

Water Supply Update

Board of Directors

January 10, 2023

Water Supply Briefing



- Water Year 2022 Review
- Supplemental Water Supply
- Current Water Supply
- California Water Supply
- Water Supply Projections



Water Year 2022 Review



Upper Mokelumne Precipitation:	39.2" (48.3" avg)
Snowpack water content (max):	18.4" (31.8" avg)
East Bay Precipitation:	21.1" (26.8" avg)
Total unimpaired runoff:	459 TAF (740 TAF avg)
End of Water Year Storage:	520 TAF



Supplemental Water Supply

Freeport Diversion

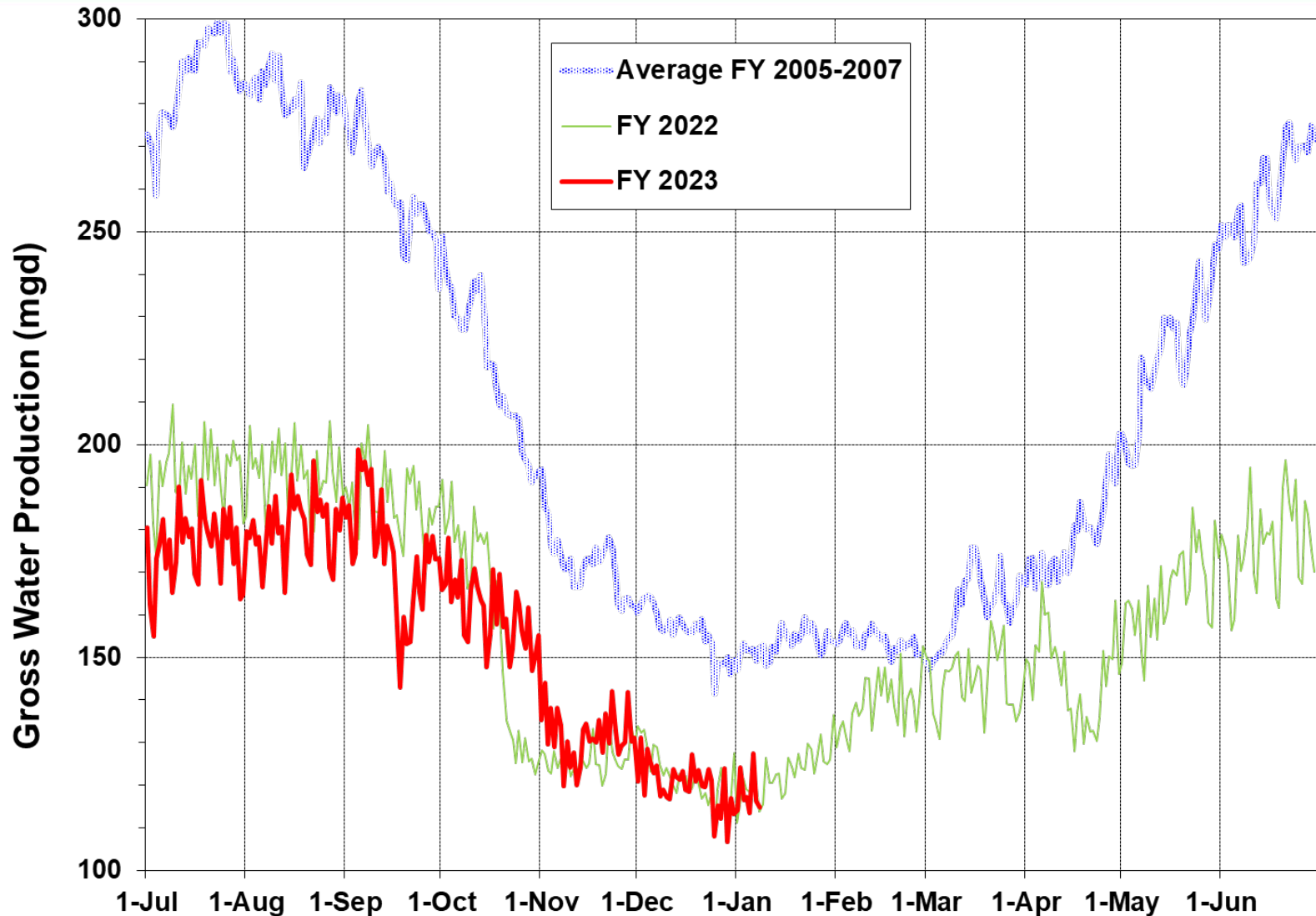


- Transfer of 31,915 AF US Bureau of Reclamation (USBR) allocation completed on 3/31/2022
- Additional 2,000 AF of CVP transfer water purchased from CCWD and diverted
- 19,921 of 20,000 AF PCWA transfer water completed 10/24/2022

Diversion Totals (AF)	
October 4, 2021 - March 31, 2022	33,915
August 2, 2022 - October 24, 2022	19,921
Total	53,836

Current Water Supply

Gross Water Production



Water Conservation

Gross Water Production CY2022 vs. CY2020



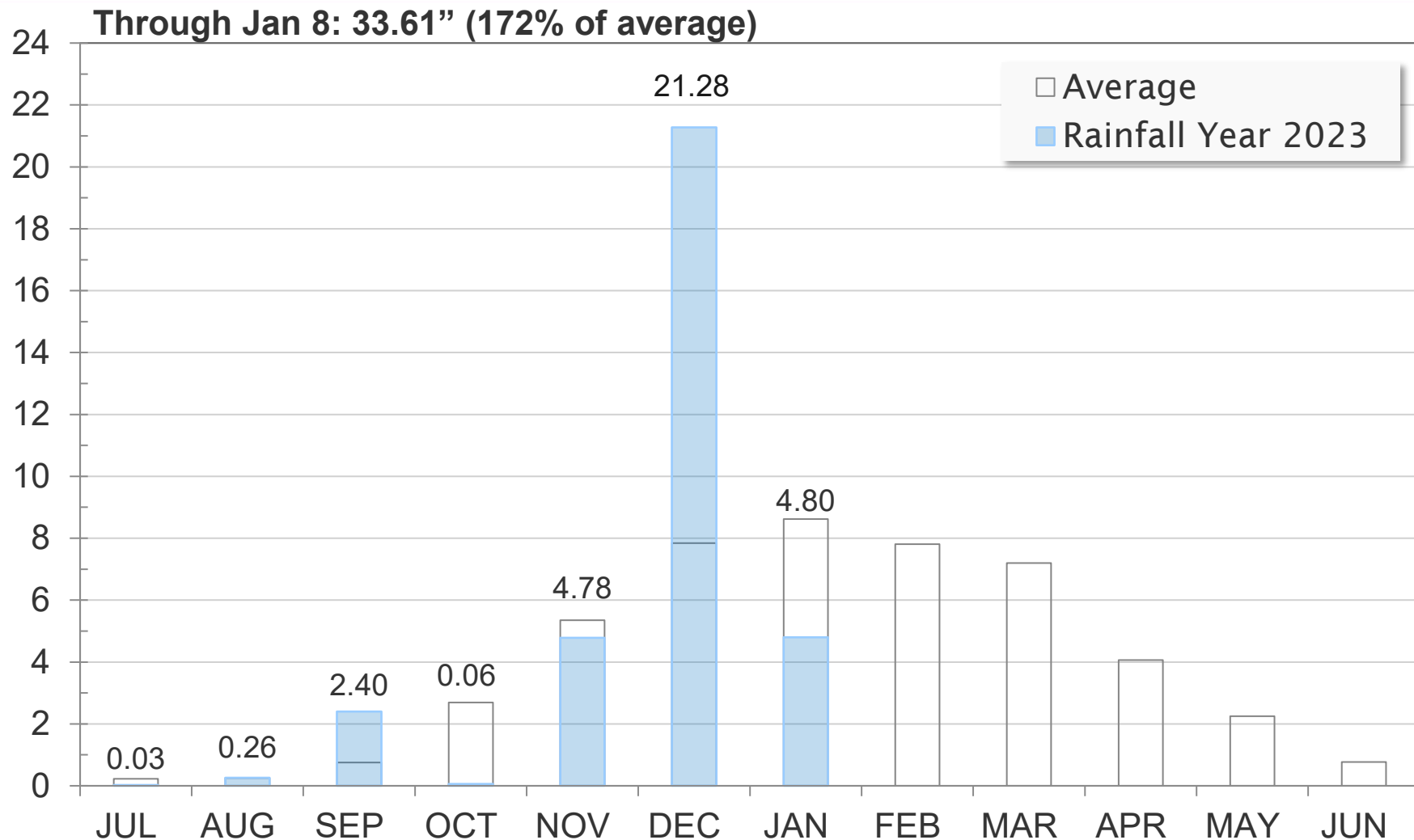
	Gross Water Production (mgd)					
	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22
Actual	123	139	145	145	165	177
WOH 2022	98	105	107	108	116	120
EOH 2022	25	34	38	37	49	57
2020 Baseline Demand	120	141	143	148	175	201
WOH CY2020	96	108	109	109	121	134
EOH CY2020	24	33	34	39	54	67
% Change	2%	-1%	1%	-2%	-6%	-12%
	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Actual	176	181	175	161	132	120
WOH 2022	117	121	119	113	102	96
EOH 2022	59	60	56	48	30	24
2020 Baseline Demand	210	211	200	185	153	135
WOH CY2020	137	137	133	125	112	104
EOH CY2020	73	74	67	60	41	31
% Change	-16%	-14%	-13%	-13%	-14%	-11%

**Total Water
Conservation
CY2022 vs.
CY2020:

9.3%**

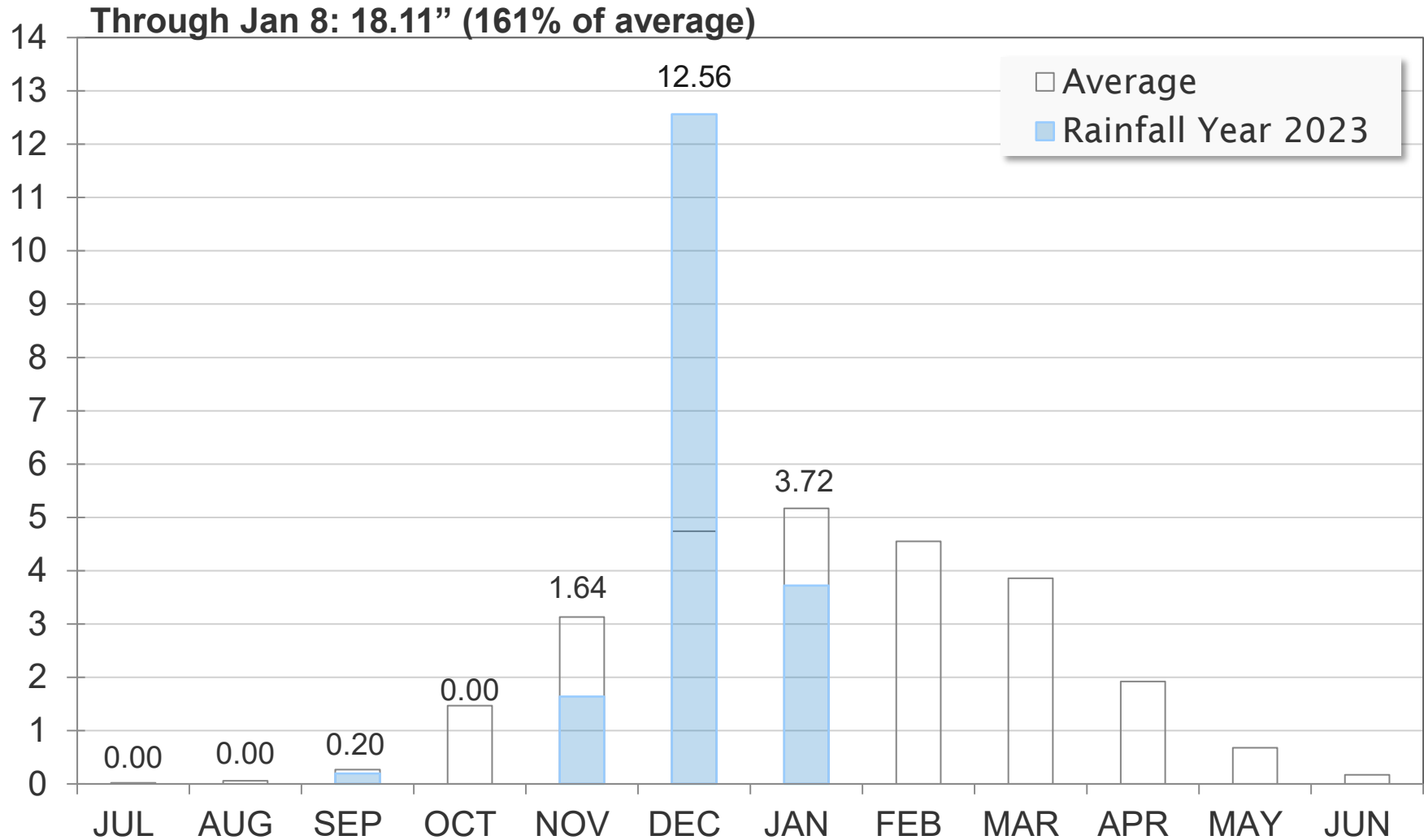
Current Water Supply

Mokelumne Precipitation



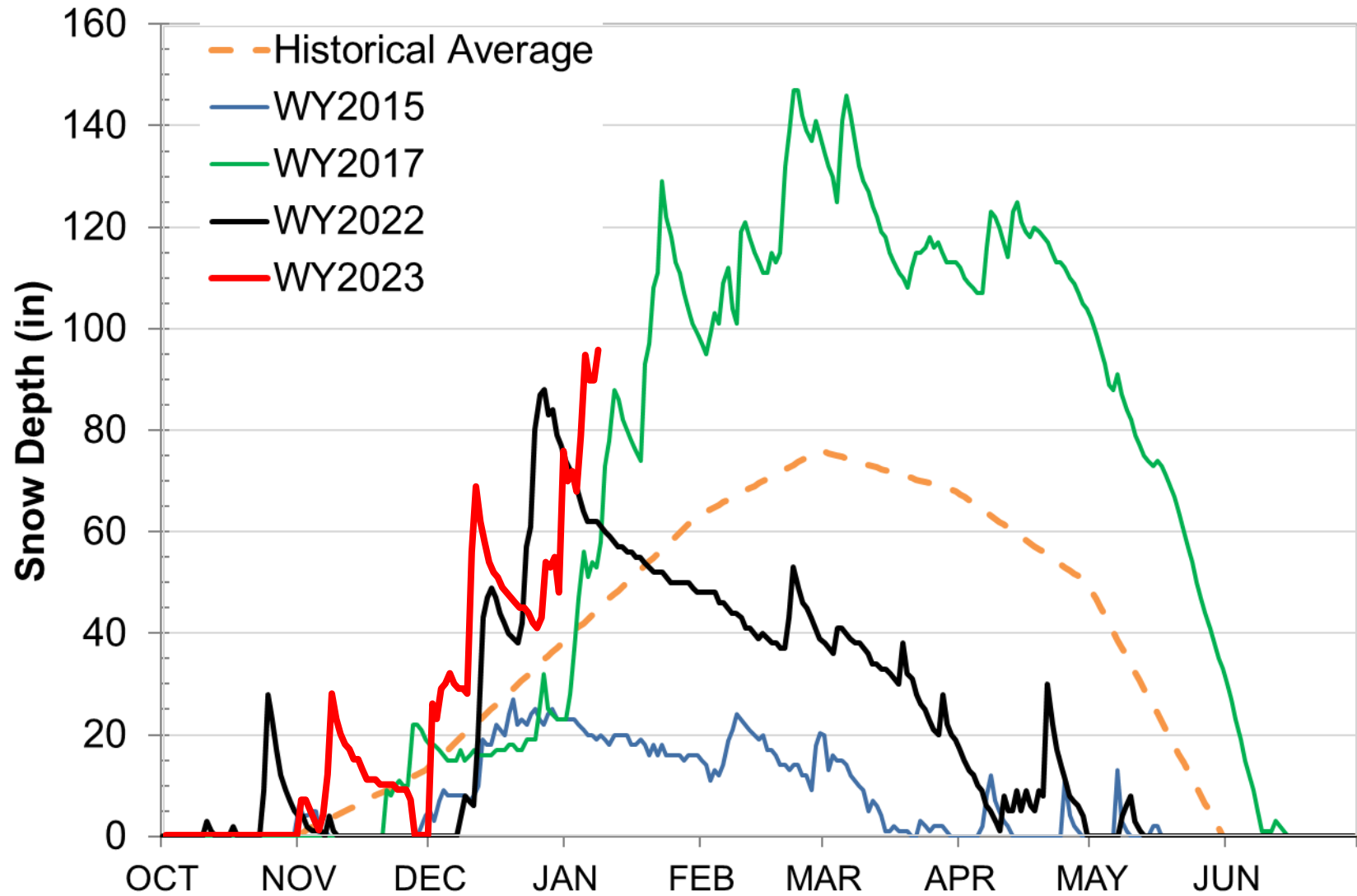
Current Water Supply

East Bay Precipitation



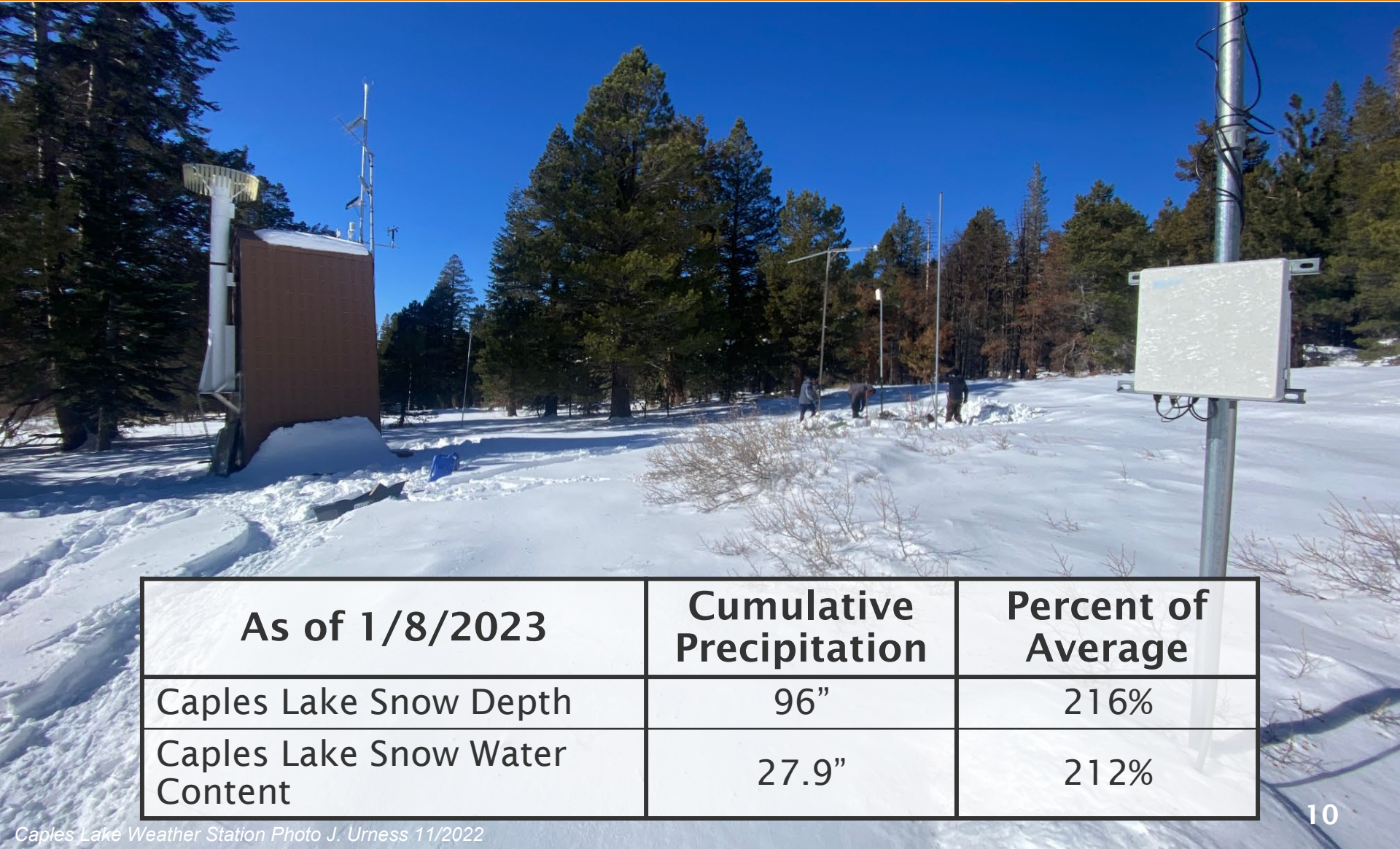
Current Water Supply

Caples Lake Snow Depth



Current Water Supply

Snow



As of 1/8/2023	Cumulative Precipitation	Percent of Average
Caples Lake Snow Depth	96"	216%
Caples Lake Snow Water Content	27.9"	212%

Current Water Supply

Reservoir Storage



As of 1/8/2023	Current Storage	Percent of Average	Percent of Capacity
Pardee	190,080 AF	106%	93%
Camanche	303,380 AF	118%	73%
East Bay	140,370 AF	115%	93%
Total System	633,830 AF	113%	82%

Current Water Supply

Record Setting December - January Storms



- **Precipitation 12/26-1/8:**
 - Mokelumne = 17.24"
 - East Bay = 12.00"
- **Oakland 24-hour rainfall record**
 - 4.75" on 12/31
- **3rd largest true natural flow daily total in last 40 years**
 - ~25,000 cfs on 12/31

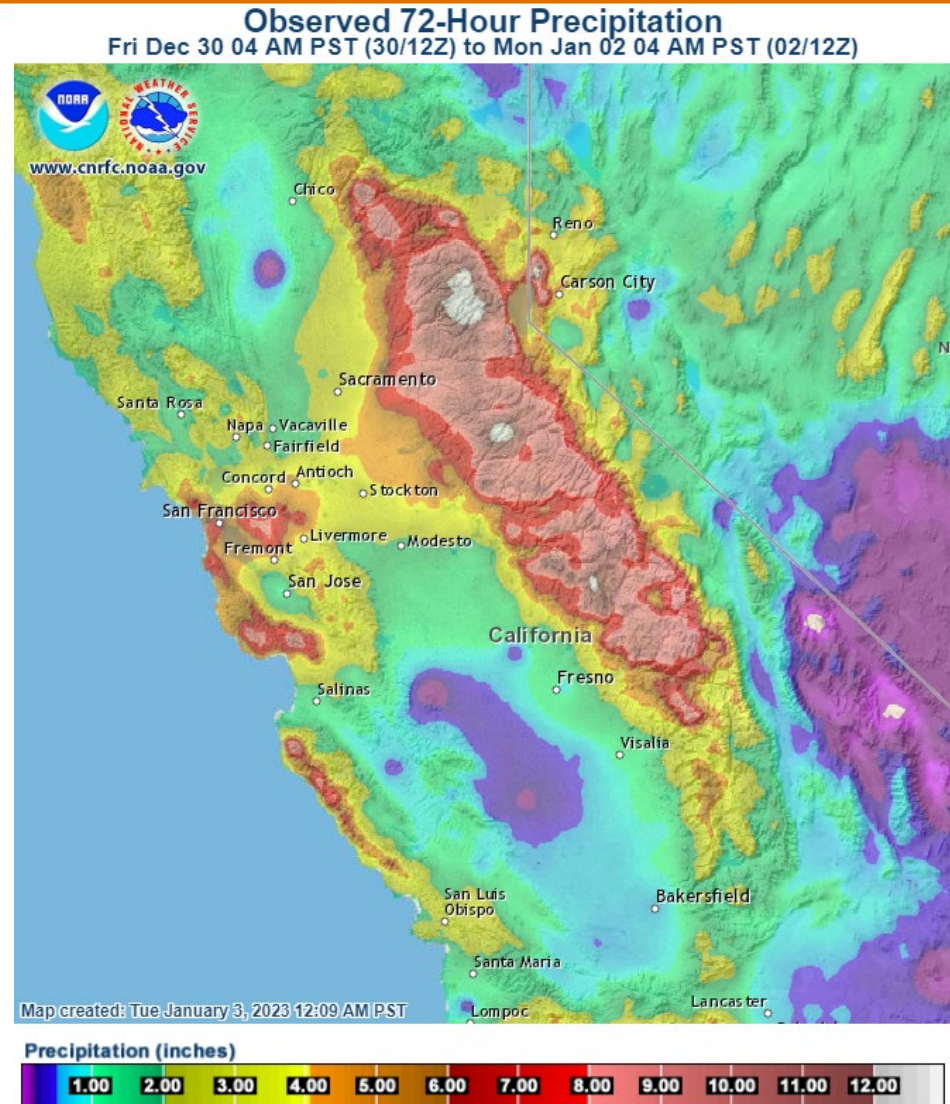


Current Water Supply

New Year's Eve Atmospheric River



- Storm on 12/30 – 1/1
- 72-hour precipitation total in Mokelumne watershed 8.6"
- 72-hour rainfall total in East Bay 5.8"



Current Water Supply

Recent Winter Storms and Reservoir Operations



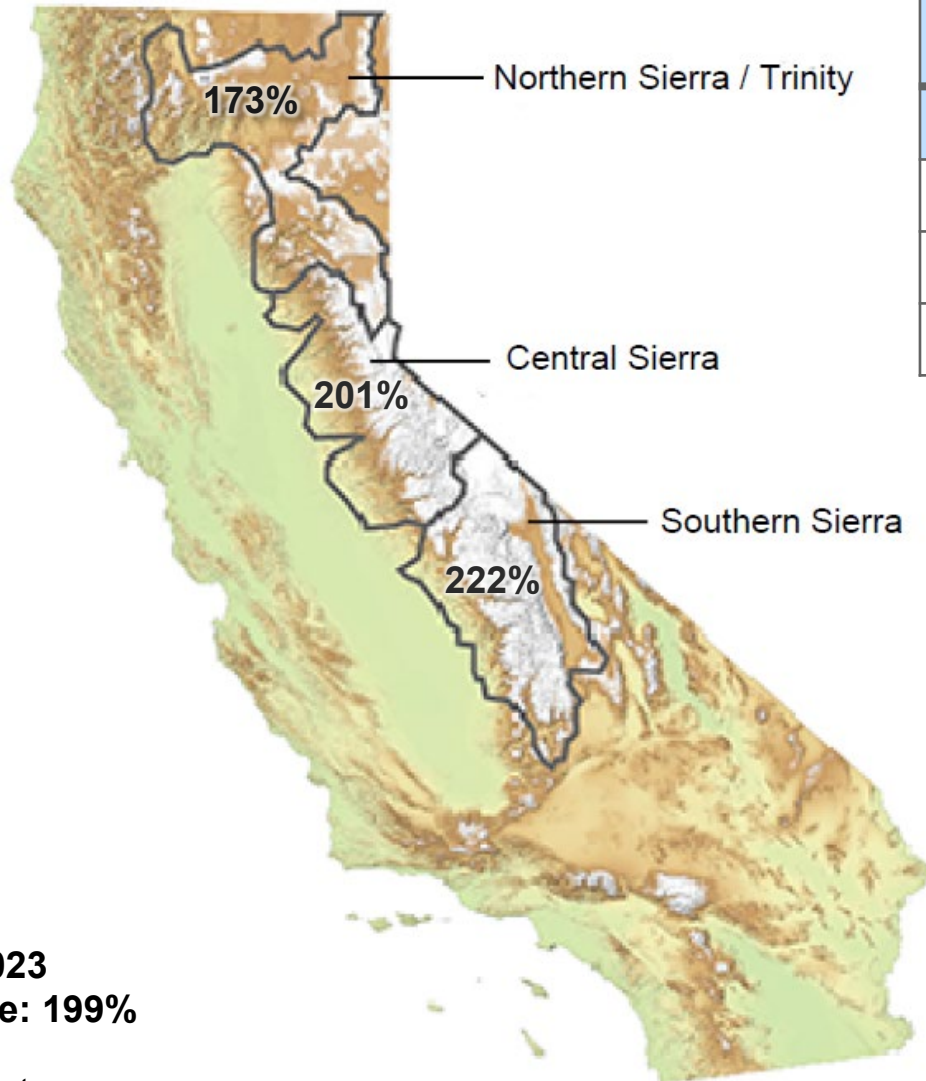
- Pardee rose 10' in 24-hours and flowed over spillway 12/31-1/3
- Total System Storage increased 71 TAF in 3 days, a 13% increase
- USL rose 9' in 24-hours on 12/31
- Releases were made from Chabot, San Pablo, and USL; suspended on 1/8
- USL and Chabot flowing over spillways



Pardee Powerhouse Photo S. Rowan

California Water Supply

Change in Snow Water Equivalents



Snow Water Content Percent of Normal for this Date				
Date	North	Central	South	State
12/1/22	104	100	123	106
1/1/23	139	187	209	179
1/9/23	173	201	222	199

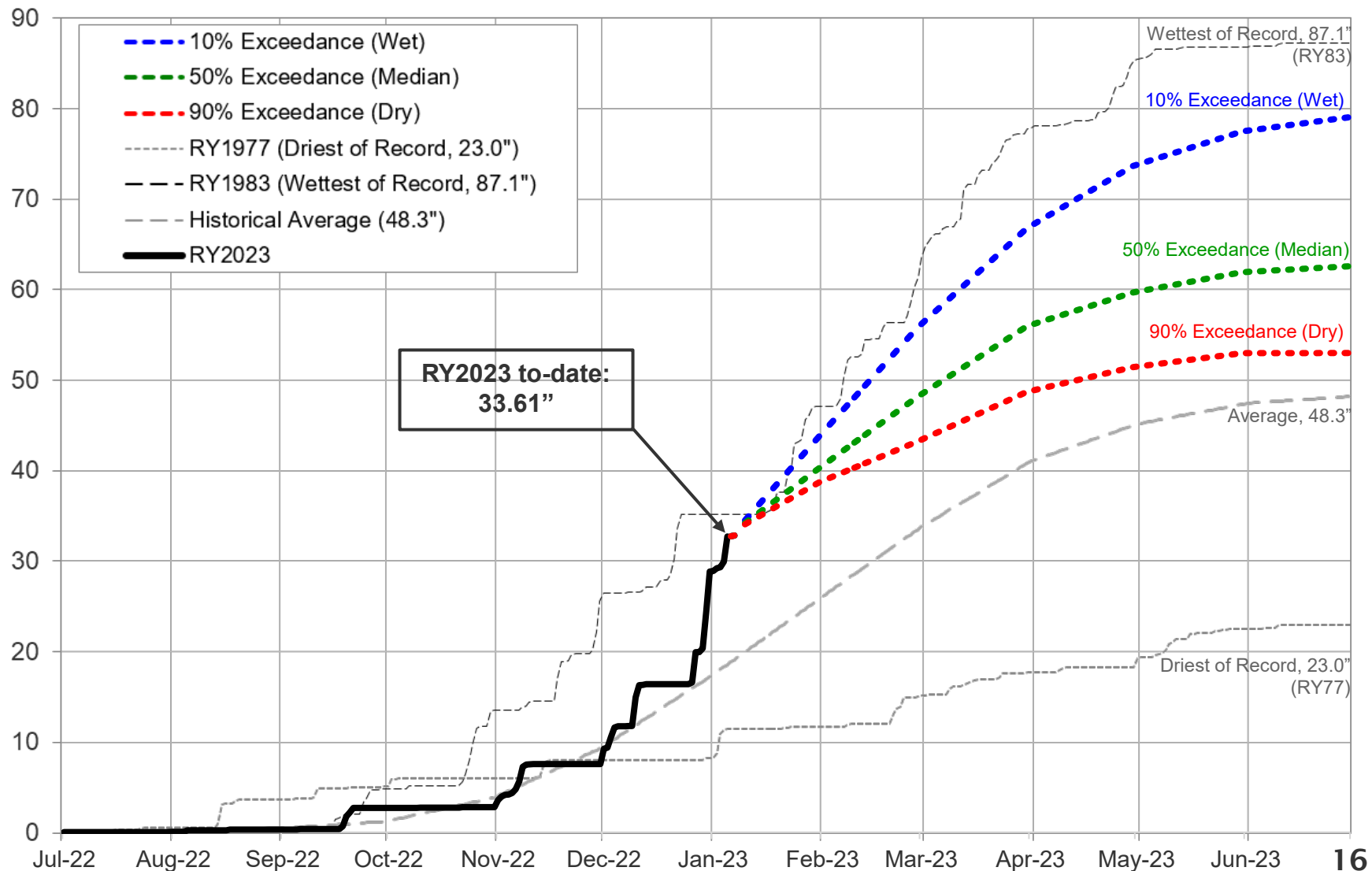


Data for: 9-Jan-2023
Statewide Average: 199%

% of Normal for this Date

Water Supply Projections

Mokelumne Precipitation Rainfall Year 2023

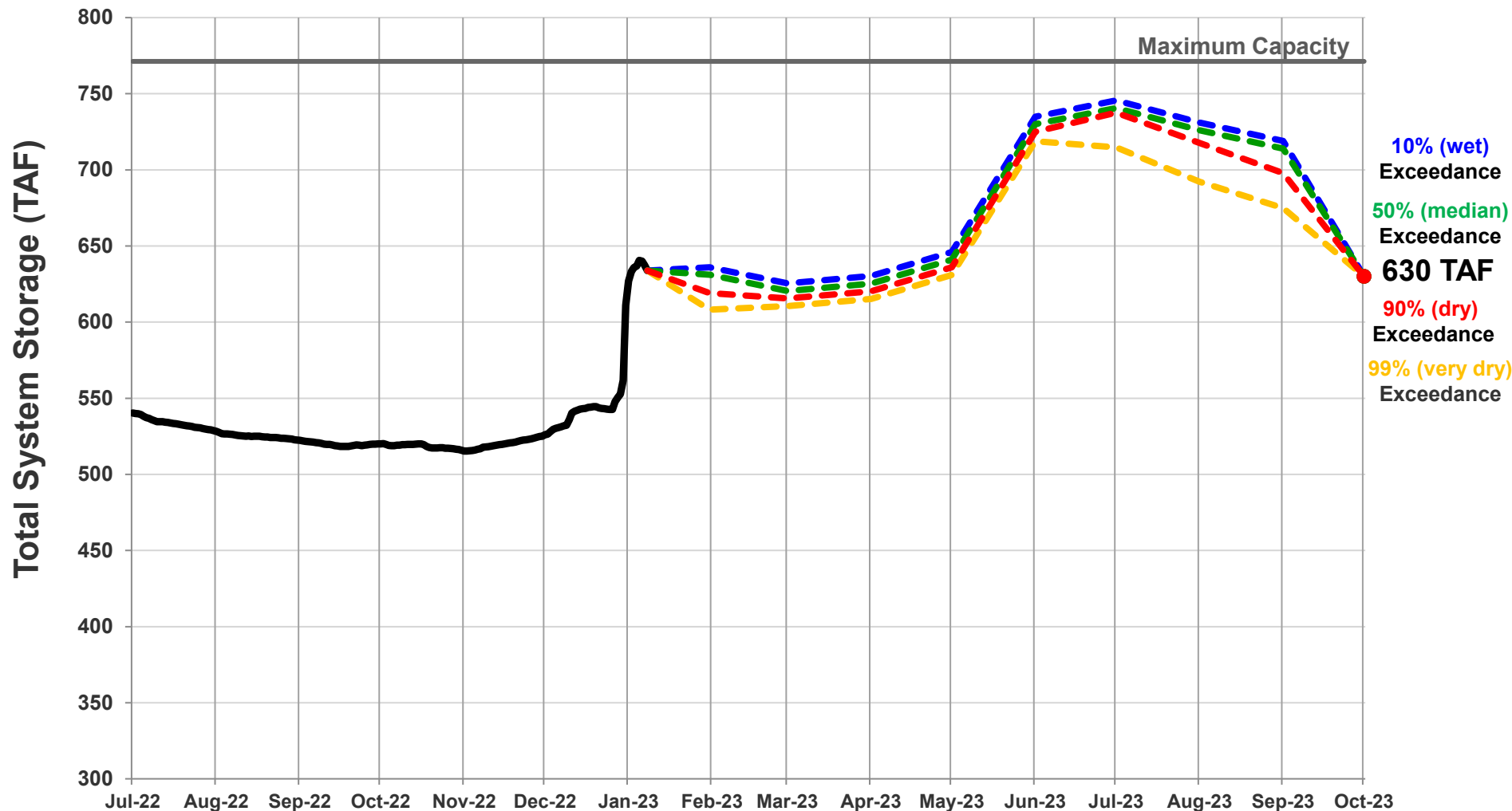


Water Supply Projections

Projected 2023 EBMUD Total System Storage



Total System Storage WY2023



Questions ?



WATER SUPPLY ENGINEERING DAILY REPORT

Sunday, January 8, 2023

RESERVOIR STORAGE AND ELEVATION

	<u>WATER SURFACE</u>		<u>STORAGE</u>		<u>MAXIMUM CAPACITY</u>		Release	Spill
	Elevation	+Gain		+Gain	Elevation	Storage		
	<u>Feet</u>	<u>-Loss</u>	<u>Ac-Ft</u>	<u>-Loss</u>	<u>Feet</u>	<u>Ac-Ft</u>	<u>Cfs</u>	<u>Cfs</u>
<u>MOKELUMNE</u>								
Pardee	561.36	-1.64	190080	-3510	567.65	203795	3381	0
Camanche	219.17	-0.06	303380	-380	235.5	417120	3500	0
<u>EAST BAY</u>								
Briones	572.32	0.08	56310	60	576.14	58960	0	0
Chabot	228.08	0.11	10640	40	227.25	10350	83	65
Lafayette	437.9	0.09	2930	10	449.16	4250	0	0
San Pablo	307.18	-0.05	32690	-40	313.68	37915	117	0
Upper San Leandro	458.54	0.4	<u>37800</u>	<u>300</u>	459.98	<u>38905</u>	59	0
<u>Total East Bay Res.</u>			<u>140370</u>	<u>370</u>		<u>150380</u>		
<u>TOTAL SYSTEM STORAGE</u>			633830	-3520		771295		

<u>DISTRIBUTION SYSTEM</u>			<u>MOKELUMNE SYSTEM</u>		
<u>DISTRIBUTION RESERVOIRS</u>			<u>AQUEDUCT DELIVERIES</u>		
	Storage	Operating		<u>MG</u>	<u>Flow Conditions</u>
	<u>MG</u>	<u>Capacity</u>			
Today	346	720	Line 1	30.2	THROTTLE
Total Previous Day	<u>373</u>		Line 2	0	SHUTDOWN
Total Change	-27		Line 3	<u>34.7</u>	<u>THROTTLE</u>
			TOTAL	64.9	100 Cfs
<u>WATER PRODUCTION</u>	Million	Capacity	<u>FSCC to MOK AQUEDUCTS (Measured at Brandt), MG</u>		
<u>AND DEMAND</u>	<u>Gallons</u>	<u>MGD</u>	Mok 1	0	
Lafayette WTP	0	25	Mok 2	<u>0</u>	
Orinda WTP	39	190		0 MG	
San Pablo WTP	0	30	<u>RIVER FLOWS AND RELEASES</u>		<u>Cfs</u>
Sobrante WTP	14.6	50	Mokelumne River Natural Flow		2145
Upper San Leandro WTP	19.7	45	Pardee Reservoir Inflow		1692
Walnut Creek WTP	15.9	90	Pardee Release to Camanche Res.		3381
<u>TOTAL SURFACE PRODUCTION</u>	89.2	430	Pardee Release to JVID		0
Miscellaneous(Estimated)	0.4		Camanche Release to Mokel. River		3500
<u>TOTAL WATER PRODUCTION</u>	<u>89.6</u>		<u>PG&E CO. STORAGE (Acre-feet)</u>		
Change in Distribution System	-27				
Wash Water from Distribution Sys.	1.4				
<u>SYSTEM DEMAND</u>	114.9				
East-of-Hills Demand	21.2				
West-of-Hills Demand	93.7				

RAW WATER TRANSMISSION			Ac-ft	PRECIPITATION (Inches)				
	INPUT	DRAFT		THIS YEAR		AVERAGE YEAR		
Briones Res.	0	0	<u>STATION</u>	<u>Today</u>	<u>This Month</u>	<u>Season to-Date</u>	<u>Season to-Date</u>	<u>Season Total</u>
San Pablo Res.	31	55						
U. San Leandro Res.	0	65						
TOTAL	31	120						
<u>REMARKS</u>								
WID Canal Diversion = 0 cfs								
Mokelumne River below WID = 2,993 cfs								
								</

EAST BAY MUNICIPAL UTILITY DISTRICT