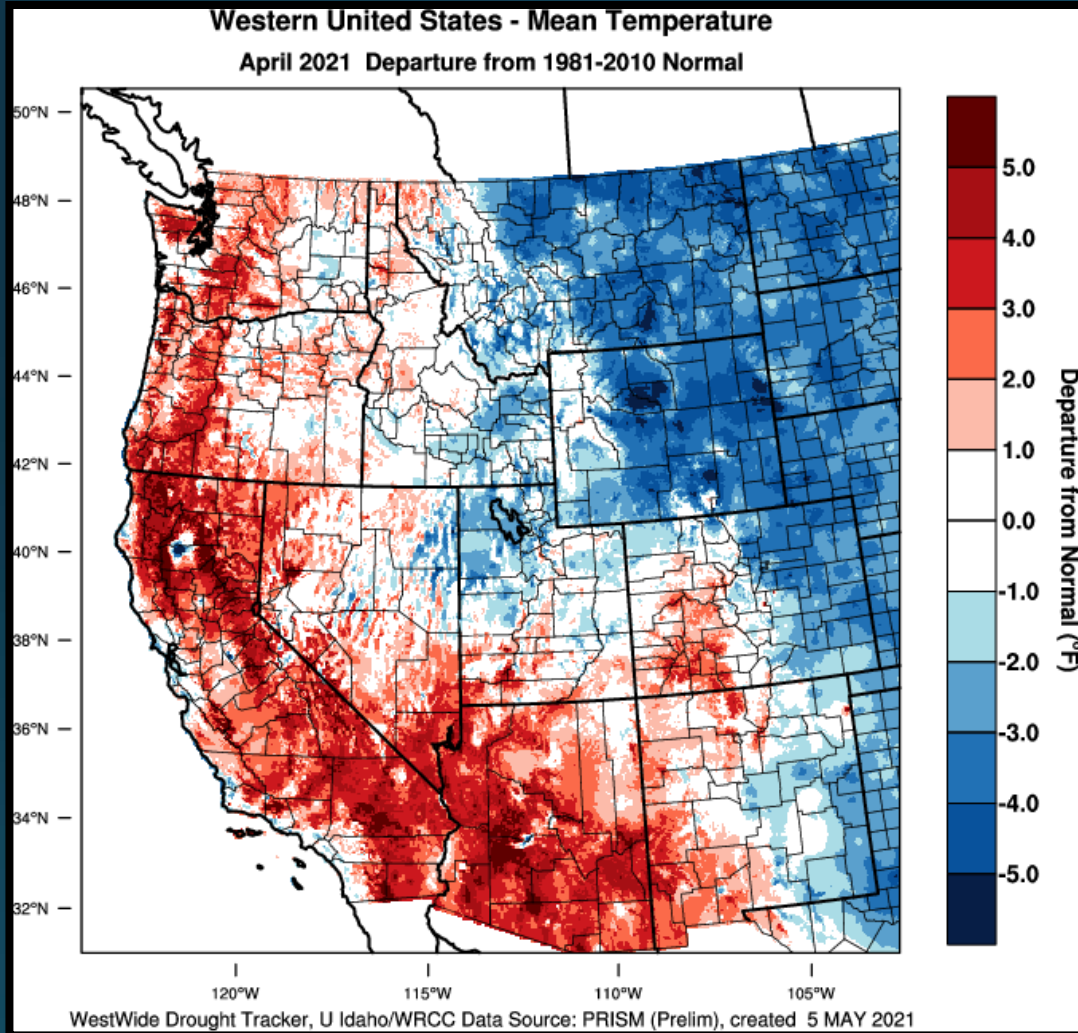
A few weak fronts moved through the region during the first half of the month, but precipitation was limited and accumulations were focused along the coast and north of the Umpqua Divide. These fronts, however, did bring heightened fire weather concerns as they brought strong gusty winds to the area during unseasonably dry conditions. After the middle of the month, strong high pressure settled over the region and this brought another stretch of well above normal temperatures and dry conditions.

Those in the Rogue Valley experienced a taste of wildfire season as smoke from nearby prescribed burns, as well as a few small wildfires, brought reduced air quality to those in Grants Pass and Medford. Thankfully a strong upper level trough moved into the region the next day to mix out the smoke and alleviate air quality concerns. This upper level trough brought significantly cooler and wetter conditions to the region. In fact, afternoon high temperatures of 15 to 20 degrees *above* normal during the preceding week, dropped to 10 to 15 degrees *below* normal during the last weekend of the month. This unseasonably cool system brought much needed precipitation to the area as well as some mountain snow as snow levels dipped to 3500-4000 ft under the cooler air mass. This system also brought the end to the 4th longest dry stretch experienced in Medford during the spring months (March, April, May). This dry streak lasted 29 days with the previous date of measured precipitation at the Medford Airport occurring on March 25th. This fell short of the record of 35 days set back in 1976 which occurred from April 25th through May 29th.

The cooler and wetter weather didn't last long, however, as high pressure quickly returned on the heels of the departing upper trough. Hot and dry conditions returned and a more summer like pattern resumed.



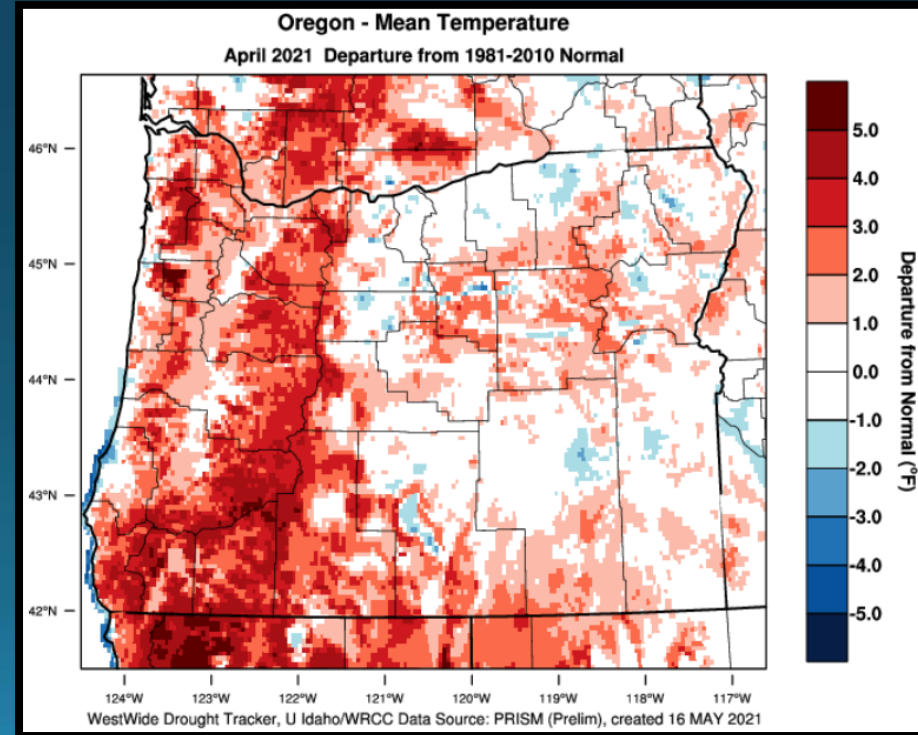
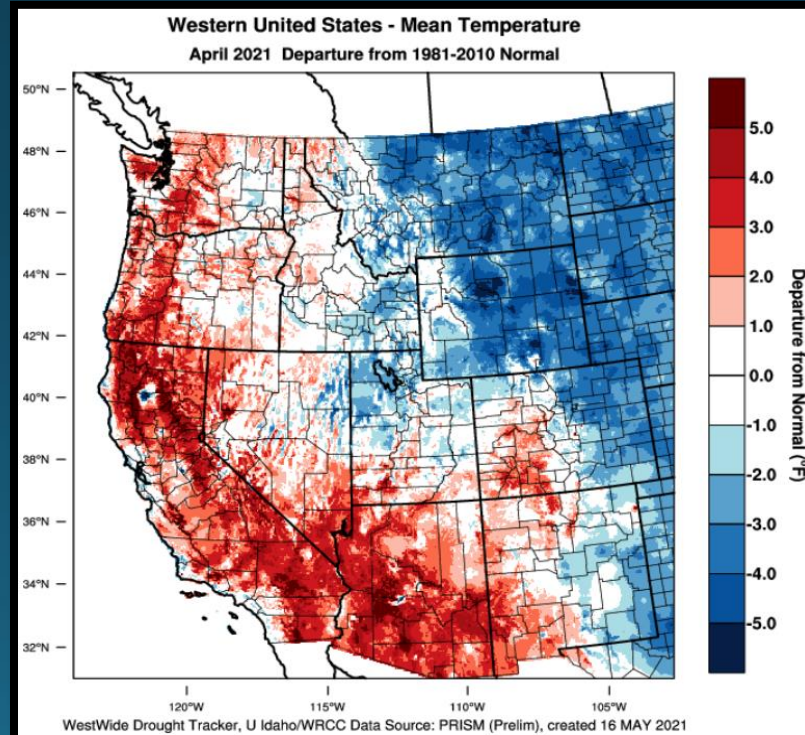
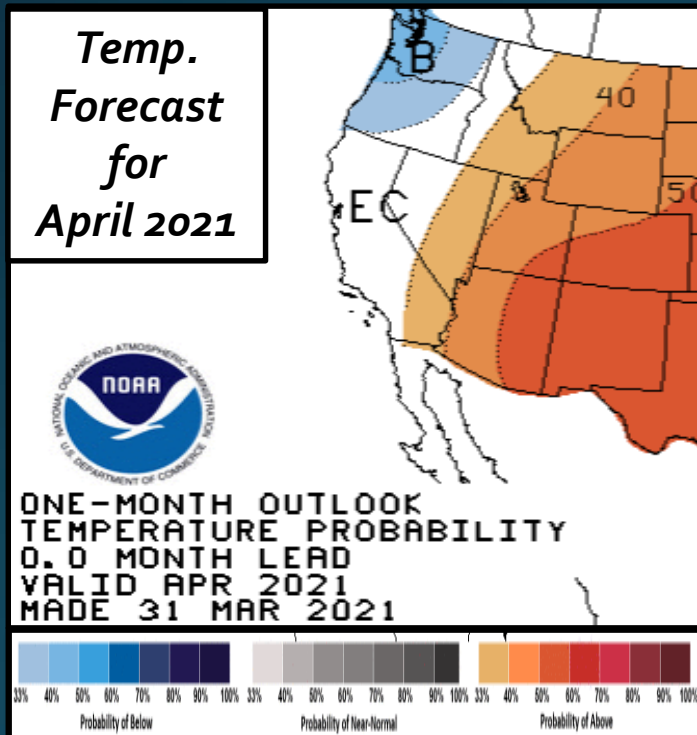
April 2021 Observed Temperatures





A Look Back at the April 2021 Temp Outlook (Our Update was Issued April 9th)

- **What was our localized forecast?** Below normal temperatures along the immediate coast, but above normal temperatures elsewhere. Predicted anomalies were 0 to -3°F along the immediate coast and 0°F to +7 °F from the 1981-2010 normal elsewhere.
- **Was the forecast anomaly correct?** Yes, mostly-nearly right on. *Actual anomalies were below normal by up to 3 degrees along and near the Coos County coast, though nearly all of Curry County was above normal due to a lot of northeast flow days and more sunny days than normal. Inland areas experienced temperatures 0°F to +5°F or even a bit higher anomalies for the month.*
- **Was the expected impact correct?** Yes. Expectations based on temperature about frost/freeze, large diurnal temperature ranges, evaporative demand, snow melt, and drought were all correct.
- **Did our forecast improve upon the CPC forecast?** Yes. CPC's forecast was clearly on the cool side. This month was very warm for most.





Average Temperatures

	Average (°F)	Departure from Normal	Average Max (°F)	Departure from Normal	Average Min (°F)	Departure from Normal
North Bend	48.4	-0.8°	56.1	0.8°	40.7	-2.4°
Roseburg	54.9	2.7°	70.0	7.6°	39.9	-2.1°
Medford	56.3	3.5°	72.4	7.5°	40.2	-0.6°
Klamath Falls	45.1	2.0°	63.6	7.1°	26.5	-3.2°
Montague, CA	51.4	4.3°	70.6	9.7°	32.3	-0.9°
Mt. Shasta City, CA	50.8	3.6°	67.4	6.5°	34.3	0.9°
Alturas, CA	45.3	2.1°	64.6	6.8°	26.0	-2.7°



Monthly Max & Min Temperatures

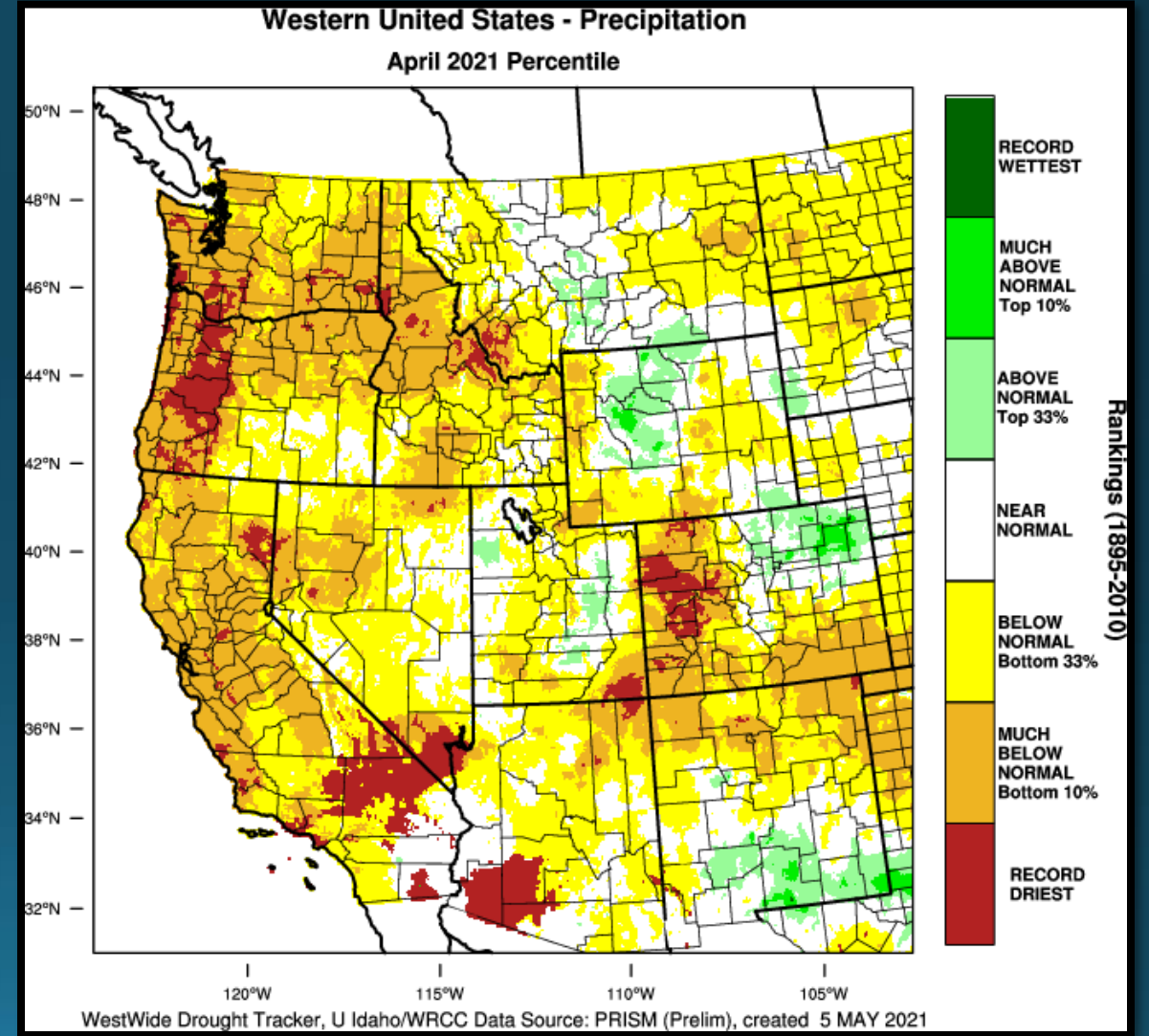
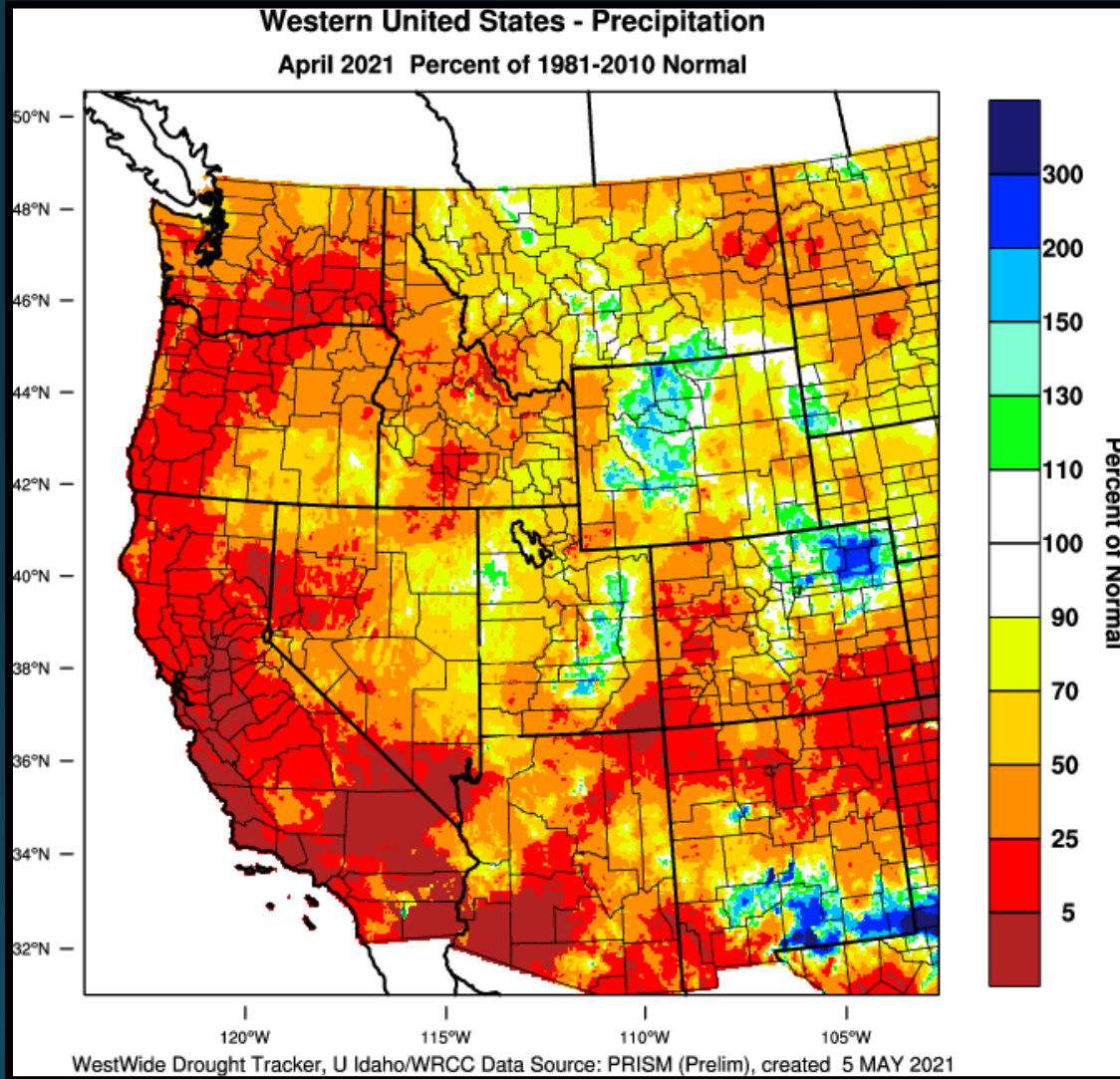
	Max (°F)	Date(s)	Min (°F)	Date(s)
<i>North Bend</i>	63°	28th & 30th	33°	9th & 13th
<i>Roseburg</i>	86°	18th	32°	9th
<i>Medford</i>	87°	29th	31°	11th
<i>Klamath Falls</i>	81°	29th	16°	6th
<i>Montague, CA</i>	89°	29th	23°	6th
<i>Mt. Shasta City, CA</i>	86°	29th	27°	15th
<i>Alturas, CA</i>	84°	29th	14°	6th

	Date	Record High	Old Record/Year
<i>Montague</i>	29 th	89°	85° / 1957
<i>Alturas</i>	29 th	84°	80° / 1968
<i>Mt Shasta City</i>	29 th	86°	84° / 1981

	Date	Record Low	Old Record/Year
<i>Klamath Falls</i>	9 th	17°	Ties with 2001
	11 th	18°	21° / 1909



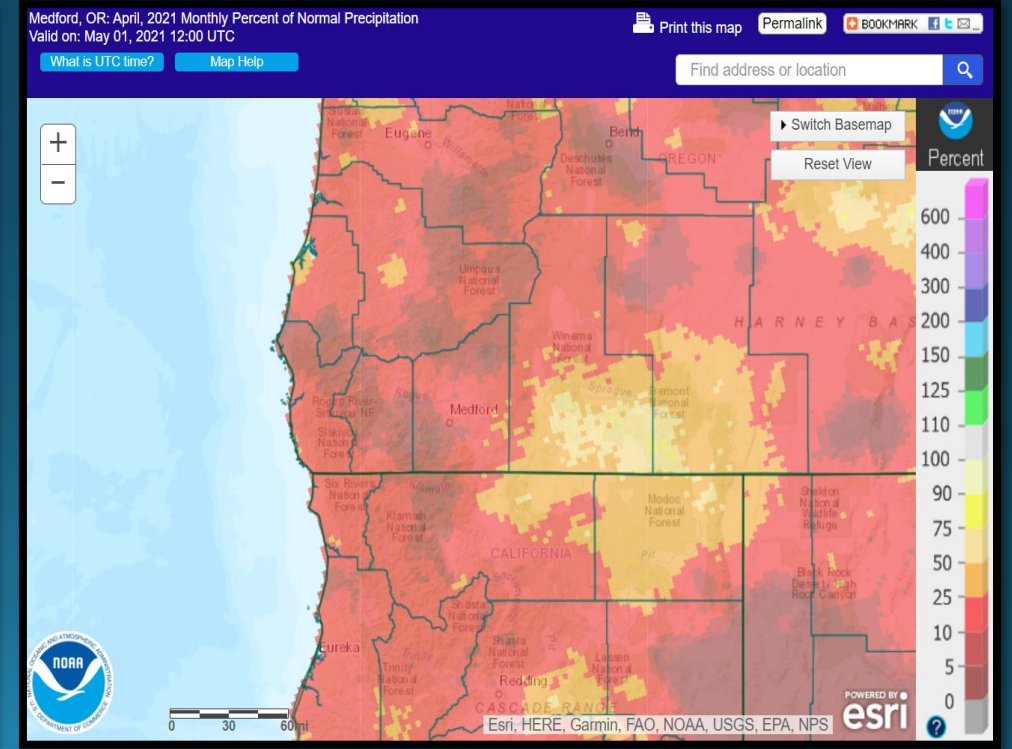
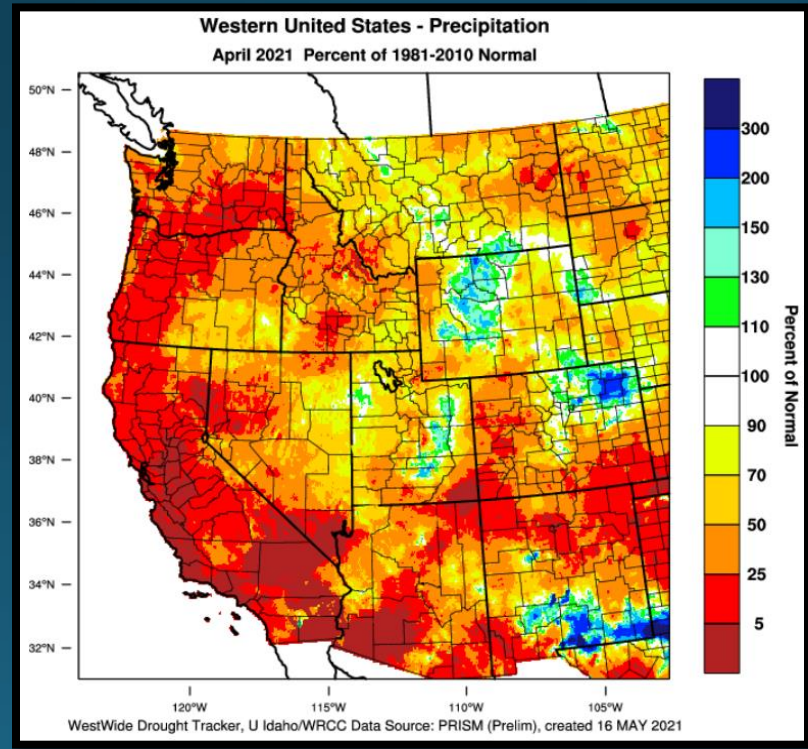
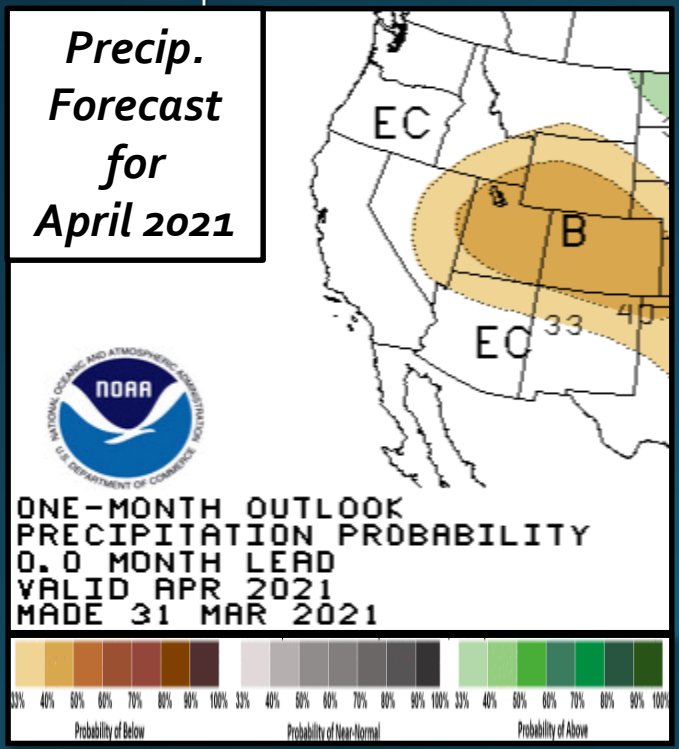
April 2021 Observed Precipitation





A Look Back at the April 2021 Precip Outlook (Our Update was issued April 9th)

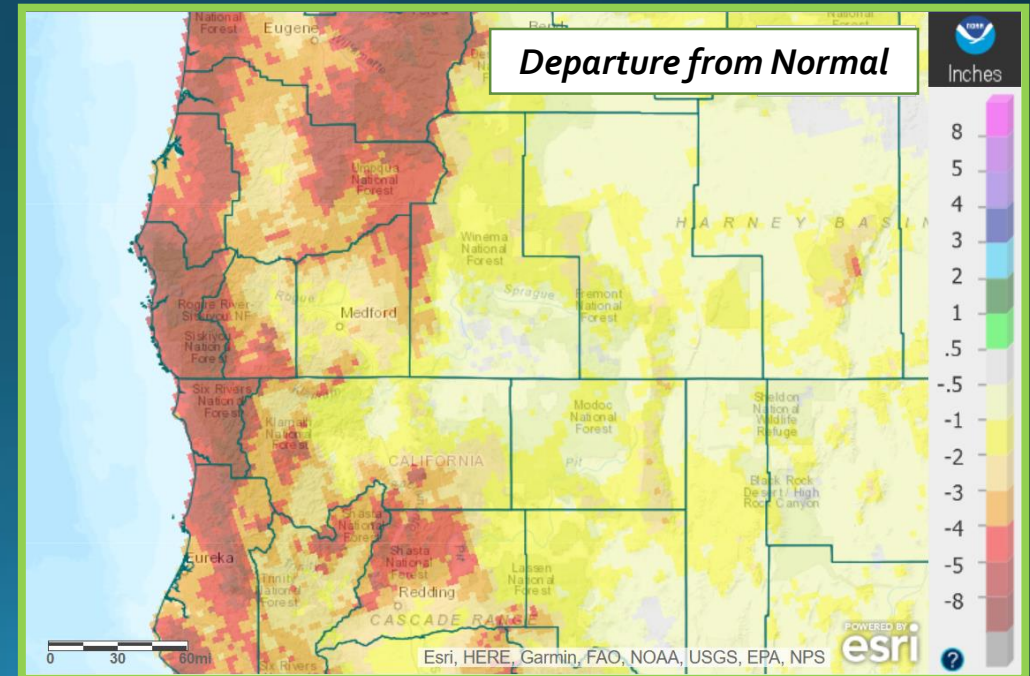
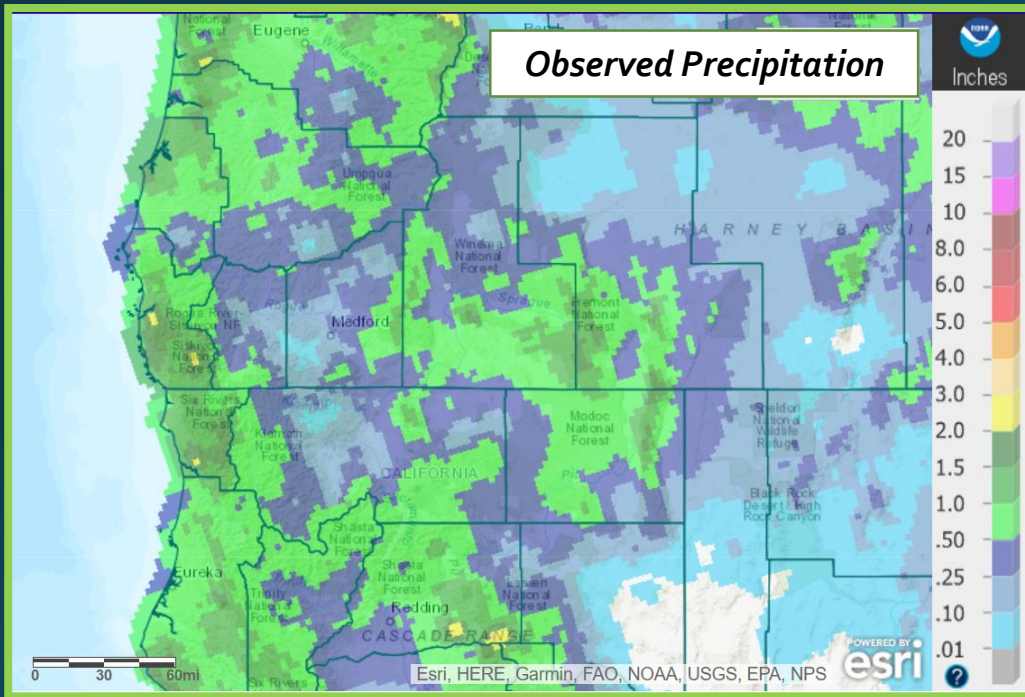
- **What was our localized forecast?** Our localized April precipitation forecast was for high confidence of below normal precipitation across the forecast area (in the 0-50% range). It was stated that SW flow in the last 10 days of the month could bring some shower and thunderstorm activity, and that some weather systems were most likely to affect mainly the western portion of the area by month's end.
- **Was the forecast anomaly correct? Yes, mostly.** As the graphics below indicate, all areas were under 50% of normal for precipitation for the month except for portions of the east side, where convective precipitation pushed some locations over 50%.
- **Was the expected impact correct? Yes.** The overall expectation of increasing dryness was well communicated. The timing of precipitation was also as indicated.
- **Did our forecast improve upon the CPC forecast? Yes.** CPC's equal chance forecast did suggest below normal precipitation was possible, but we were able to indicate with high confidence that the month would end with well below normal precipitation. However, we had an extra nine days to see how the month started over CPC's product issuance.





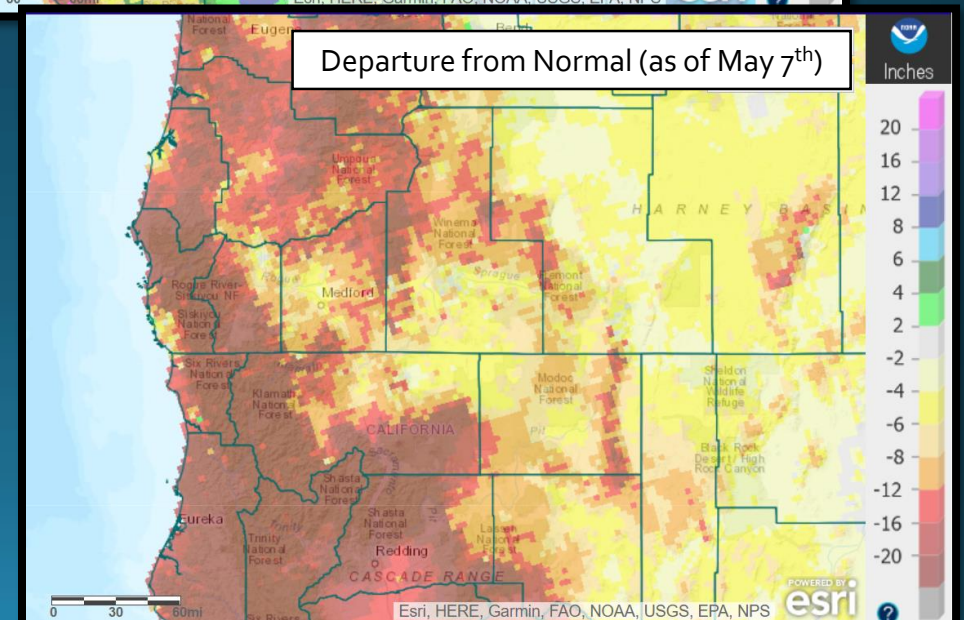
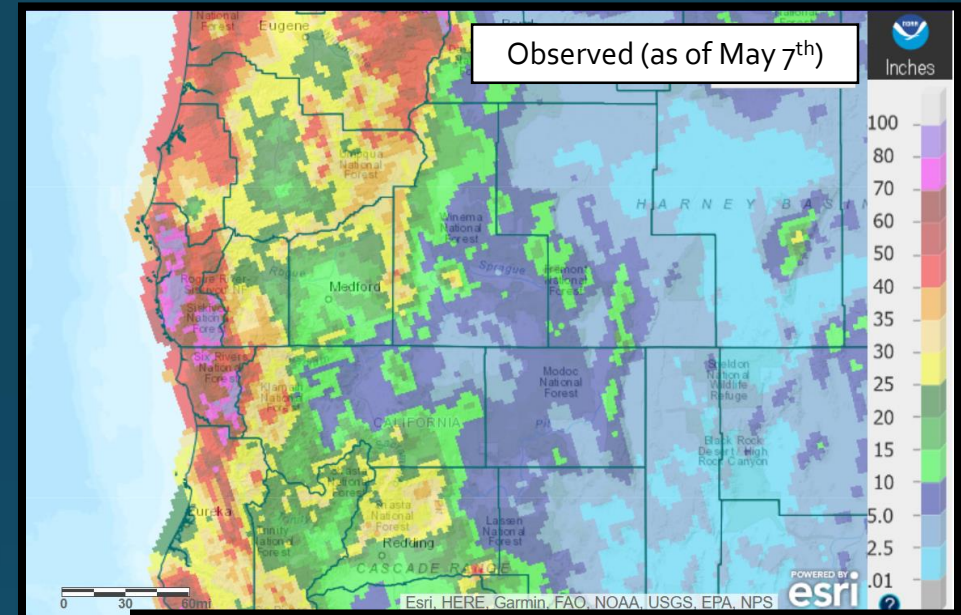
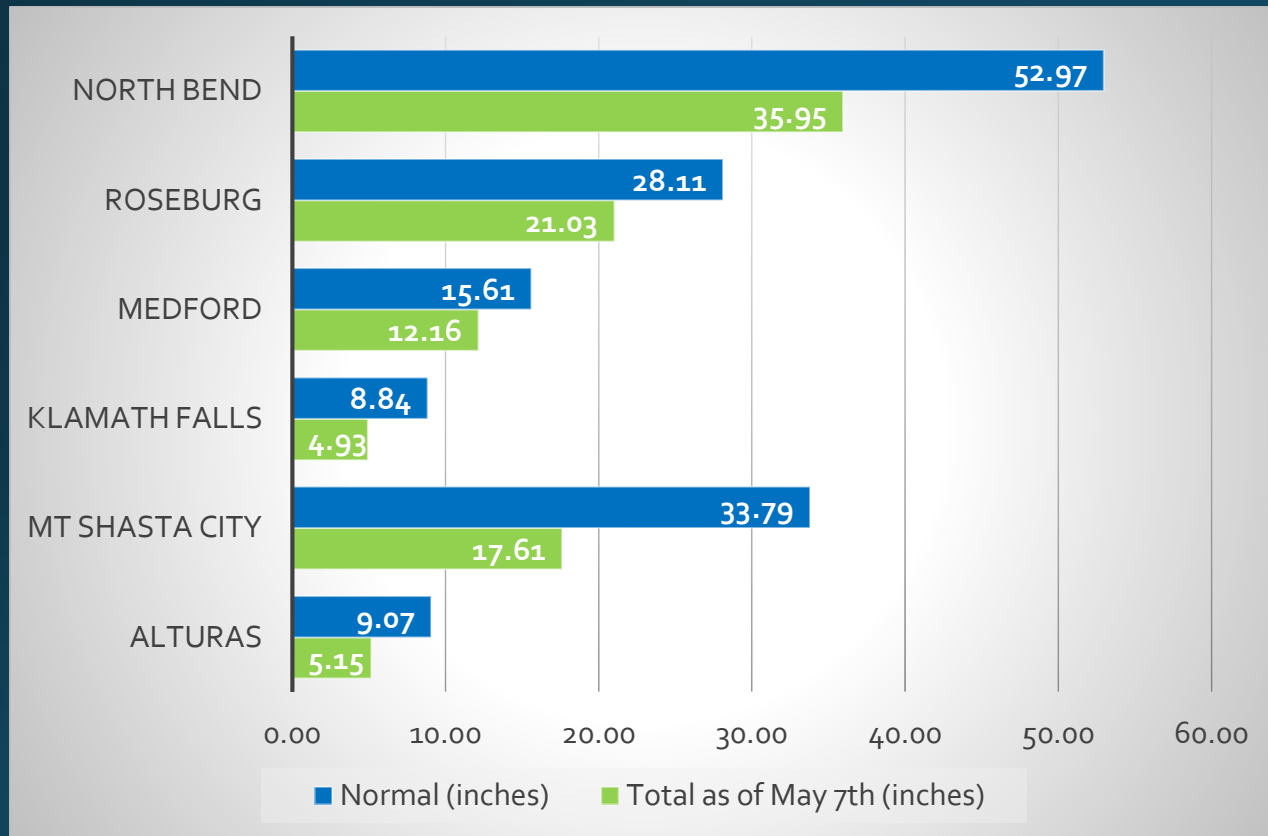
Precipitation

	Total	Departure from Normal	Greatest 24-hr Total	Date(s)
North Bend	1.14"	-4.03"	0.46"	23 rd – 24 th
Roseburg	0.70"	-2.12"	0.55"	25 th
Medford	0.24"	-1.14"	0.22"	25 th – 26 th
Klamath Falls	0.69"	-0.68"	0.27"	24 th – 25 th
Montague, CA	0.38"	-1.18"	0.18"	23 rd – 24 th
Mt. Shasta City, CA	0.46"	-2.47"	0.37"	24 th – 25 th
Alturas, CA	0.48"	-1.08"	0.35"	23 rd – 24 th



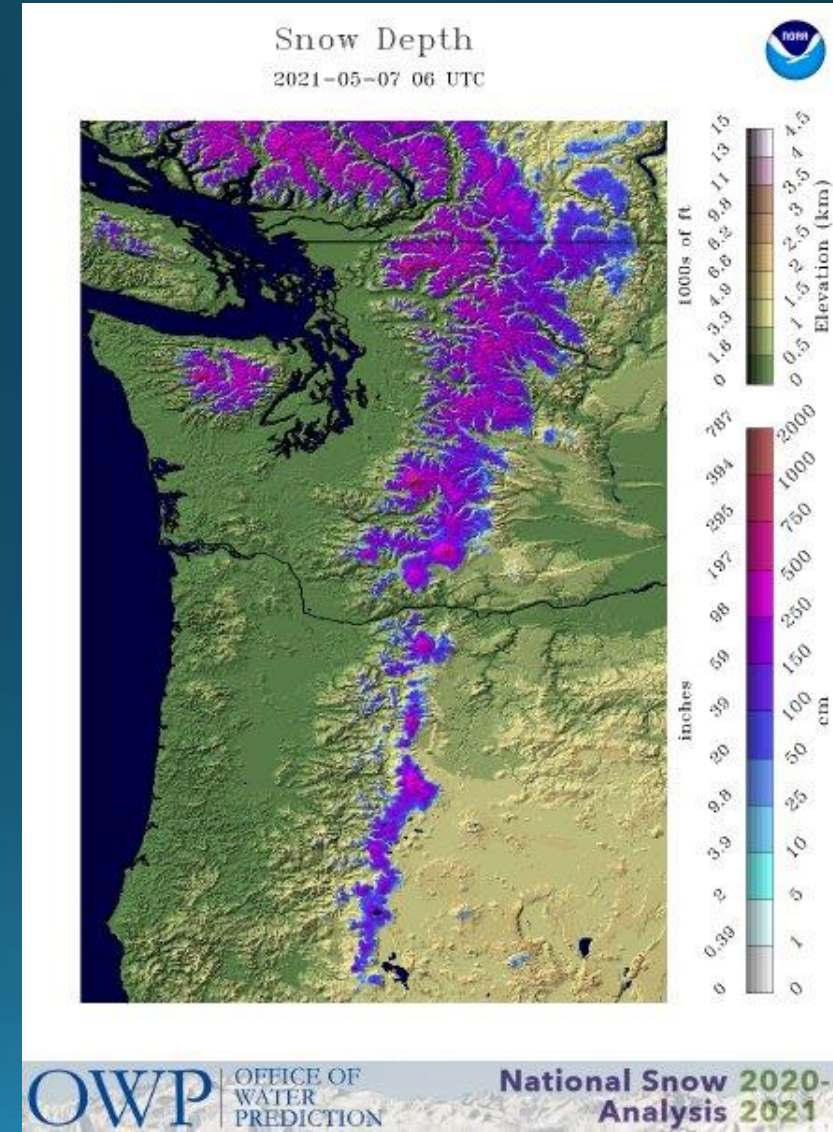
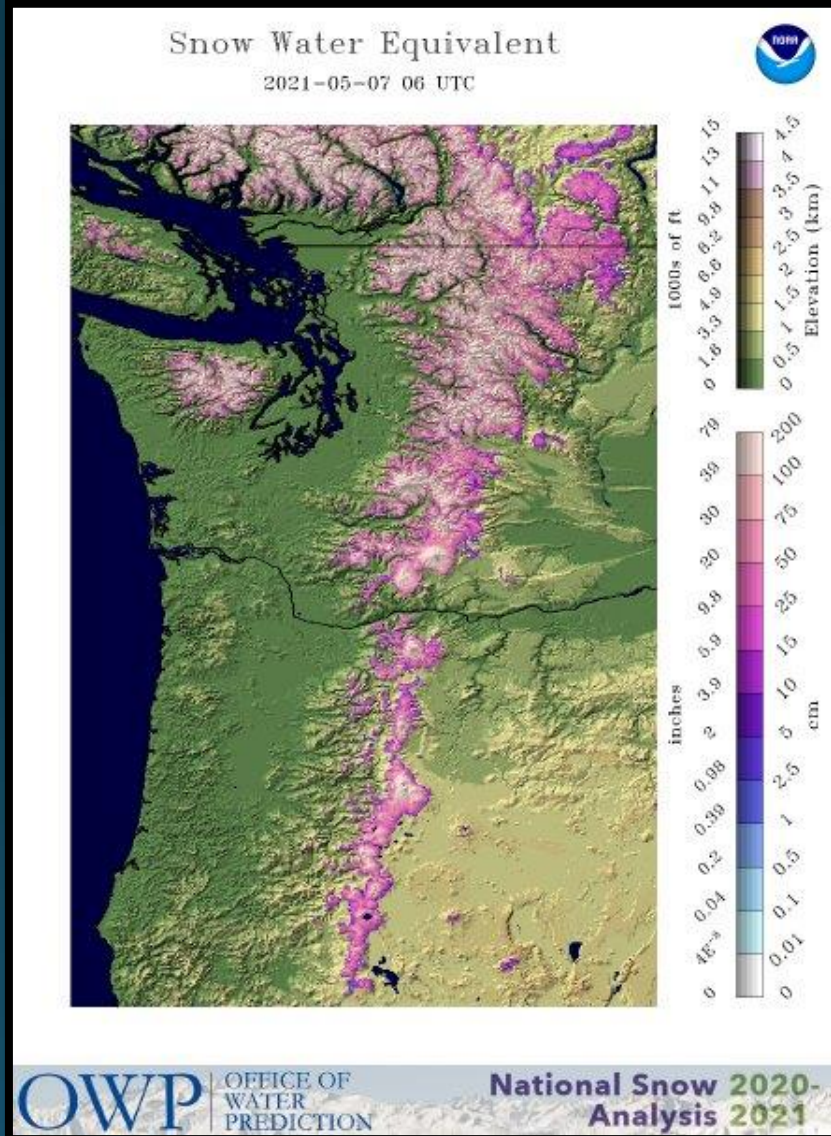


Water Year Status (As of May 7th)

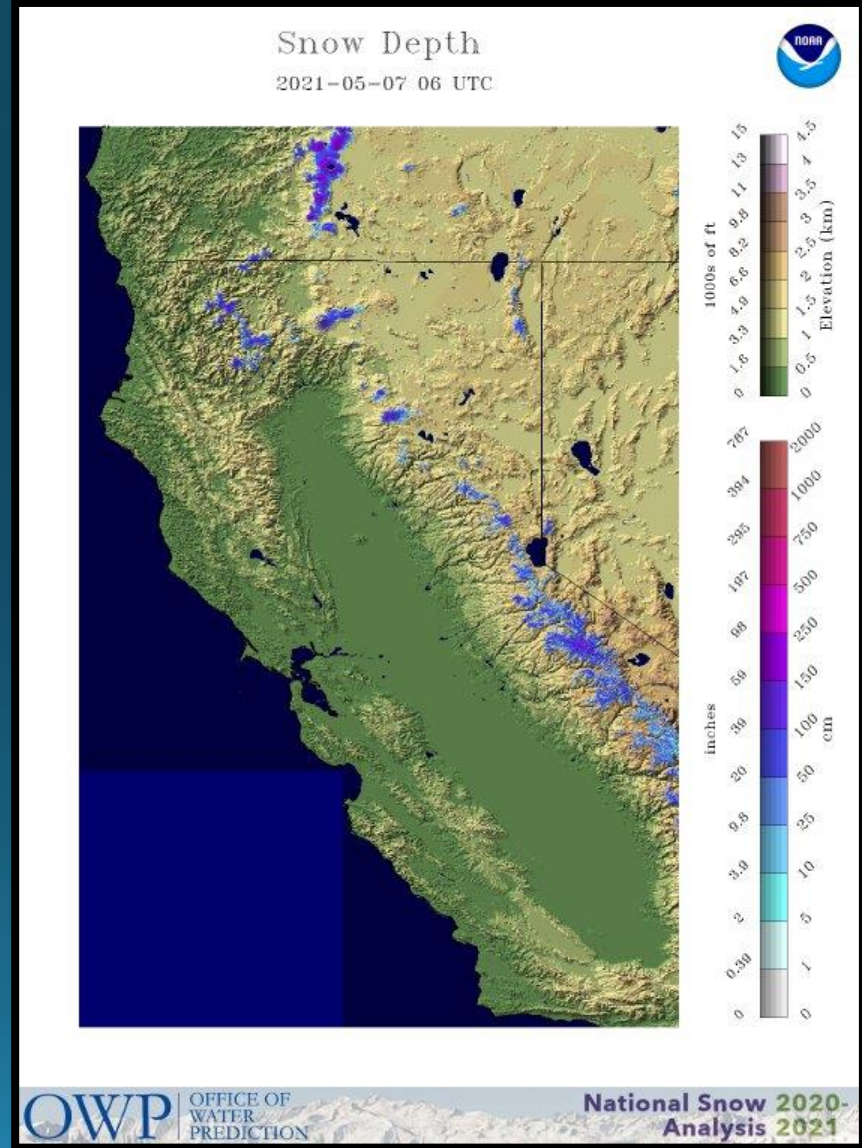
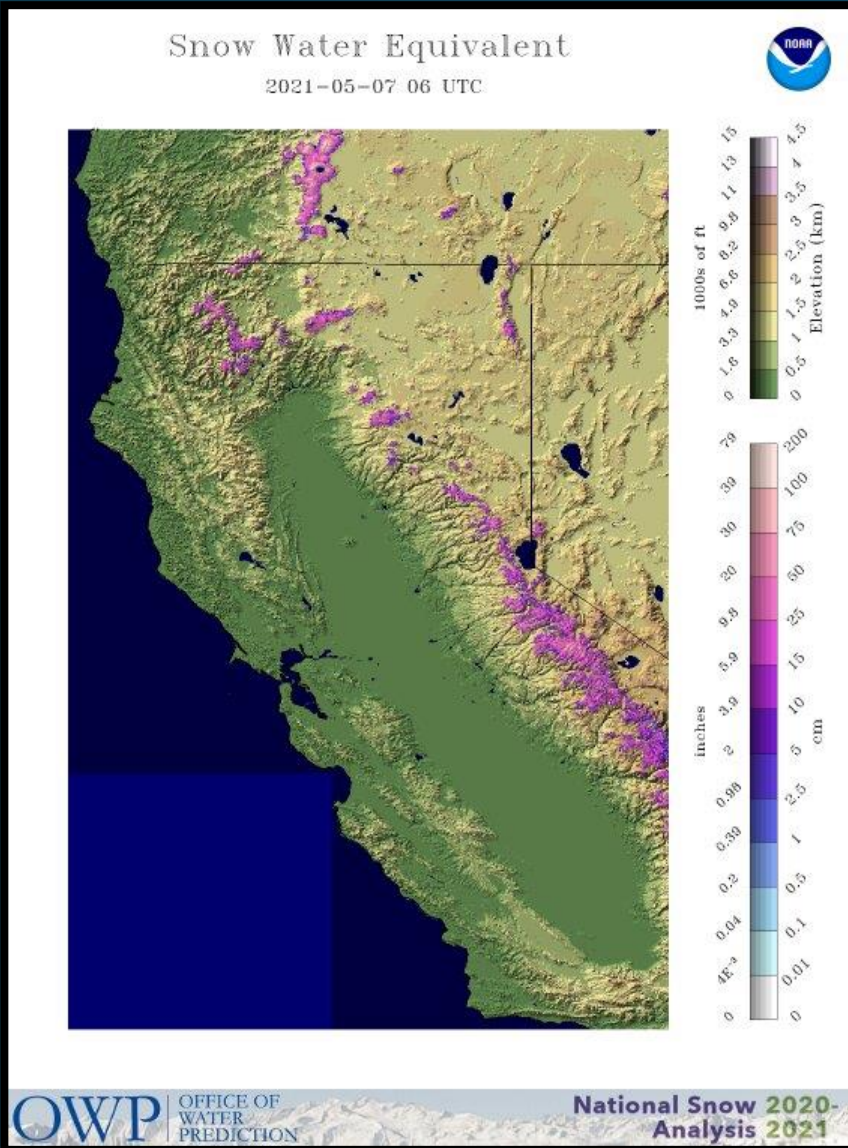




PacNW SWE & Snow Depth as of 5/7/21

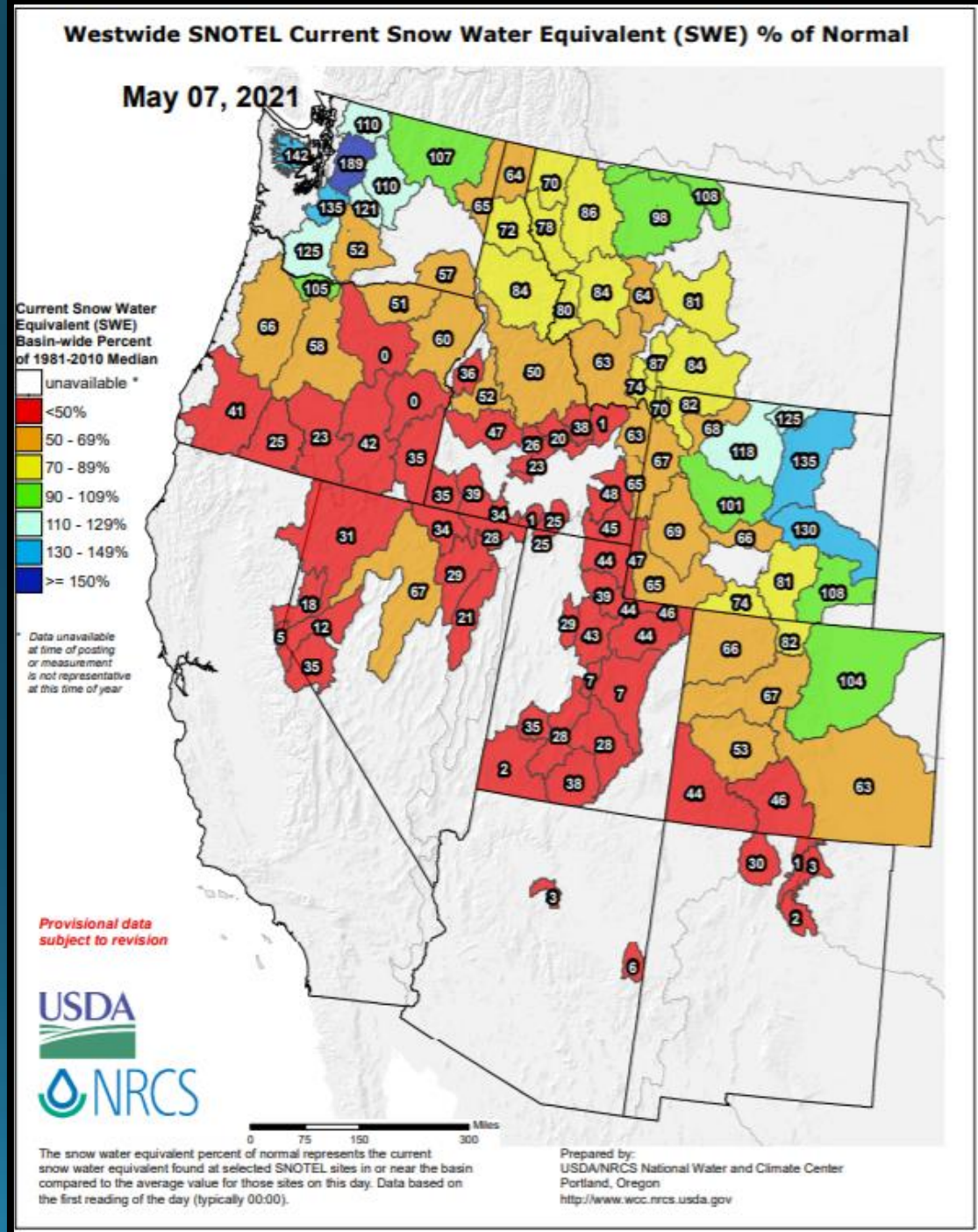
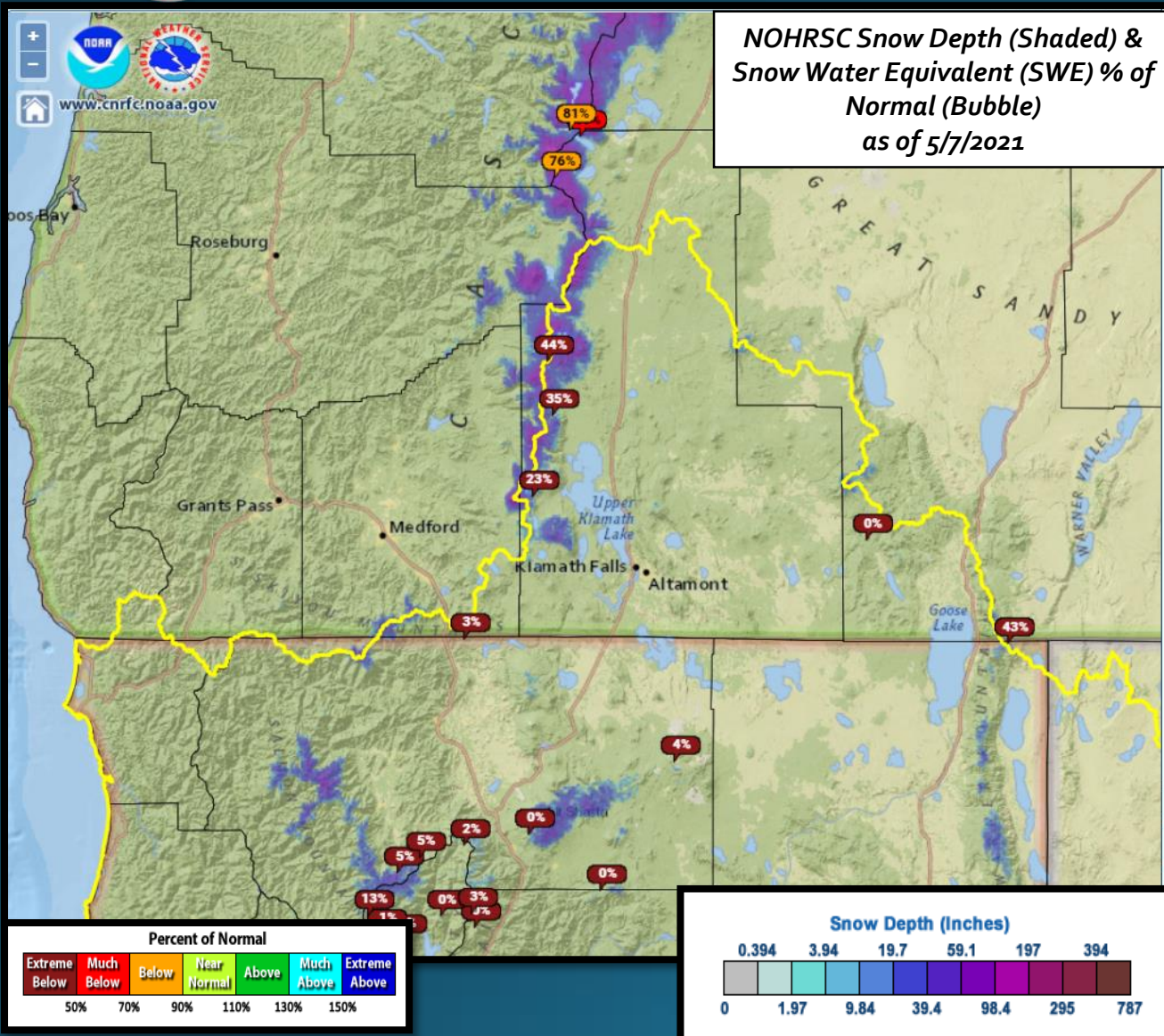


California SWE & Snow Depth as of 5/7/21





Snowpack Status



Crater Lake

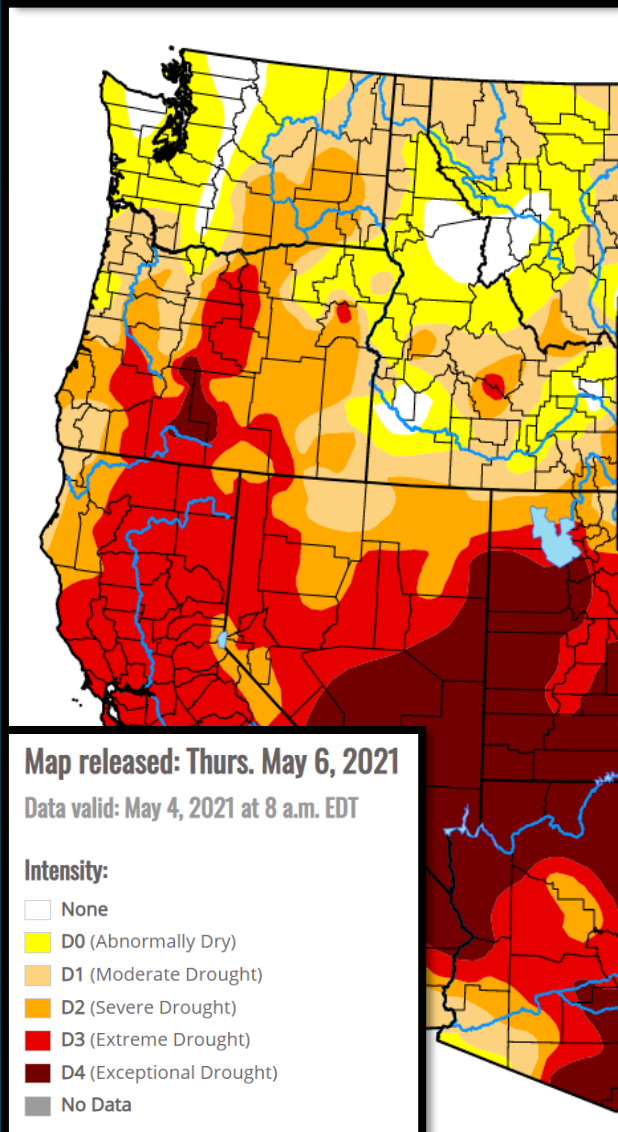
Image Courtesy: NPS



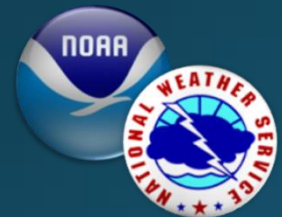
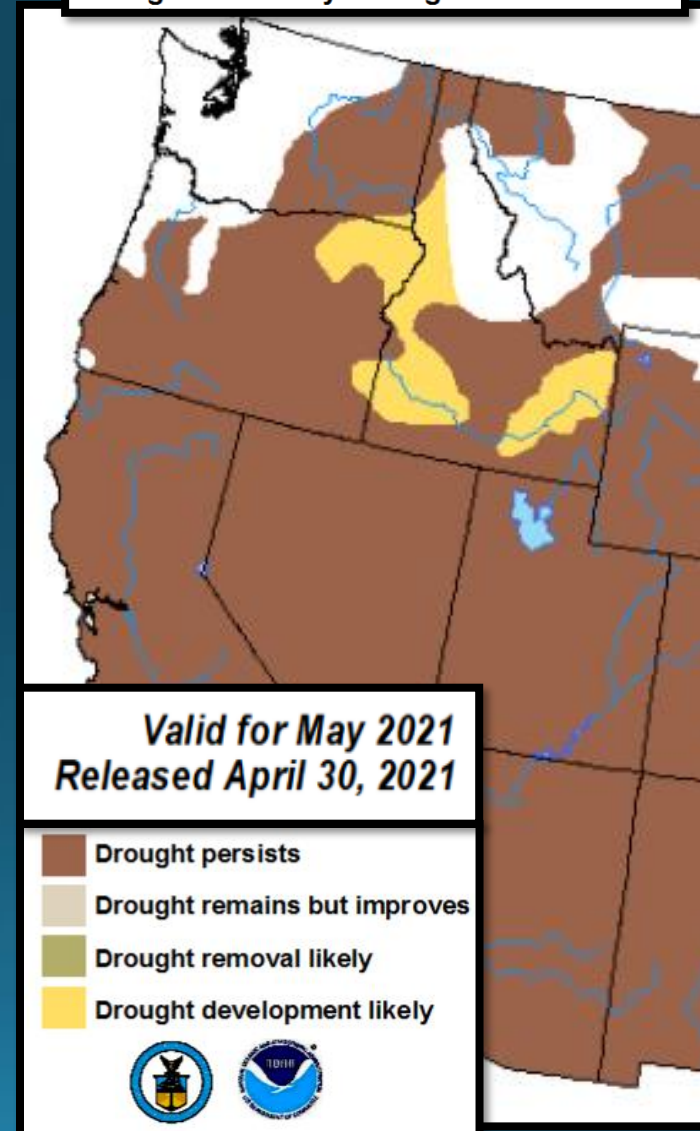
	Average Max Temp (°F)	Average Min Temp (°F)	Total Precipitation	Total Snowfall	Snow Depth as of: 04/29/21	Highest Max/ Lowest Min
April	47.1°	25.8°	0.63"	4.2"	58"	61° on 29 th / 17° on 11 th
Normal (1981-2010)	41.8°	22.6°	5.46"	46.7"	100"	N/A

Drought Monitor (Current) & Outlook (May)

United States Drought Monitor



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





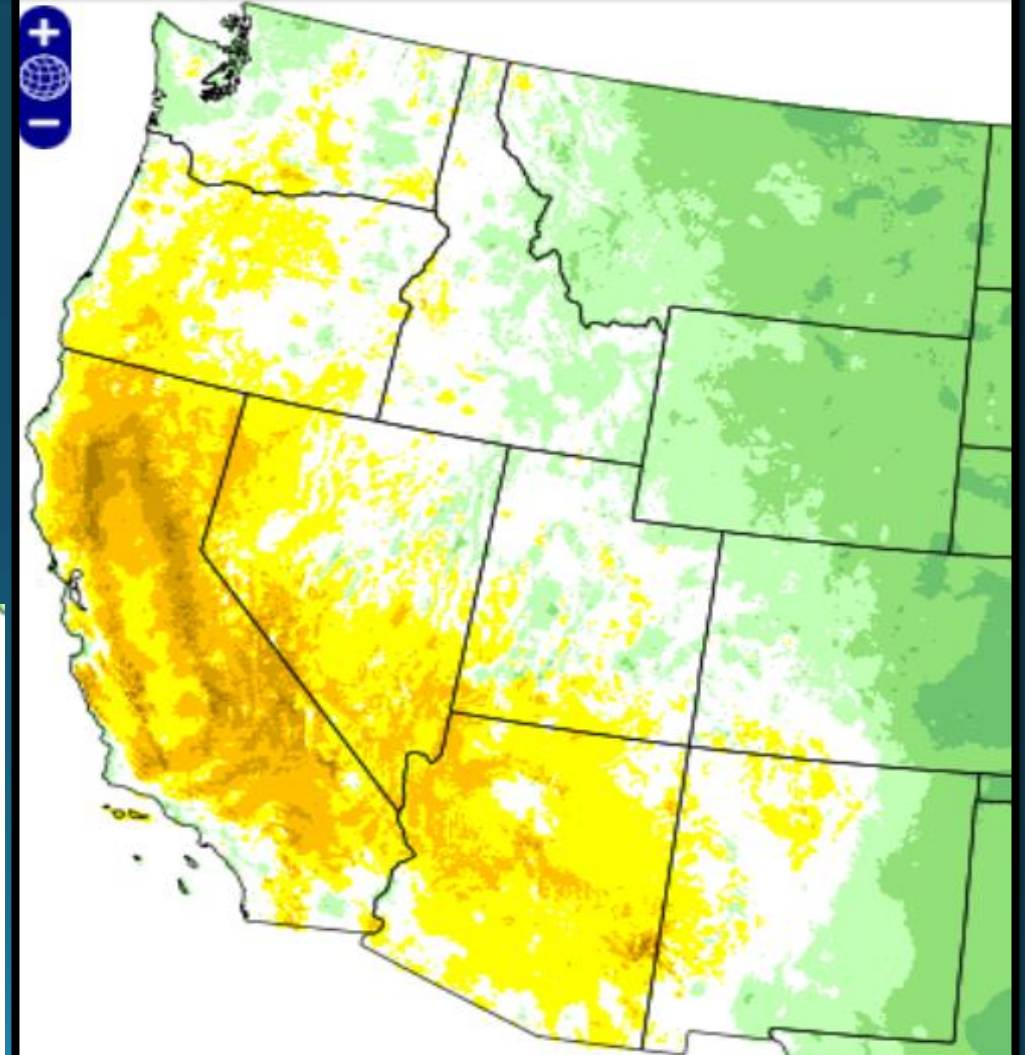
Observed Temps: May 1-16th, 2021

Daily Mean Temperature Anomaly: 01 May 2021 - 16 May 2021

Period ending 7 AM EST 16 May 2021

Base period: 1981-2010

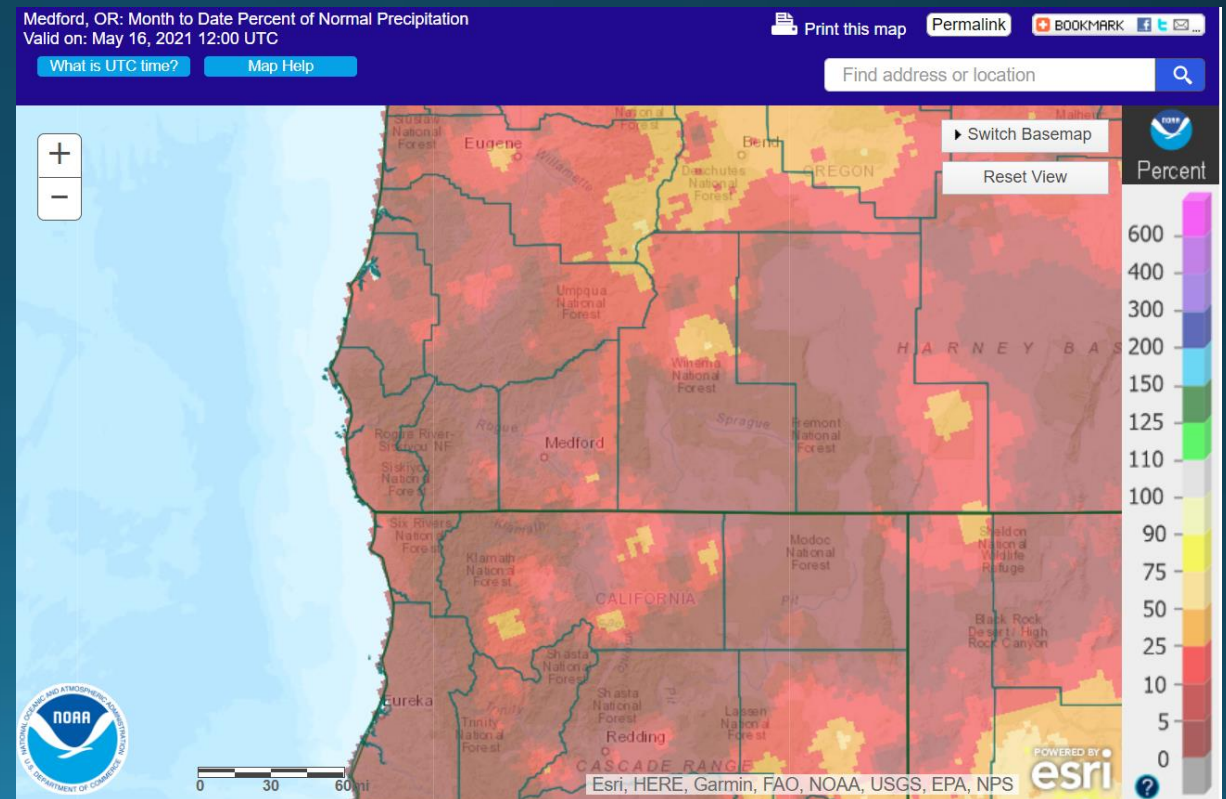
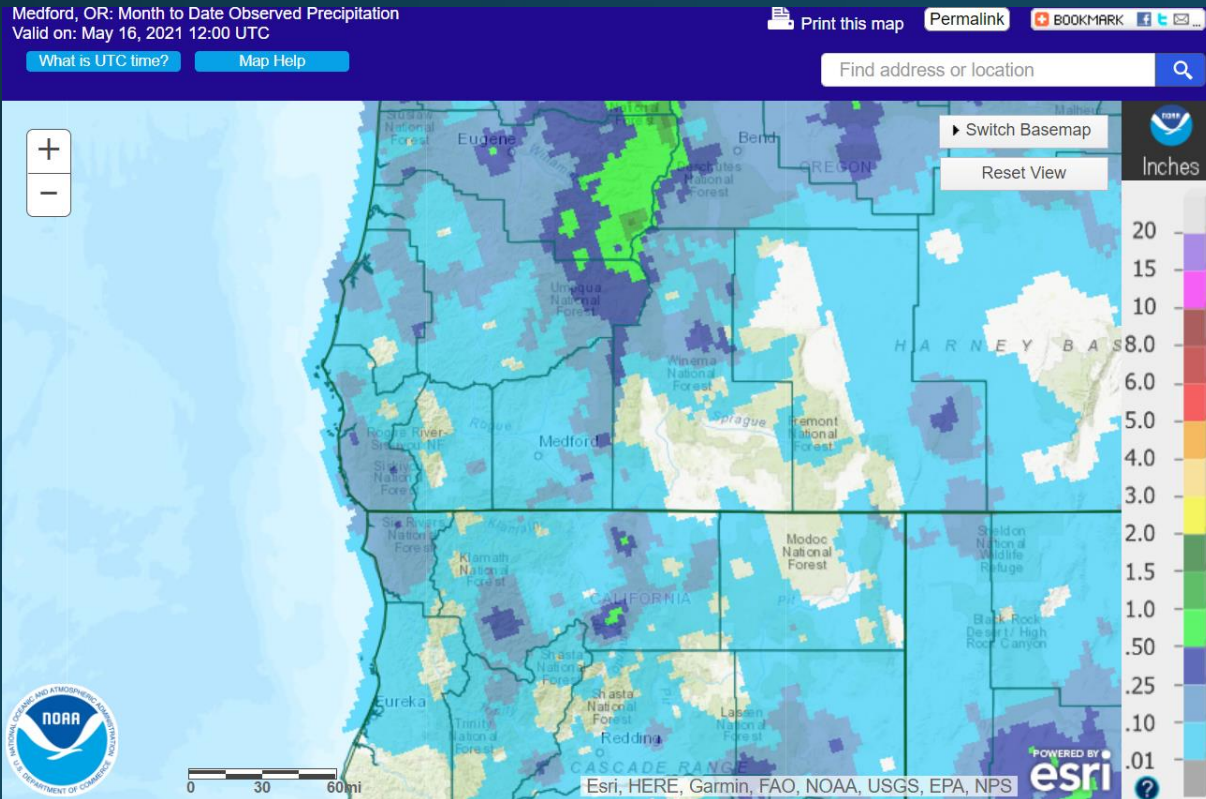
Colder than normal, upwelled ocean water continues to result in below normal temperatures across portions of Coos County. However, with the exception of some cold pockets east of the Cascades, average temperatures have been 1-5 degrees Fahrenheit above normal across the Medford NWS forecast area during the May 1-16th period.





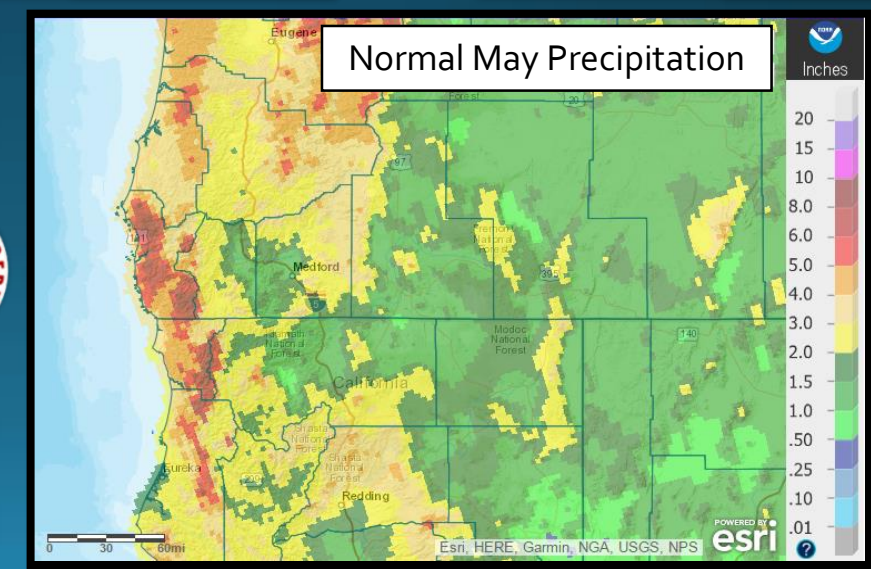
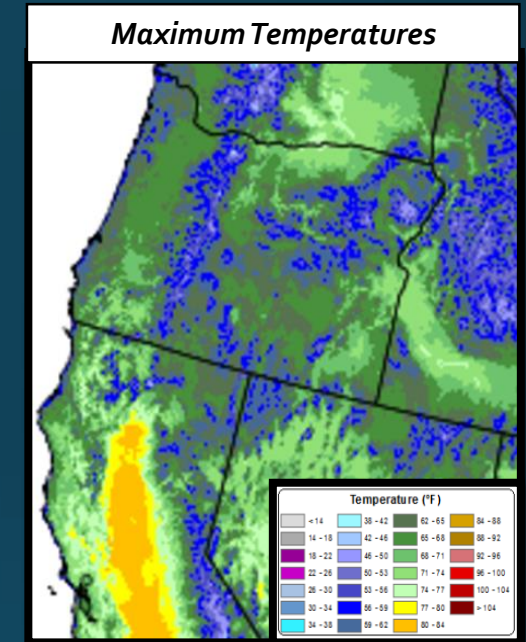
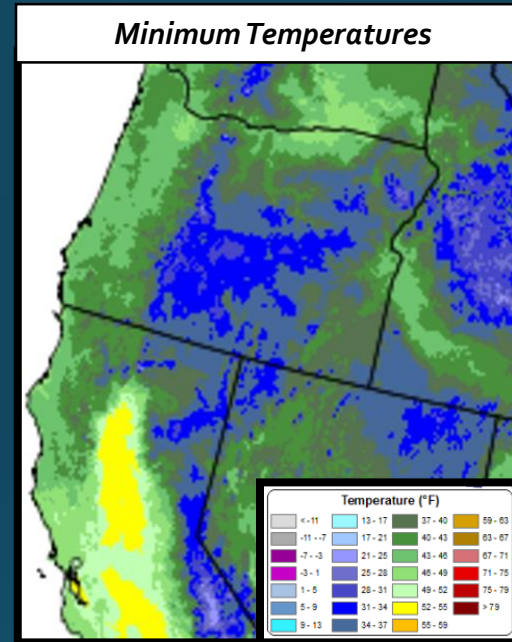
Observed Precipitation: May 1-16th, 2021

- Despite some weak frontal activity over NW portions of the forecast area and a healthy round of showers and thunderstorms along and east of the Cascades and Marble Mountains on the 15th, May has started out unusually dry for most locations. Weather systems continue to be infrequent and have not produced much precipitation when they have occurred. Conditions are apparently more like June in terms of the state of maturity of the vegetation.



Looking Ahead: Normals for May (1981-2010)

- Temperatures:** Along the coast, lows are typically in upper 40s to lower 50s with highs in the upper 50s to mid 60s. The Interior West Side valleys usually experiences average lows in the 40s to 50s and highs in the lower 60s to mid 70s. Lows are typically in the 30s across the higher mountains west of the Cascades and the majority of the East Side. Highs across even the higher elevations are typically in the 40s and 50s, while across the valleys east of the Cascades highs are typically 60-70 degrees.
- Precipitation:** Curry County usually gets 4 to 10 inches of water. South and southwest flow favored areas west of the Cascades, the Mount Shasta area, and the Cascades and Siskiyou's typically get 2 to 5 inches. The remainder of the West Side has a wide range in normals, from as low as 0.50 up to 2 inches. East of the Cascades, the drier portions of Lake County can expect 0.50 to 1.5 inches, while most of the rest of the East Side gets 1 to 3 inches of water, though some of the mountains typically see up to around 4 inches.
- Snow:** With peak snow water equivalent normally having occurred in mid-March, we expect the snowpack to be melting off. However, in some years the snowpack peaks in April. Also, we do sometimes get mountain snow in May that slows the melting process. The snowpack typically melts off much faster on southerly slopes than northerly slopes due to exposure and related temperatures. Snowpack at and above 7000 feet usually remains through the month of May, though it is melting much of the time. Snowfall drops precipitously at Crater Lake NP HQ in May, to 15.9 inches per the 1981-2010 normal period.





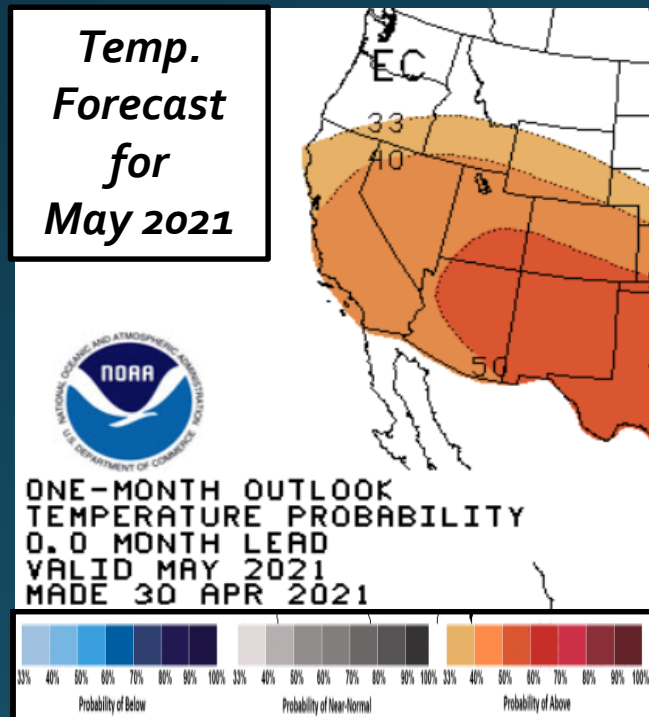
Updated May 2021 Outlook

(Written May 17th)

The official Climate Prediction Center forecast for May 2021 predicts increased probabilities (33-40%) for above normal temperatures over southeast portions of the forecast area and equal chances of above, near, or below normal temperatures across the rest of the Medford NWS forecast area. All areas except the NW quarter of the CWA are predicted to have an increased probability of below average precipitation (33-<50%).

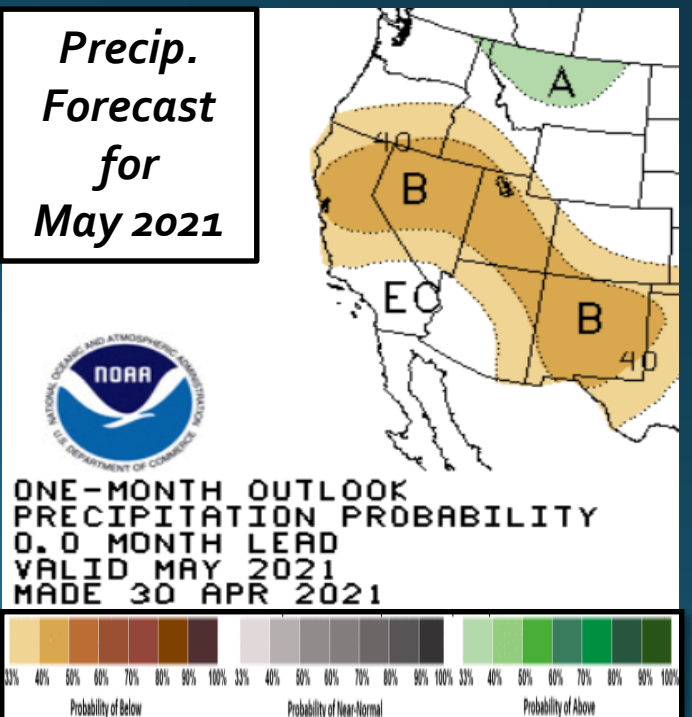
- Our localized May **temperature** forecast is for **below normal temperatures along and near the coast, mainly in Coos County, but also coastal Douglas and Curry counties, as well as much of Lake County, with anomalies in the 0 to -3°F range. Above normal temperatures are likely elsewhere, probably in the +1 to +6°F range above the 1981-2010 normals.**
- There is high confidence in our localized **May precipitation** forecast of **below normal precipitation from the Cascade Mountains westward, with 10-50% of normal expected. Areas east of the Cascades are expected to get 50-100% of normal precipitation, but some locations could get less due to the hit and miss nature of showers and thunderstorms.**

Summary: High pressure that has mostly been stuck along and near the West Coast is expected to give way to a trough of low pressure over the forecast area in the May 18th – May 25th time frame resulting in cooler than normal conditions across the forecast area. Ensembles focus the impacts of this trough over the East Side and into the Great Basin. 1 day anomalies during that time period are expected to peak at 15-25 degrees below normal, so a late frost/freeze is possible. The low is expected to linger east of the Cascades resulting in cooler and wetter conditions there, and this could end up resulting in conditions near May normals for portions of Lake & Modoc counties. For most, it will merely be a brief reprieve from the warmer and drier than normal conditions.



Expected Impact, May 2021:

Some areas east of the Cascades, mainly in Lake County and possibly Modoc, are likely to be cool enough and wet enough from about May 19th onward to diminish fire danger, pause the worsening drought conditions, and end up with near normal temperatures. While a brief reprieve from warmer than normal conditions is expected for much of the forecast area May 18th-25th, precipitation is not expected to be much elsewhere. Therefore, drought conditions are likely to remain the same or worsen in most areas. Cold temperatures under the low pressure system in the 18th-25th time frame are likely to result in some mountain snow, and also a possibility of a later than normal frost/freeze for areas along and near the Cascades. Cooler conditions could linger through the end of the month if the upper low slows. Elsewhere, cold upwelled waters along and near the coast are likely to keep temperatures at or below normal there.





*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: 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**