

# California Drought & Water Supply Update 2/14/2023

## WINTER REPORT

 MOUNTAIN CONDITIONS
  LIFT/TRAIL STATUS
  LIVE CAMS
  MAPS

### Mammoth Mountain - Main Lodge - Snow in Inches

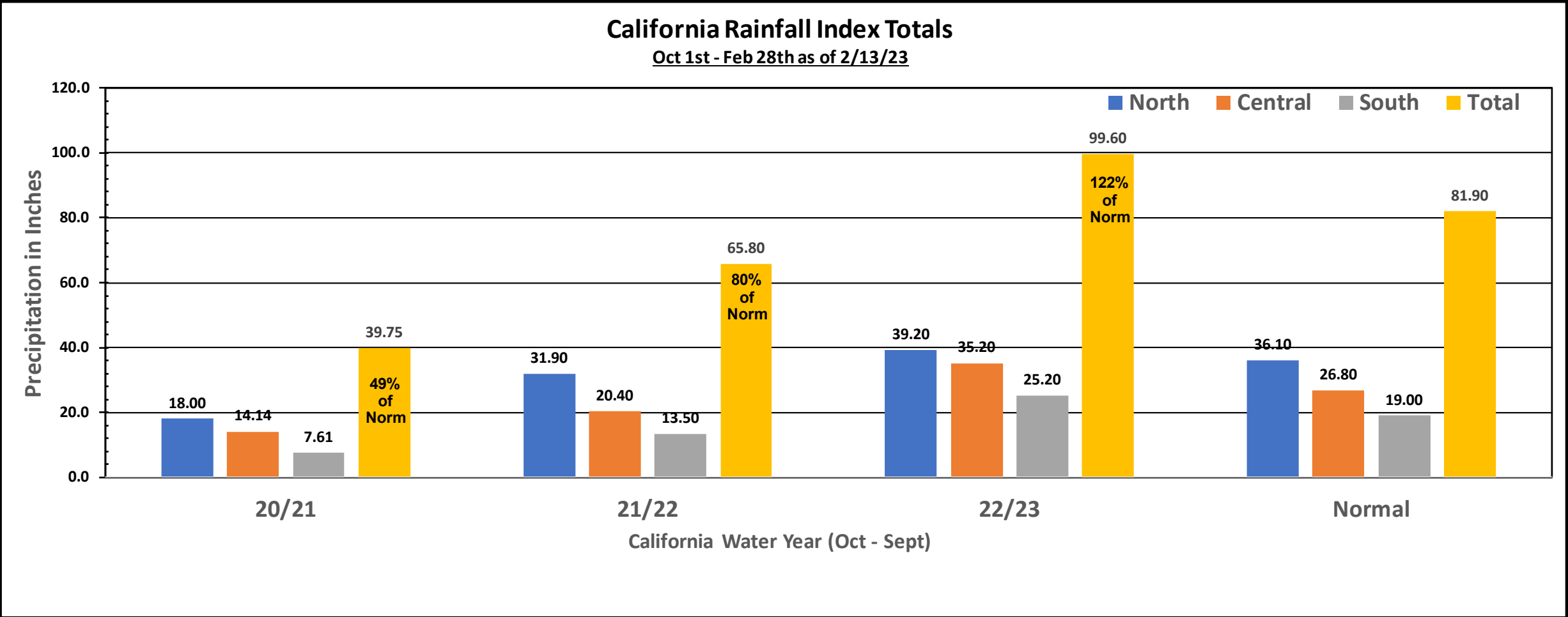
New Snow in February 2023 as of 2/14/23	February New Snow Record - 1986	Historical Records			
		Through February		Season Total	
		WY '22/'23	WY '16/'17	Normal	'10/'11
16	169	401	513	400	669

**As of 2/13/23, the year-to-date precipitation index totals average 141% of normal statewide. This is down from 168% on January 25<sup>th</sup> due to the drier weather pattern we have been experiencing over the past 19 days.**

## **YTD California Precipitation Index Totals As of 2/13/23**

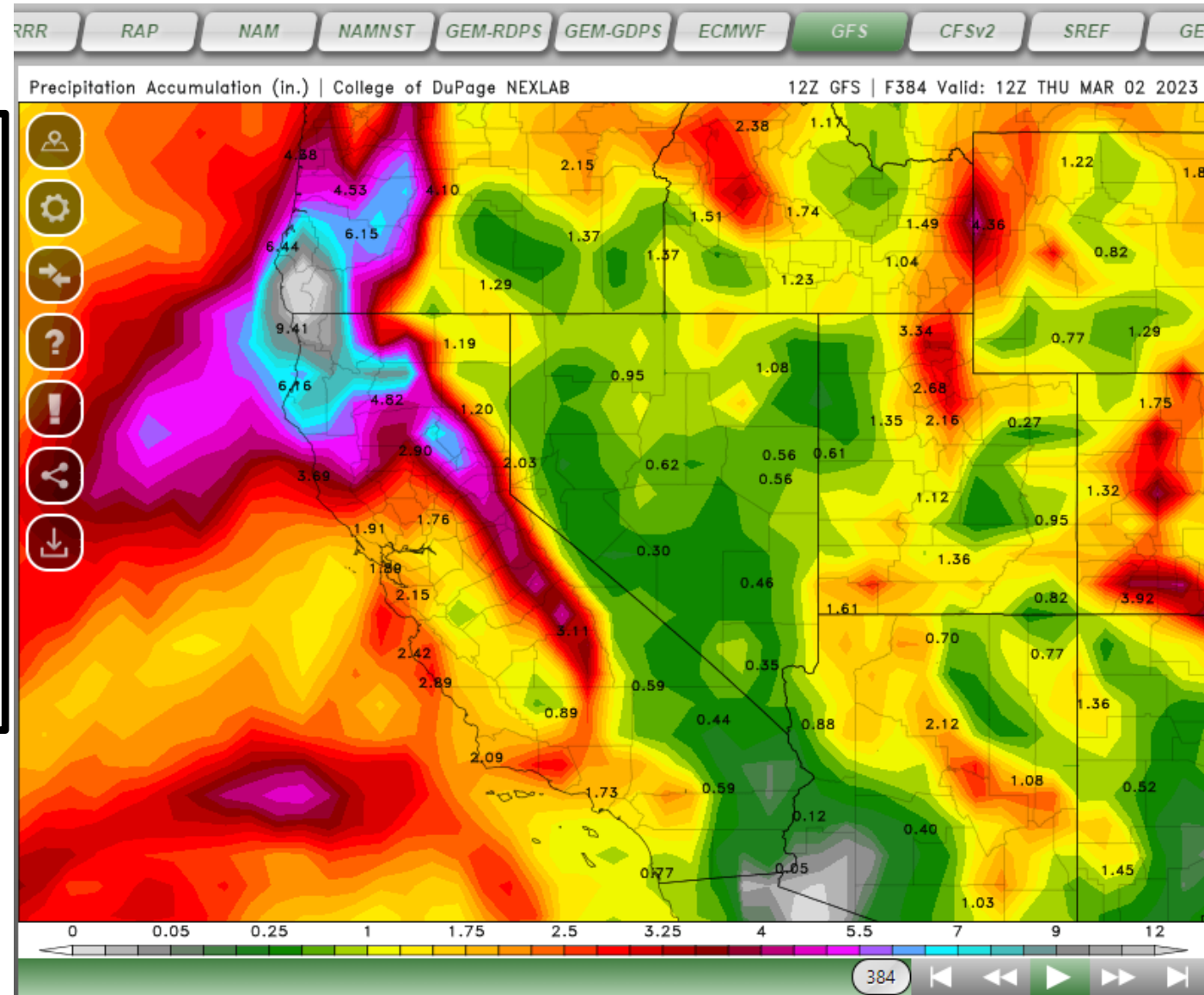
<b>Region</b>	<b>inches of Precip</b>	<b>% of YTD Normal</b>
<b>8 Station Northern</b>	<b>39.2</b>	<b>125%</b>
<b>5 Station Central</b>	<b>35.2</b>	<b>153%</b>
<b>6 Station Southern</b>	<b>25.2</b>	<b>155%</b>
<b>Combined Stations:</b>	<b>99.6</b>	<b>141%</b>

If you compare the current precipitation totals today (2/13/23) to the full year-to-date totals the past two years (Oct 1<sup>st</sup> –Feb 28<sup>th</sup>), you can see we will remain well ahead of those years by the end of February even if California receives no further precipitation for the remainder of the month!



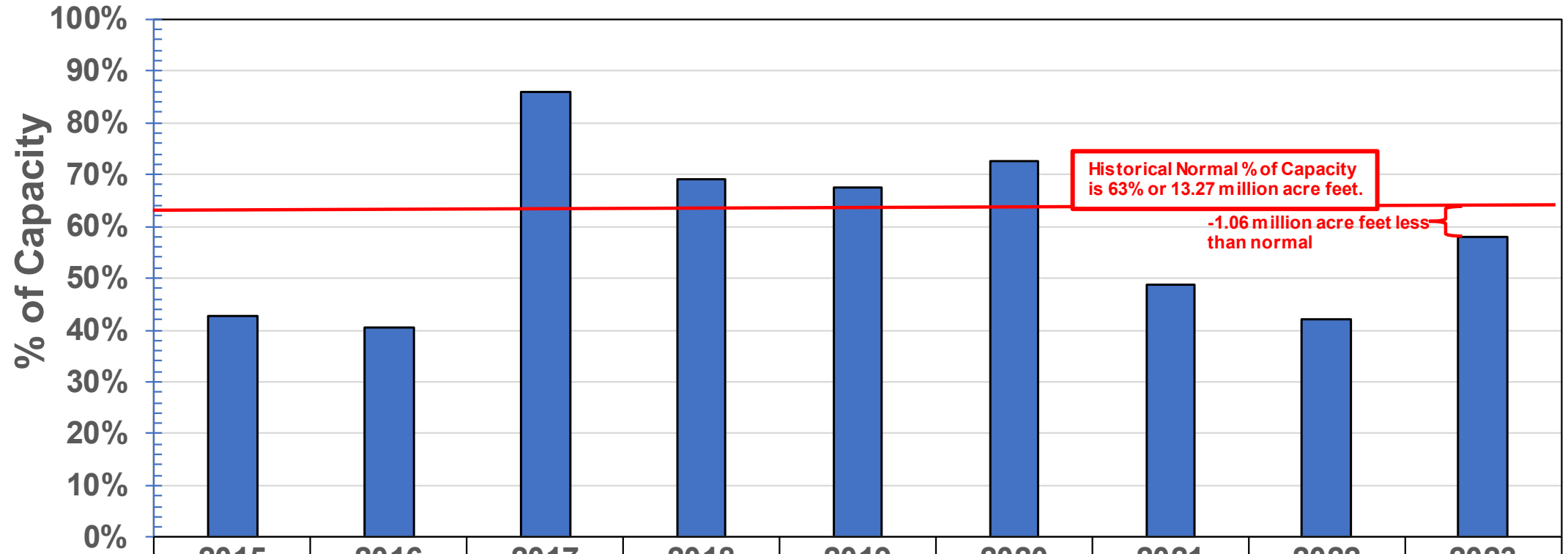
# Current 16-day Precipitation Forecast – as of 2/14/23

The current 16-Day GFS Precipitation 12z Model run shows a wetter pattern than we have experienced so far in February, with most of the precipitation coming from 2/25 – 3/2/2023. Hopefully, this forecast model holds true as we don't want to see California dry out like we experienced last year from January forward.



The Combined Reservoir level have increased by 5.87-million-acre feet since December 11<sup>th</sup>, 2022. However, the total volume storage as of 2/13/23 is still only 92% of normal for this time of year (-1.06 million-acre feet).

### Major California Storage Reservoirs % of Capacity as of February 13th, 2023



■ % of Capacity

2015	2016	2017	2018	2019	2020	2021	2022	2023
43%	41%	86%	69%	68%	72%	49%	42%	58%

Year

## Major California Water Storage Reservoir's Levels as of February 13th, 2023

Reservoir	Total Capacity	% of Capacity as of February 13th									Storage level in Millions of acre feet as of February 13th									
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Shasta (F)	4.552	53%	56%	96%	74%	69%	78%	48%	36%	58%	2.413	2.549	4.370	3.368	3.141	3.551	2.185	1.639	2.640	
Trinity (F)	2.448	44%	30%	71%	73%	67%	82%	51%	32%	32%	1.077	0.734	1.738	1.787	1.640	2.007	1.248	0.783	0.783	
Oroville (S)	3.538	46%	48%	100%	41%	45%	63%	36%	46%	69%	1.627	1.698	3.538	1.451	1.592	2.229	1.274	1.627	2.441	
New Melones (F)	2.420	25%	18%	55%	82%	80%	82%	65%	41%	43%	0.605	0.436	1.331	1.984	1.936	1.984	1.573	0.992	1.041	
Folsom (F)	0.977	54%	62%	69%	58%	62%	49%	31%	54%	56%	0.528	0.606	0.674	0.567	0.606	0.479	0.303	0.528	0.547	
San Luis (F,S)	2.039	58%	38%	91%	84%	90%	75%	55%	45%	71%	1.183	0.775	1.855	1.713	1.835	1.529	1.121	0.918	1.448	
Don Pedro (L)	2.030	42%	43%	99%	83%	78%	81%	68%	57%	74%	0.853	0.873	2.010	1.685	1.583	1.644	1.380	1.157	1.502	
Millerton (F)	0.520	36%	44%	85%	68%	68%	59%	30%	52%	57%	0.187	0.229	0.442	0.354	0.354	0.307	0.156	0.270	0.296	
Exchequer (L)	1.025	8%	15%	91%	66%	67%	62%	38%	27%	63%	0.082	0.154	0.933	0.677	0.687	0.636	0.390	0.277	0.646	
Pyramid (S)	0.171	85%	85%	88%	87%	86%	85%	85%	86%	86%	0.145	0.145	0.150	0.149	0.147	0.145	0.145	0.147	0.147	
Castaic (S)	0.325	35%	31%	91%	80%	79%	74%	78%	62%	55%	0.114	0.101	0.296	0.260	0.257	0.241	0.254	0.202	0.179	
Pine Flat (F)	1.000	15%	23%	73%	52%	45%	50%	23%	30%	54%	0.150	0.230	0.730	0.520	0.450	0.500	0.230	0.300	0.540	
<b>Total:</b>	<b>21.045</b>	<b>43%</b>	<b>41%</b>	<b>86%</b>	<b>69%</b>	<b>68%</b>	<b>72%</b>	<b>49%</b>	<b>42%</b>	<b>58%</b>	<b>8.963</b>	<b>8.529</b>	<b>18.067</b>	<b>14.514</b>	<b>14.228</b>	<b>15.252</b>	<b>10.259</b>	<b>8.840</b>	<b>12.210</b>	
<b>Change vs. January 31st 2023:</b>		<b>5.0%</b>	<b>3.5%</b>	<b>14.9%</b>	<b>-0.1%</b>	<b>4.5%</b>	<b>0.7%</b>	<b>1.4%</b>	<b>0.4%</b>	<b>1.6%</b>	<b>1.051</b>	<b>0.728</b>	<b>3.145</b>	<b>(0.018)</b>	<b>0.944</b>	<b>0.138</b>	<b>0.291</b>	<b>0.076</b>	<b>0.332</b>	
<b>Change vs. January 31st 2023</b>																				
<b>Statewide Snowpack as a % of Normal as of Feb 13th, 2023:</b>		<b>26%</b>	<b>97%</b>	<b>180%</b>	<b>22%</b>	<b>130%</b>	<b>58%</b>	<b>68%</b>	<b>76%</b>	<b>190%</b>	<b>Change Since December 11th 2022</b>									<b>5.873</b>
<b>Snowpack: Avg. Statewide snow water equivalent inches:</b>		<b>5.5</b>	<b>20.2</b>	<b>37.6</b>	<b>4.5</b>	<b>27.1</b>	<b>12.1</b>	<b>14.1</b>	<b>15.6</b>	<b>35.7</b>										

  = Lowest over the past 9 years  
  = CVP Reservoirs (San Luis is both CVP & DWR)

**Current vs. Same Time Last Year:** 3.371 16%  
**Current vs. Prior 8yr Avg:** (0.121) -1%

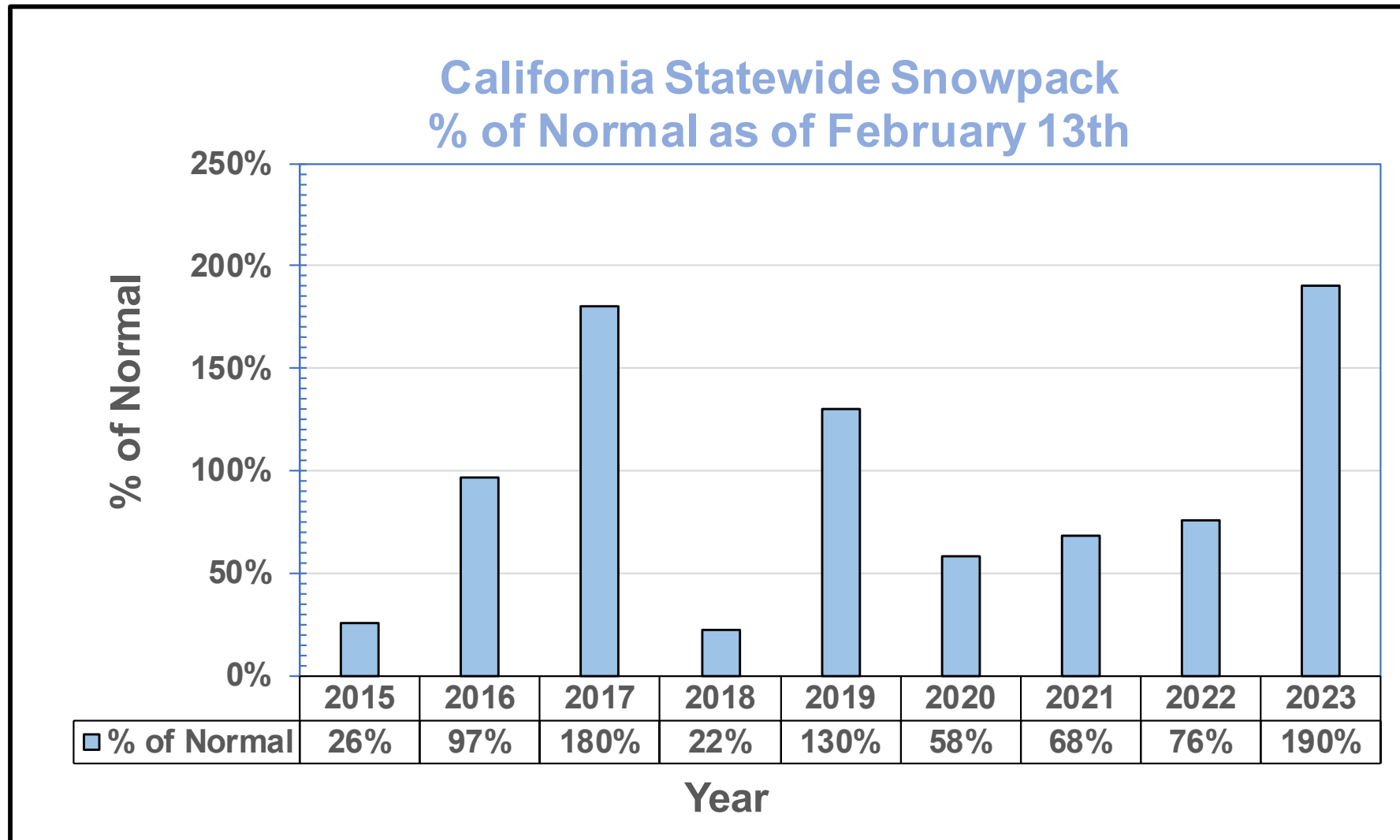
  = 2.41 M acre ft Increase vs. Last year in these key Agricultural Supply Reservoirs.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	Initial
<b>Federal Water Supply (CVP)</b>										
North of Delta Ag	0%	100%	100%	100%	100%	50%	0%	0%	N/A	Initial Allocation will be announced in late February 2023
North of Delta Exchange/Settlement Contractors	75%	100%	100%	100%	100%	100%	75%	18%	N/A	Initial Allocation will be announced in late February 2023
South of the Delta Ag	0%	5%	100%	50%	75%	20%	0%	0%	N/A	Initial Allocation will be announced in late February 2023
South of the Delta Exchange/Settlement Contractors	75%	100%	100%	100%	100%	100%	75%	75% or less	N/A	Initial Allocation will be announced in late February 2023
Friant Class 1	0%	75%	100%	88%	100%	65%	20%	30%	N/A	Initial Allocation will be announced in late February 2023
Friant Class 2	0%	0%	0%	130K AF	0%	0%	0%	0%	N/A	Initial Allocation will be announced in late February 2023
<b>State Water Allocation</b>	20%	60%	85%	35%	75%	20%	5%	5%	30%	Initial Allocation was 5% in December 2022. Moved to 30% on January 26th, 2023.

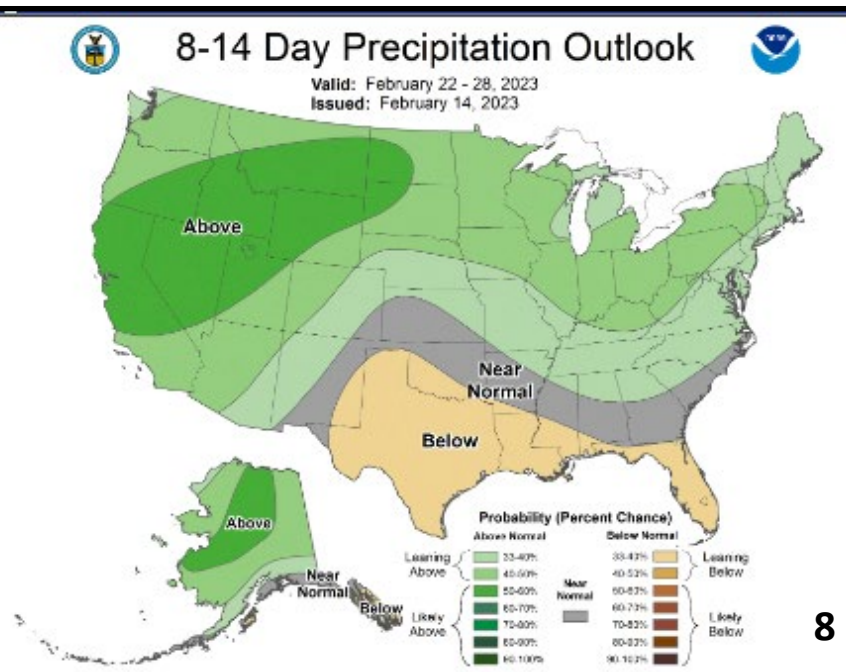
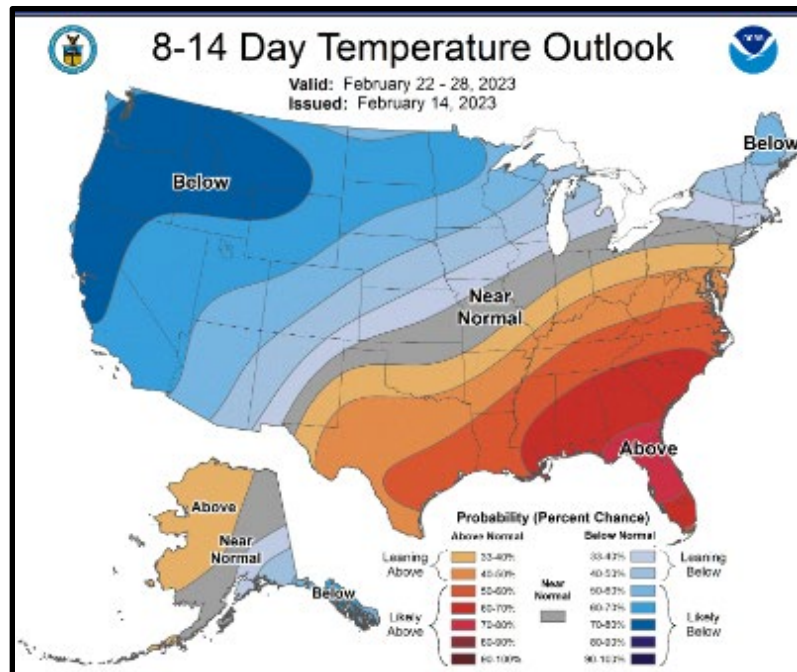
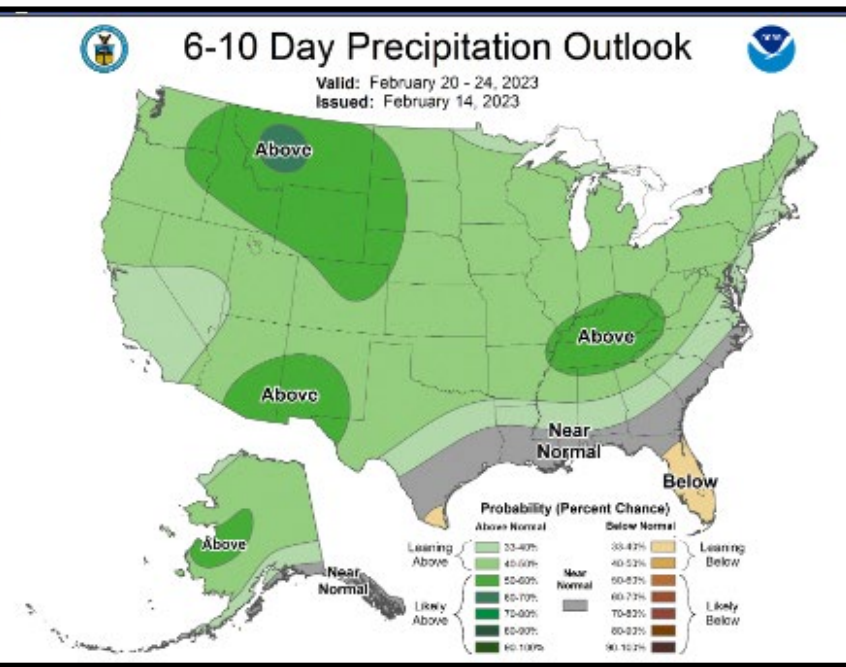
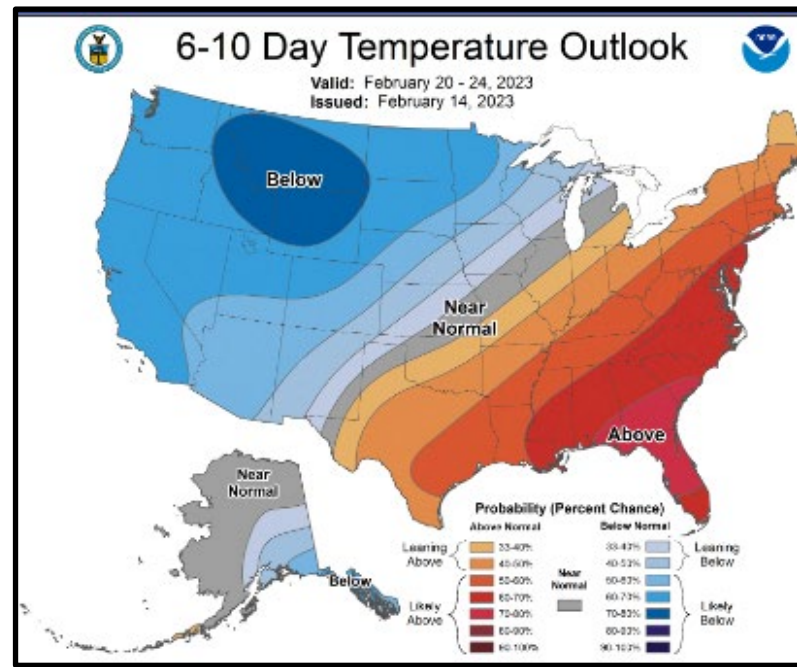
**Current vs. YTD Normal:** 92%  
**LY vs. YTD Normal:** 65%

(S) = State Water Project (F) = Federal Water Project (L) = Local Water Project

**As of February 13<sup>th</sup>, 2023, the State-wide average snowpack is 190% of normal (down from 218% of normal on January 25<sup>th</sup>) and already totals 136% of the April 1<sup>st</sup> average. This is the highest % of normal since February 13<sup>th</sup>, 2017 (180% of normal & 133% of the April 1<sup>st</sup> average). As you can see, due to the lack of storm systems since January 25<sup>th</sup>, the % of normal has dropped by 28%. Hopefully, the storms forecasted from February 25<sup>th</sup> – March 2<sup>nd</sup> will prop our snowpack figures back to levels above 200% of normal!**

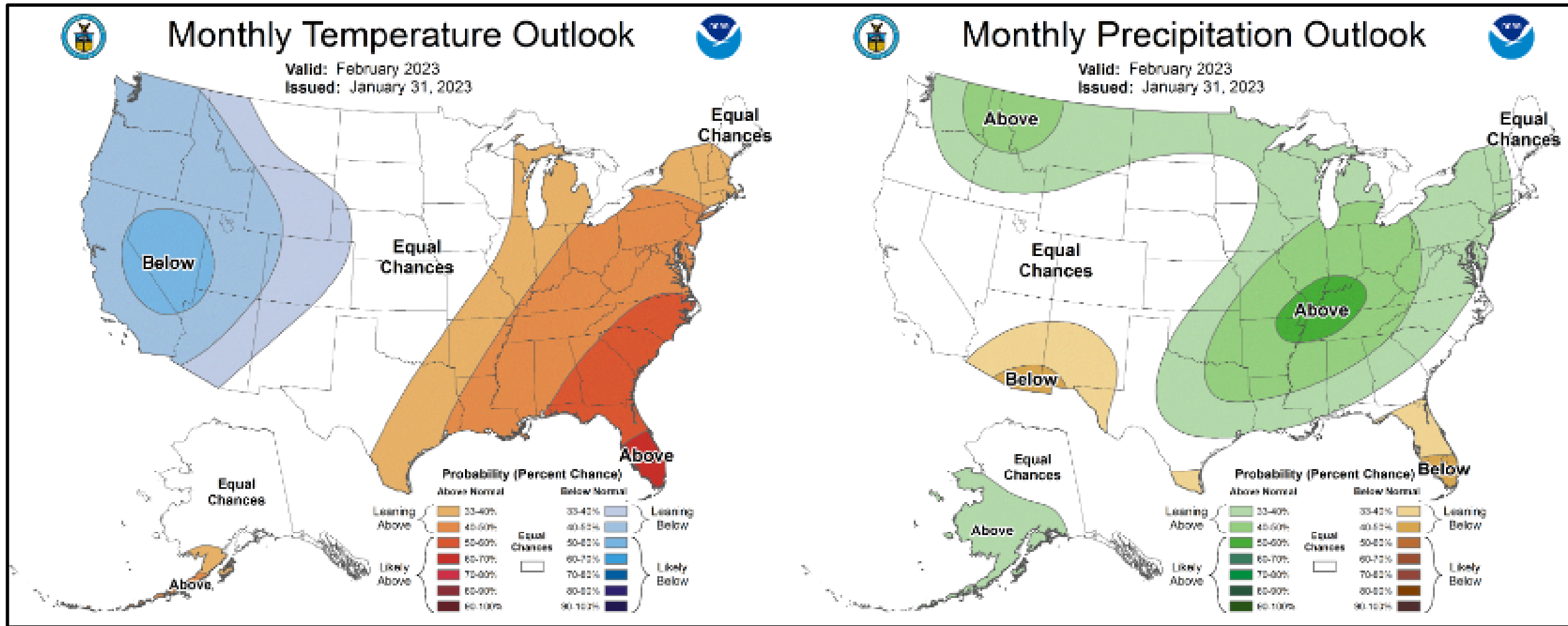


The Current NOAA 6-10 Day & 8-14 Day Temperature and Precipitation Outlooks are showing colder than normal temperatures and higher normal precipitation for California is likely through the 28<sup>th</sup> of February.

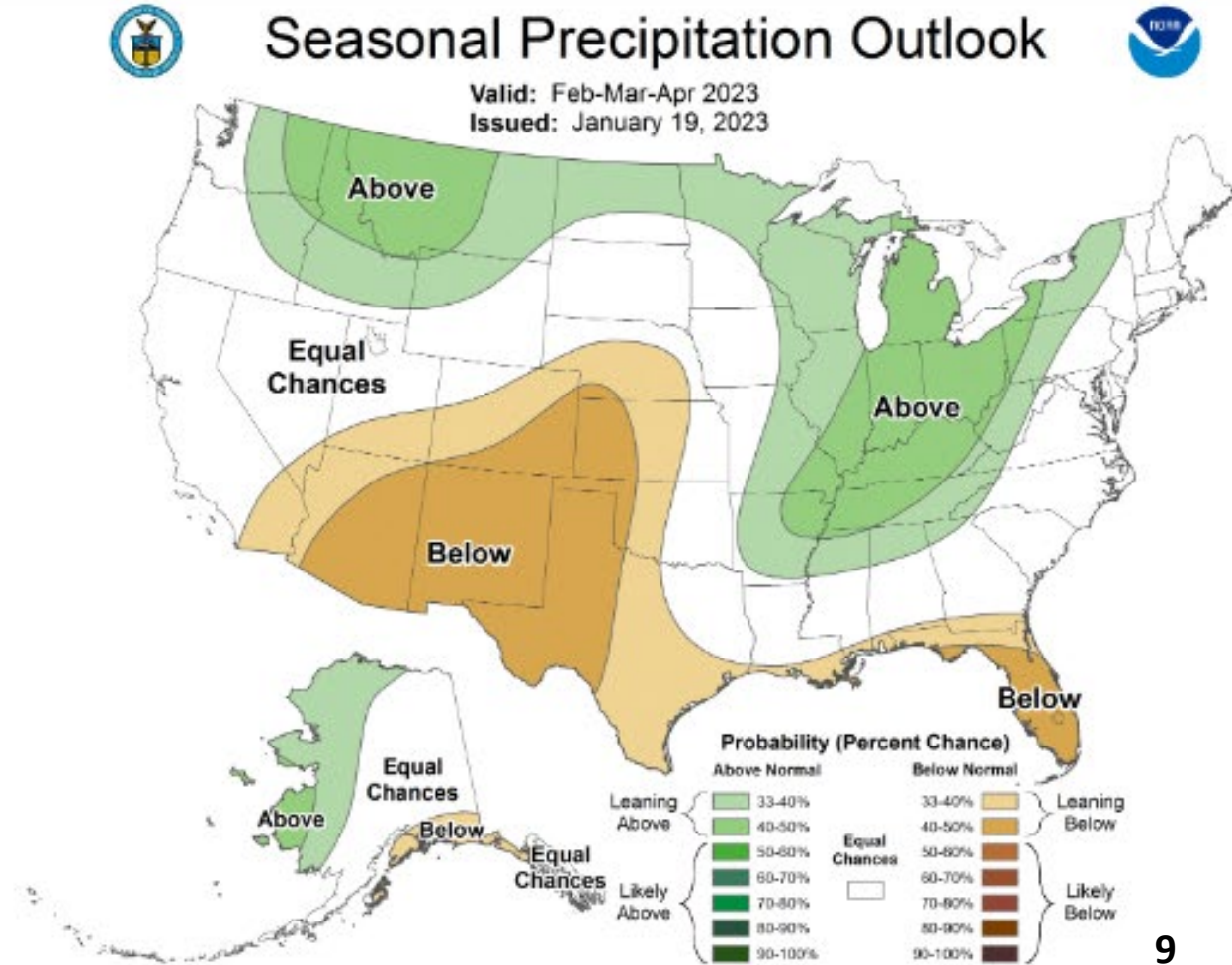
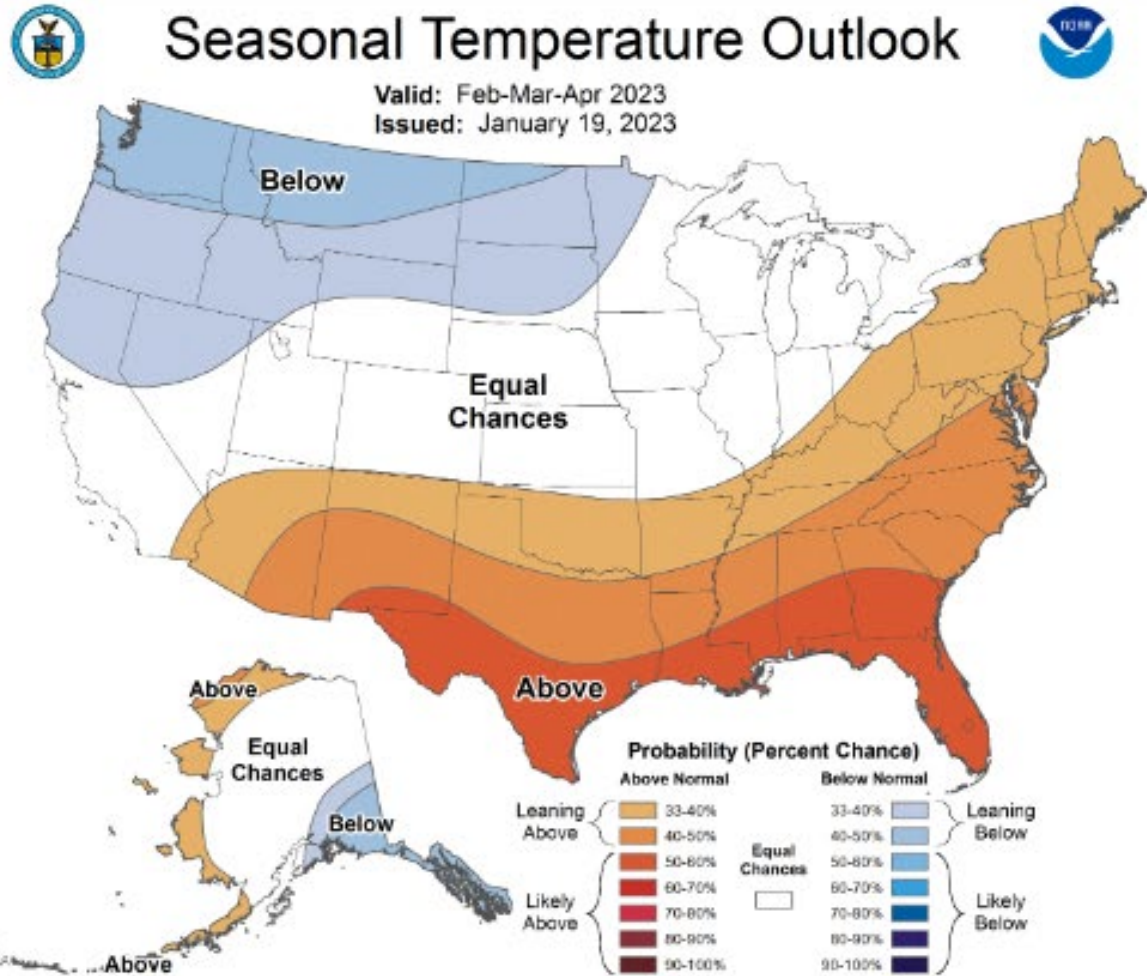




The Current NOAA Temperature and Precipitation Outlook for February that was made on January 31<sup>st</sup> showed below normal temperatures and average precipitation for California.



The Current NOAA Temperature and Precipitation Outlook for February through April of 2023 Is showing fairly normal temperatures and likely normal precipitation for California. But since their November '22 – January '23 chart has proven to be so very wrong; I would not put much weight on this current longer-term outlook.

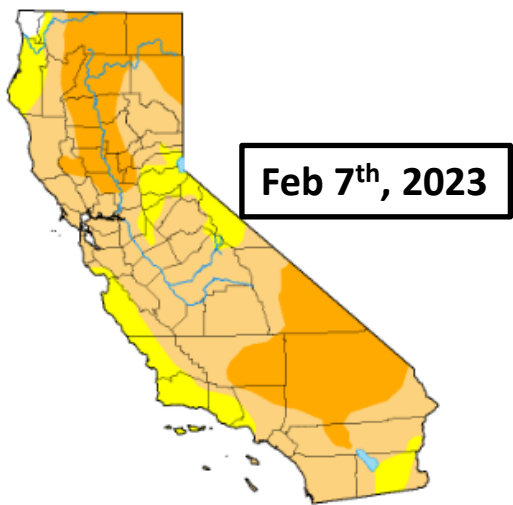


Compare Two Weeks

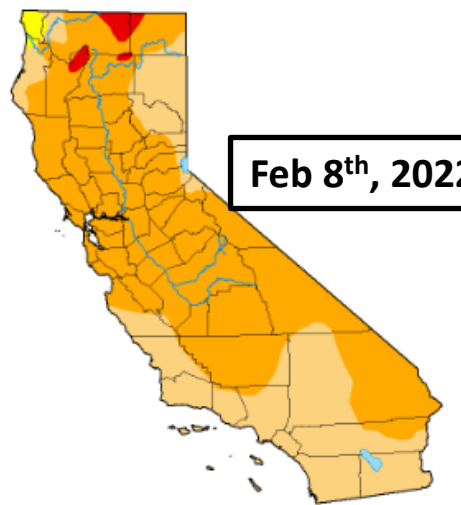
Area type: State Area: California Statistics type: Cumulative Percent Area

Drought Classification

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



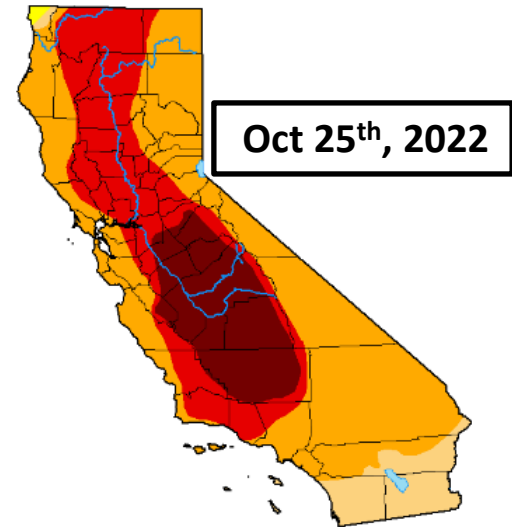
Feb 7<sup>th</sup>, 2023



Feb 8<sup>th</sup>, 2022

The California Drought Monitor shown to the right compares current conditions on 2/7/23 to the same period one year ago (2/8/22). As you can see, conditions are better than the levels seen last year with a lot less land in the “Severe” drought category. This current map is a big improvement vs. the map below at the end of October 2022 due to the rainfall we have seen so far from November 2022 – January 17<sup>th</sup>, 2023.

U.S. Drought Monitor California



Oct 25<sup>th</sup>, 2022

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

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.77	91.83	43.06	18.57
Last Week 10-19-2022	0.00	100.00	99.77	91.03	40.91	18.57
3 Months Ago 07-28-2022	0.00	100.00	99.79	97.47	59.01	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	99.76	94.01	40.91	18.57
One Year Ago 10-26-2021	0.00	100.00	100.00	93.61	83.33	39.74

- 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>

Author: Adam Hartman NOAA/NWS/NCEP/CPC



Statistics Comparison

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
2023-02-07	0.64	99.36	84.60	32.62	0.00	0.00	217
2022-02-08	0.00	100.00	99.25	66.42	1.39	0.00	267
Change	-0.64	0.64	14.65	33.80	1.39	0.00	50