

California Drought & Water Supply Update 4/20/2023

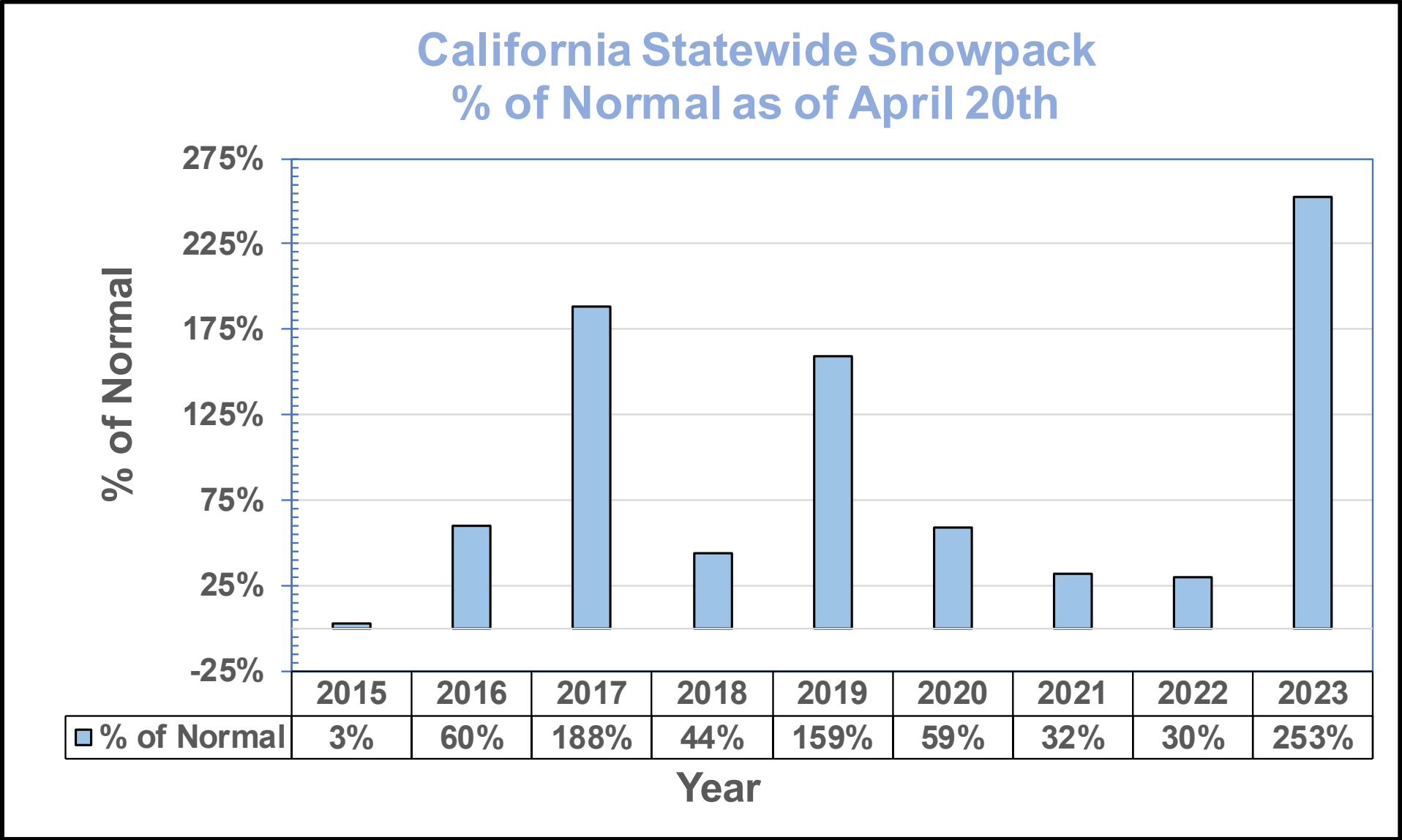
WINTER REPORT

 MOUNTAIN CONDITIONS  LIFT/TRAIL STATUS  LIVE CAMS  MAPS

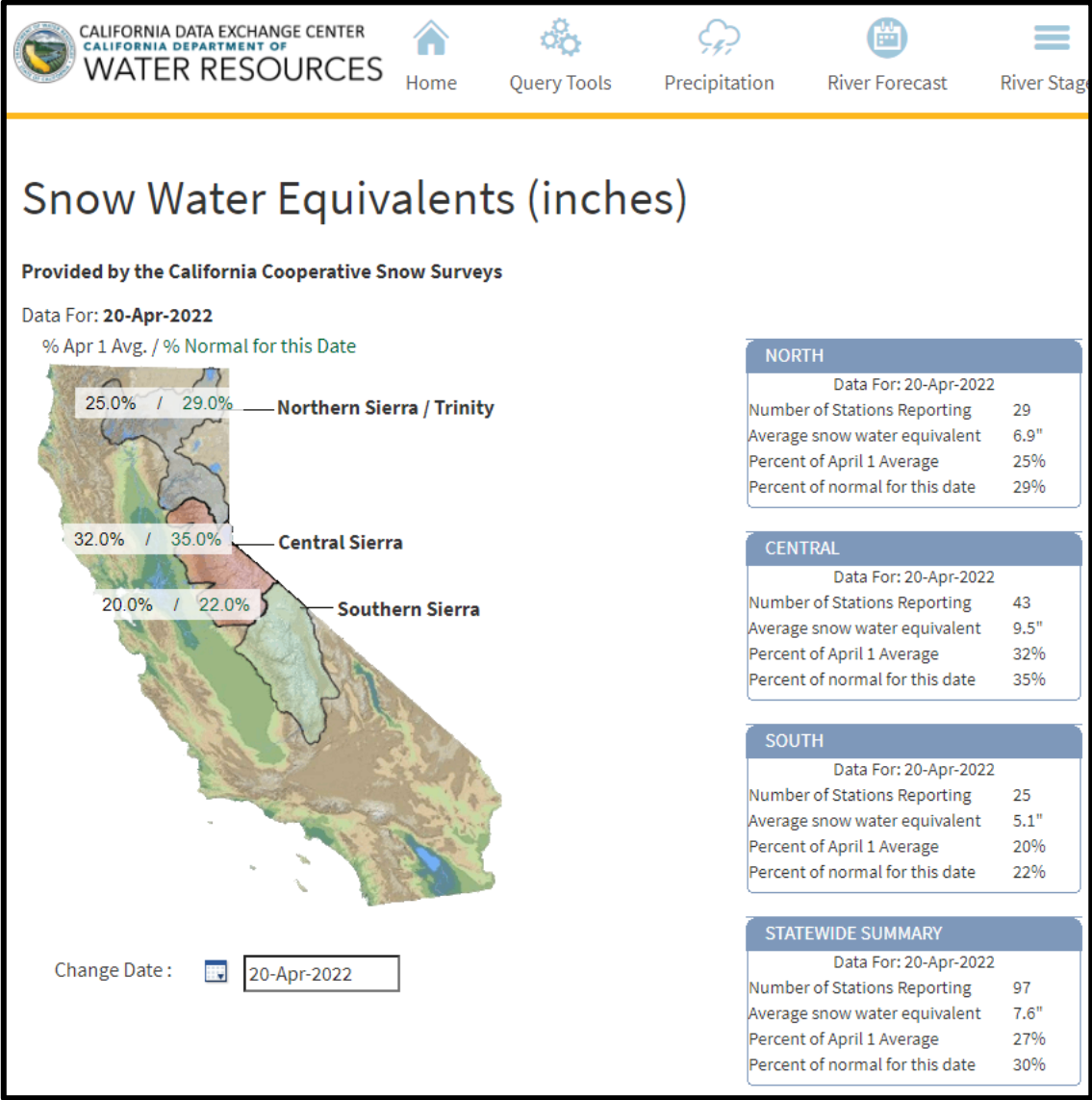
Mammoth Mountain - Main Lodge - Snow in Inches

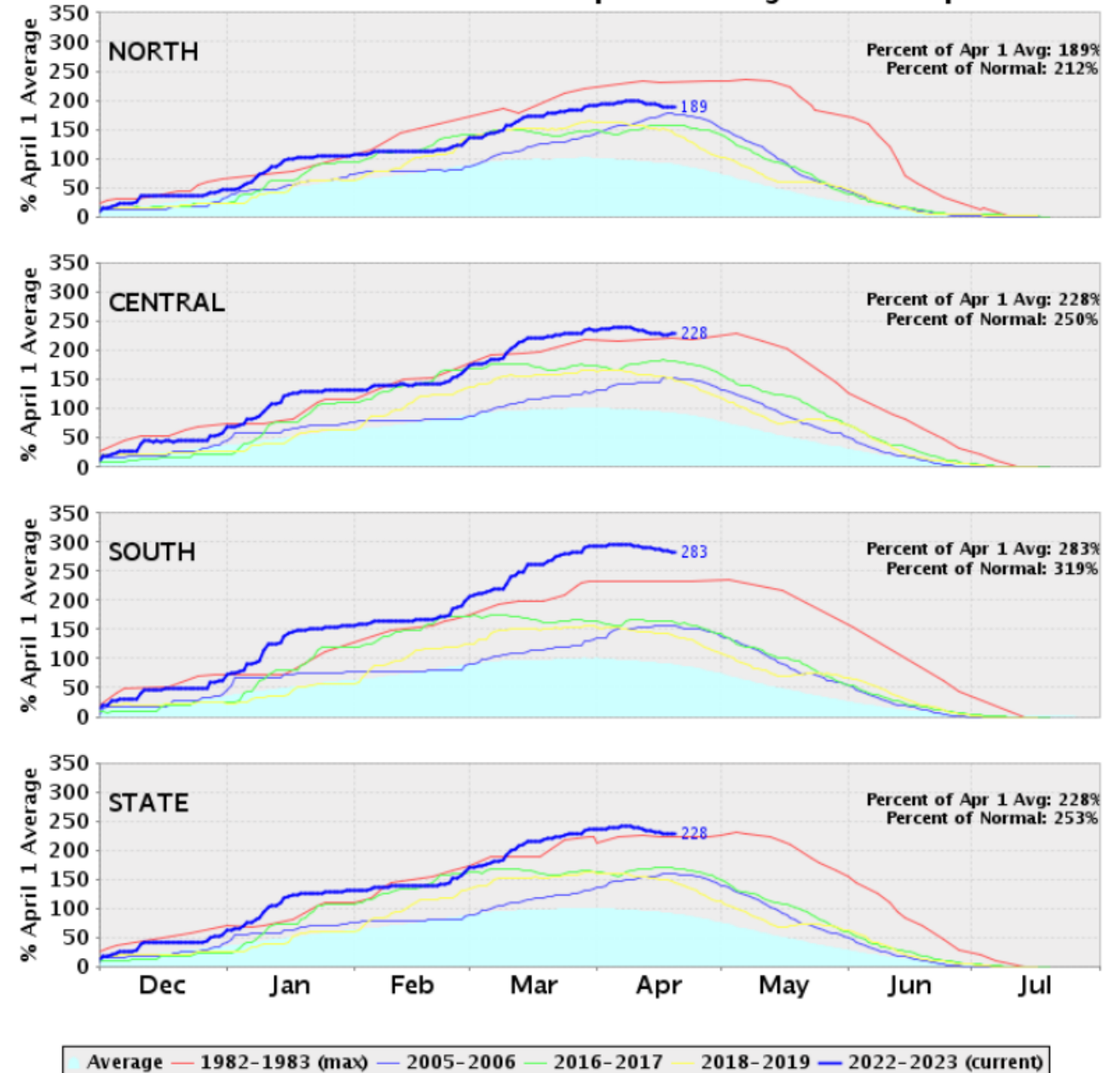
New Snow in April 2023 as of 4/20/23	April New Snow Record - 2006	Historical Records			
		Through April 20th		Season Total	
		WY '22/'23	WY '10/'11	Normal	'10/'11
3	118	705	637	400	669

As of April 20th, 2023, the State-wide average snowpack is 253% of normal (up from 235% of normal on March 30th) and is 228% of the April 1st average! The highest % of normal previously was seen on April 1st, 1983 (see comparison on page 3).



The maps below compare the snowpack in the various regions of California today vs. 1 year ago. With almost all major reservoirs already above normal for this time of year and a Southern Sierra snowpack that is 319% of normal, we expect major flooding issues in many places in the central valley once warmer temperatures arrive over the next 2 months.



**CA Snow Water Content - Percent of April 1 Average For: 20-Apr-2023**

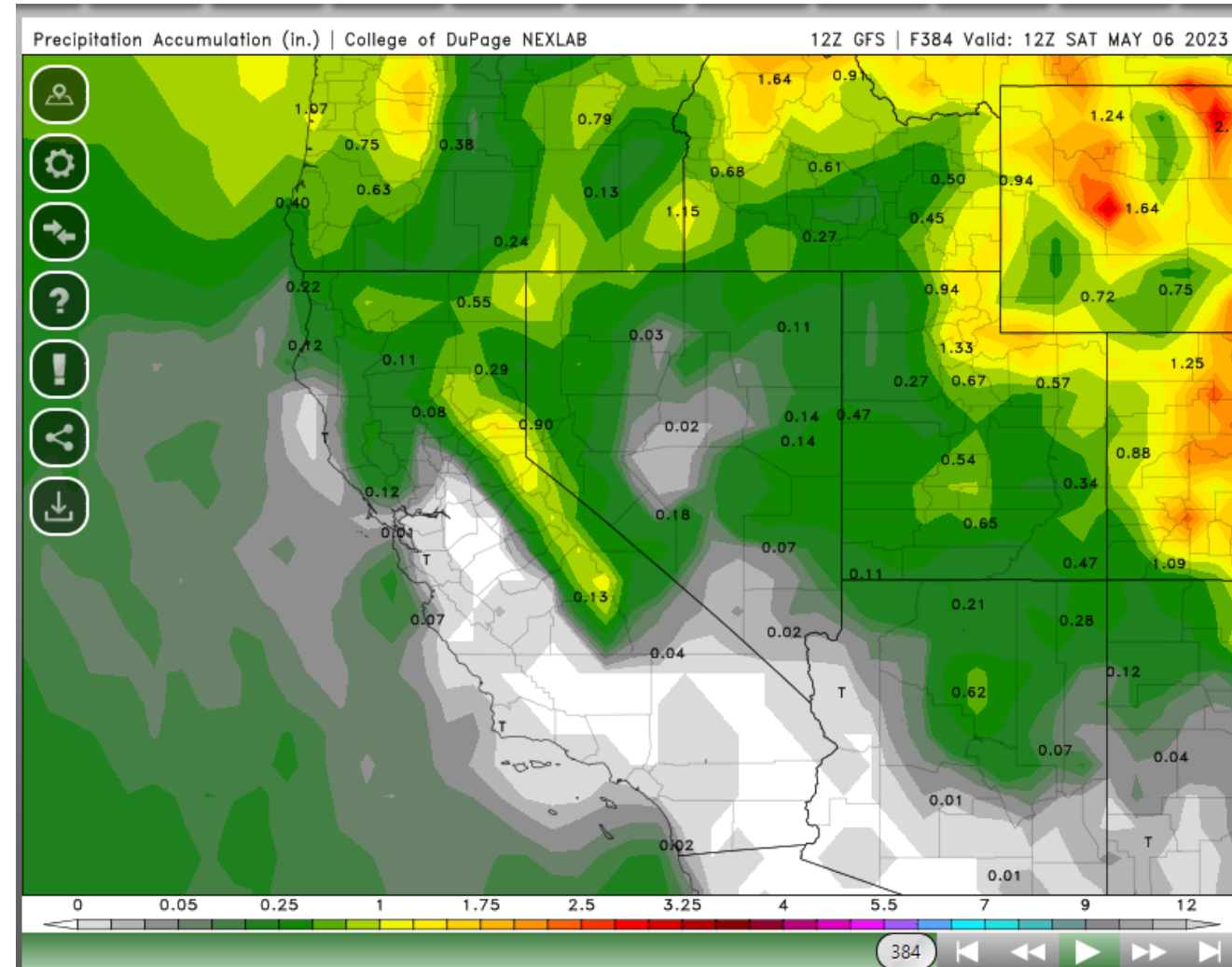
The graphs to the right show the current California Snow Water Content as a % of the April 1st average in comparison to the previous record years (1982/83, 2005/06, 2016/17, 2018/19). As you can see, the southern region is a record by a substantial amount!

As of 4/20/23, the year-to-date precipitation index totals average 162% of normal statewide. This is down from 172% on March 30th due to the drier weather pattern we have been experiencing over the past 20 days.

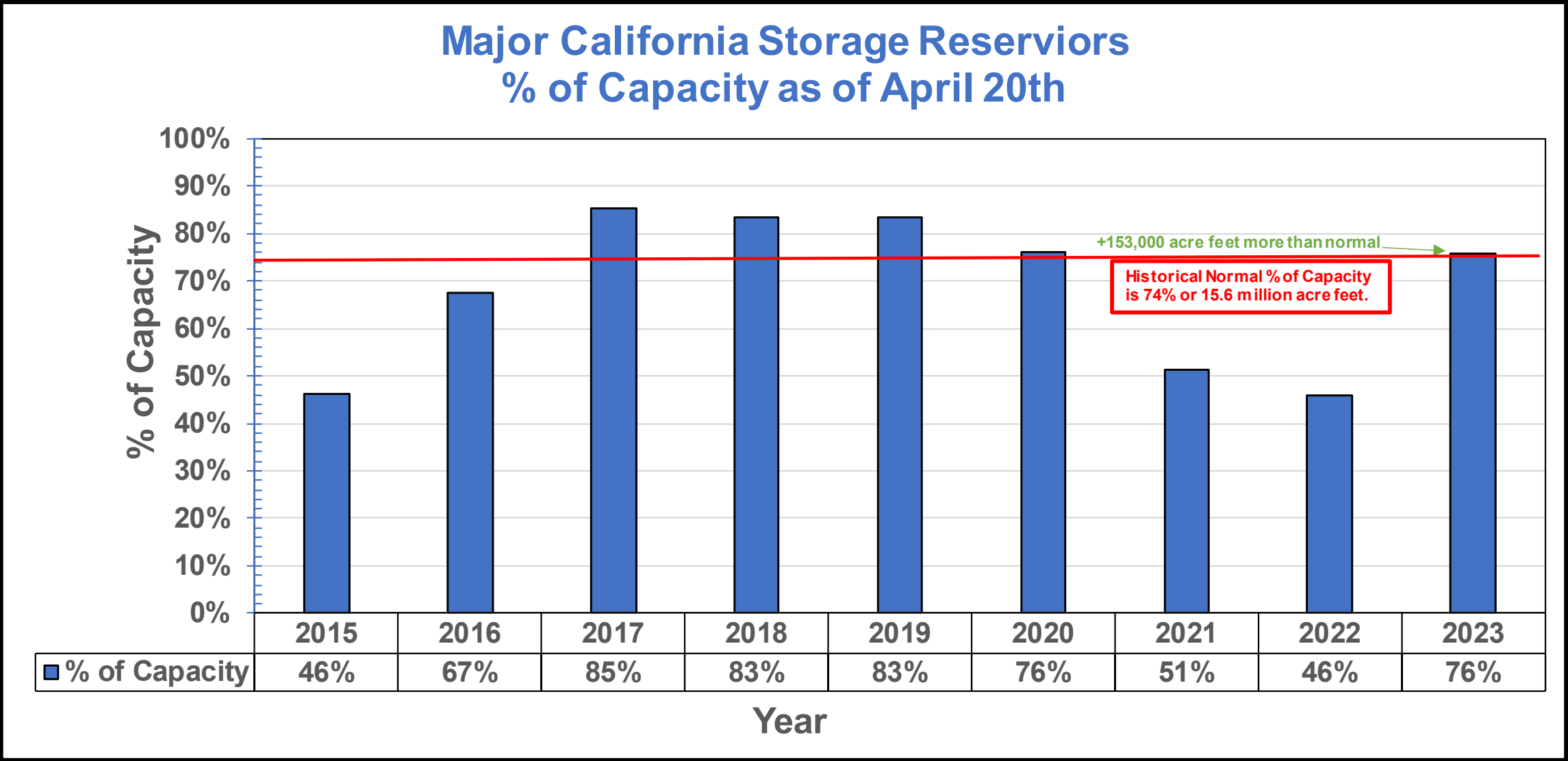
YTD California Precipitation Index Totals As of 4/20/23		
Region	inches of Precip	% of YTD Normal
8 Station Northern	61.0	127%
5 Station Central	61.2	173%
6 Station Southern	51.1	203%
Combined Stations:	173.3	162%

Current 16-day Precipitation Forecast – as of 4/20/23

The current 16-Day GFS Precipitation 12z Model run as of 4/20/23 shows very little precipitation will occur over the next 16-days. This is good news for farmers who need conditions stay dried out so they can continue normal operations moving forward.



The Combined Reservoir level have increased by 9.6-million-acre feet since December 11th, 2022. The total volume storage as of 4/20/23 is now slightly above normal for this time of year (+153,000-acre-feet or 101% of YTD normal level)!



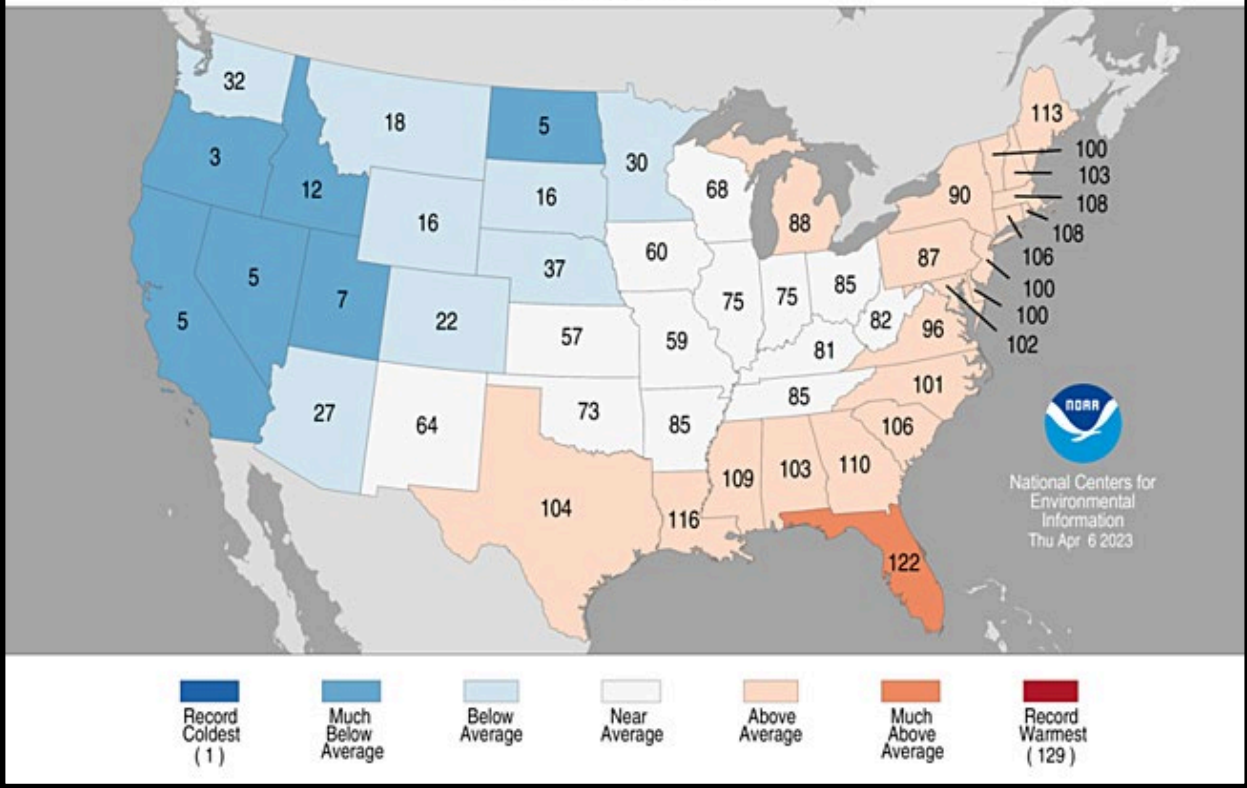
Major California Water Storage Reservoir's Levels as of April 19th, 2023																							
Reservoir	Total Capacity	% of Capacity as of April 19th										Storage level in Millions of acre feet as of April 19th											
		2015	2016	2017	2018	2019	2020	2021	2022	2023		2015	2016	2017	2018	2019	2020	2021	2022	2023			
Shasta (F)	4.552	60%	92%	96%	91%	89%	82%	52%	39%	94%		2.731	4.188	4.370	4.142	4.051	3.733	2.367	1.775	4.279			
Trinity (F)	2.448	49%	59%	95%	79%	88%	80%	53%	33%	36%		1.200	1.444	2.326	1.934	2.154	1.958	1.297	0.808	0.881			
Oroville (S)	3.538	51%	93%	84%	65%	87%	69%	42%	50%	89%		1.804	3.290	2.972	2.300	3.078	2.441	1.486	1.769	3.149			
New Melones (F)	2.420	21%	27%	81%	86%	81%	80%	62%	39%	61%		0.508	0.653	1.960	2.081	1.960	1.936	1.500	0.944	1.476			
Folsom (F)	0.977	59%	81%	78%	81%	84%	65%	37%	68%	75%		0.576	0.791	0.762	0.791	0.821	0.635	0.361	0.664	0.733			
San Luis (F,S)	2.039	64%	50%	97%	89%	93%	76%	52%	46%	99%		1.305	1.020	1.978	1.815	1.896	1.550	1.060	0.938	2.019			
Don Pedro (L)	2.030	42%	65%	83%	91%	80%	84%	68%	62%	79%		0.853	1.320	1.685	1.847	1.624	1.705	1.380	1.259	1.604			
Millerton (F)	0.520	38%	56%	49%	90%	53%	57%	40%	67%	32%		0.198	0.291	0.255	0.468	0.276	0.296	0.208	0.348	0.166			
Exchequer (L)	1.025	10%	42%	66%	86%	68%	66%	41%	37%	63%		0.103	0.431	0.677	0.882	0.697	0.677	0.420	0.379	0.646			
Pyramid (S)	0.171	93%	93%	92%	92%	92%	92%	93%	92%	89%		0.159	0.159	0.157	0.157	0.157	0.157	0.159	0.157	0.152			
Castaic (S)	0.325	29%	45%	91%	90%	91%	91%	78%	54%	96%		0.094	0.146	0.296	0.293	0.296	0.296	0.254	0.176	0.312			
Pine Flat (F)	1.000	20%	47%	51%	84%	56%	61%	31%	45%	51%		0.200	0.470	0.510	0.840	0.560	0.610	0.310	0.450	0.510			
Total:	21.045	46%	67%	85%	83%	83%	76%	51%	46%	76%		9.731	14.203	17.947	17.550	17.570	15.994	10.804	9.667	15.927			
Change vs. March 29th 2023:		-0.3%	4.6%	4.6%	5.6%	2.0%	3.3%	0.1%	2.2%	1.5%		(0.063)	0.964	0.978	1.185	0.411	0.696	0.022	0.464	0.325			
												Change vs.March 29th 2023											
Statewide Snowpack as a % of Normal as of Mar 30th, 2023:	3%	60%	188%	44%	159%	59%	32%	30%	253%			Change Since December 11th 2022								9.589			
Snowpack: Avg. Statewide snow water equivalent inches:	0.7	15.2	47.3	11.0	39.4	15.2	8.0	7.6	58.1														
												Current vs. Same Time Last Year:		6.259	30%								
												Current vs. Prior 8yr Avg:		1.743	8%	<div></div> = 5.56 M acre ft Increase vs. Last year in these key Agricultural Supply Reservoirs.							
										Current													
										2015	2016	2017	2018	2019	2020	2021	2022	2023					
																				Current vs. YTD Normal:		101%	
																				LY vs. YTD Normal:		62%	
																				Initial 35% on Feb 22, Revised to 80% on Mar 28th, to 100% on April 20th			
																				Initial 100% on Feb 22, 2023			
																				Initial 35% on Feb 22, Revised to 80% on Mar 28th, to 100% on April 20th			
																				Initial 100% on Feb 22, 2023			
																				Initial 100% on Feb 22, 2023			
																				Initial 20% on Feb 22, Revised to 70% on Mar 7th			
																				Initial was 5%. Moved to 30% on 1/26 - to 35% on 2/22, to 75% on 3/24, to 100% on 4/20			
(S) = State Water Project (F) = Federal Water Project (L) = Local Water Project																							

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March 2023 was the 5th Coldest and 7th Wettest March on record (based on 129 years of record keeping). Unfortunately, this provided very poor conditions for the back-half of bloom as well as for the first 20 days of post-bloom.

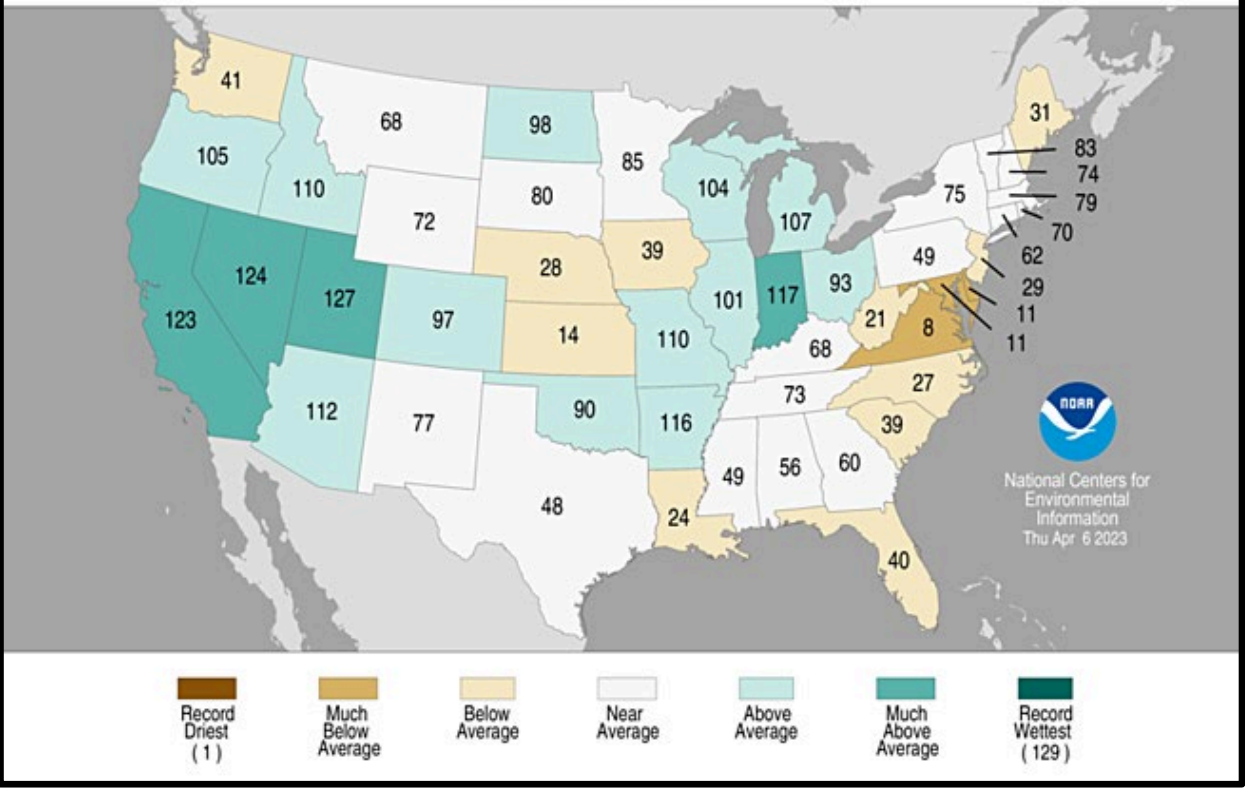
Statewide Average Temperature Ranks

March 2023
Period: 1895–2023

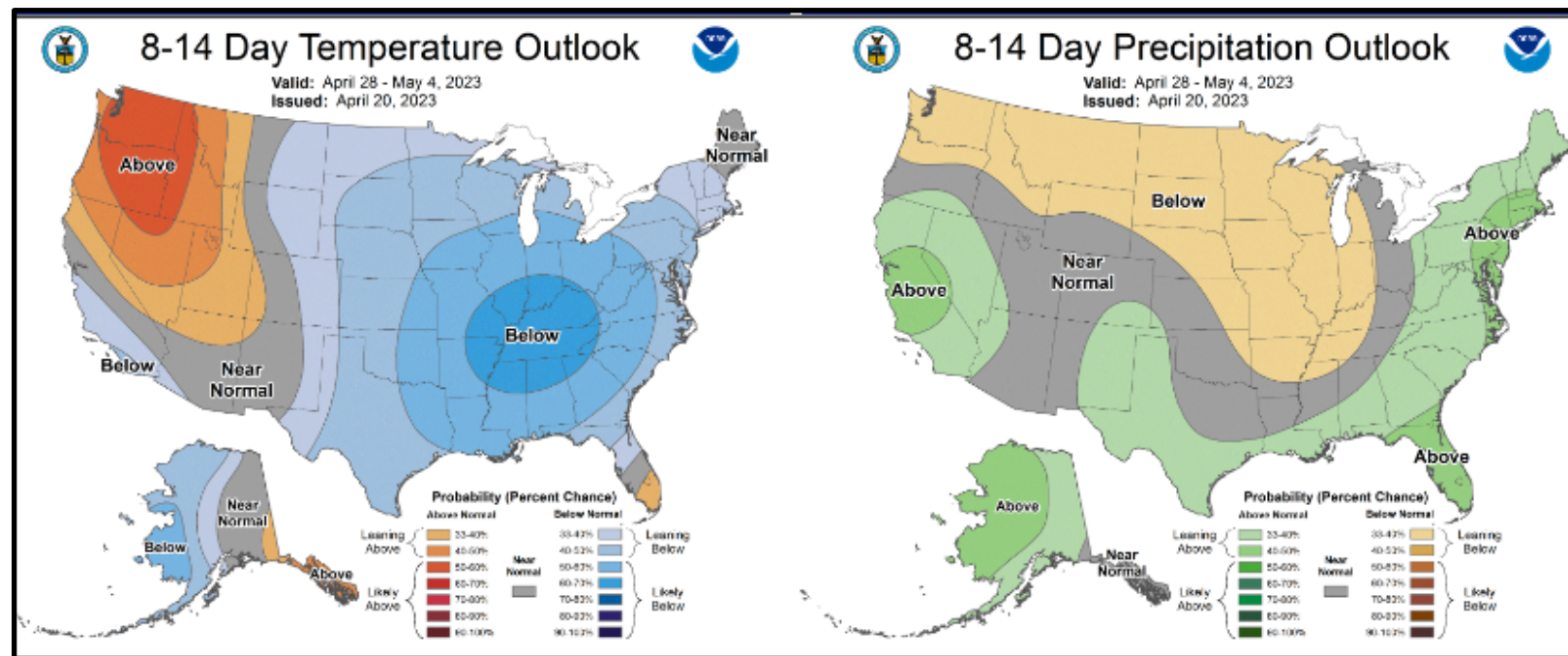
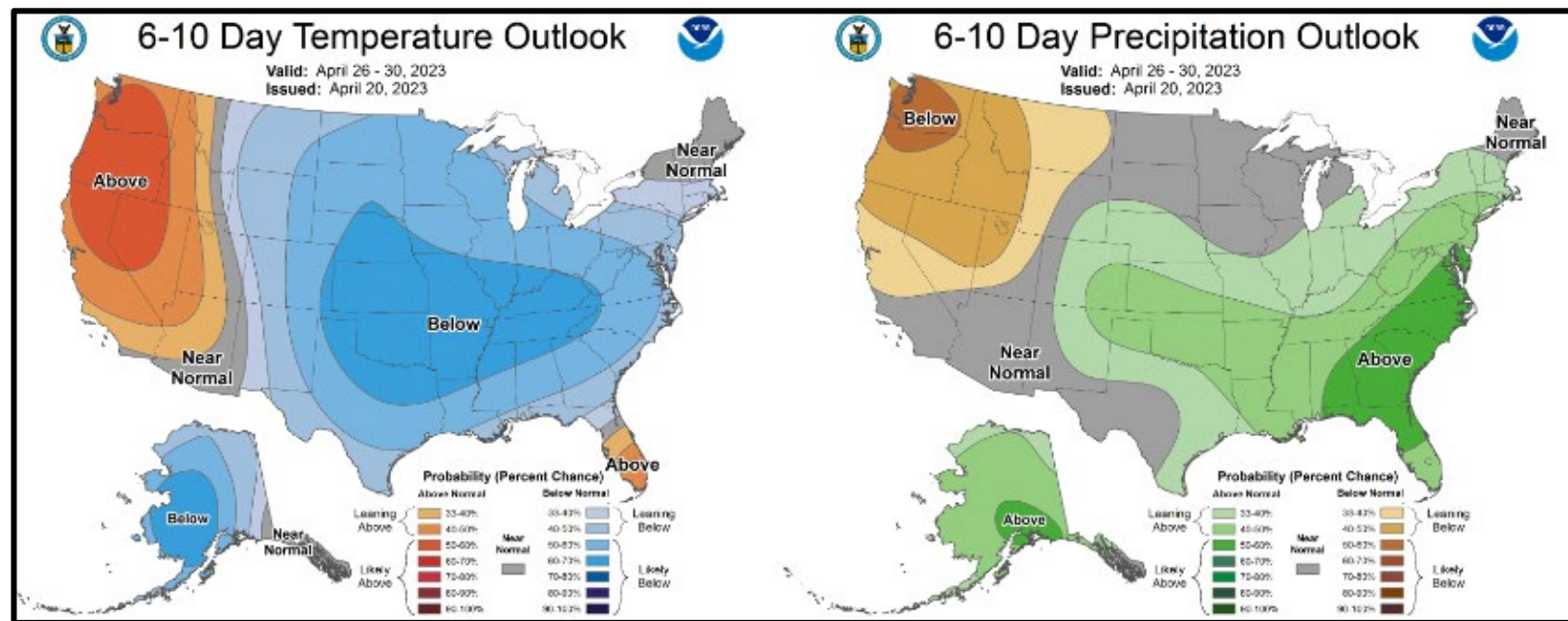


Statewide Precipitation Ranks

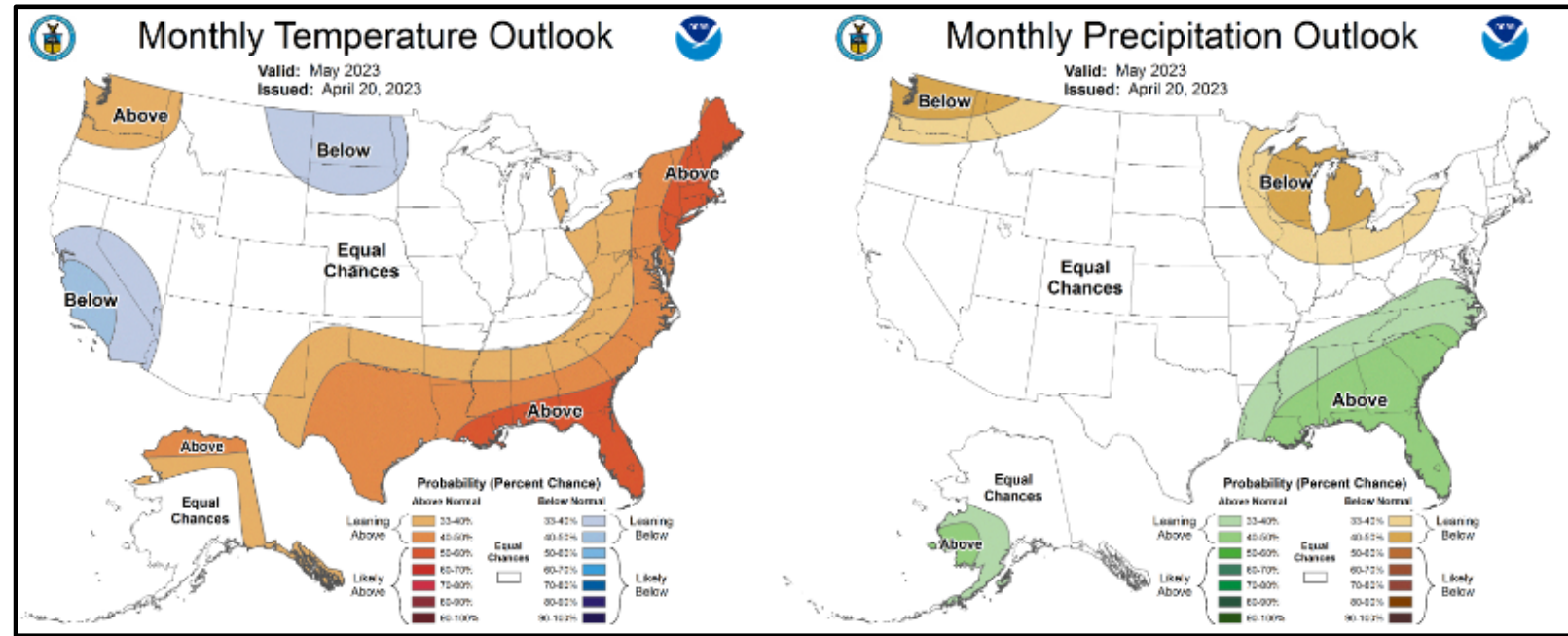
March 2023
Period: 1895–2023



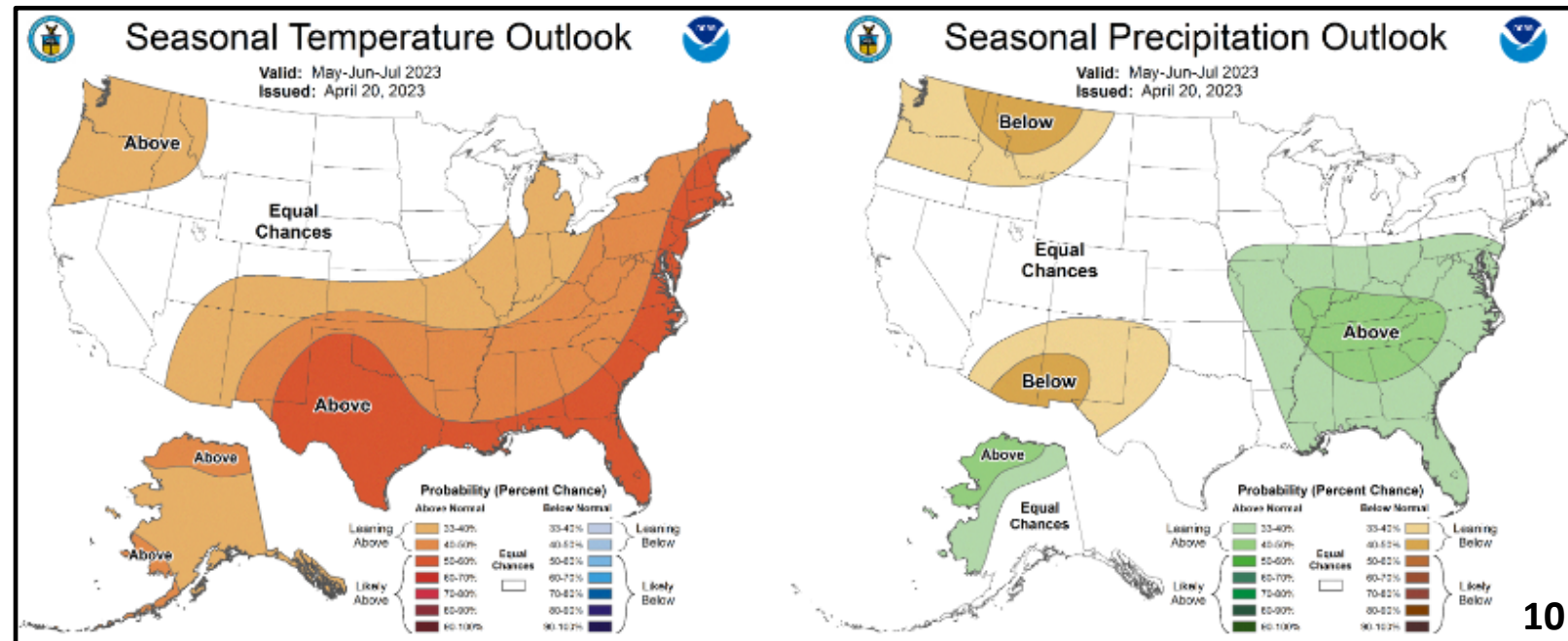
The Current NOAA 6-10 Day Outlook is showing that drier and warmer conditions are likely through April 30th. The 8-14 Day Temperature and Precipitation Outlook is showing relatively normal temperatures and a slightly higher chance that above normal precipitation will occur in California through the 4th of May.



The Current NOAA 1-Month Temperature and Precipitation Outlook for May made on April 20th shows below normal temperatures for most of California and the likelihood that average precipitation should be expected.



The Current NOAA 3-Month Temperature and Precipitation Outlook for May-July made on April 20th shows normal temperatures precipitation should be expected.

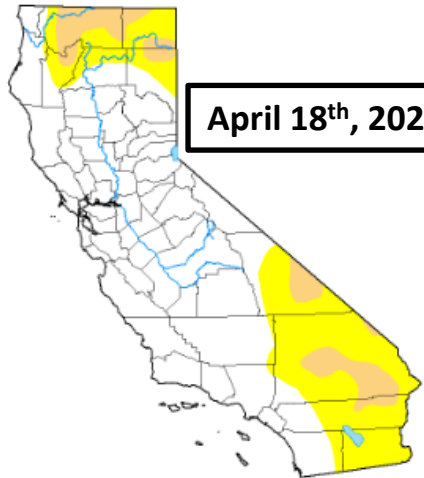


Compare Two Weeks

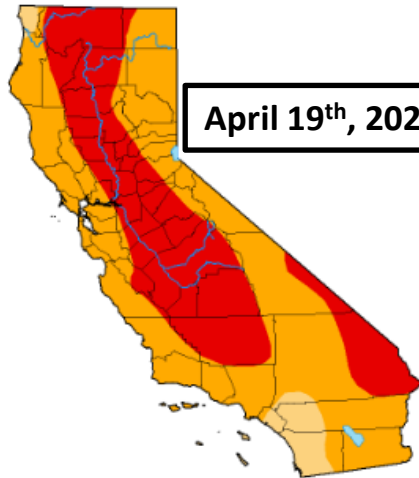
Area type: State Area: California Statistics type: Cumulative Percent Area

Drought Classification

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



April 18th, 2023



April 19th, 2022

Statistics Comparison

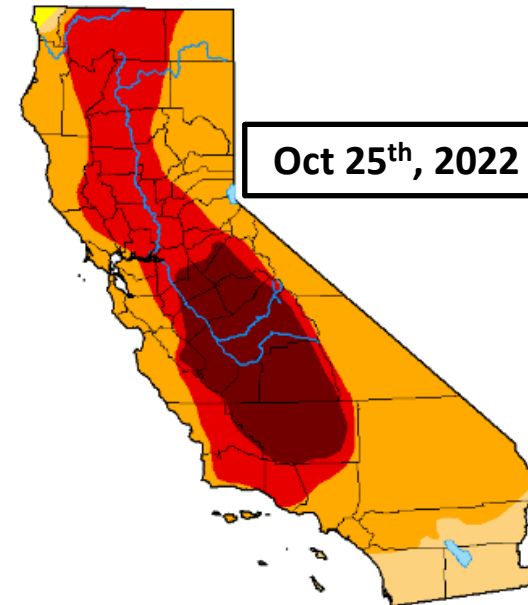
Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
2023-04-18	65.67	34.33	8.79	0.00	0.00	0.00	43
2022-04-19	0.00	100.00	100.00	95.18	40.81	0.00	336
Change	-65.67	65.67	91.21	95.18	40.81	0.00	293

The California Drought Monitor shown to the left compares current conditions on 4/18/23 to the same period one year ago (4/19/22).

As you can see, conditions significantly better than the levels seen last year with only the far north-east and far south-east regions showing any level of drought.

This current map is a massive improvement vs. the map below at the end of October 2022.

U.S. Drought Monitor California



Oct 25th, 2022

October 25, 2022
(Released Thursday, Oct. 27, 2022)
Valid 8 a.m. EDT

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.77	91.83	43.06	16.57
Last Week 10-19-2022	0.00	100.00	99.77	91.83	40.91	16.57
3 Months Ago 07-26-2022	0.00	100.00	99.78	97.47	59.81	12.74
Start of Calendar Year 01-01-2022	0.00	100.00	99.30	67.62	16.60	0.84
Start of Water Year 09-27-2021	0.00	100.00	99.75	94.01	40.91	16.57
One Year Ago 10-26-2021	0.00	100.00	100.00	93.81	83.33	38.74

- Intensity**
- None
 - D0 Abnormally Dry
 - D1 Moderate Drought
 - D2 Severe Drought
 - D3 Extreme Drought
 - D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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droughtmonitor.unl.edu