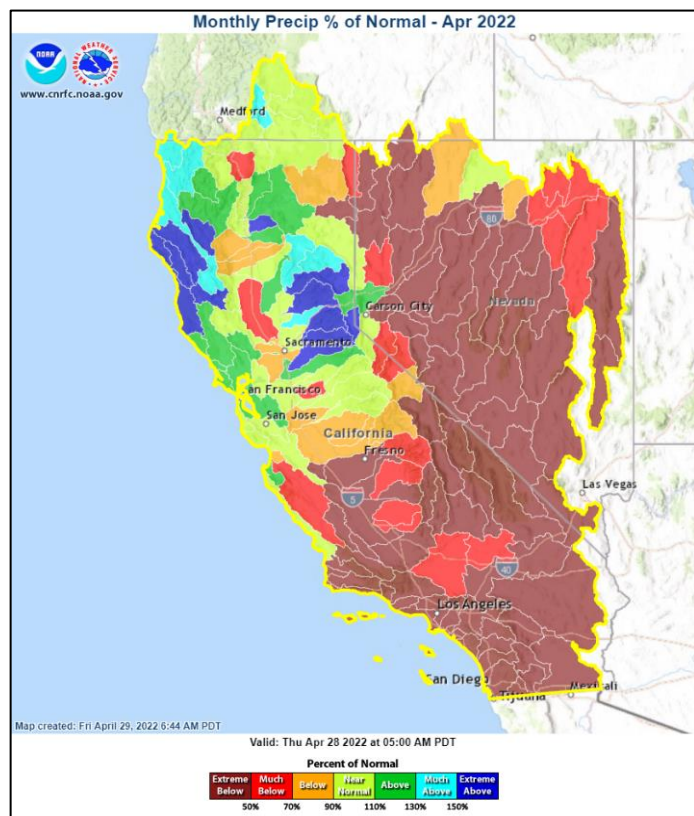


WY2022 Water Resources Update – April 29, 2022

Summary:

- April rains helped some watersheds; long-term deficits remain over much of the region.
- Some snow accumulation in Northern Calif. Below normal precipitation is forecast for May.
- Water supply forecasts improved in the Northern Sierra but declined in the Southern Sierra

Details:



April precipitation has boosted water supply in several northern watersheds, from the Feather River down to the Cosumnes River.

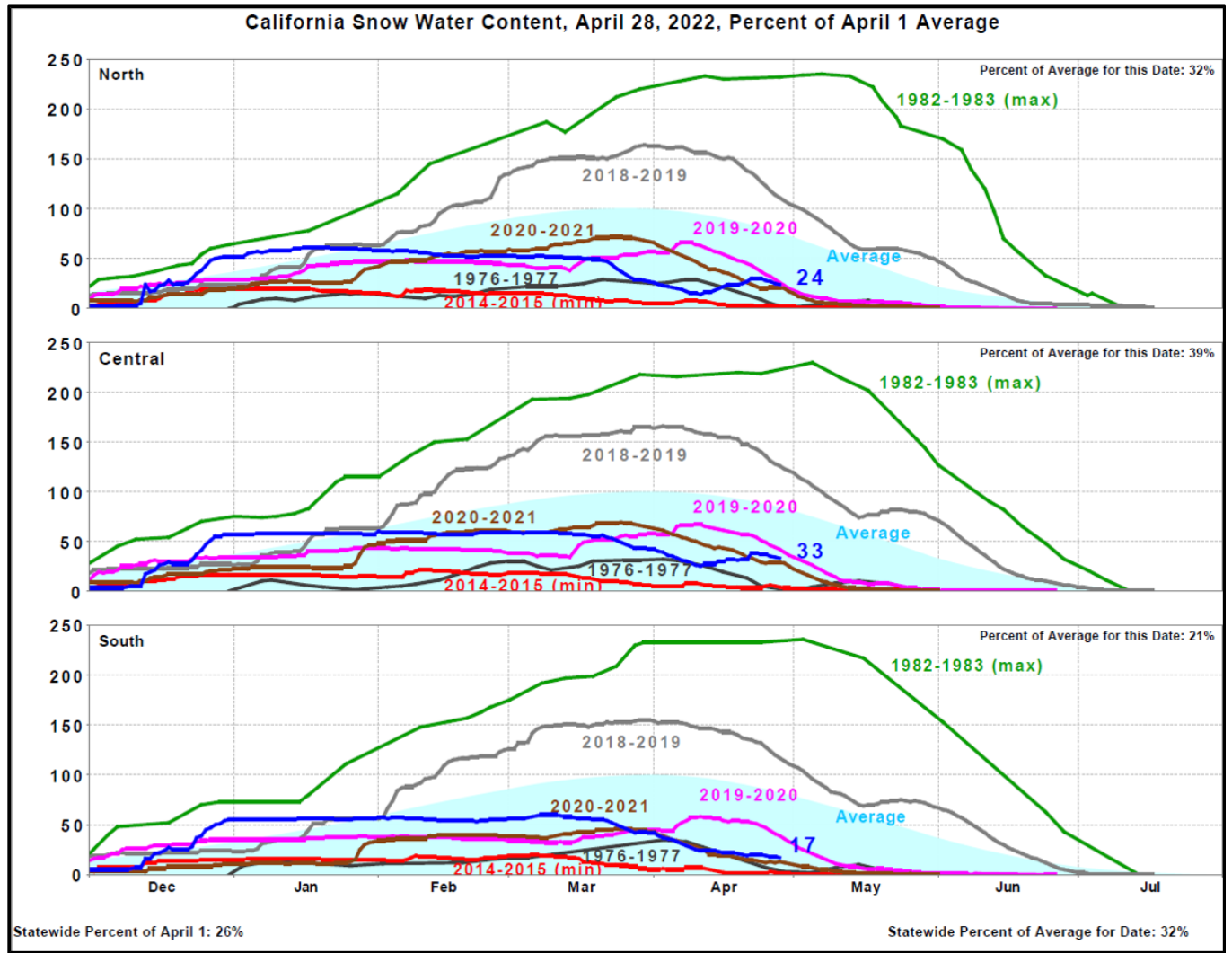
After only 3 inches in the 8 Station Index for Jan-March, the month of April saw 6 inches of precipitation (141% of average for the month).

Deep drought remains over much of the entire region as we near the close of the third below normal water year in a row (WY2020 – WY2022).

The table below shows how April's beneficial rains did little to erase the deficits from the first three months of the year. WY2022 remains the **driest calendar year on record** (since 1922) for the first 4 months of the year.

	N. SIERRA - 8 STATION				SAN JOAQUIN - 5 STATION				TULARE - 6 STATION				COMBINED
Data in Inches	Jan	Feb	Mar	Apr	Jan	Feb	Mar	Apr	Jan	Feb	Mar	Apr	Jan - Apr 8/5/6 Stations
2022	1.3	0.4	1.3	6.1	0	0.2	1.7	2.2	0	0.5	1.4	1.1	16.2
2013	1.35	0.77	3.67	2	1.28	0.69	2.81	1.28	1.86	1.56	1.06	0.66	18.99
1977	3.14	3.18	2.57	0.76	2.77	2.42	2.2	0.26	2.22	1.53	1.33	0.13	22.51
2015	0.3	7.6	1	2.3	0.2	4	0.4	2.3	0.5	3.3	0.2	0.9	23
1966	7.11	4.15	2.98	2.15	1.77	3.23	1.02	2.02	1.73	2.41	0.59	1	30.16
1924	3.55	3.94	2.67	0.89	2.74	1.34	4.45	1.6	1.3	0.85	5.06	1.89	30.28
1972	4.26	5.03	2.99	4.47	2.29	2.02	0.36	4.08	1.75	1.33	0.25	1.62	30.45
1976	0.74	5.93	2.42	2.7	0.38	4.69	3.68	2.31	0.09	3.41	3.25	2.19	31.79

Snowpack Trends



Snowpack in the Sierra has recovered slightly in the Northern and Central Sierra, passing up WY2021.

Looking at the changes in snowpack compared to April 1, 2022, only the Northern California snow pillow data have shown an increase over the month of April:

California Snowpack changes during April (as % of average for Date)

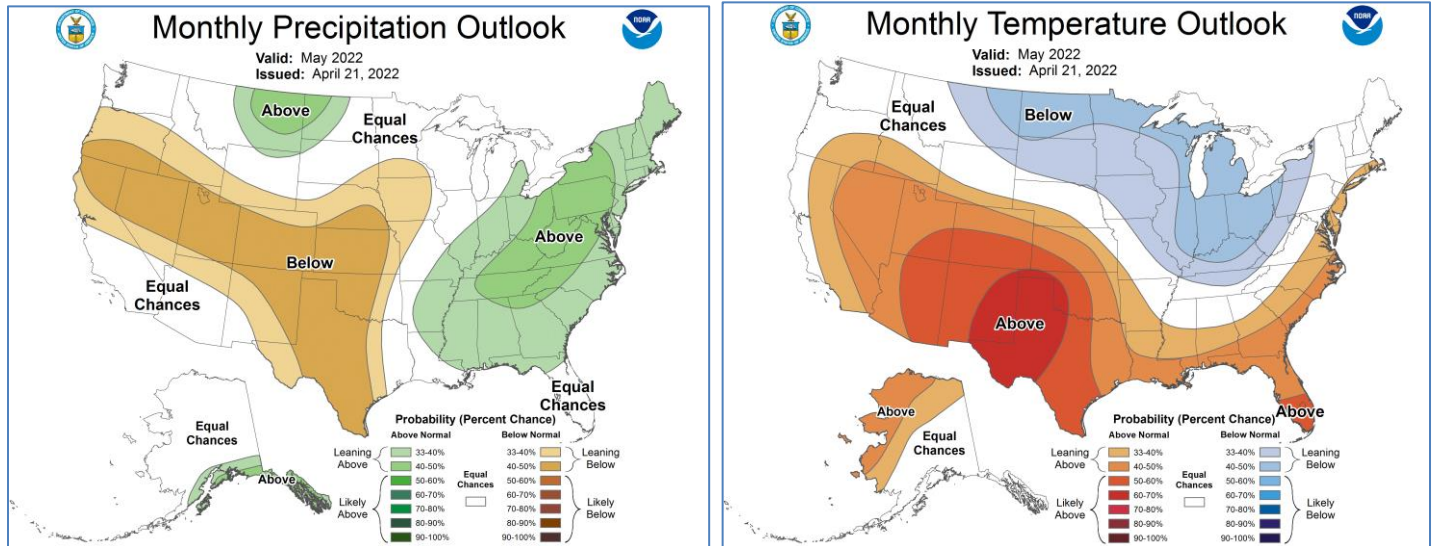
	Northern	Central	Southern	Statewide
April 1st	26%	42%	42%	37%
April 28th	32%	39%	21%	32%

Source of graphic:

https://cdec.water.ca.gov/reportapp/javareports?name=PLOT_SWC.pdf

May Outlook

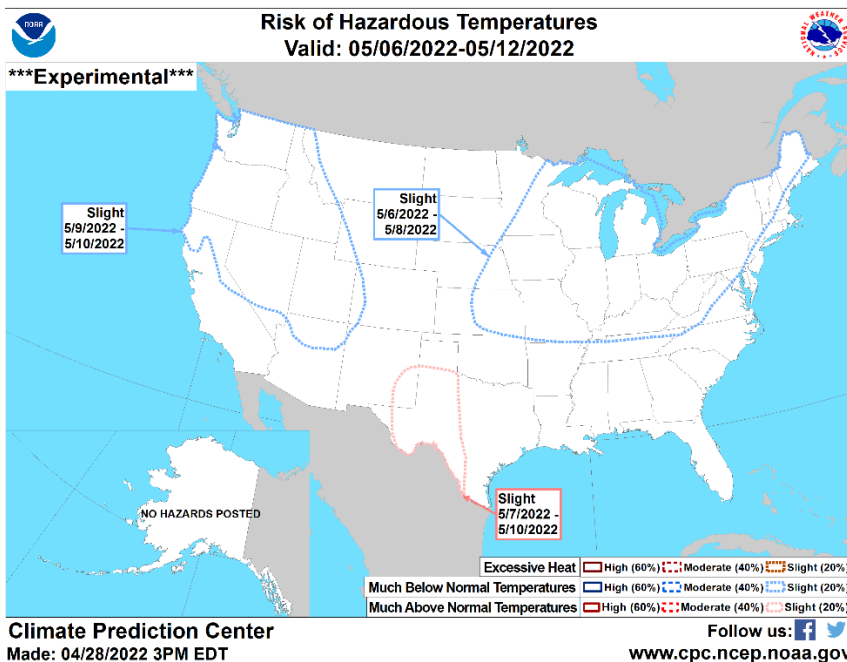
Nothing much to say about the outlook for May, beyond it does not look promising at this point. All the monthly outlooks that I have seen are pointing to an overall below average month.



Source:

https://www.cpc.ncep.noaa.gov/products/predictions/30day/off14_prdp.gif

https://www.cpc.ncep.noaa.gov/products/predictions/30day/off14_temp.gif



Despite the overall May outlook, there does seem to be some cooler and unsettled weather expected in Week 2.

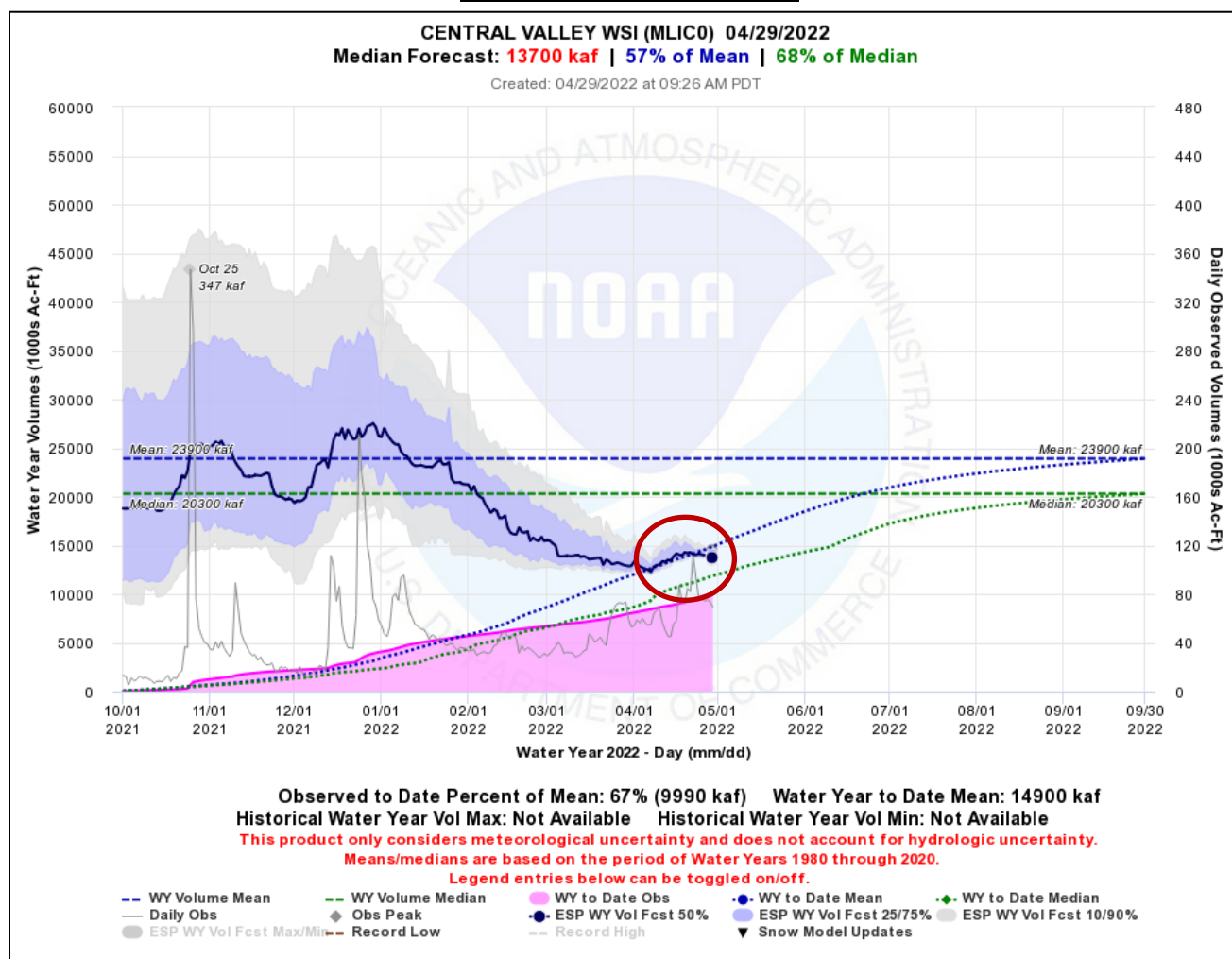
CPC has a 20% chance for cooler weather in week 2 (May 6-12), which would also indicate a chance for some precipitation as well. Though chances are low, it's worth noting.

Source:

https://www.cpc.ncep.noaa.gov/products/predictions/threats/threats.php#haz_discussion

Water Supply Impacts (HEFS = Hydrologic Ensemble Forecast Service)

Water Year Runoff Projection

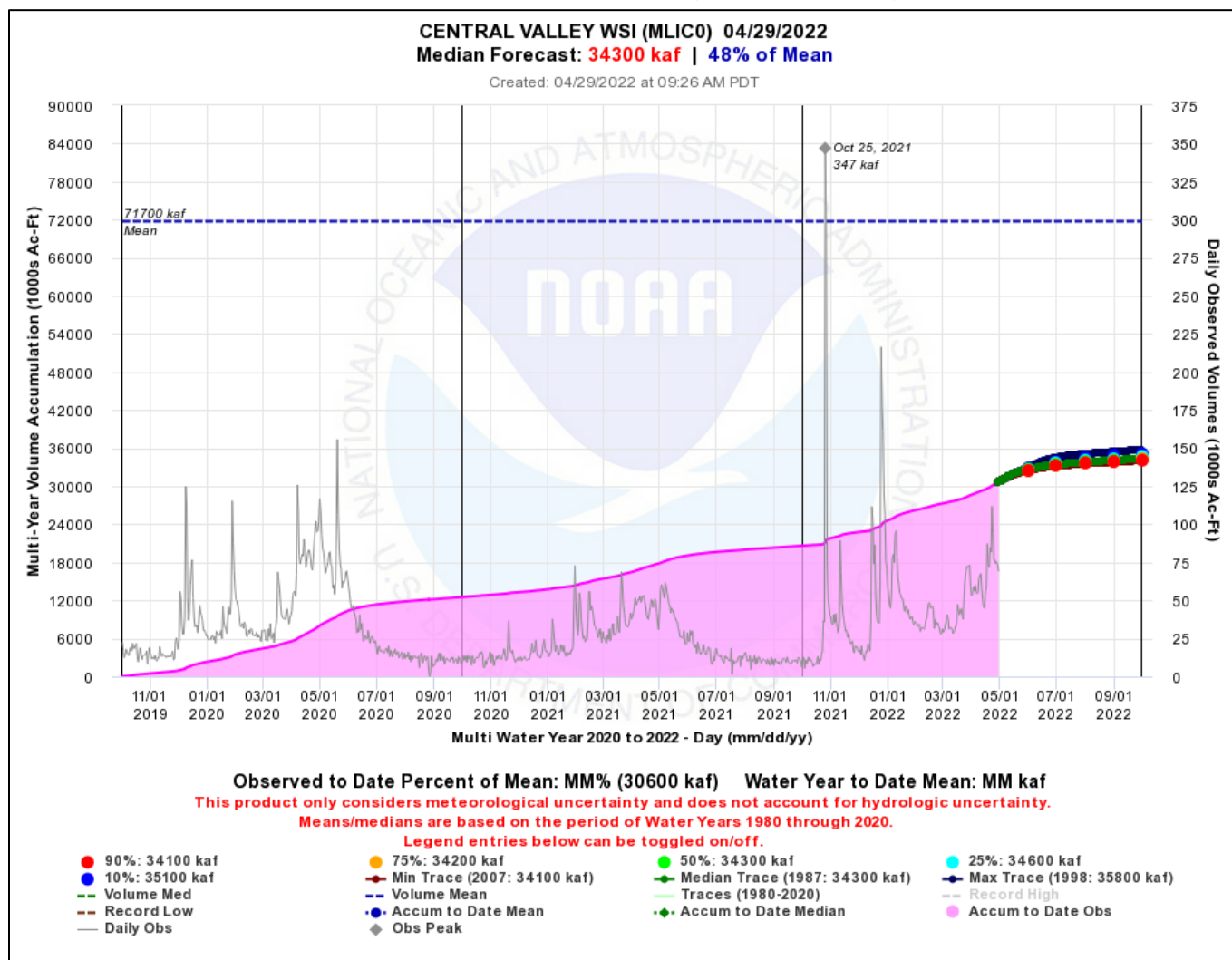


Source: <https://www.cnrfc.noaa.gov/ensembleProduct.php?id=MLIC0&prodID=9>

Over the past two weeks, CNRFC water supply forecasts have risen slightly, mostly due to the beneficial storm of April 22nd over Northern and Central California.

For those watching the 10 and 90 percent exceedance numbers, please remember that as the future weather becomes less and less of a factor, the HEFS output has too narrow a spread between the 10 and 90 percent exceedances. HEFS is not currently able to incorporate the uncertainty in snowpack and soil conditions.

3-Water Years Runoff Accumulation (WY2020-WY2022)



Source: <https://www.cnrfc.noaa.gov/ensembleProduct.php?id=MLIC0&prodID=11>

Conclusion:

This last image shows the course of the 3-year drought and the runoff from the Central Valley 8 River Index. WY2021 is clearly the driest year. The October and December storms of WY2022 provided the most runoff in the past 3 years, but the past 4 months put the brakes on any drought recovery. Most likely our runoff for the past 3 years will be below 50% of average, putting us at a deficit of over 37 million acre-feet (MAF) – That's a lot of water.

CNRF

Pete Fickenscher