



# STATUS OF WATER SUPPLIES

Water Resources and Watershed  
Committee

January 10, 2024





# OVERVIEW

## 2023 Operations

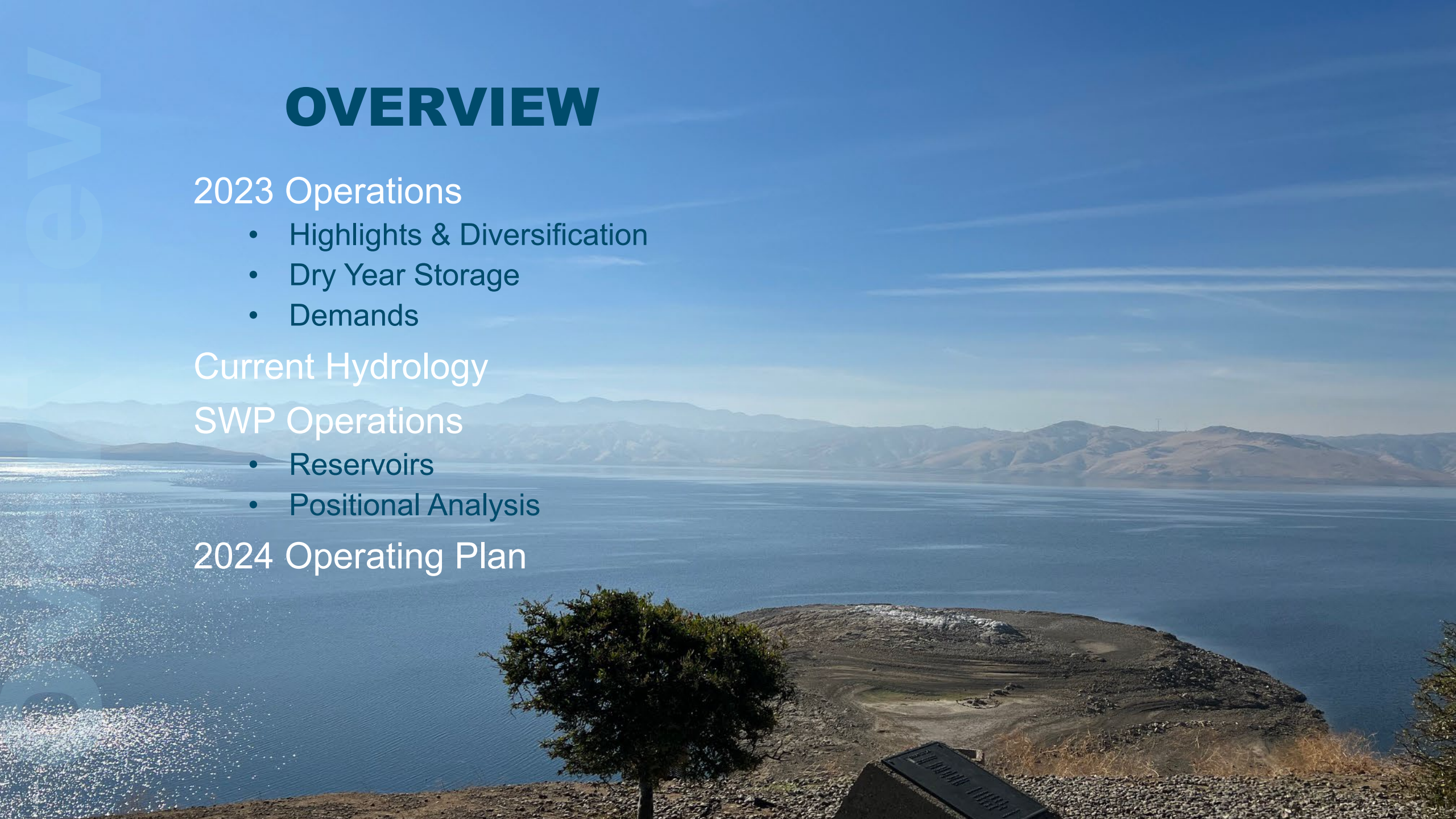
- Highlights & Diversification
- Dry Year Storage
- Demands

## Current Hydrology

## SWP Operations

- Reservoirs
- Positional Analysis

## 2024 Operating Plan

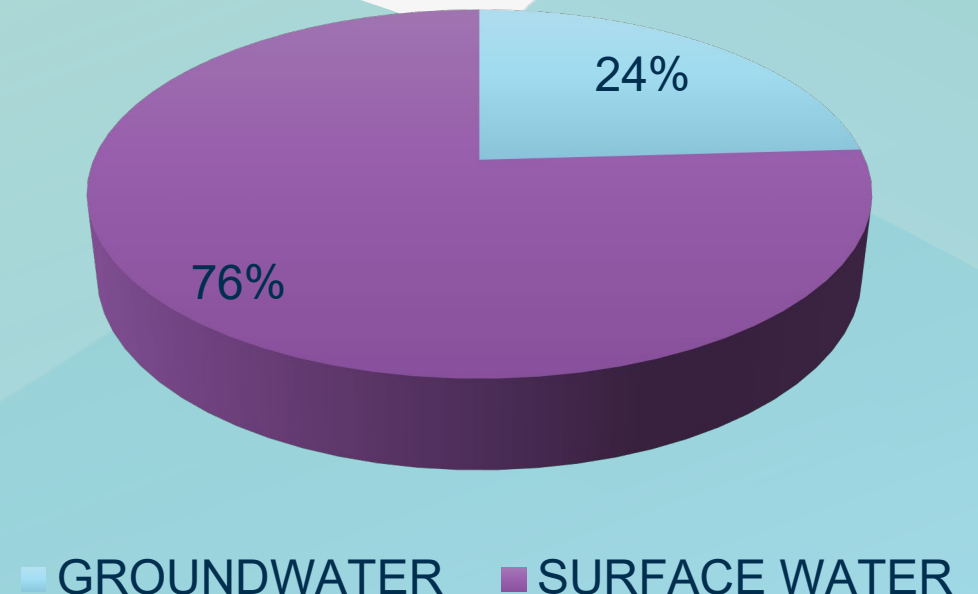


# 2023 OPERATION HIGHLIGHTS

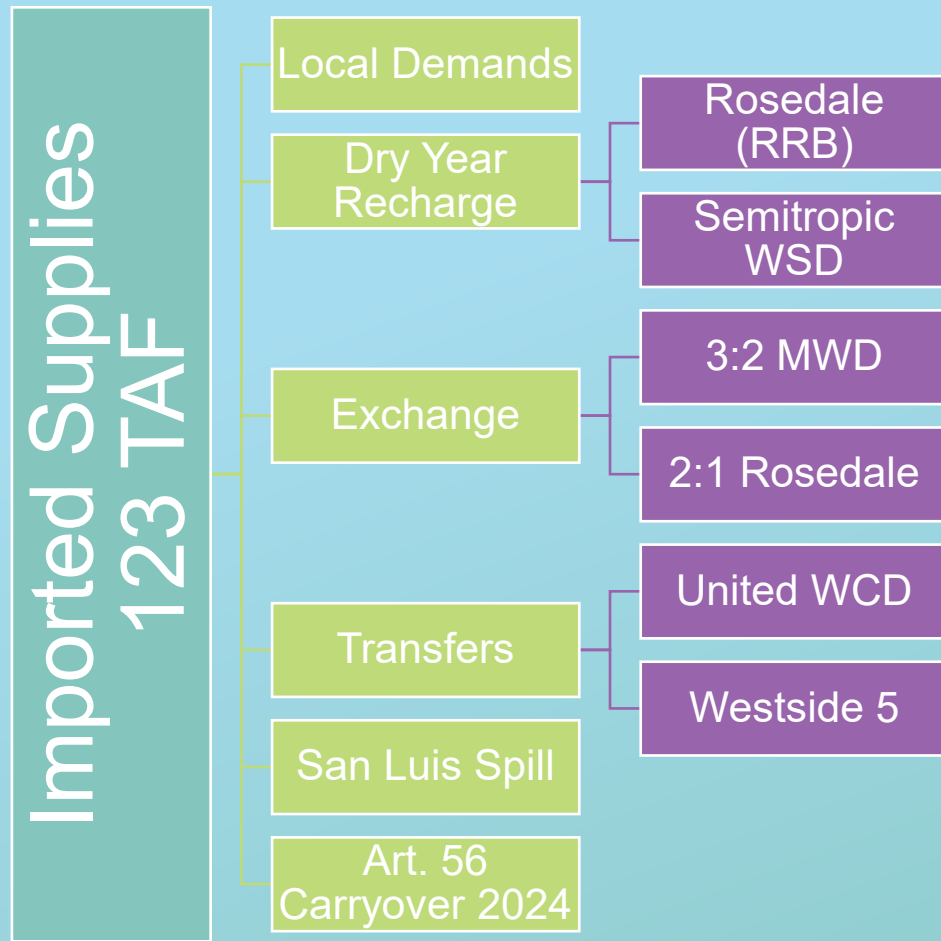
## “Epic hydrology”

- 100% SWP Allocation
- Maximized local imported water use
- Maximized recharge into banking programs
- Executed 2 exchange agreements
- Executed 2 transfer agreements
- Received article 21 supplies

% Production by Source



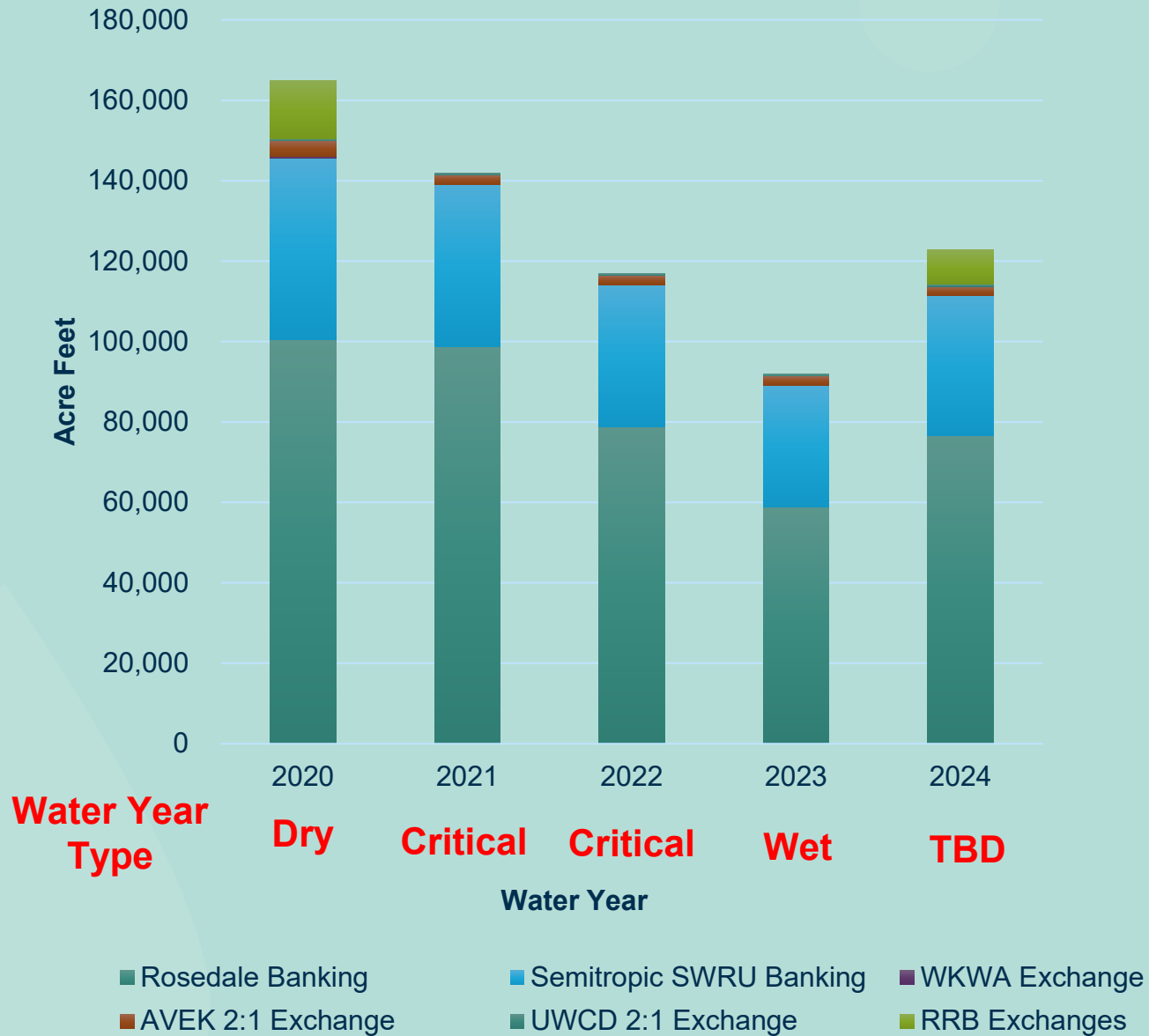
# 2023 DIVERSIFICATION OF STATE PROJECT SUPPLIES



## 2023 Imported Supplies

1. 95,200 AF SWP Table A
2. 17,047 AF Art. 56 Carryover & Backup supply
3. 11,000 AF BVRRB

# Banking & Exchange Balances Jan 1st

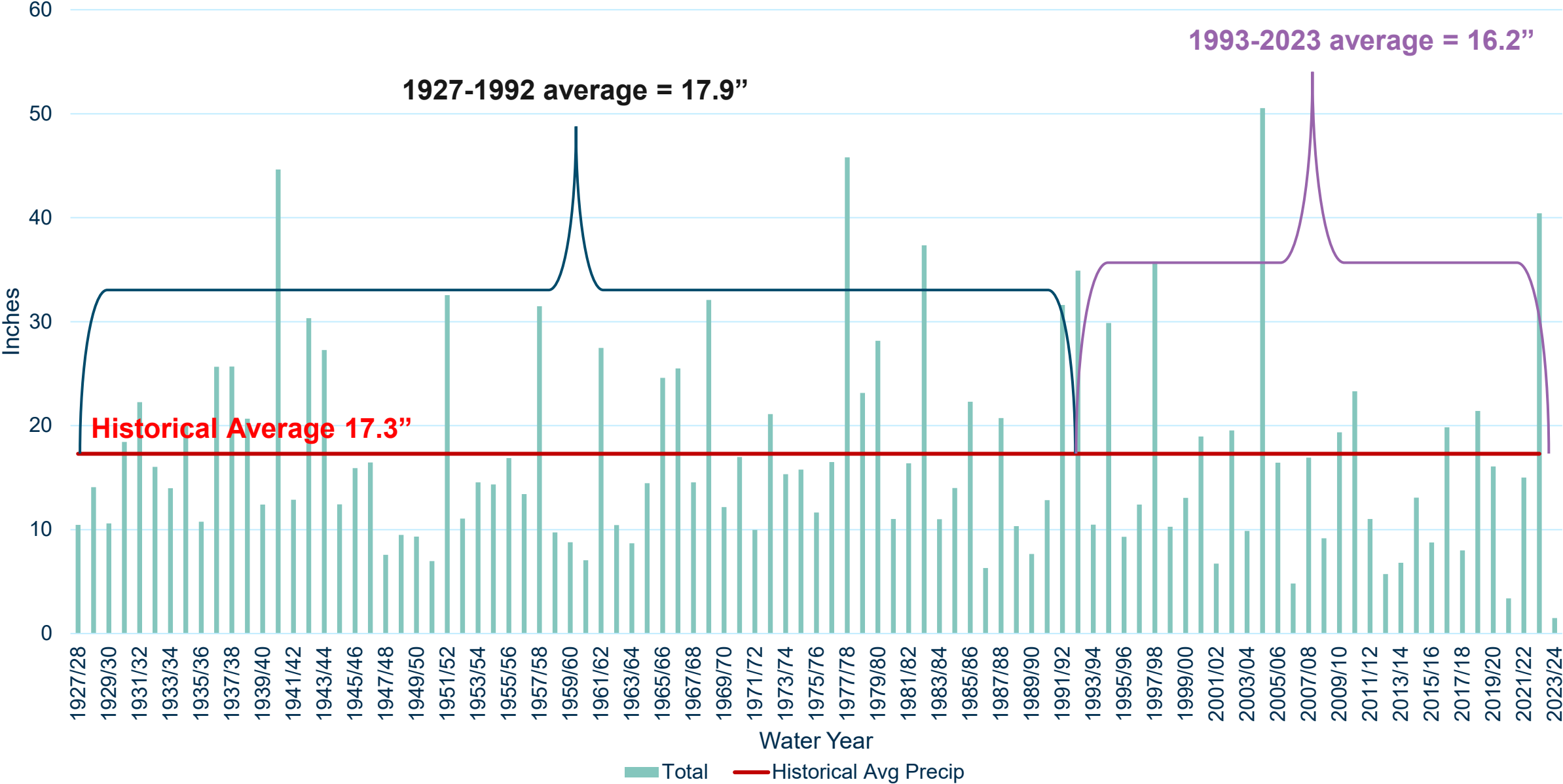


## DRY YEAR STORAGE

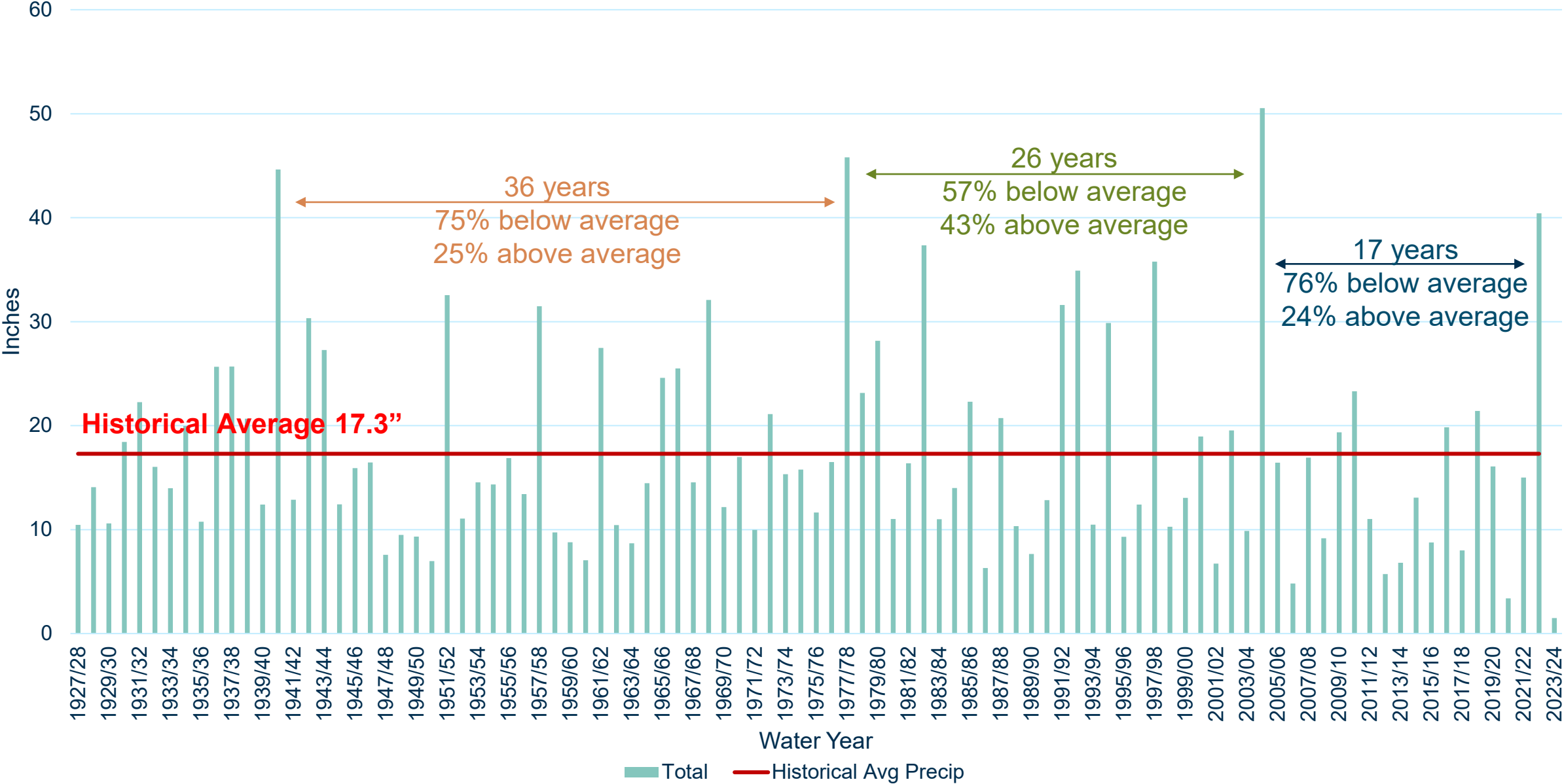
2023 increased storage  
29+ TAF

Remaining space in banking  
programs = 24 TAF

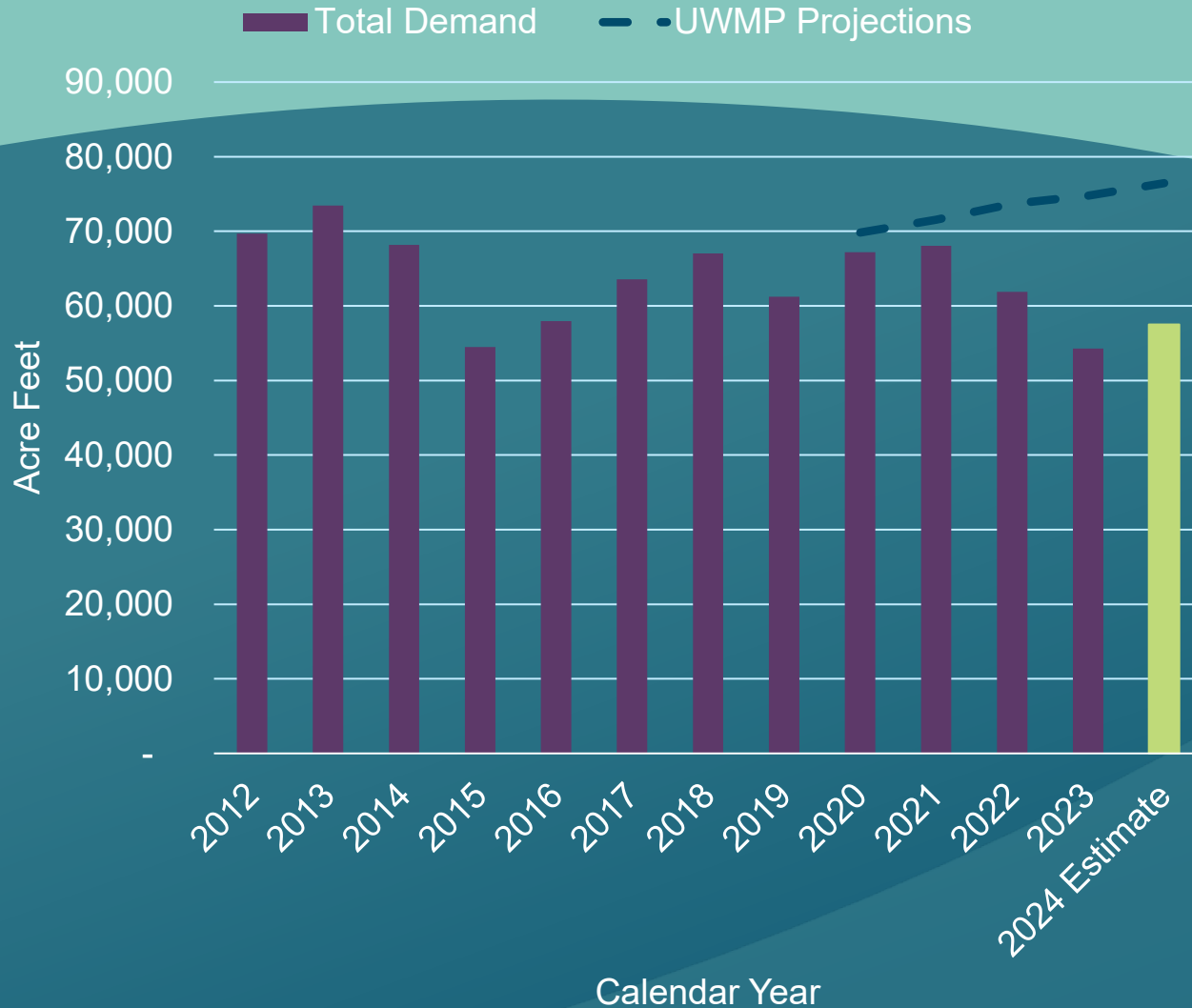
# Historical SCV Water Year Precipitation Totals



# Historical SCV Water Year Precipitation Totals



## SCV Water Annual Demand



# DEMANDS

## 2023 Demand Decrease

- Wet hydrology
- Conservation regulations
- Three years of drought messaging and community action



# CURRENT HYDROLOGY

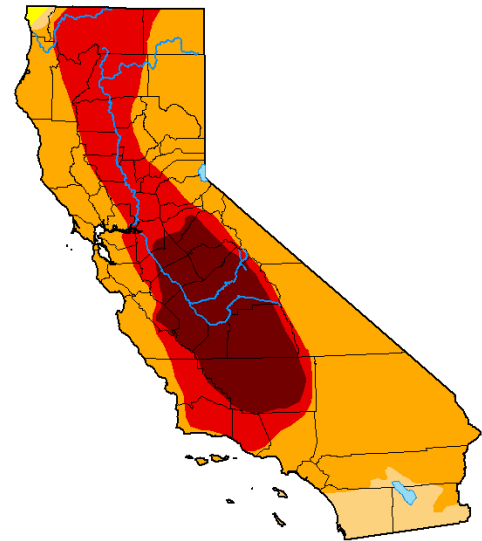


## El Nino Conditions

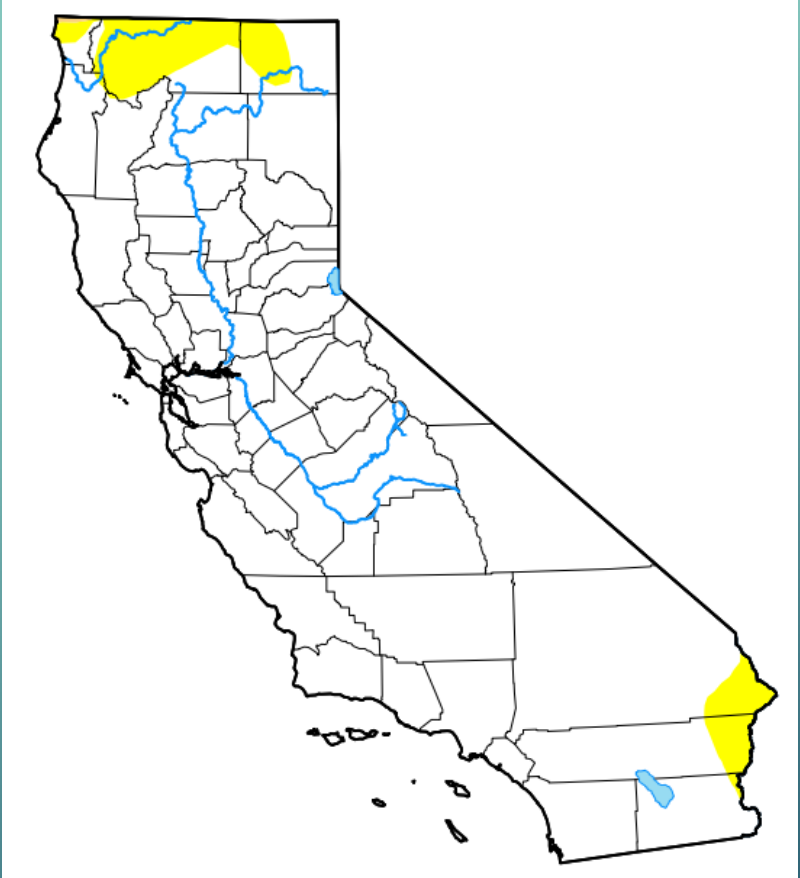
- Last El Nino winter was 2019
- 7 events in 21<sup>st</sup> century so far (2 dry, 3 near avg., 2 wet)
- Slow start to Water Year 2024

# DROUGHT CLASSIFICATION

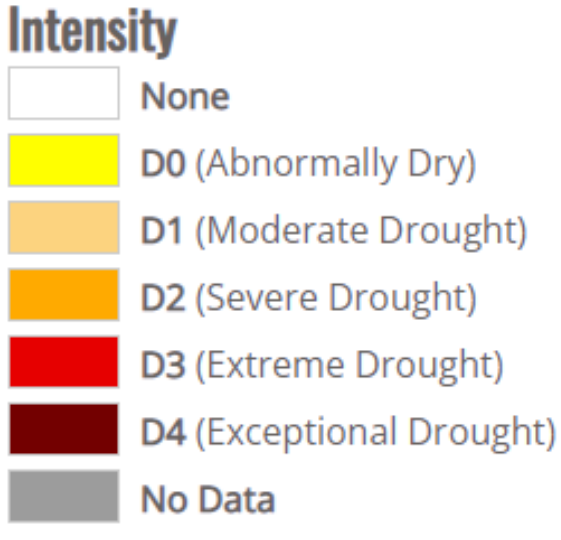
Start of  
WY 2023  
10-4-22



Start of  
WY 2024  
10-3-23

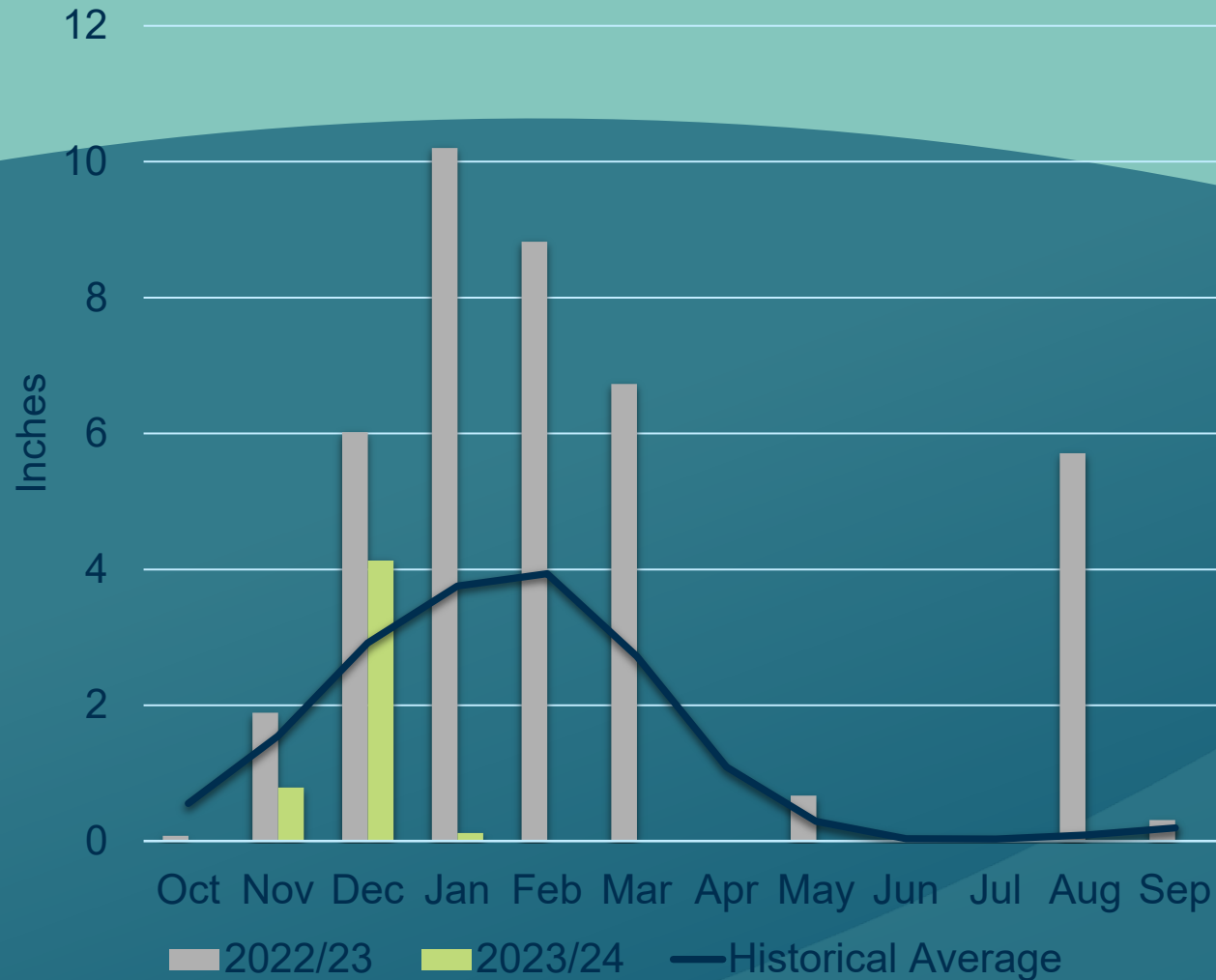


Huge improvements!



Source: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CA>

## SCV Precipitation Water Year 2023 vs 2024



# SCV PRECIPITATION

- 40.43" in WY 2023
  - 233% of average
- 5" so far in WY 2024
  - 100% of average historical (Oct-Dec)

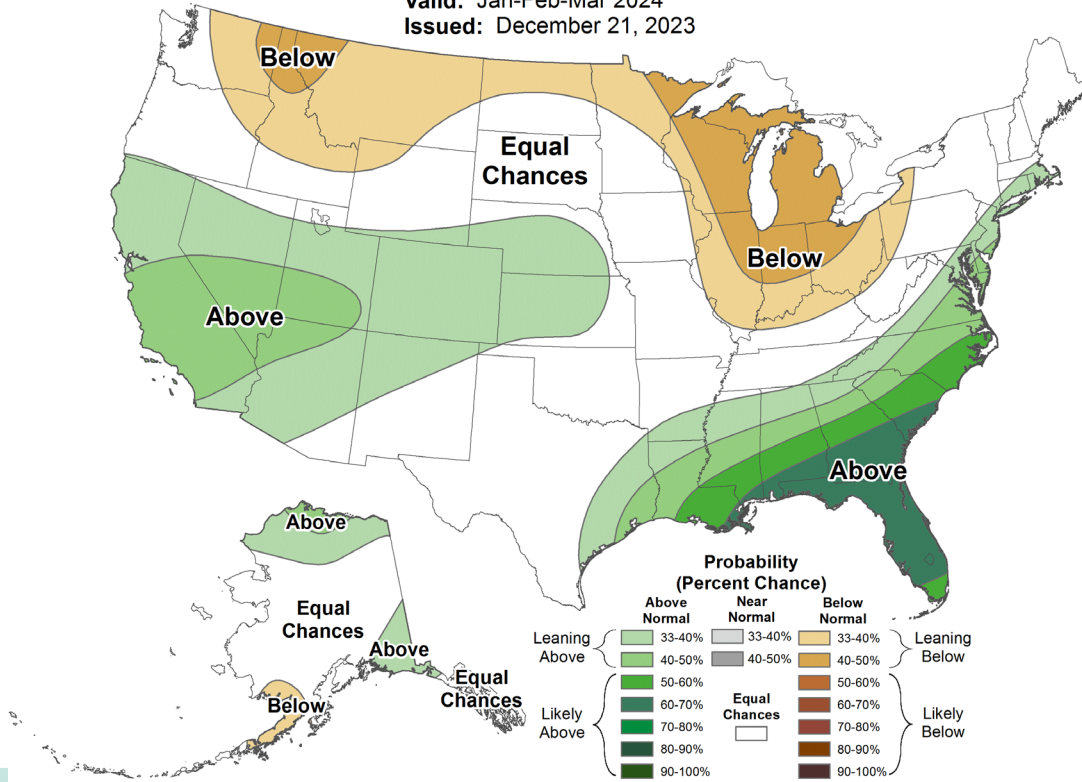
# PRECIPITATION OUTLOOK



## Seasonal Precipitation Outlook



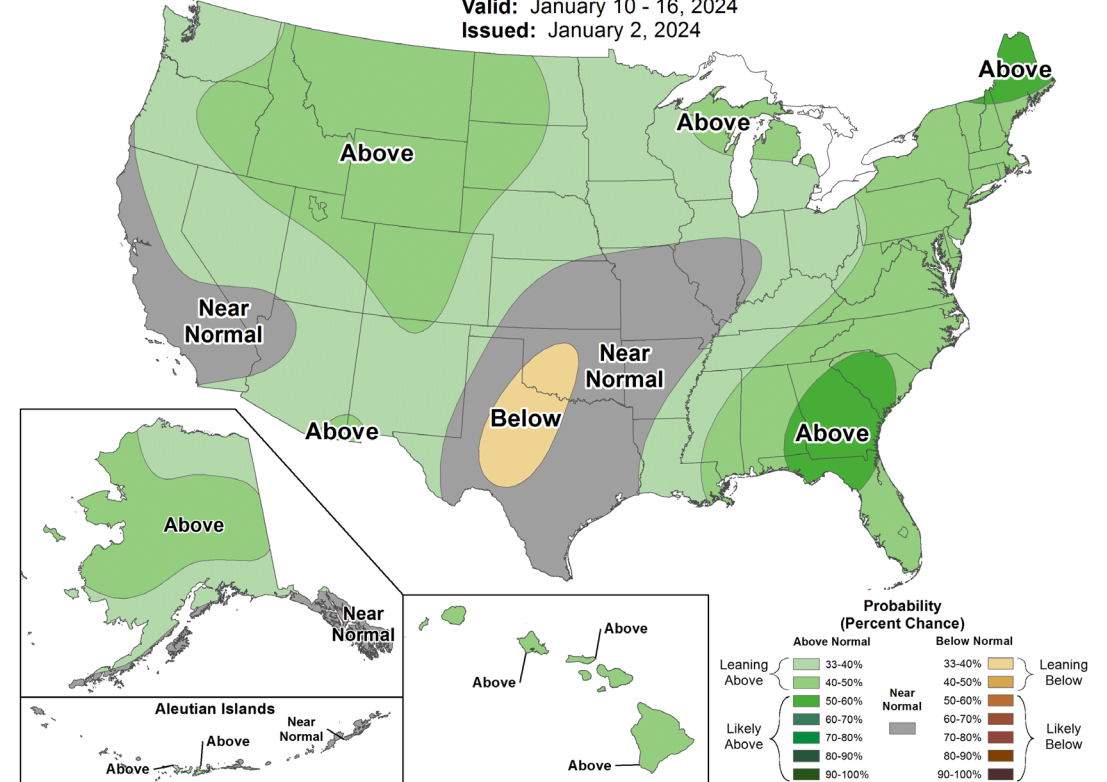
Valid: Jan-Feb-Mar 2024  
 Issued: December 21, 2023



## 8-14 Day Precipitation Outlook



Valid: January 10 - 16, 2024  
 Issued: January 2, 2024



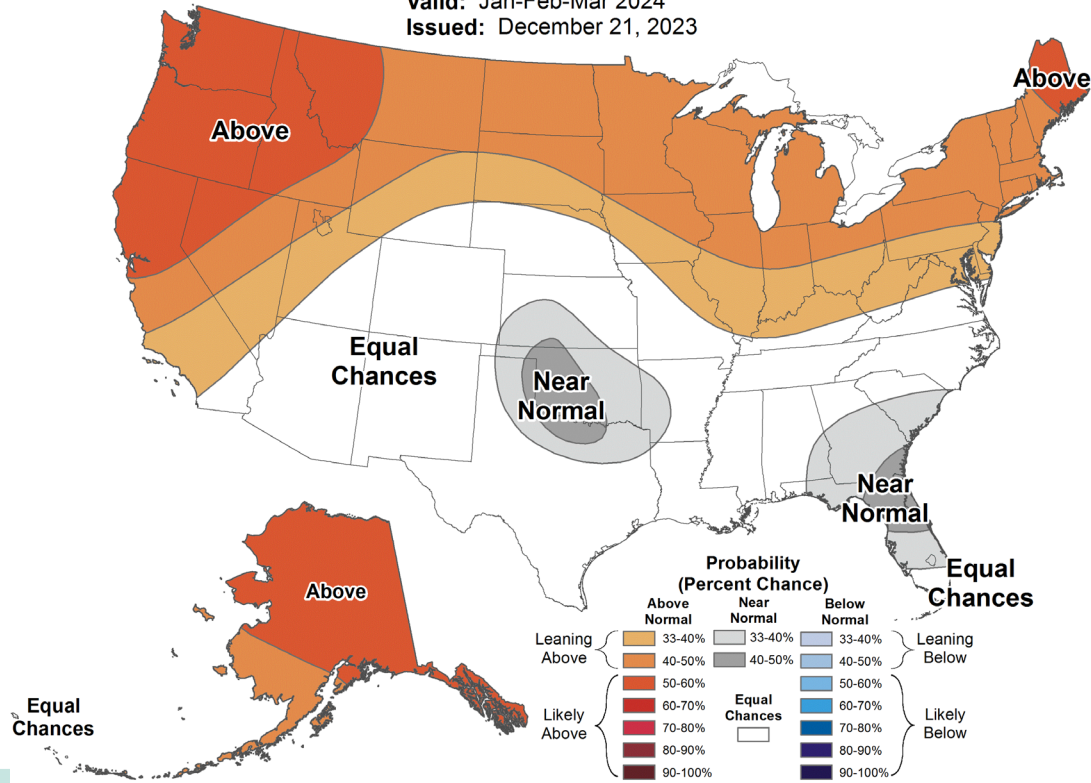
# TEMPERATURE OUTLOOK



## Seasonal Temperature Outlook



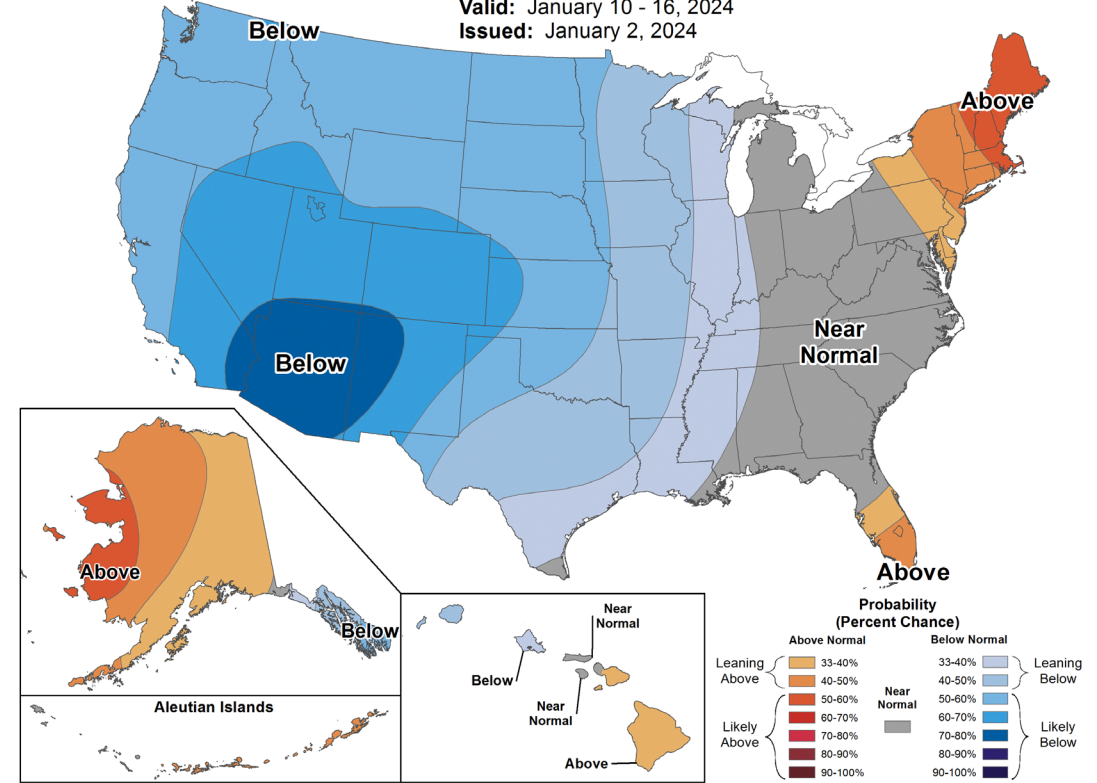
Valid: Jan-Feb-Mar 2024  
 Issued: December 21, 2023



## 8-14 Day Temperature Outlook

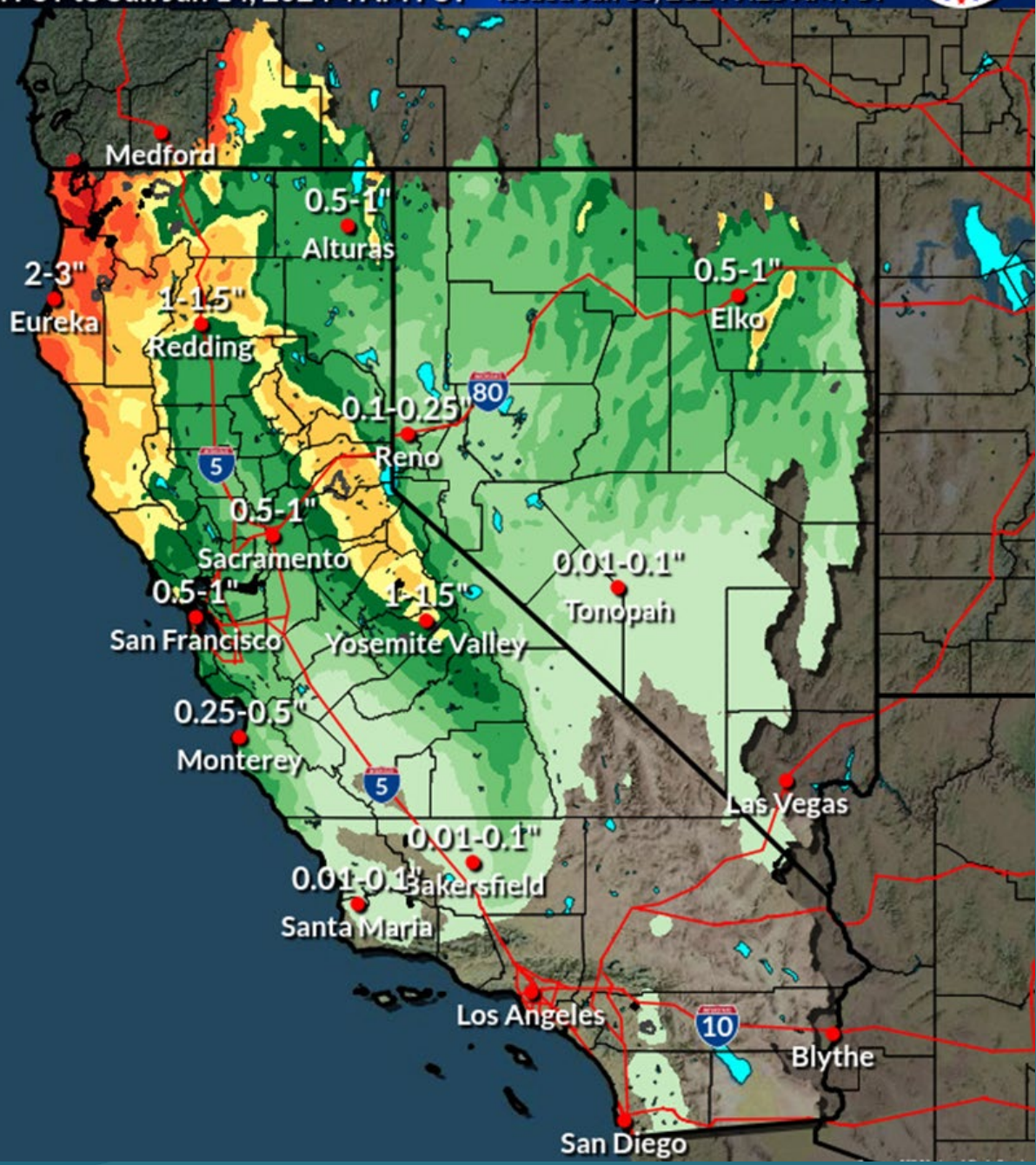
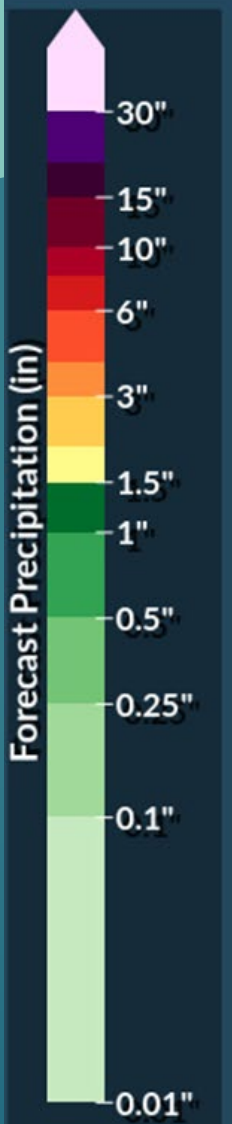


Valid: January 10 - 16, 2024  
 Issued: January 2, 2024





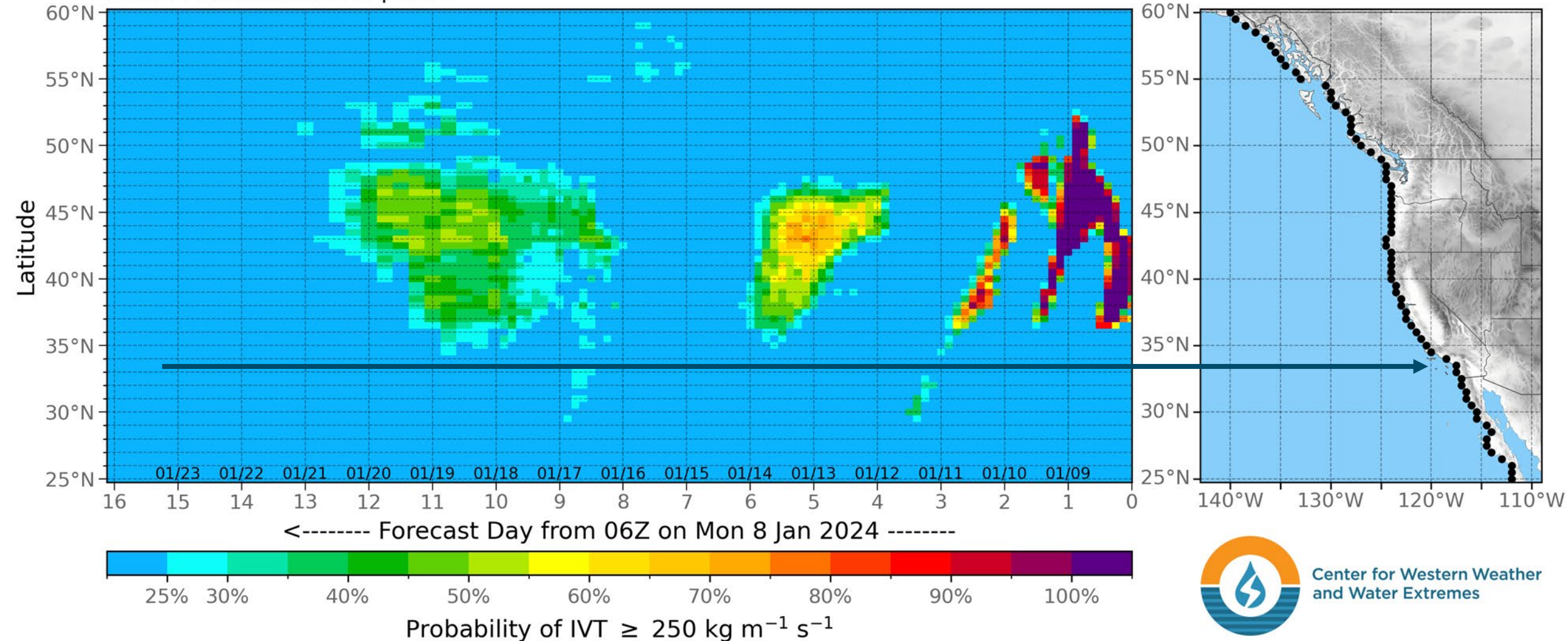
# 6-DAY FORECAST



# ATMOSPHERIC RIVER FORECAST

CW3E AR Landfall Tool | GEFS

Model Run: 06Z Mon 8 Jan 2024

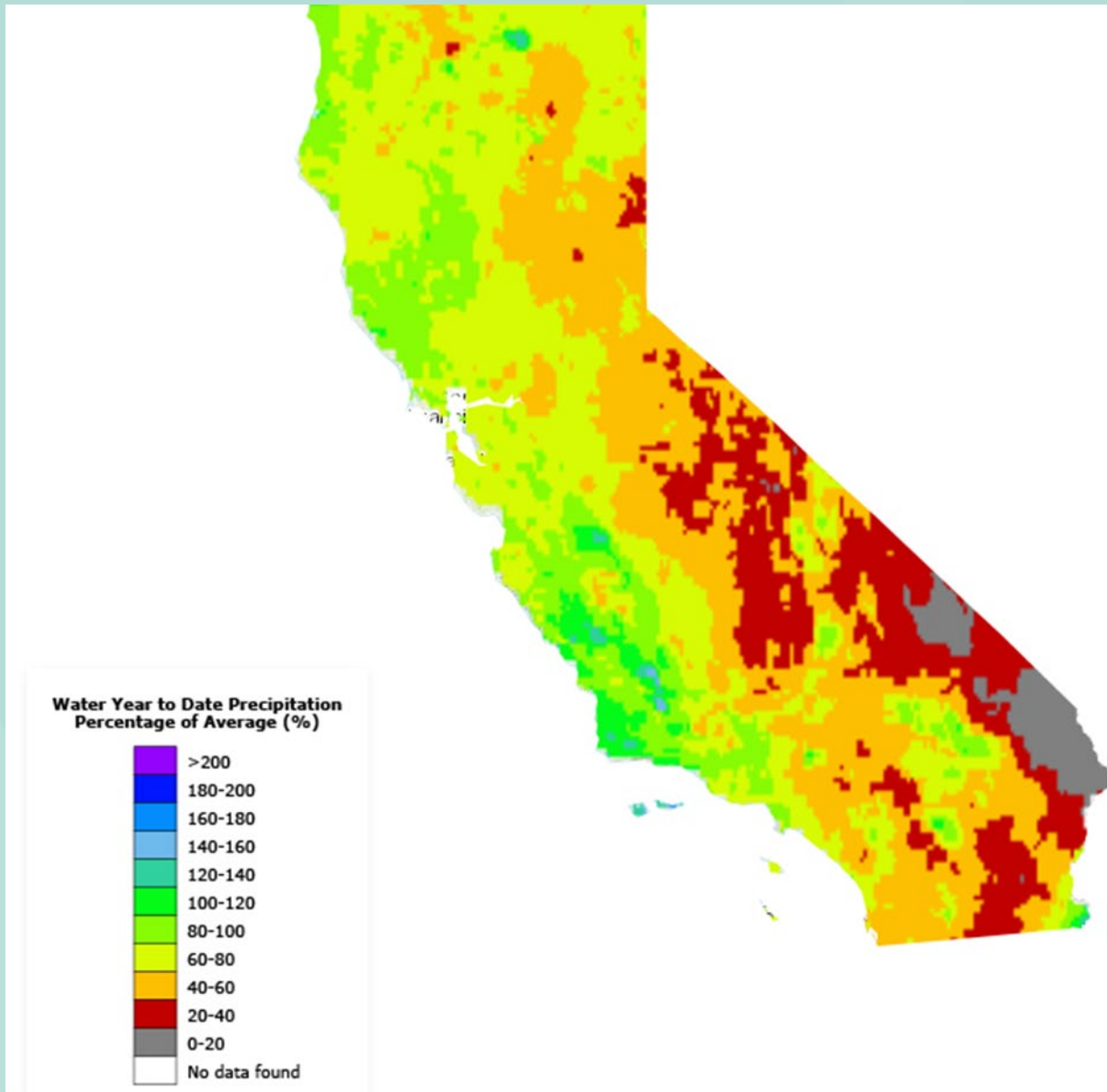


Forecasts support FIRO/CA-AR Program and NSF #2052972 | Intended for research purposes only



# STATEWIDE PRECIPITATION

- 67% of average to date
- 26% of full water year

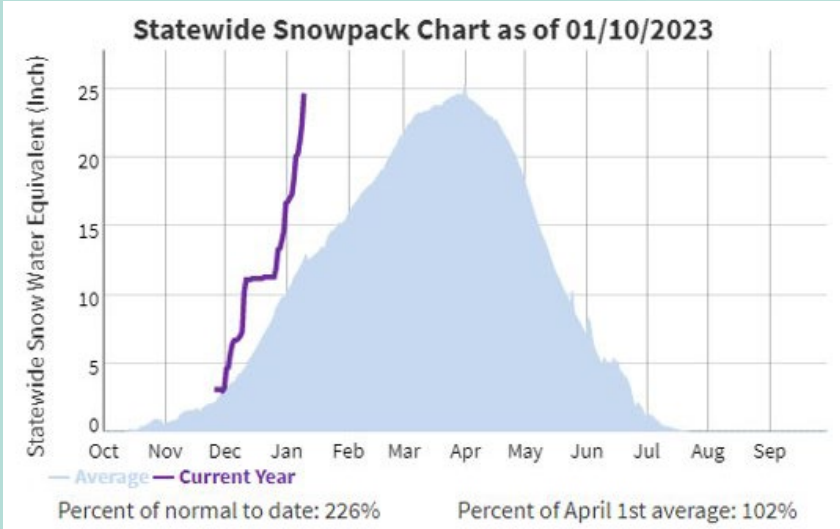
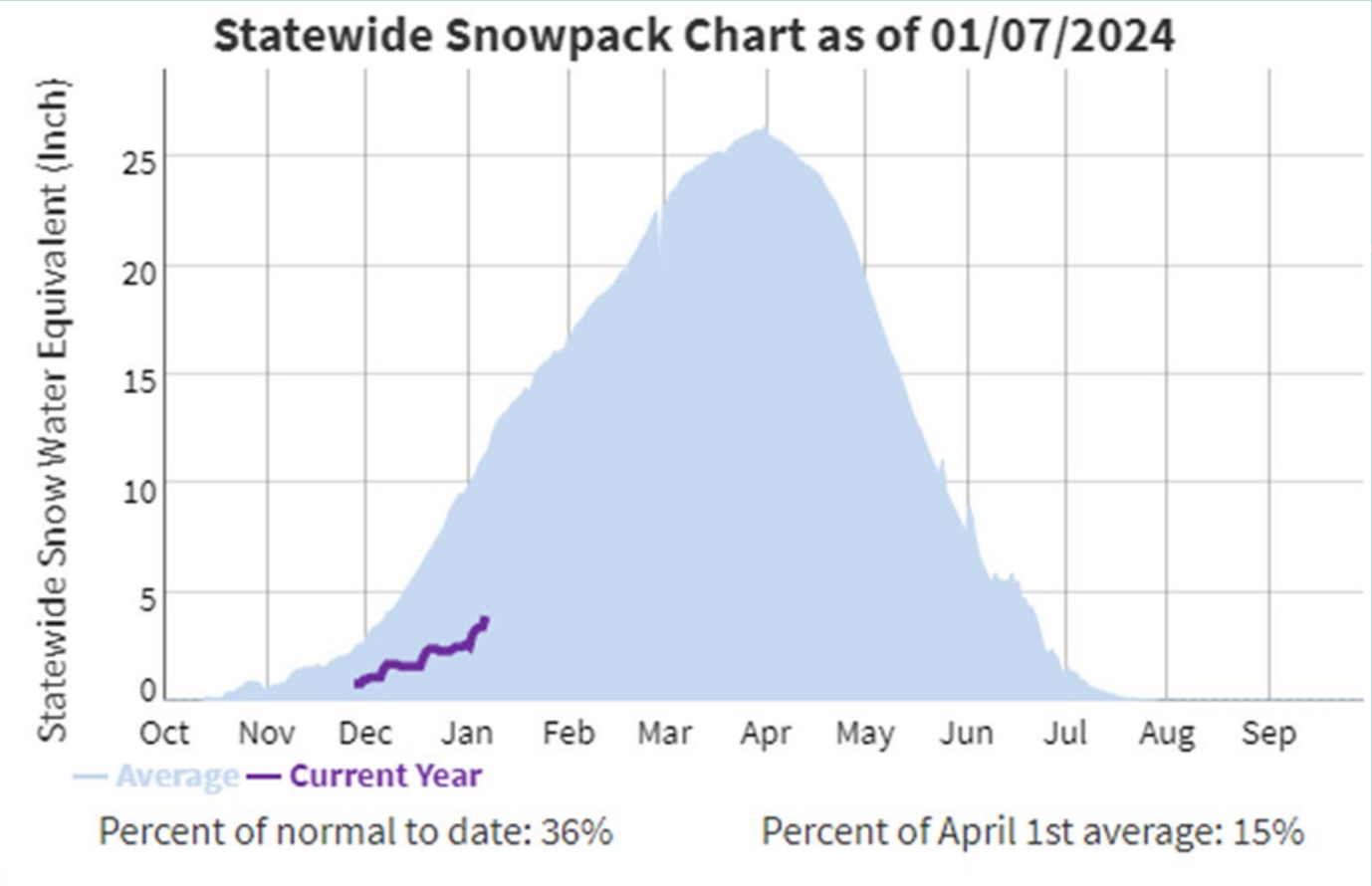


Source: California Water Watch - <https://cww.water.ca.gov/>



# STATEWIDE SNOWPACK

- 36% normal to date
- 15% of April 1<sup>st</sup> average
- Very different then last year!



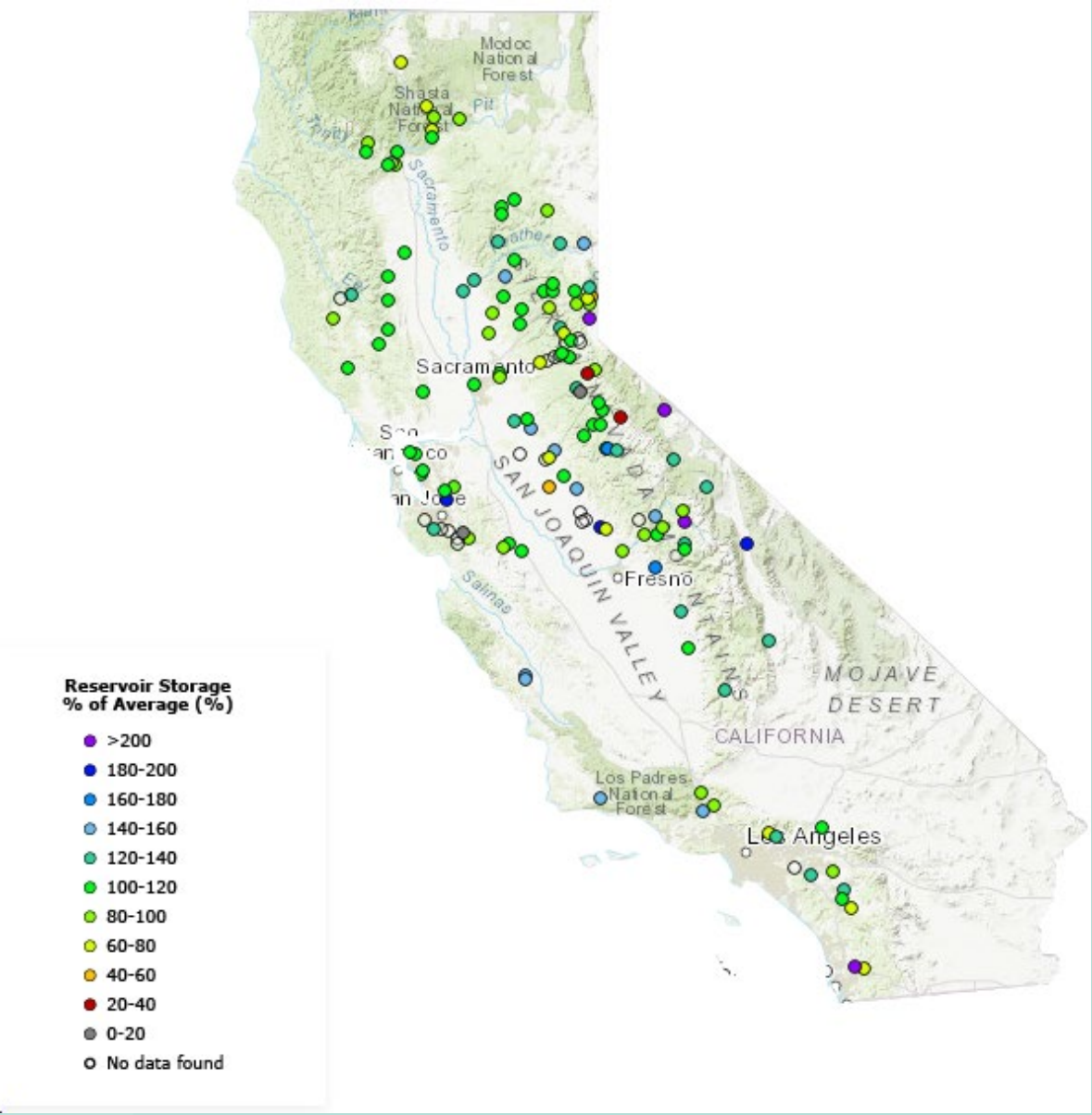
Source: California Water Watch - <https://cww.water.ca.gov/>



# RESERVOIR CONDITIONS

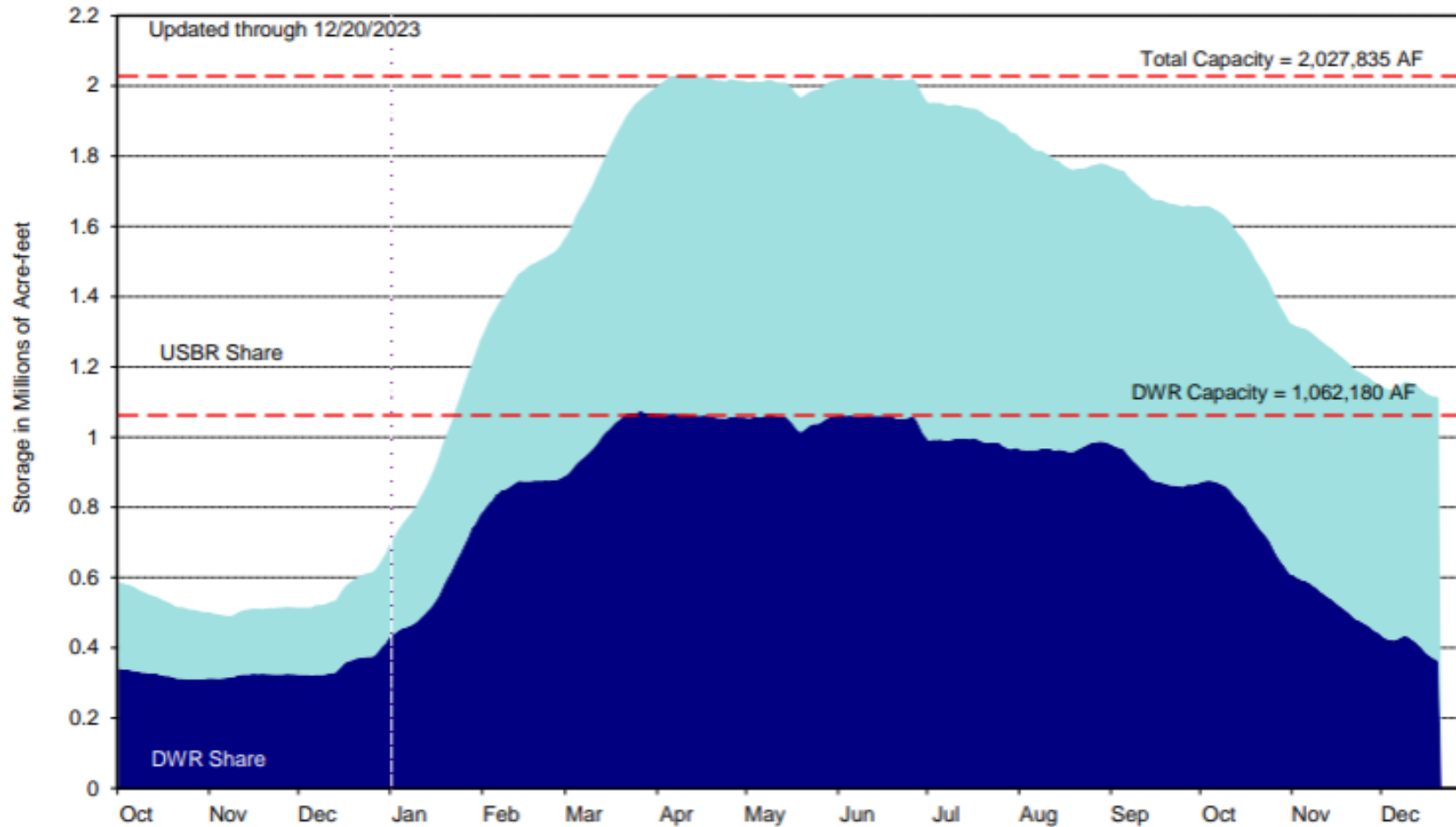
- Estimated total statewide storage : 24.7 MAF\*
- Percent of historical average: 115%

\*Million Acre Feet (MAF). On average, California receives about 200 million acre-feet of water per year in the form of rain and snow. One acre-foot of water is enough to serve two families of four for a year.



# SAN LUIS RESERVOIR STORAGE

San Luis Reservoir Storage  
Combination Water/Calendar Year



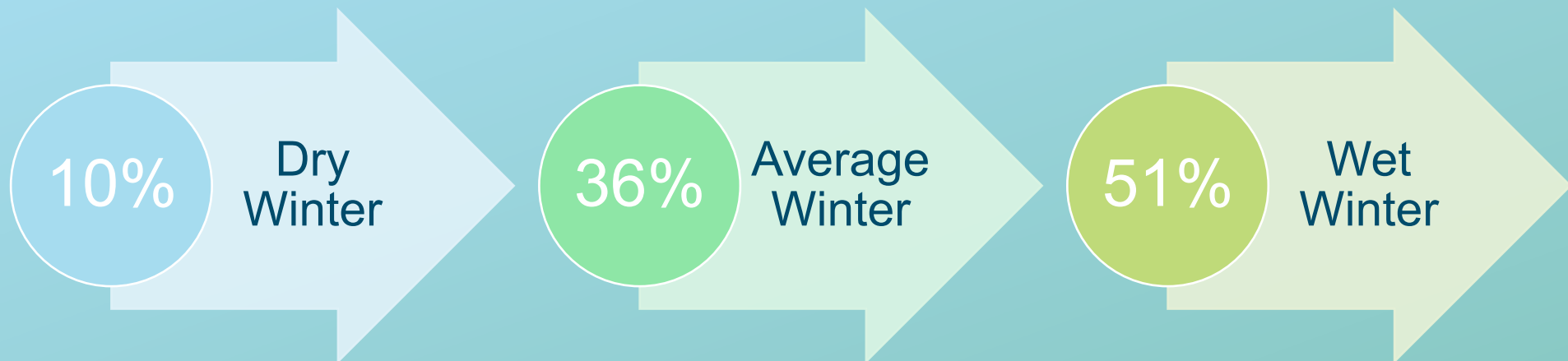
- No risk of spill currently
- 1-7-24 storage level for DWR similar
- SCV Water has 21,000 AF of Article 56 Carryover supplies

Source: <https://water.ca.gov/Programs/State-Water-Project/Operations-and-Maintenance/Operations-and-Delta-Status>

# SWP ALLOCATION

## Initial SWP Table A Allocation – 10%

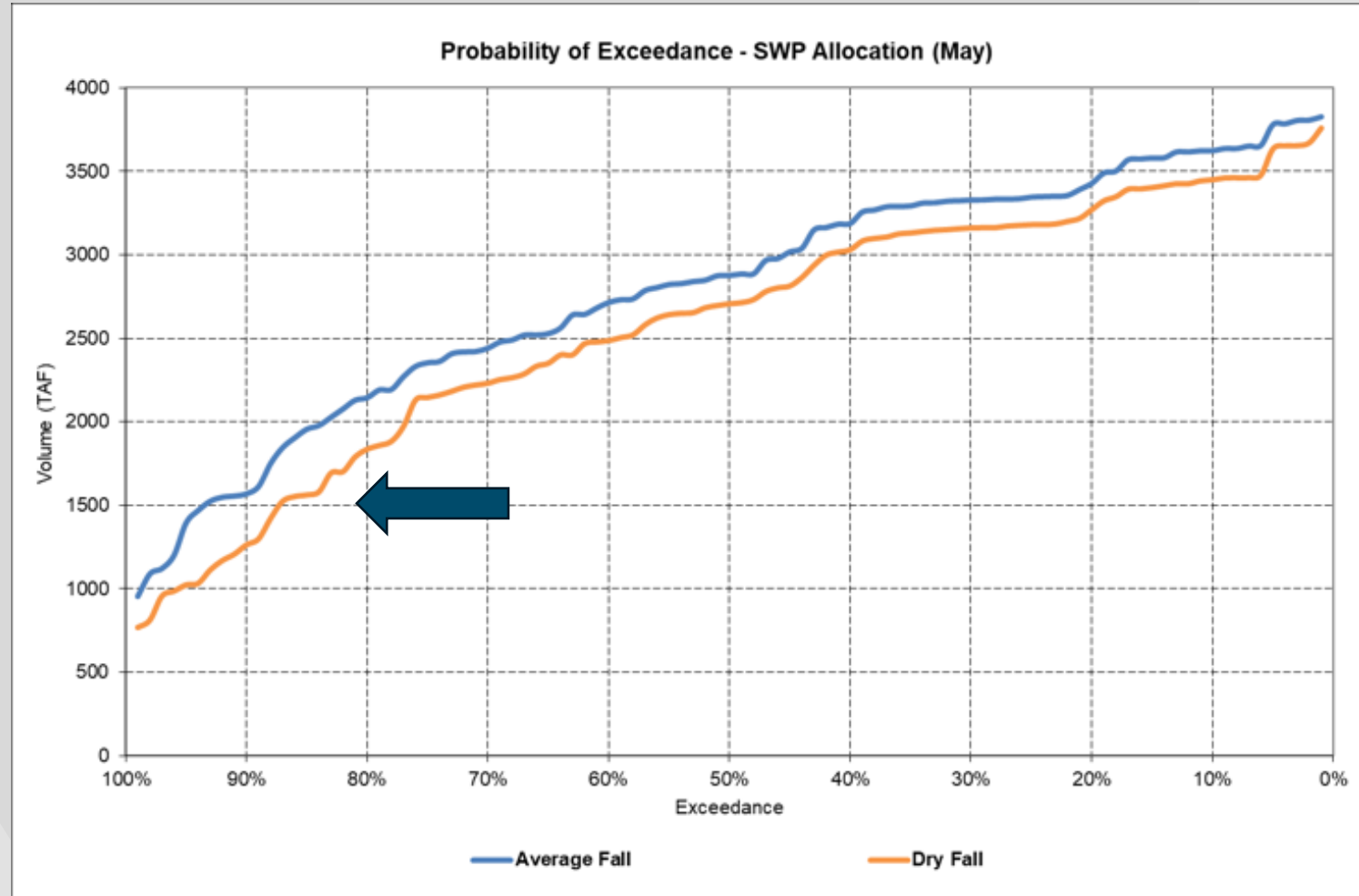
Allocation Analysis range based on December drafted Water Supply Index



# DWR POSITION ANALYSIS ALLOCATION (MAY)

- Increased probability that conditions will improve

- Average Fall has ~10% chance of allocation less than 1.5 MAF or (36%)
- Dry Fall has ~15% chance of allocation less than 1.5 MAF or (36%)



# 2024 OPERATING PLAN

- Returning to maximized groundwater production (still constrained)
- Utilize Art 56 Carryover imported supplies
- Continue monitoring hydrology
- Start rain dancing again
- Update operating plan as conditions progress

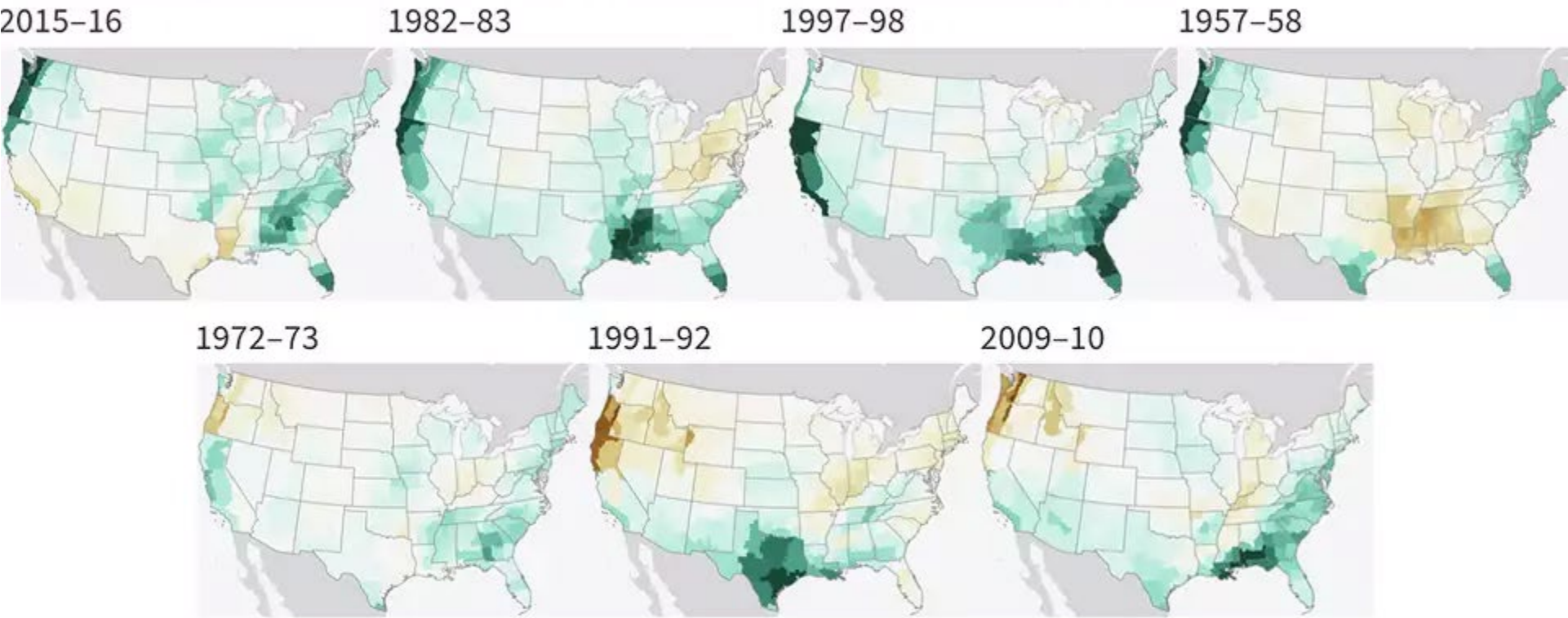
2024 WATER ORDER Operating Plan 1-8-23	2024 10% SWP Allocation	2024 25% SWP Allocation	2024 50% SWP Allocation	2025 5% SWP Allocation
<b>Demand</b>	<b>57,500</b>	<b>57,500</b>	<b>57,500</b>	<b>60,500</b>
<b>Groundwater Supplies</b>	18,050	18,050	18,050	22,840
Alluvium	10,900	10,900	10,900	11,840
Saugus	7,150	7,150	7,150	11,000
Recycled Water	500	500	500	500
<b>Imported Demand</b>	<b>38,950</b>	<b>38,950</b>	<b>38,950</b>	<b>37,160</b>
<b>Imported Supplies</b>				
SWP Table A	9,520	23,800	47,600	4,760
BVRRB	11,000	11,000	11,000	11,000
<b>Total Available Imported Supplies</b>	<b>20,520</b>	<b>34,800</b>	<b>58,600</b>	<b>15,760</b>
<i>Excess Imported Supplies (neg = shortfall)</i>	(18,430)	(4,150)	19,650	(21,400)
<b>Dry Year Water Supplies</b>				
SWP Carryover-Art 56 (not guaranteed)	21,000	21,000	21,000	13,570
Art 56 Carryover/Backup SPILL				
Article 21 Water				
Rosedale Banking			(20,000)	10,000
Semitropic SWRU Banking	5,000			5,000
*****RRB 2023 Exchange	5,000			
YUBA WATER ACCORD	1,000			1,000
Conservation WSCP demand reduction				
*****Water Sales				
Devils Den Sale	(500)	(500)	(500)	
Flexible Storage (up to 6,060 AF)				
<b>Total Imported &amp; Dry Year Supplies</b>	<b>52,520</b>	<b>55,800</b>	<b>59,600</b>	<b>45,330</b>
<b>Potential SWP Carryover at End of Year (neg = shortage)</b>	<b>13,570</b>	<b>16,850</b>	<b>20,650</b>	<b>8,170</b>



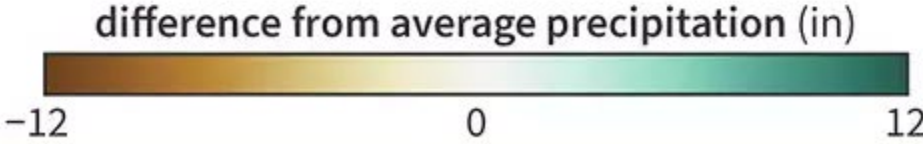
# QUESTIONS

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# U.S. winter precipitation during the 7 strongest El Niños since 1950



December-February compared to 1981-2010



NOAA Climate.gov  
Data: ESRL/NCEI