National Weather Service Medford

April 2020 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).

April 2020 Weather Review

April 2020 continued the trend of below normal precipitation that had been experienced during the 2019-2020 water year. Above normal temperatures aided in diminishing the area snow pack, and by month's end, extreme drought conditions were declared for the southwestern portions of the forecast area.

The month began on a cooler and wetter note with broad upper level troughing followed by a closed low that moved southward over the area. Snow levels hovered around 3000-4000 ft and most of the area received about half of the month's total precipitation during this time. As the closed low moved south of the area, diffulence aloft and favorable dynamics resulted in some hefty isolated thunderstorms in the Roseburg area and also in the Shady Cove area on the 5th. Hail up to half an inch was reported with these storms as well as over half an inch of hail accumulation on roadways.

Eventually the influences of the closed low moved out of the area after the first week of the month and upper level ridging nudged into the area. This brought a quick warm up to the area, resulting in the warmest temperatures of the year thus far. The Medford area reached it's first 80+ degree day of the year on the 9th. This also marked the start of an extended warm and dry spell that continued through the first half of the month. Although temperatures remained above normal, they did moderate a bit as upper level ridging retreated west.

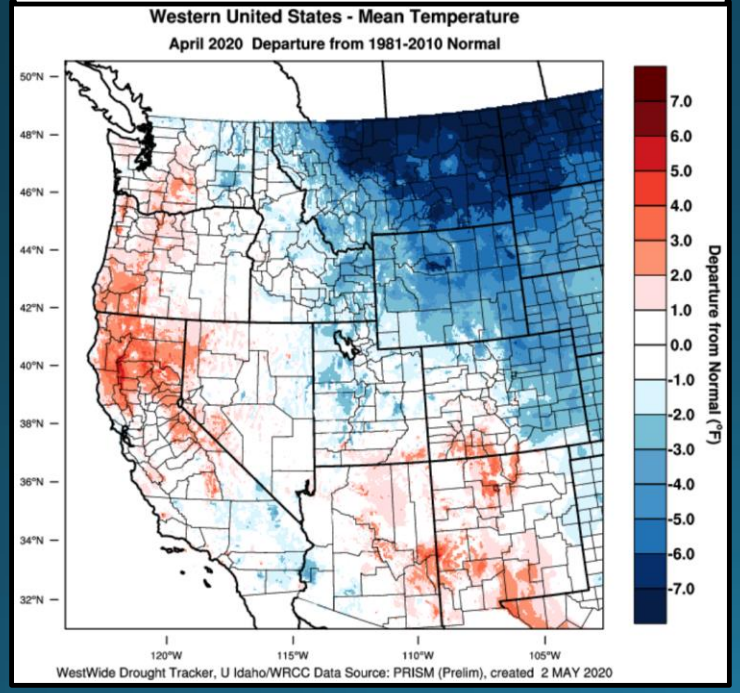
Dry conditions persisted through the 22nd as the pattern gradually transitioned from northwesterly flow to zonal flow. This allowed a few systems to move through the area during the last week of the month, delivering some much needed precipitation. Another warm up occurred towards the end of the month, setting a few new records for some climate sites.

The long stretch of warm and dry conditions during the middle of the month exasperated the ongoing drought conditions. Snow water equivalent dwindled from 70-80% of normal at the beginning of the month down to 30-40% of normal by month's end.

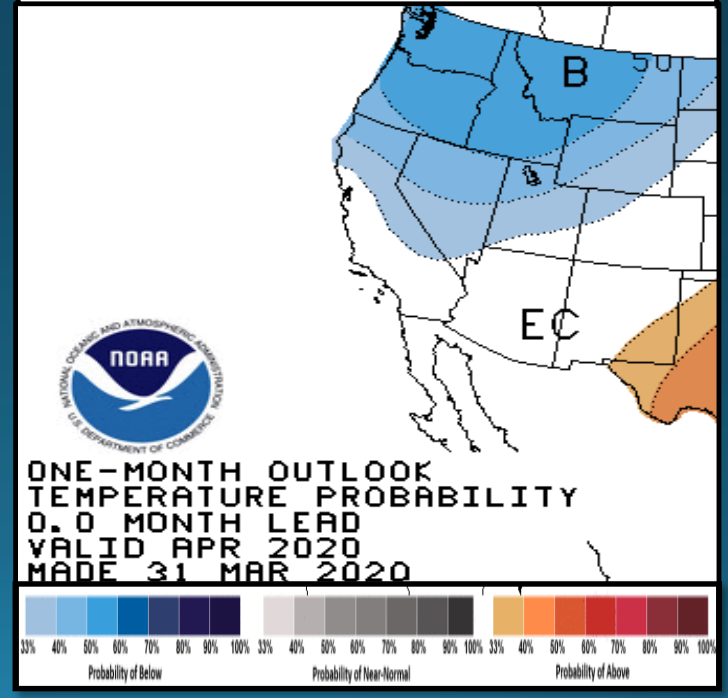
A Look Back at the April 2020 Temp Outlook

- ***What was our localized forecast?*** Our localized ***April temperature*** forecast was for ***near normal temperatures, most likely between -3°F and +3°F from the 1981-2010 normals***.
- ***Was the forecast anomaly correct?*** ***Yes***, mostly. Actual anomalies across the forecast area were -2°F and +5°F. ***The majority of the forecast area experienced anomalies between -1°F and +3°F.***
- ***Was the expected impact correct?*** ***Yes, mostly***. Frost and freeze continued to be a concern through the month. Snow levels did not come down as much as was expected for the 2nd half of the month, however. Lesser snowpack did increase noted drought concerns and depiction.
- ***Did our forecast improve upon the CPC forecast?*** ***Yes***. Our localized forecast correctly identified that temperatures were most likely to be near normal, though it was about a degree warmer than anticipated.

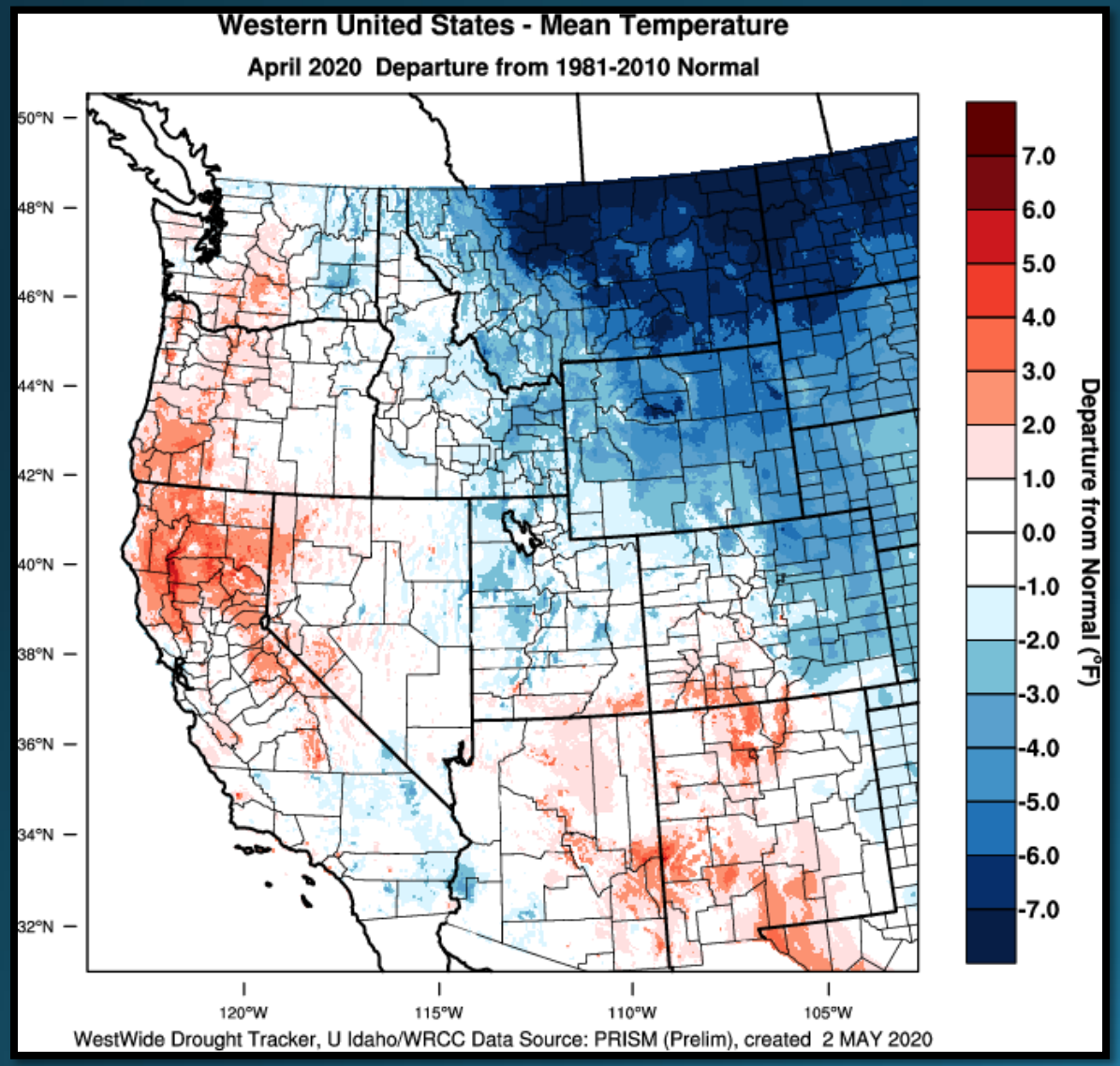
Observed April Temp. Anomaly

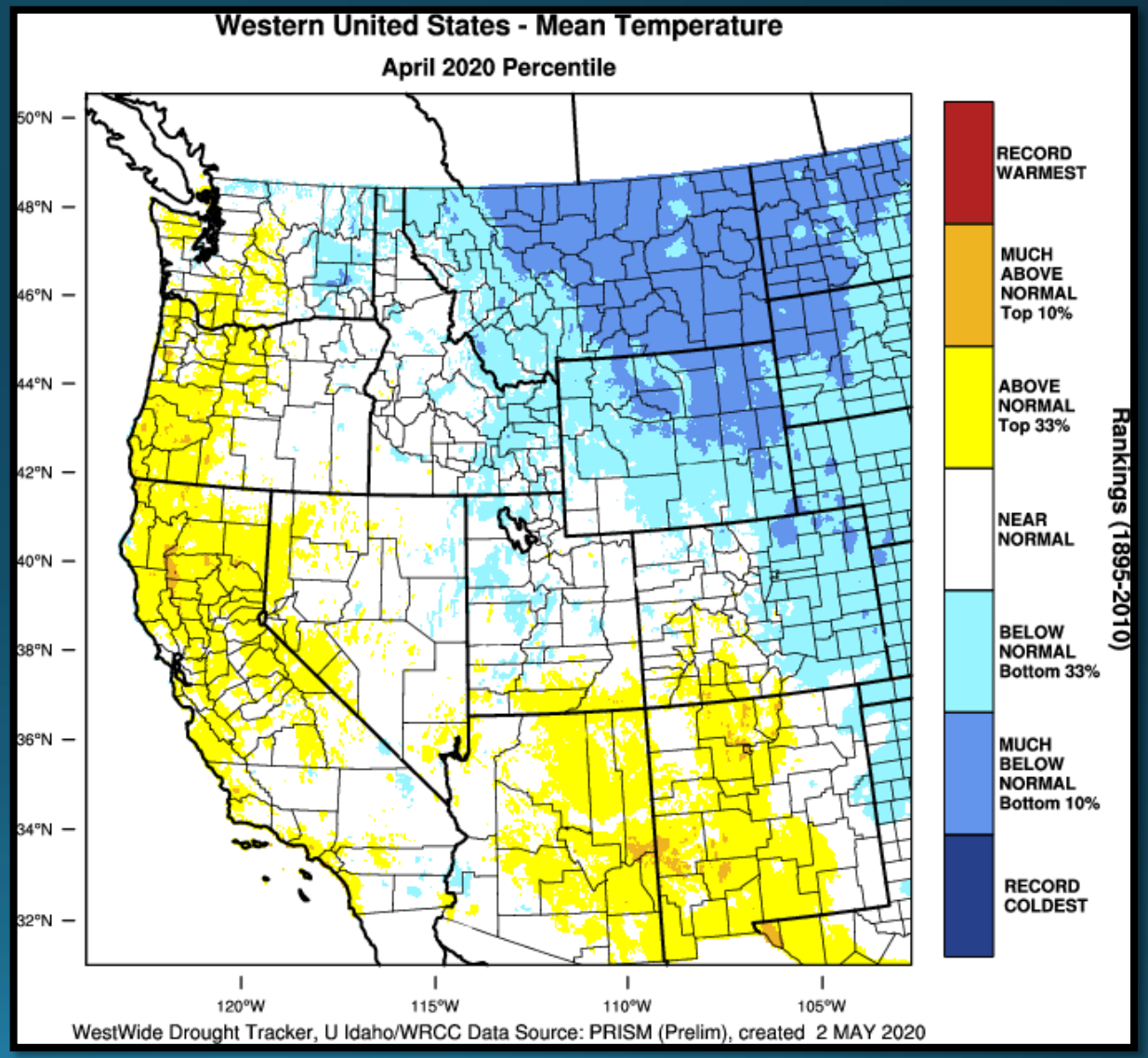


CPC's Apr Temp Anomaly Forecast



April 2020 Observed Temperatures





Average Temperatures

	Average (°F)	Departure from Normal	Average Max (°F)	Departure from Normal	Average Min (°F)	Departure from Normal
North Bend	50.5	1.3°	57.6	2.3°	43.3	0.2°
Roseburg	56.3	4.1°	68.2	5.8°	44.5	2.5°
Medford	56.1	3.3°	69.8	4.9°	42.4	1.6°
Klamath Falls	45.4	2.3°	61.4	4.9°	29.4	-0.3°
Montague, CA	52.4	5.3°	69.7	8.8°	35.2	2.0°
Mt. Shasta City, CA	51.3	4.1°	65.1	4.2°	37.5	4.1°
Alturas, CA	46.1	2.9°	62.5	4.7°	29.7	1.0°

Monthly Max & Min Temperatures

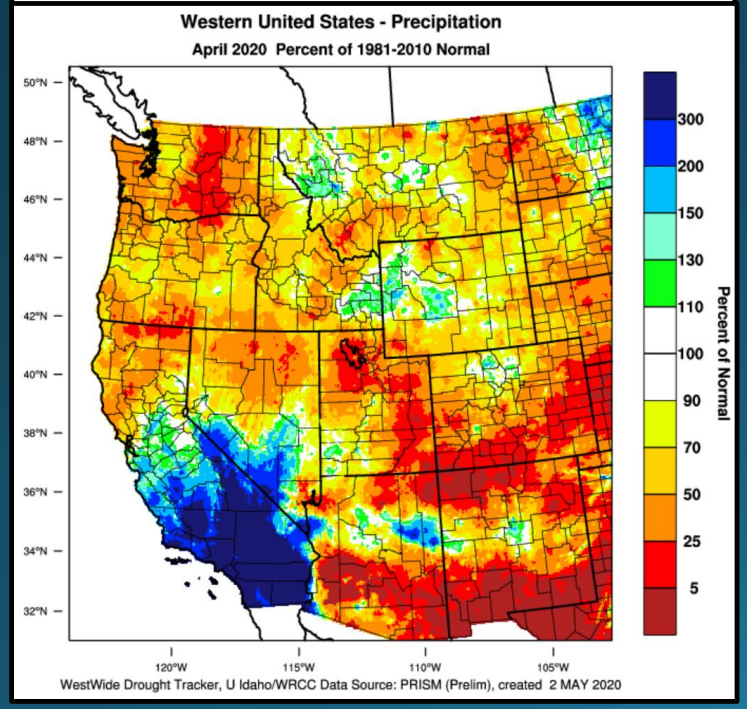
	Max (°F)	Date(s)	Min (°F)	Date(s)
North Bend	74°	16th	34°	3rd
Roseburg	80°	17th	32°	3rd
Medford	83°	28th	30°	2nd
Klamath Falls	77°	28th	17°	2nd
Montague, CA	85°	28th	19°	2nd
Mt. Shasta City, CA	81°	28th	28°	2nd & 3rd
Alturas, CA	80°	28th	15°	14th

	Date	Record High	Old Record/Year
Montague	9th	81°	Ties with 1985
	28th	85°	84° / 2006
North Bend	16th	74°	72° / 1936
Mt Shasta City	28th	81°	80° / 2007

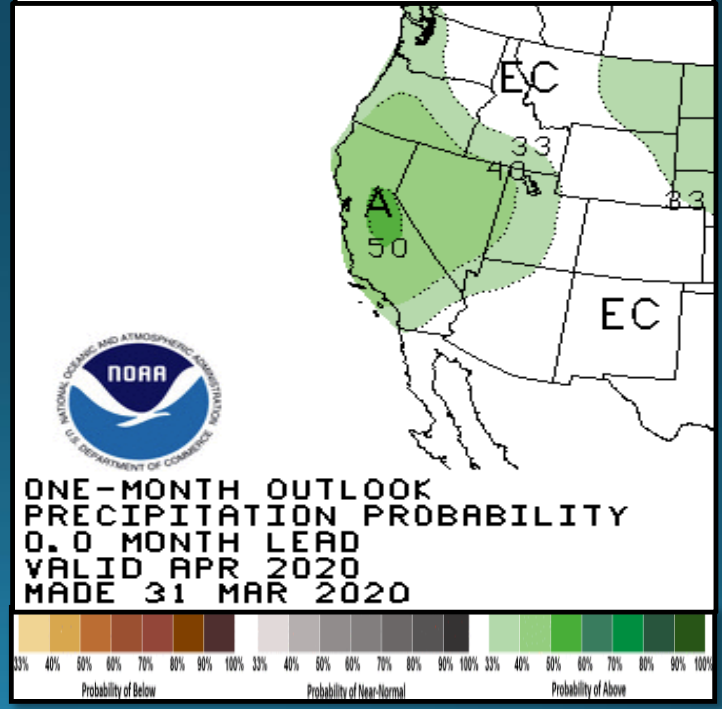
A Look Back at the April 2020 Precip Outlook

- ***What was our localized forecast?*** Our localized ***April precipitation*** forecast was for ***below normal precipitation across the forecast area (in the 25-75% range).*** Siskiyou County was forecast as likely to be the wettest compared to climatology standing a chance of seeing local areas of 75-125% of normal precipitation.
- ***Was the forecast anomaly correct?*** ***Yes and No***. The actual range of anomalies was 5% to 90% of normal. Most areas were 5-70% of normal. Thus, the low end of our forecast was not low enough. Where we were not correct was Siskiyou County, where anomalies were ~5% to <70% of normal.
- ***Was the expected impact correct?*** ***Yes***. We did get some thunderstorms and hail. The main impact highlighted was the growing precipitation deficits and drought, which we indicated as a concern.
- ***Did our forecast improve upon the CPC forecast?*** ***Yes- absolutely***. It became clear during the first week of the month that the precipitation going into California was likely to remain further south and be lighter in our area than CPC indicated. Our drier than normal forecast was a significant improvement, noting it was made on the 14th.

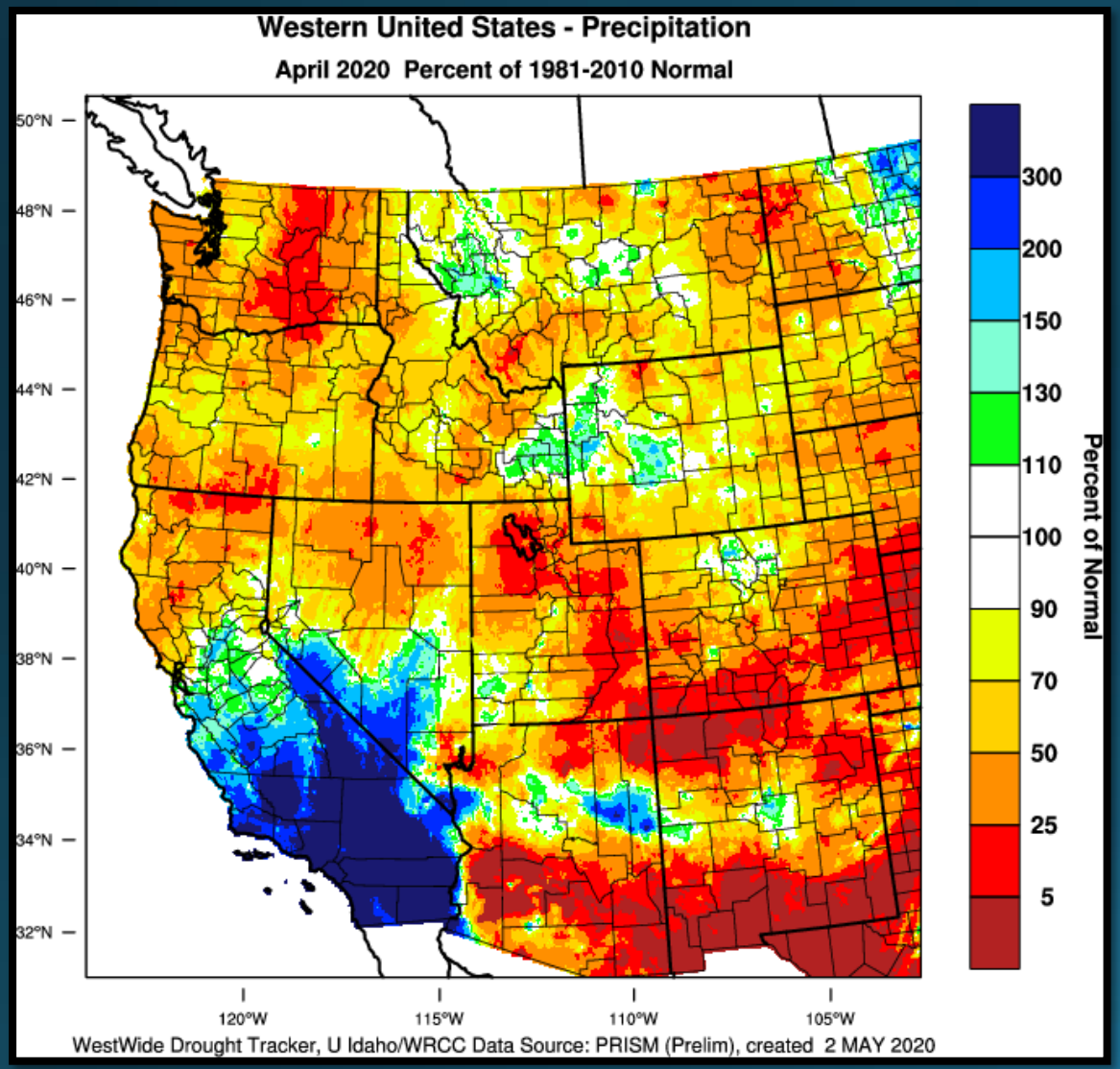
Observed April Precip. Anomaly

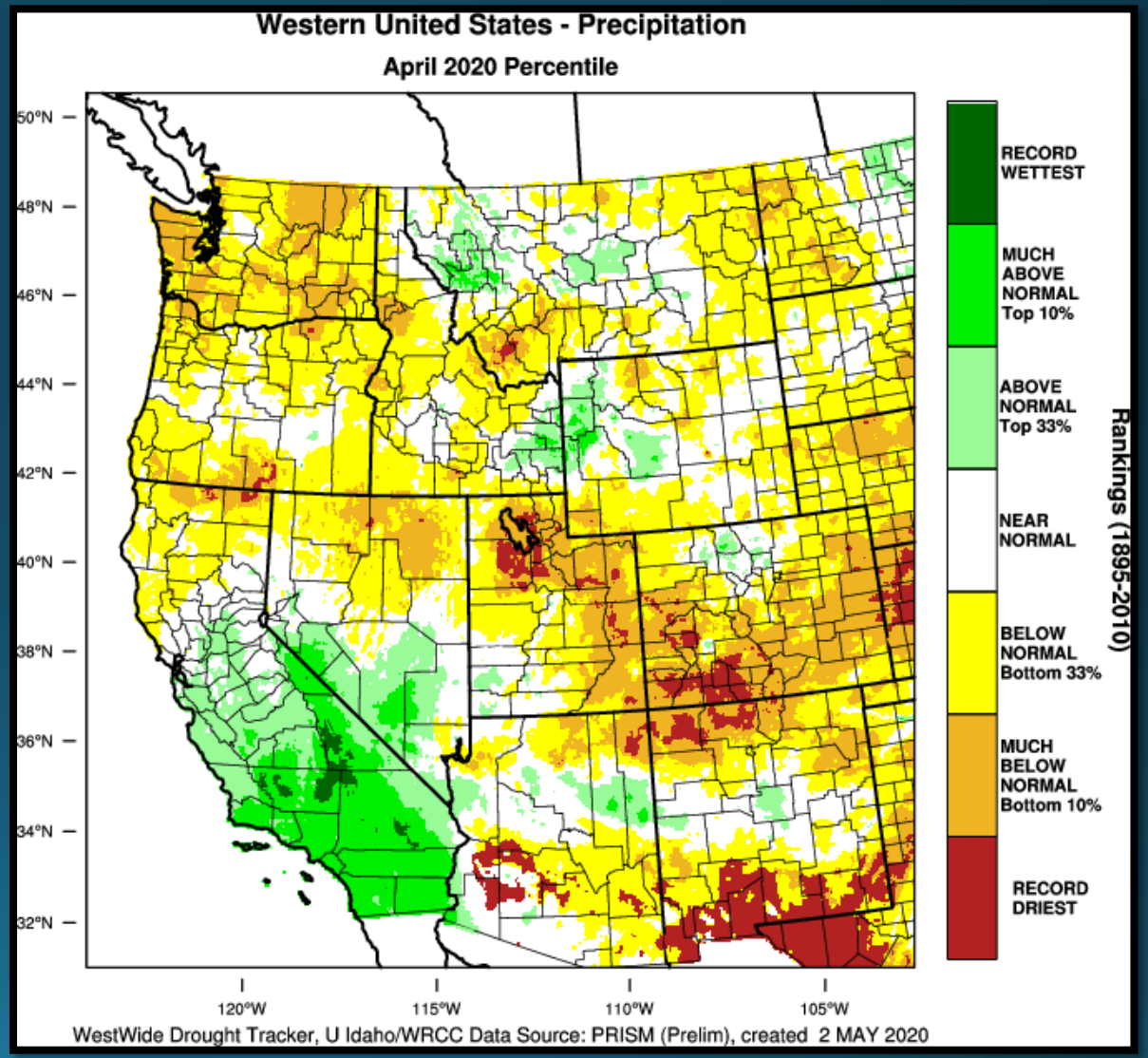


CPC's Apr Precip. Anomaly Forecast



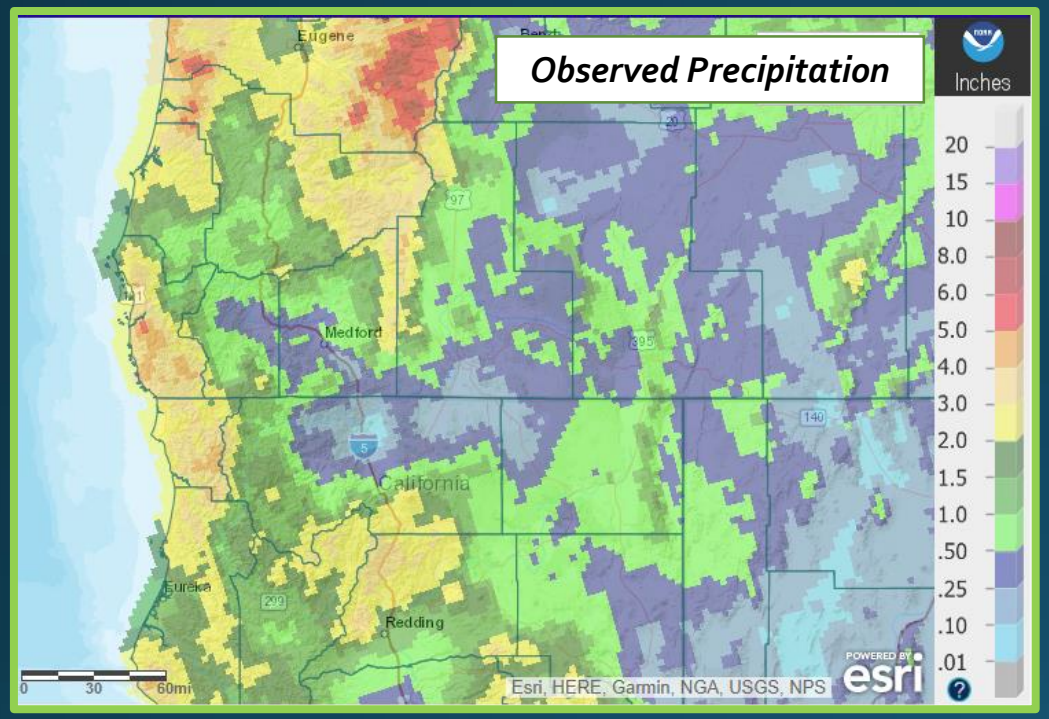
April 2020 Observed Precipitation

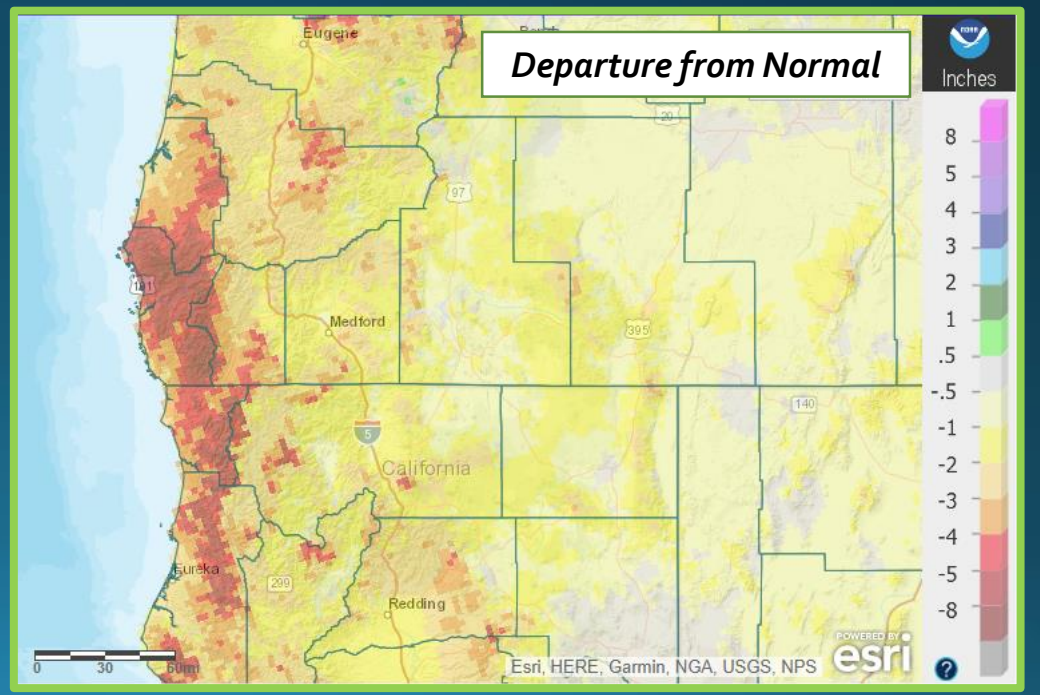




Precipitation

	Total	Departure from Normal	Greatest 24-hr Total	Date(s)
North Bend	2.71"	-2.46"	0.67"	4th
Roseburg	1.05"	-1.77"	0.31"	4th
Medford	0.46"	-0.92"	0.25"	22nd
Klamath Falls	0.23"	-1.14"	0.09"	22nd
Montague, CA	0.08"	-1.48"	0.08"	4th
Mt. Shasta City, CA	2.00"	-0.93"	1.28"	5th
Alturas, CA	1.10"	-0.46"	0.68"	19th

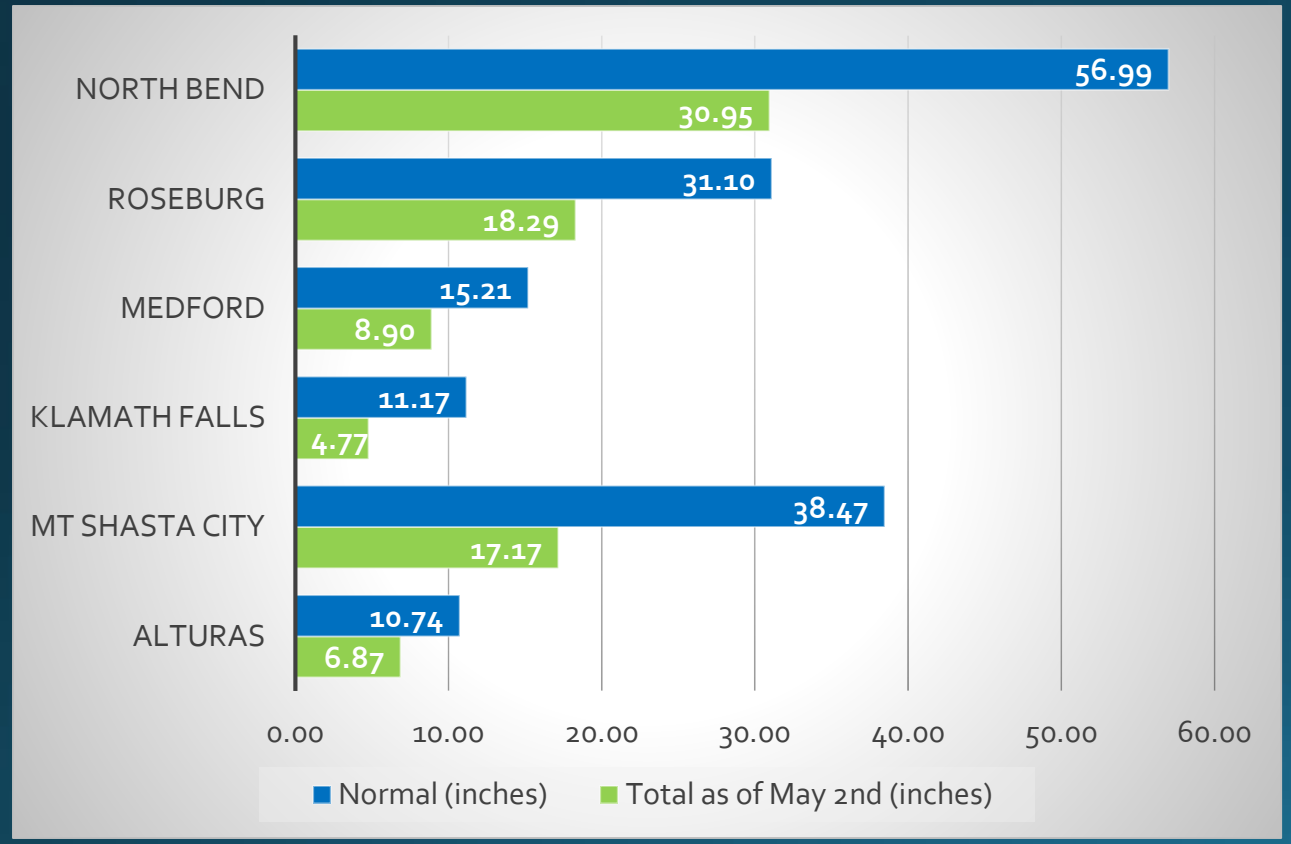


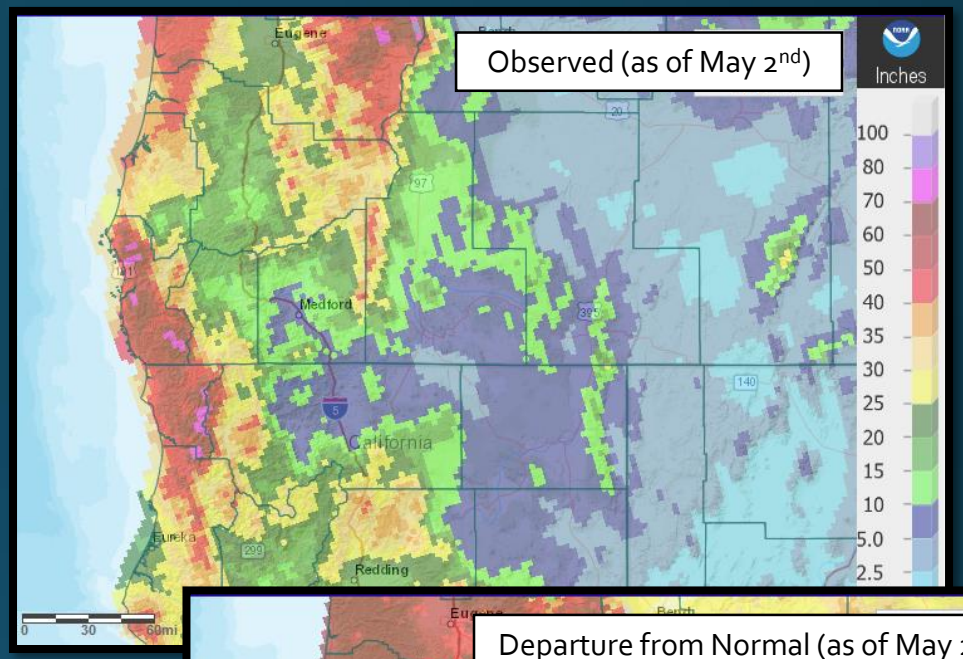


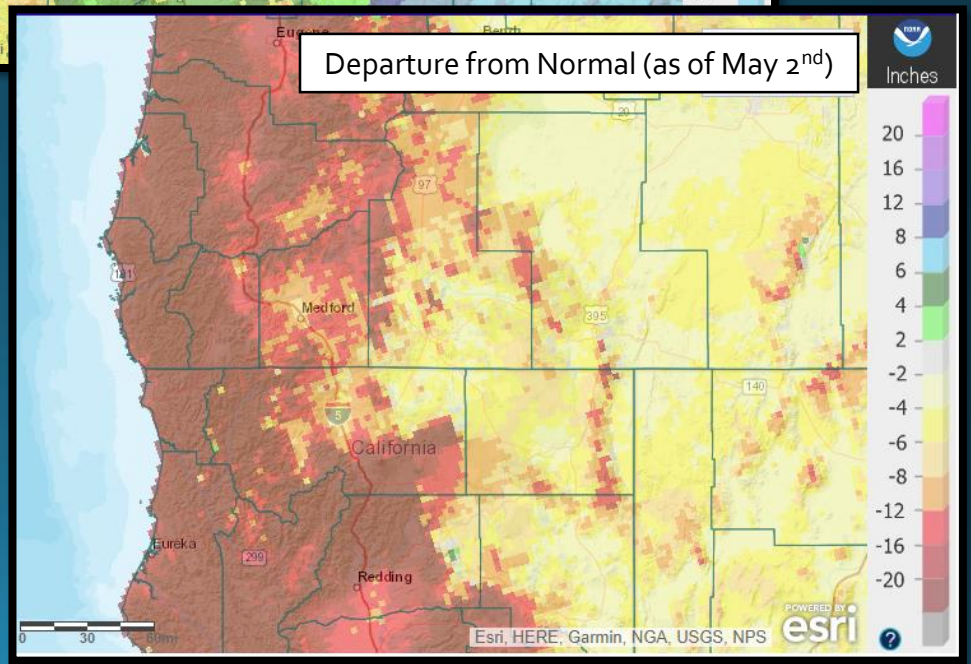
Record Precipitation

	Date / Amount	Old Record / Year
Alturas	19th / 0.68"	0.62" / 1957
Mt Shasta City	5th / 1.28"	1.10" / 1972

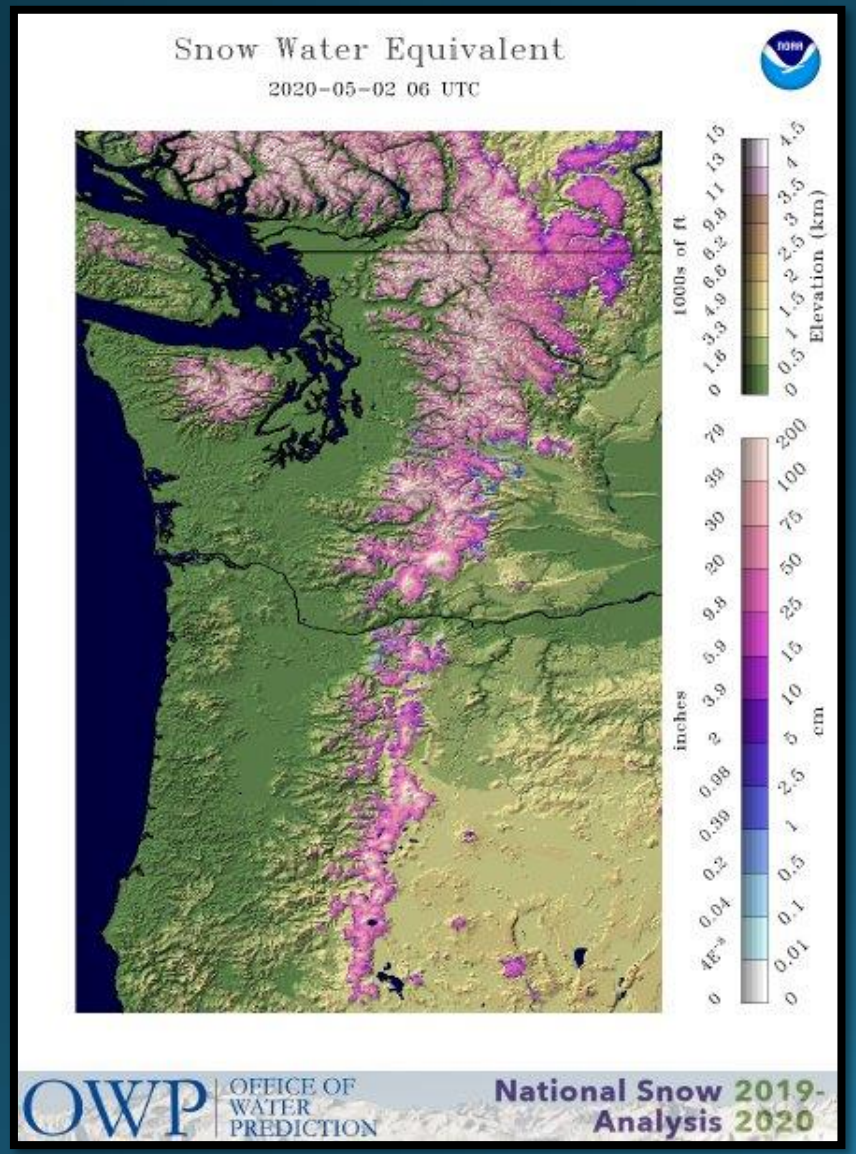
Water Year Status (As of May 2nd)

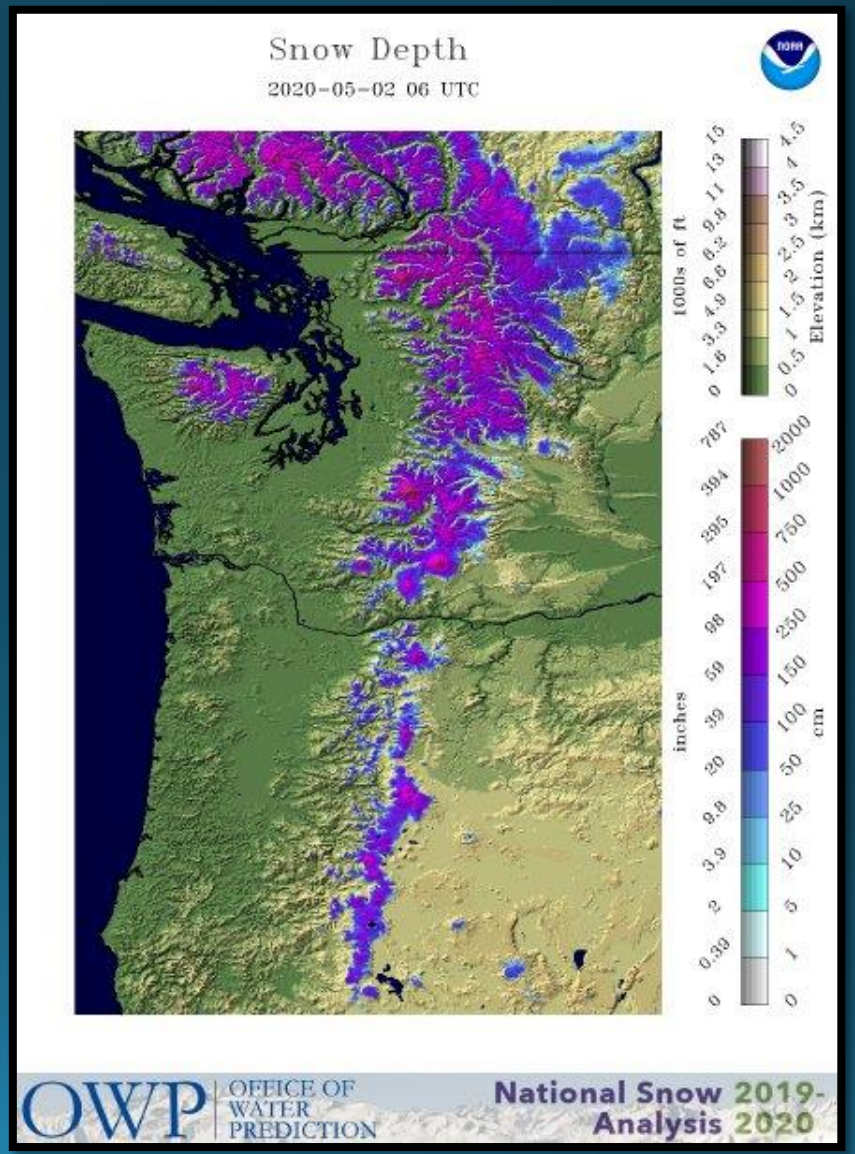




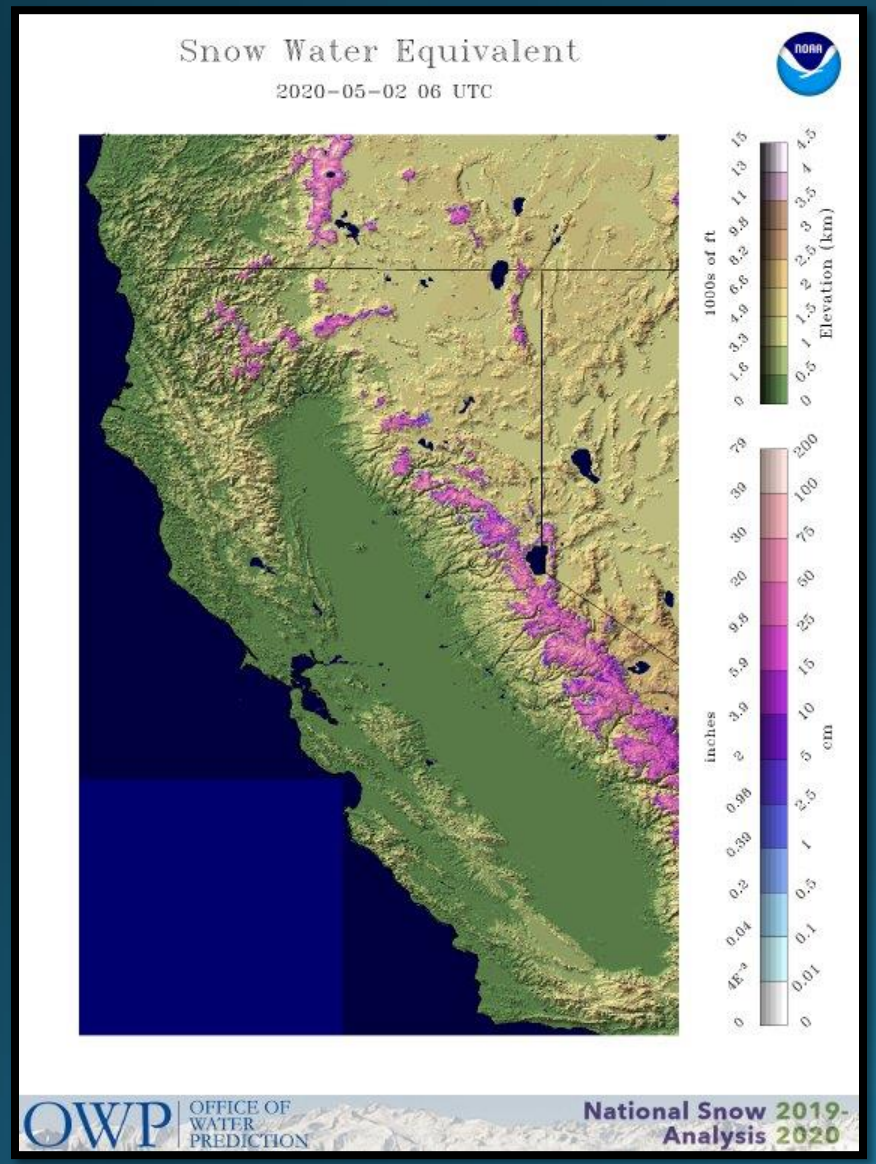


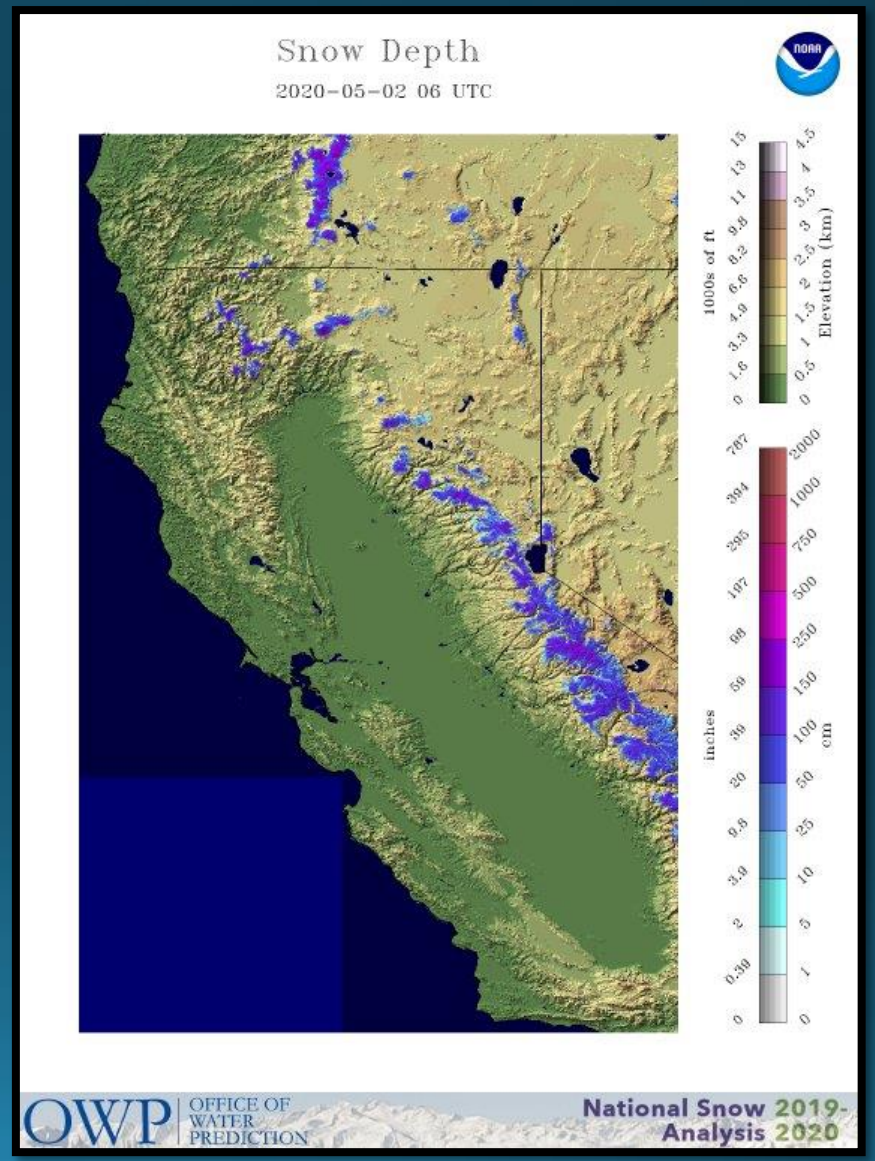
PacNW SWE & Snow Depth as of 5/2/20



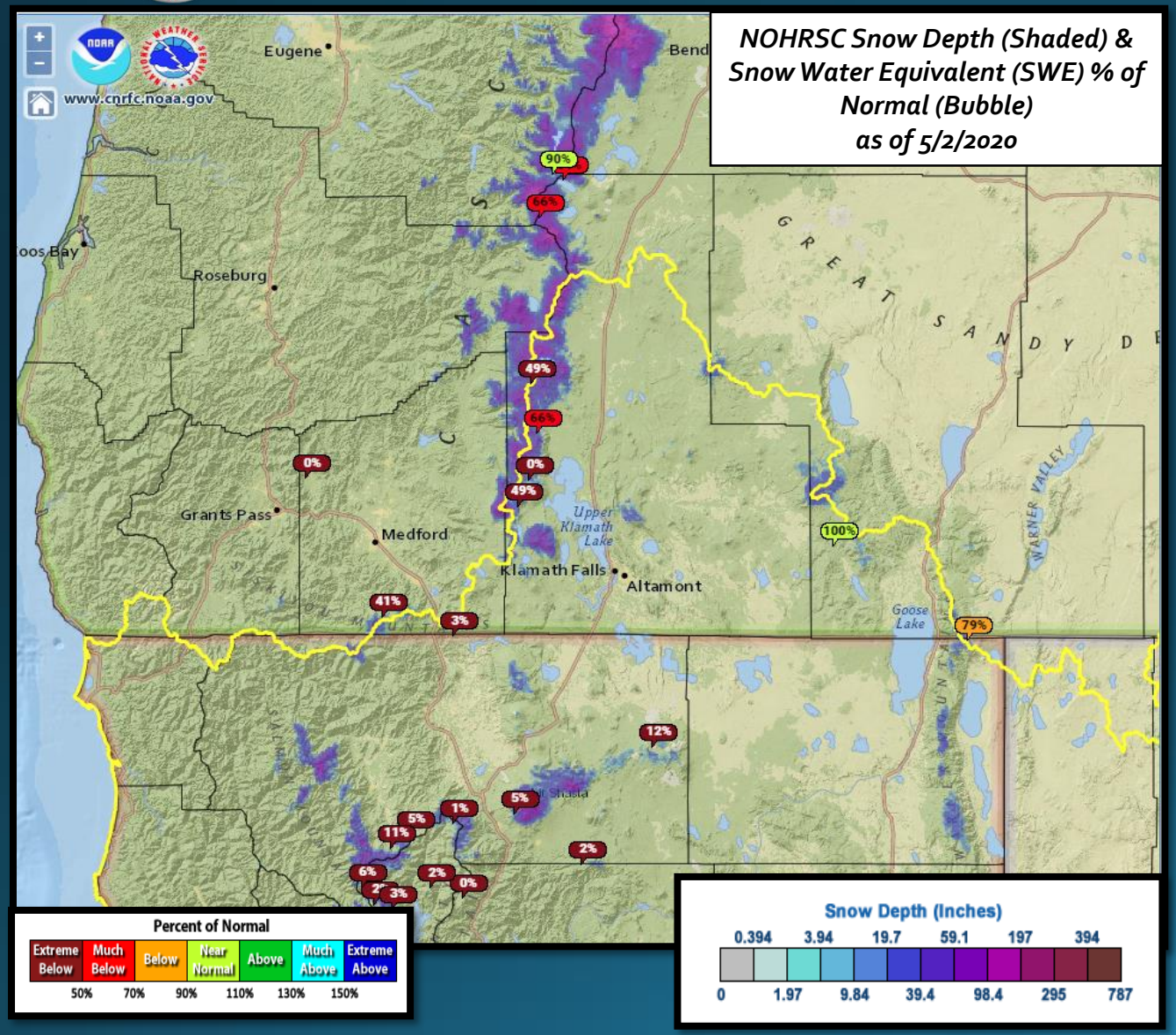


California SWE & Snow Depth as of 5/2/20

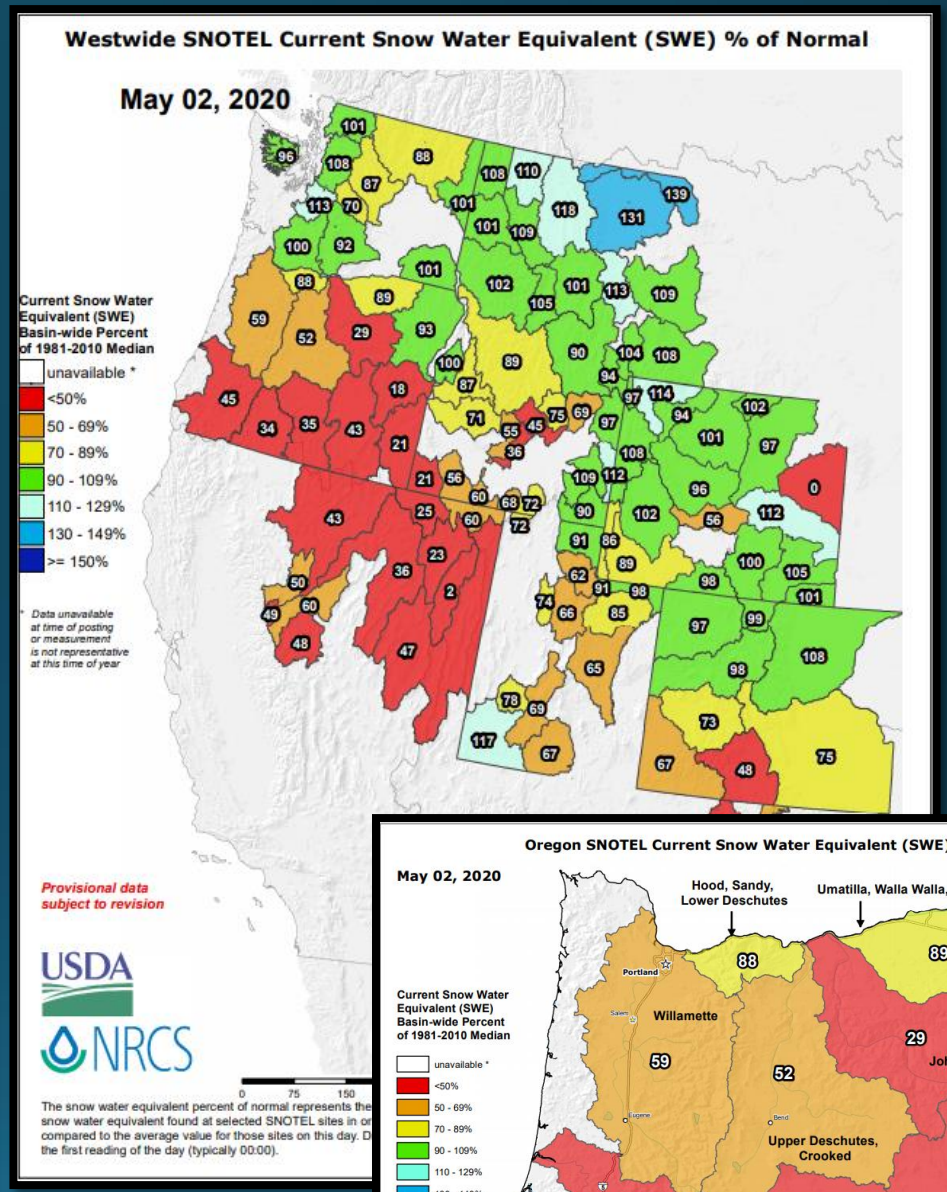


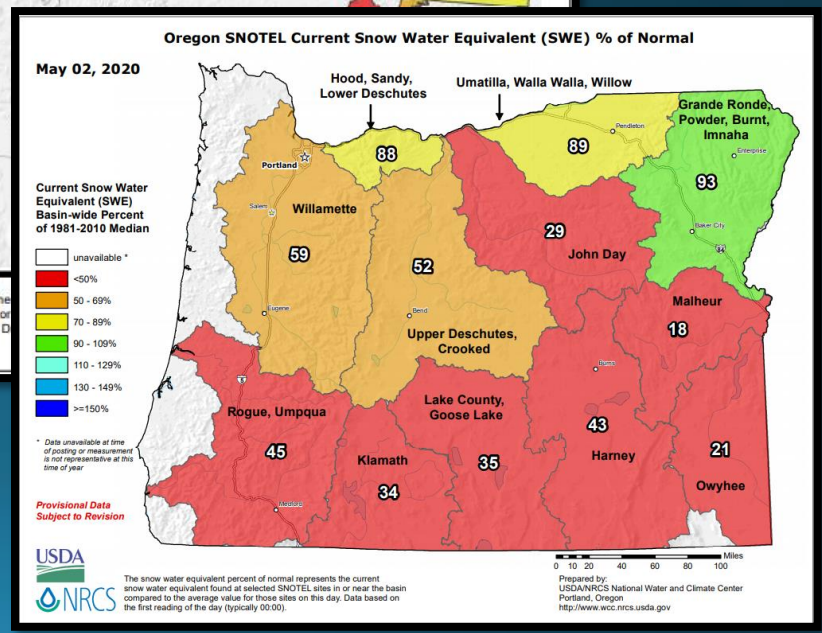


Snowpack Status



NOHRSC Snow Depth (Shaded) & Snow Water Equivalent (SWE) % of Normal (Bubble) as of 5/2/2020



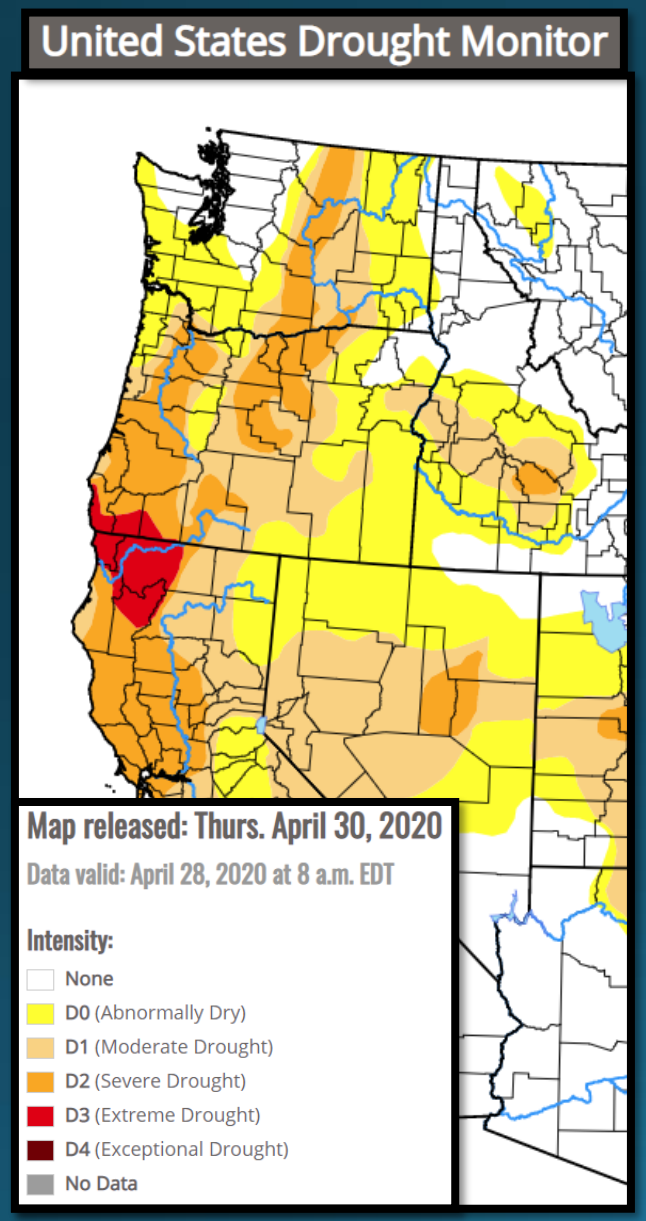


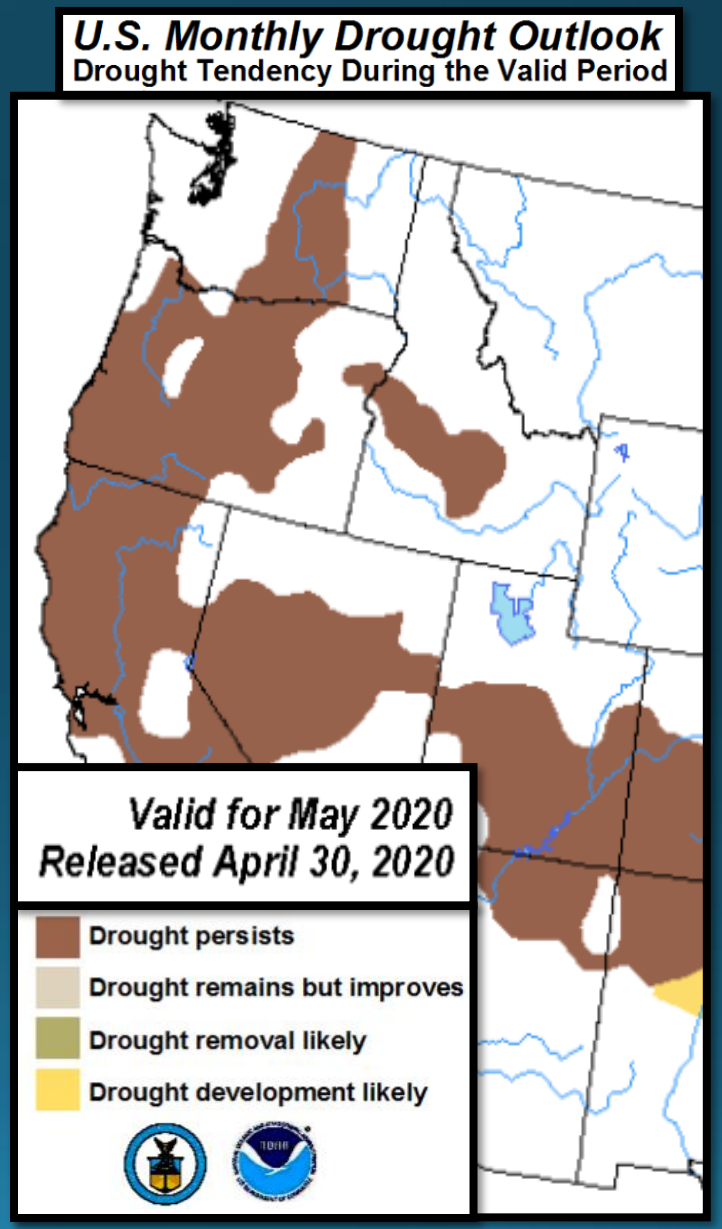
Crater Lake

Image Courtesy: NPS

	Average Max Temp (°F)	Average Min Temp (°F)	Total Precipitation	Total Snowfall	Snow Depth as of: 04/30/20	Highest Max/ Lowest Min
April	44.8°	24.1°	4.42"	17.2"	51"	51° on 4th & 12th / 7° on 26th & 27th
Normal (1981-2010)	41.8°	22.6°	5.46"	46.7"	100"	N/A

Drought Monitor (Current) & Outlook (May)

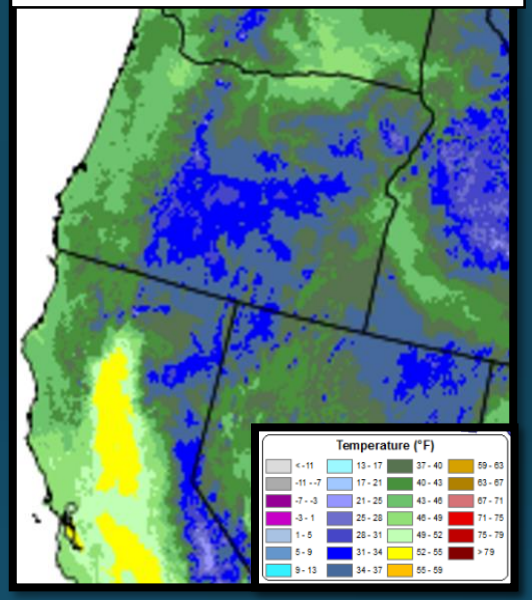




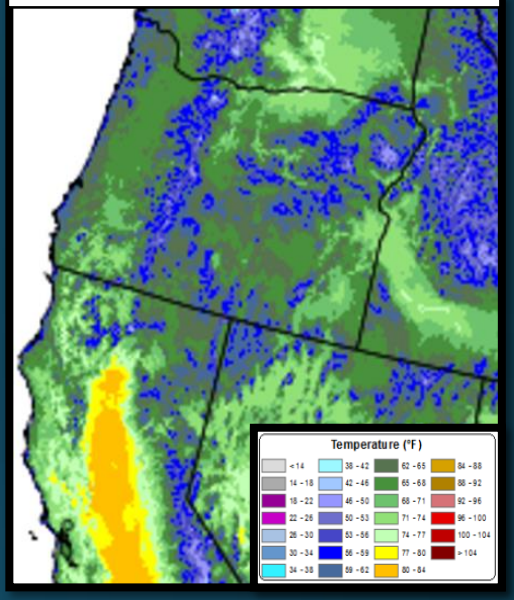
Looking Ahead: Normals for May (1981-2010)

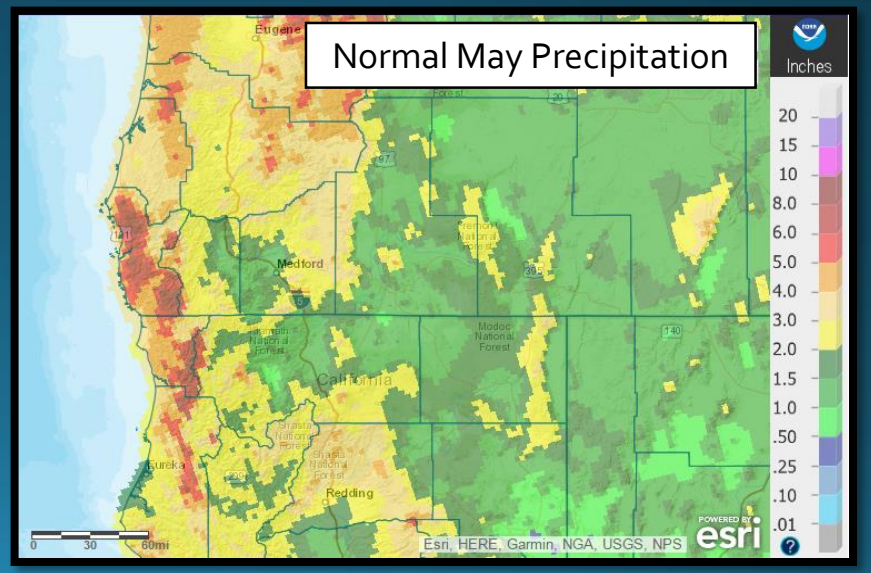
- ***Temperatures:*** Along the coast, lows are typically in upper 40s to lower 50s with highs in the upper 50s to mid 60s. The Interior West Side valleys usually experiences average lows in the 40s to 50s and highs in the lower 60s to mid 70s. Lows are typically in the 30s across the higher mountains 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 Siskiyous 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.

Minimum Temperatures



Maximum Temperatures





May 2020 Outlook

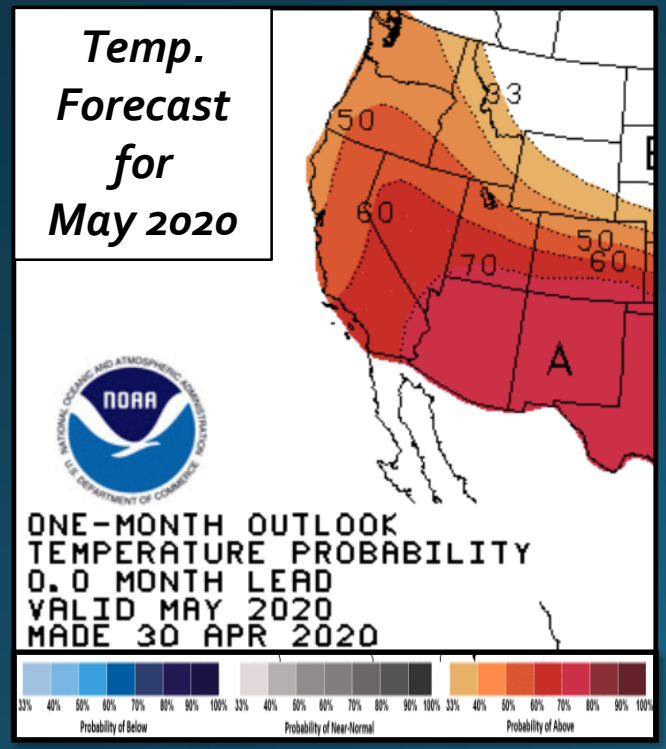
(Written May 3rd)

The official Climate Prediction Center forecast for May 2020 predicts increased probabilities for above normal temperatures and equal chances of above, near, and below normal precipitation across the Medford NWS forecast area.

- Our localized ***May temperature*** forecast is for ***ABOVE normal temperatures, most likely between +3°F and +8°F from the 1981-2010 normals***.
- Our localized ***May precipitation*** forecast is for ***BELOW normal precipitation across the forecast area (in the 20-80% range).*** It's likely to be closest to normal precipitation from about the Coast Range westward.

Summary: There is high confidence in this month being above normal for temperatures. Operational and ensemble models suggest temperatures peaking at 10-20 degrees Fahrenheit above normal during the 2nd week of the month, primarily between the 7th and the 11th due to a strong ridge of high pressure along the West Coast. The precipitation forecast is more difficult, as anomalous low pressure is expected in the Gulf of Alaska for the month which should bring some frontal systems and precipitation to coastal and near coastal areas, at times. Overall, the month is most likely to be characterized by anomalous southwesterly flow which will open the door for showers and thunderstorms from the 2nd week of the month onward. Due to the hit and miss nature of convection and the relatively low normal precipitation amounts for May, some locations could get significant short duration precipitation, but some won't.

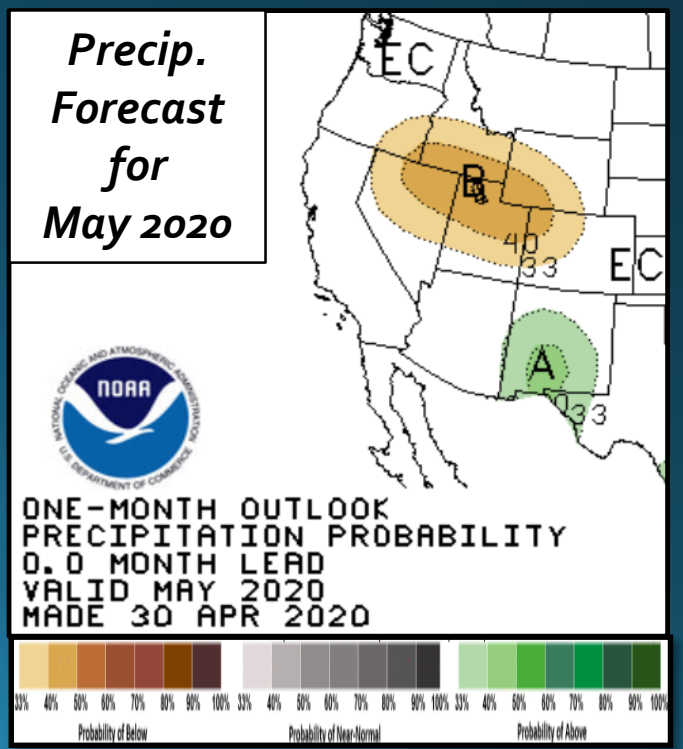
Temp. Forecast for May 2020



Expected Impact, May 2020:

Drier than normal conditions will yield a favorable environment for frost and freeze on clear nights mainly during the 1st week of the month. Warmer than normal temperatures and below normal precipitation are likely to heighten drought concerns and depiction in the USDM. Early season wildfires are likely and could become problematic during hotter and windier spells. Anomalous southwest flow brings significant uncertainty to the precipitation forecast, but also an increased potential for showers and thunderstorms from the 2nd week onward. Thunderstorms could be locally damaging and possibly severe. One period when this could occur is during ridge break down around the 11th. A more westerly flow mid-late month means temperatures are less likely to be as anomalously warm and precipitation could occur from shortwaves embedded in the flow.

Precip. Forecast for May 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 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**