EAST BAY MUNICIPAL UTILITY DISTRICT

Amendment to EBMUD Retirement System Ordinance (No. 40) - Section 21 Second Reading

Board of Directors

March 24, 2015

Updates to Ordinance No. 40

- Section 21 provides for an optional modification of a member's retirement allowance to provide an actuarially equivalent allowance for a surviving beneficiary.
- Actuarial rate of return is used to:
  - calculate the optional beneficiary allowance in Section 21,
  - cash-outs of retirement contributions, and
  - posting of interest to employee accounts

Updates to Ordinance No. 40

- Plan actuary recommended a change to actuarial rate of return as part of their 2014 Annual Actuarial Valuation.
- The Retirement Board adopted the Actuary's recommended rate of return on January 15, 2015.
- The new recommended rate of return is 7.50%, effective date of July 1, 2015

Updates to Ordinance No. 40

- The Ordinance requires that the actuarial assumptions used to determine optional forms of benefits be specified.
- The proposed update to the Retirement Ordinance (Section 21) ensures language is consistent with the change adopted by the Retirement Board.

Updates to Ordinance No. 40

- Steps to the adoption of Ordinance amendment
  - First Reading, March 10, 2015
  - Second reading and vote to adopt, March 24, 2015
  - The Ordinance amendment must be placed in newspaper for 2 successive weeks
  - Adoption of Ordinance amendment will take effect 30 days after the vote to adopt, April 24, 2015

Recommended Action

Vote to adopt the amendment to Section 21 of EBMUD Retirement System Ordinance No. 40, updating the actuarial rate of return to 7.5%.

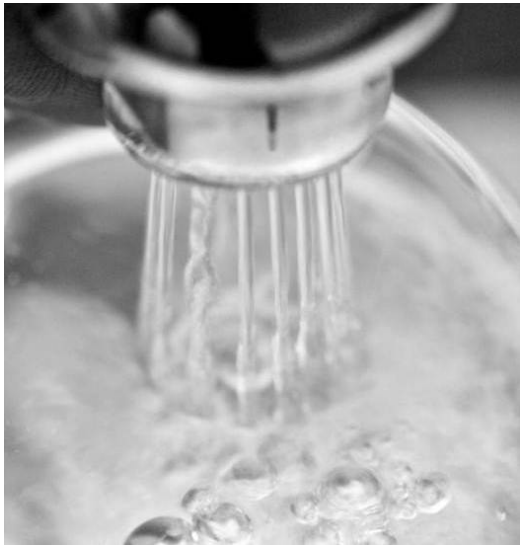
EAST BAY MUNICIPAL UTILITY DISTRICT

Water Supply Briefing

Water Operations Department

March 24, 2015

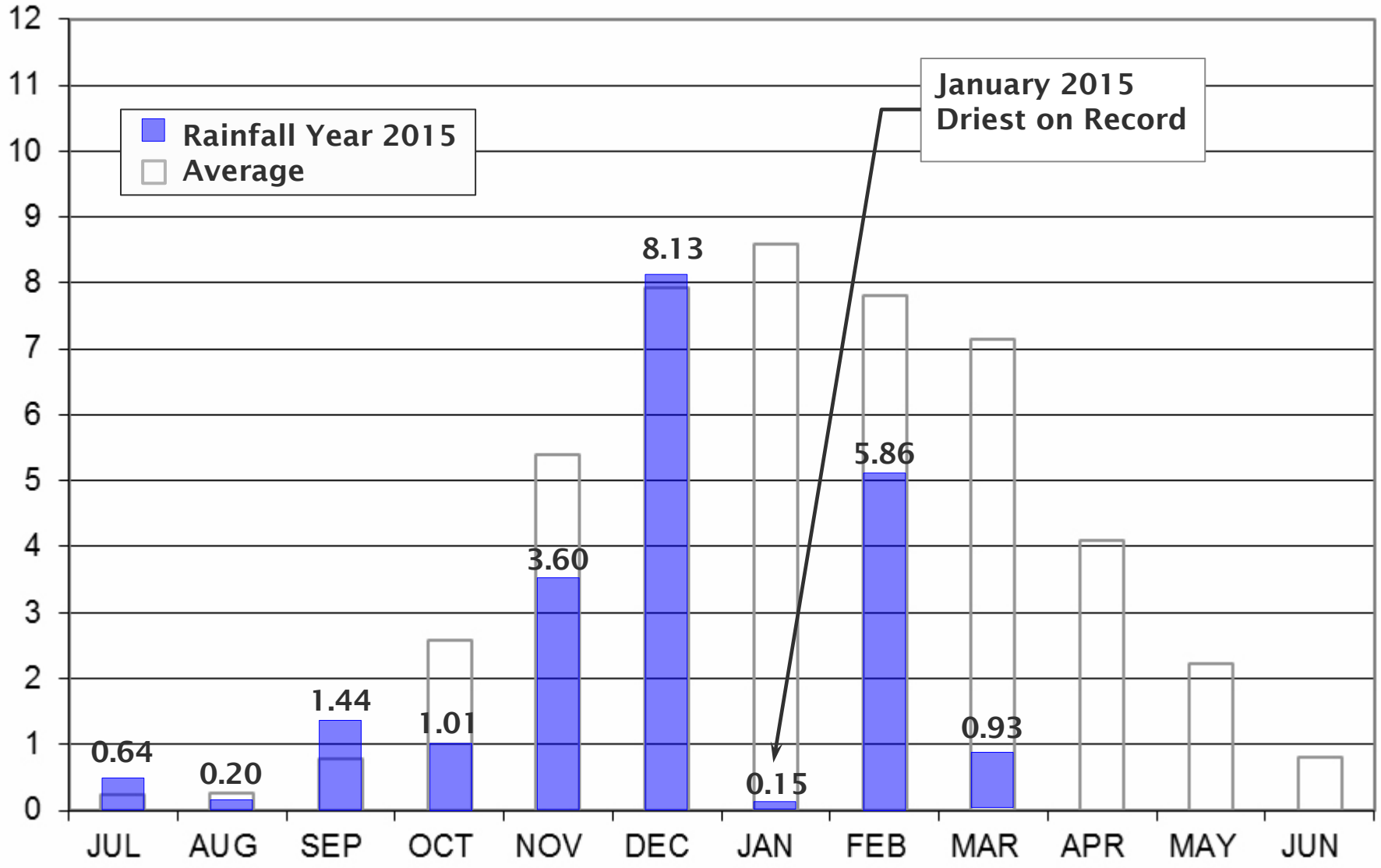
Water Supply Briefing



- Current Water Supply
- California Water Supply
- Water Supply Projections
- Drought Plan

Current Water Supply

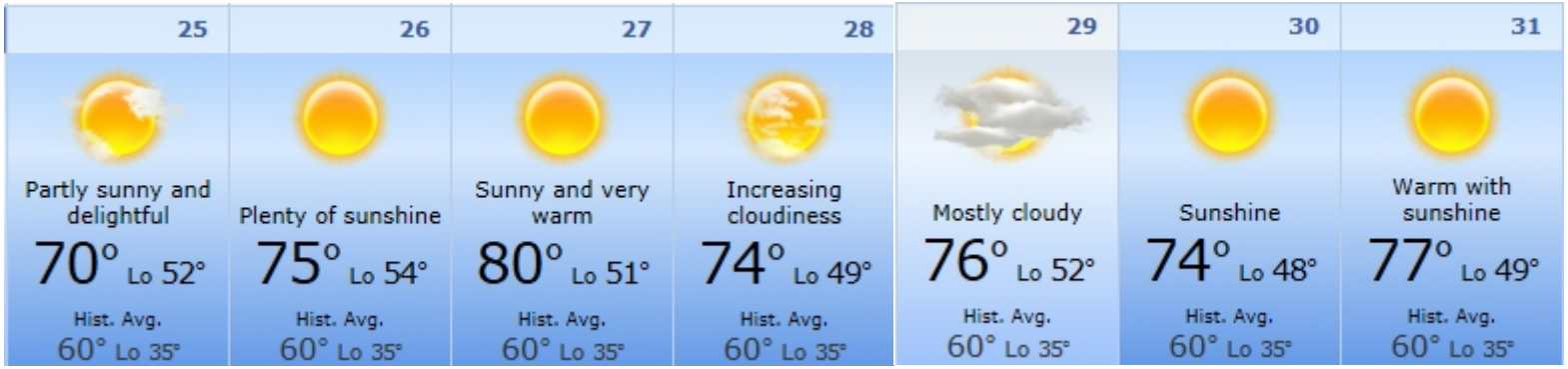
Mokelumne Precipitation



Current Water Supply

Mokelumne Precipitation – March Madness

7-Day Forecast



Accuweather.com at Pioneer, CA

How Dry is March 2015?

March 2015

Mokelumne 4-Station Average Precipitation (through March 23rd)

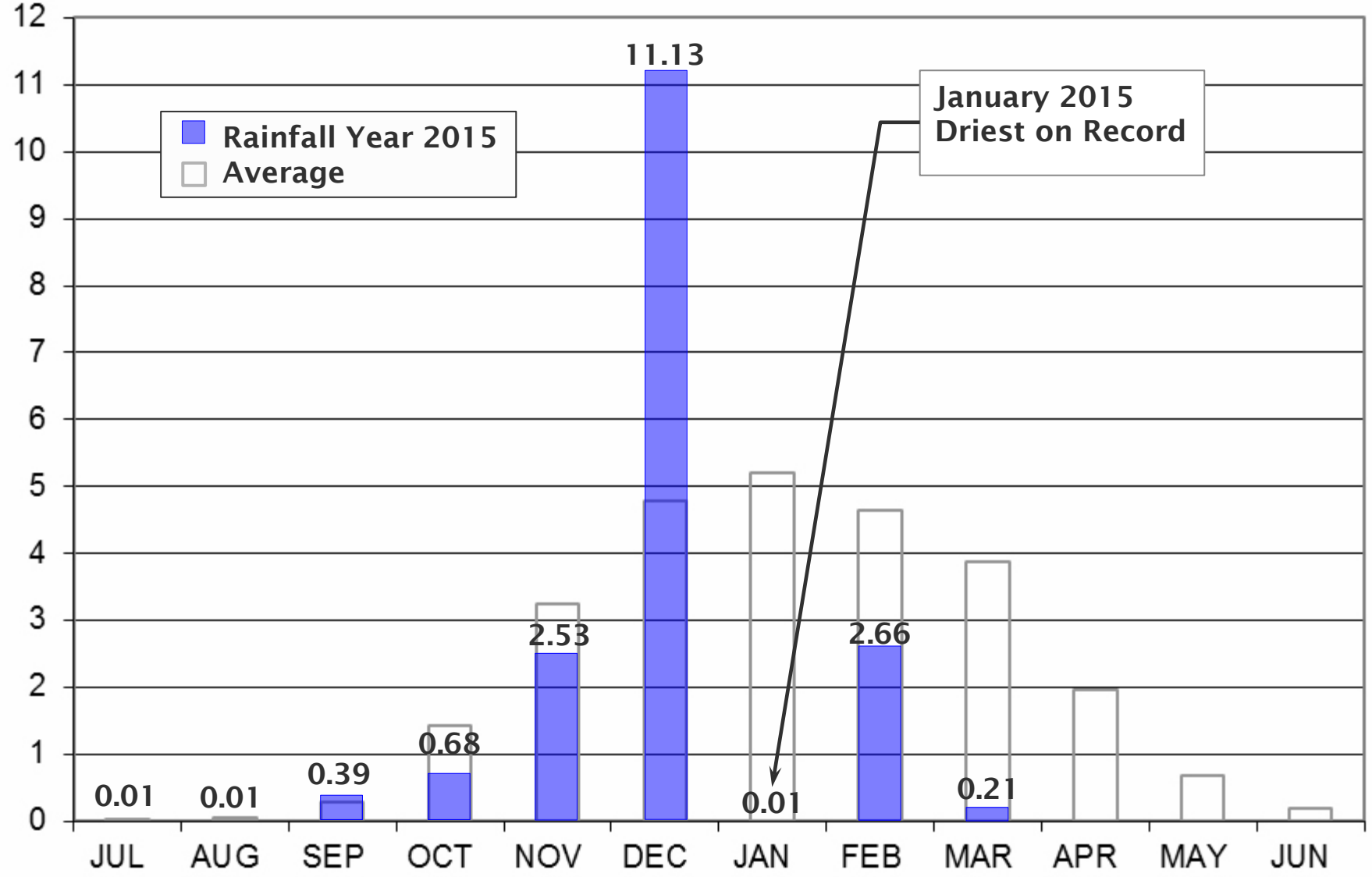
0.93”

Top 5 Driest Marches

Year	Mokelumne 4-Station Average Precipitation
1997	0.73”
1934	0.98”
1994	1.05”
1956	1.14”
2008	1.18”

Current Water Supply

East Bay Precipitation



Current Water Supply

Precipitation & Snow

As of 03/23/15	Cumulative Precipitation	% of Average
East Bay		
East Bay Watershed	17.57”	77%
Mokelumne Basin		
4-Station Average	21.95”	56%
Caples Lake Snow Depth	3”	4%
Caples Lake Snow Water Content	0.4”	1%

Current Water Supply

Reservoir Storage

As of 03/23/15	Current Storage	Percent of Average	Percent of Capacity
Pardee	177,440 AF	98%	90%
Camanche	119,060 AF	41%	29%
East Bay	114,590 AF	82%	76%
Total System	411,090 AF	67%	54%

California Water Supply

Sierra Snowpack

Statewide Automated Snow Readings

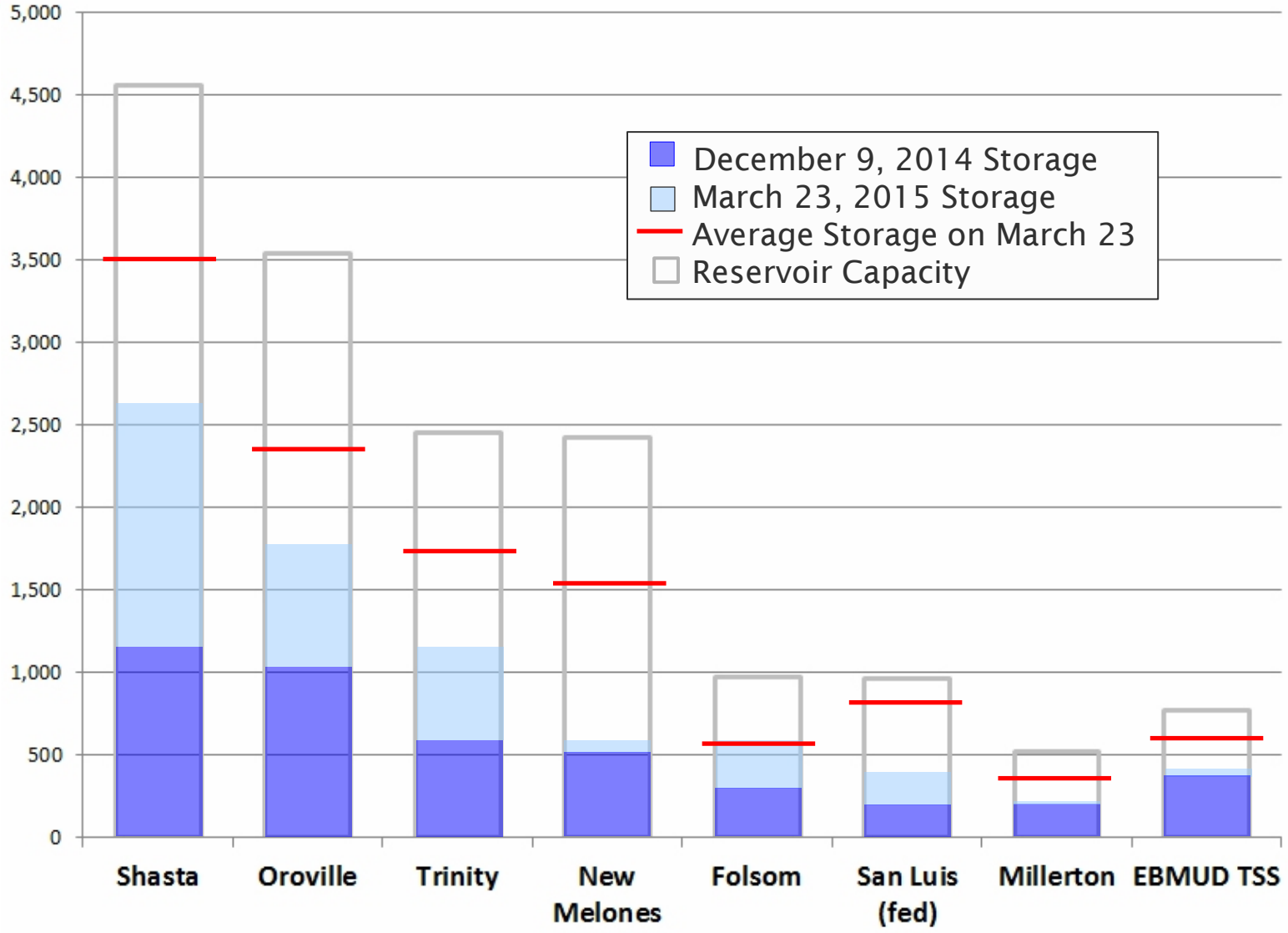
Year	Average Snow Water Equivalent
Average Year	29”
2015	3”

Caples Lake Snow Sensor Readings

Year	Average Snow Water Equivalent
Average Year	28”
2015	0.4”

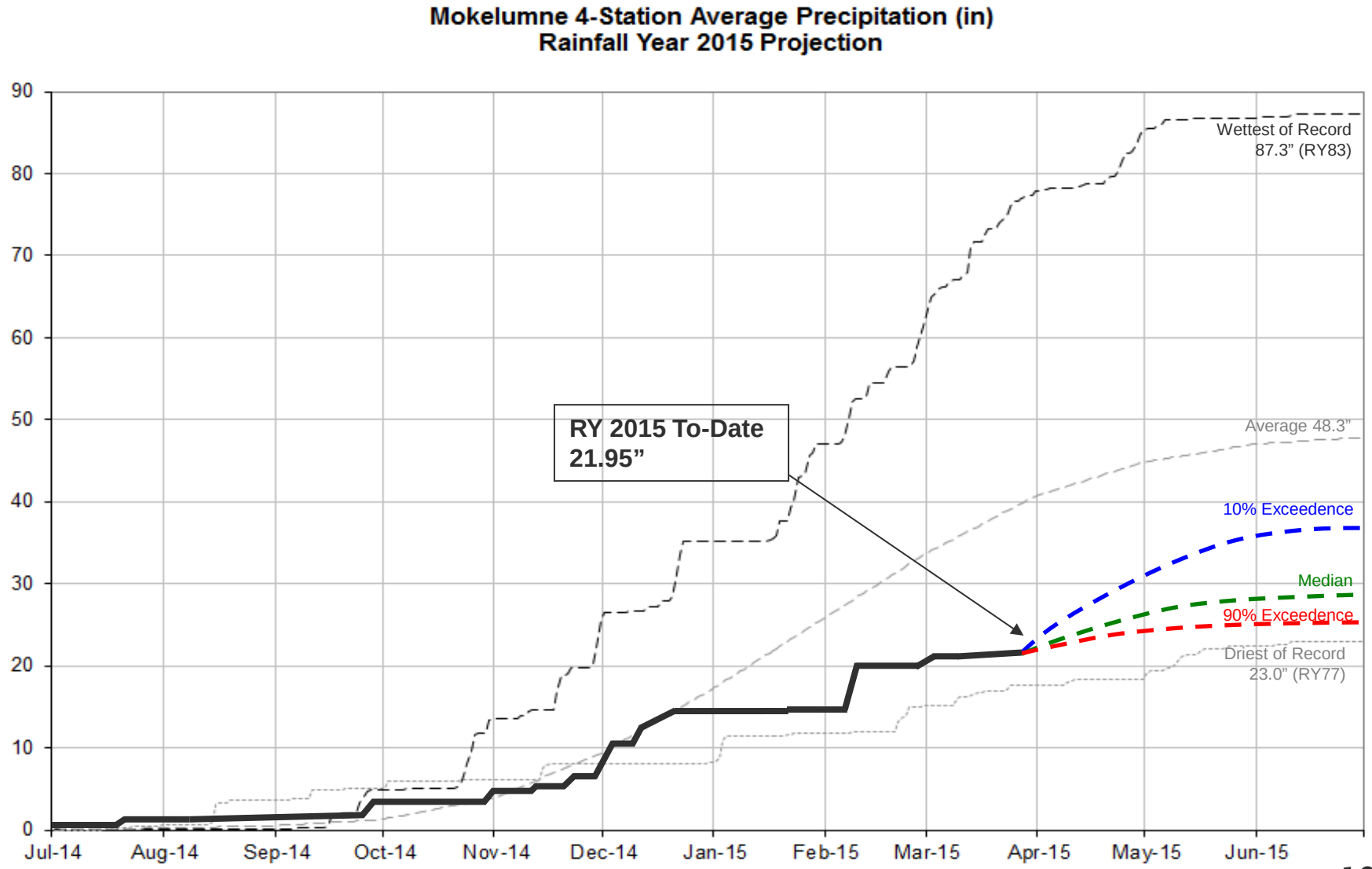
California Water Supply

Reservoir Storage – Dec 9 Comparison



Water Supply Projections

Mokelumne Precipitation Rainfall Year 2015



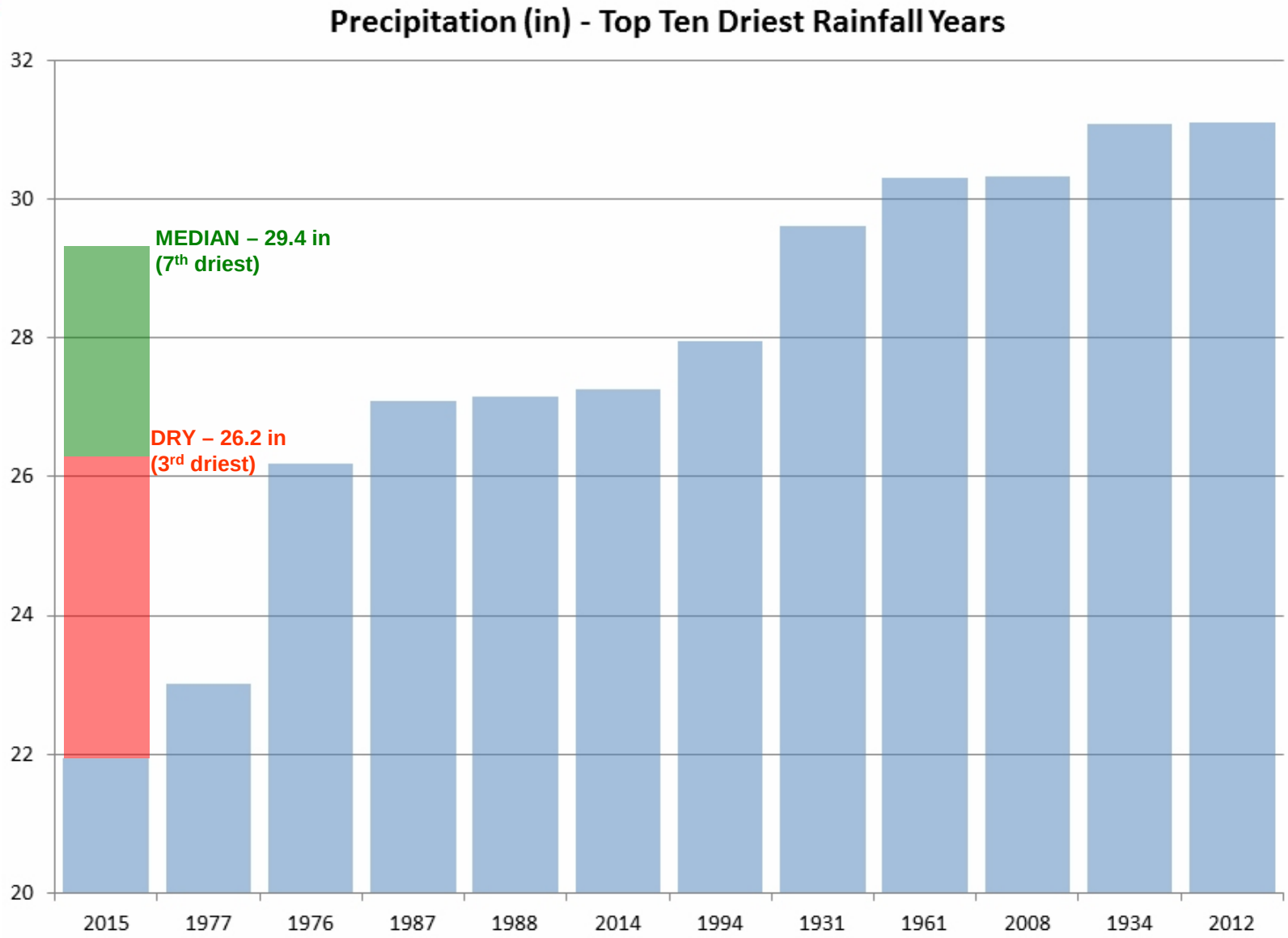
Water Supply Projections

(Runoff Projections as of March 24, 2015)

Forecast	Annual Runoff	Total System Storage (on Sept 30, 2015)
No Rain	140 TAF	230 TAF
95% Exceedence (19 of 20 years are wetter)	160 TAF	250 TAF
90% Exceedence (9 of 10 years are wetter)	170 TAF	260 TAF
50% Exceedence (5 of 10 years are wetter)	230 TAF	330 TAF
10% Exceedence (1 of 10 years is wetter)	390 TAF	440 TAF
Average Year	745 TAF	630 TAF

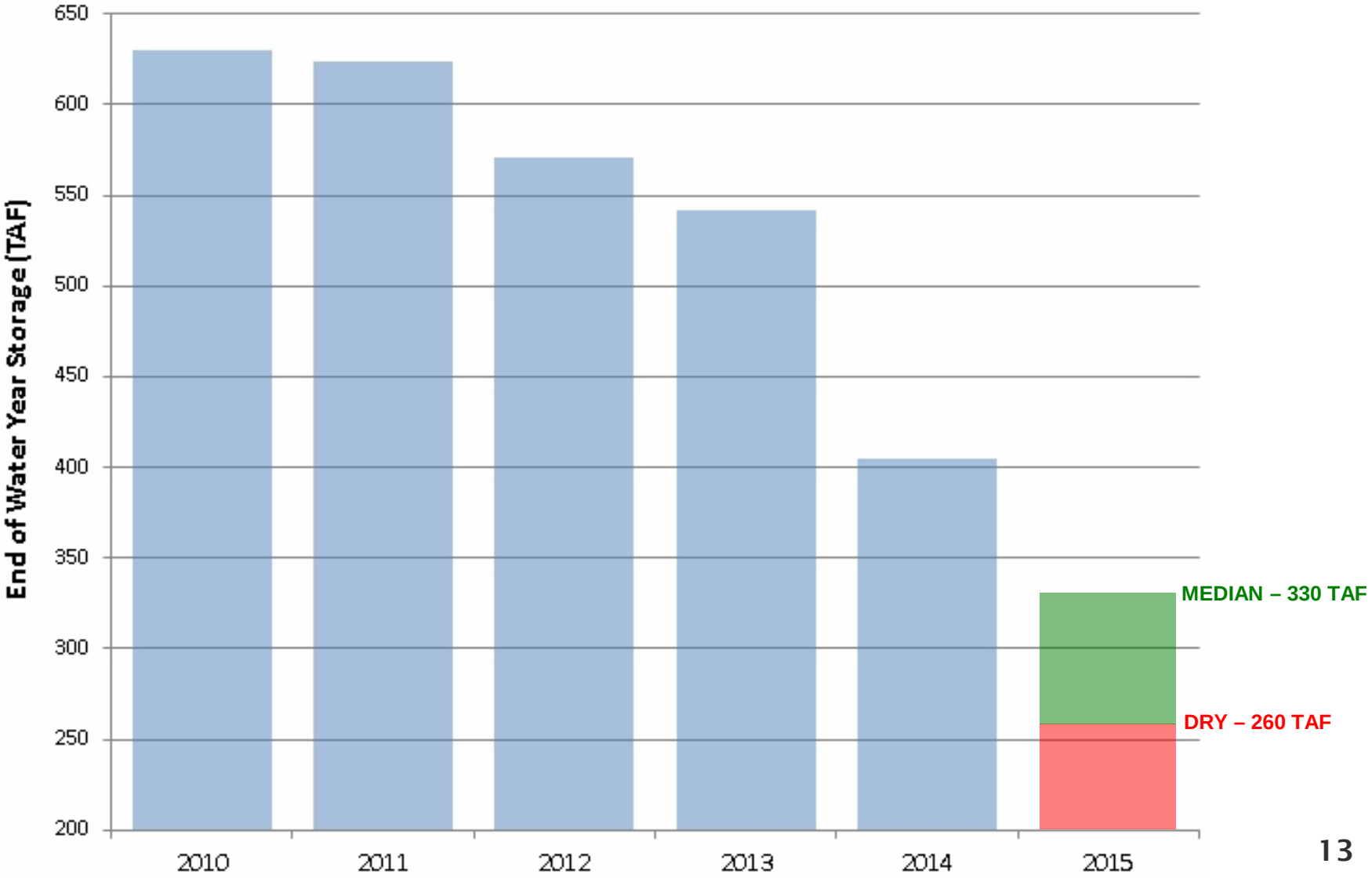
Water Supply Projections

Dry Year Precipitation Comparison



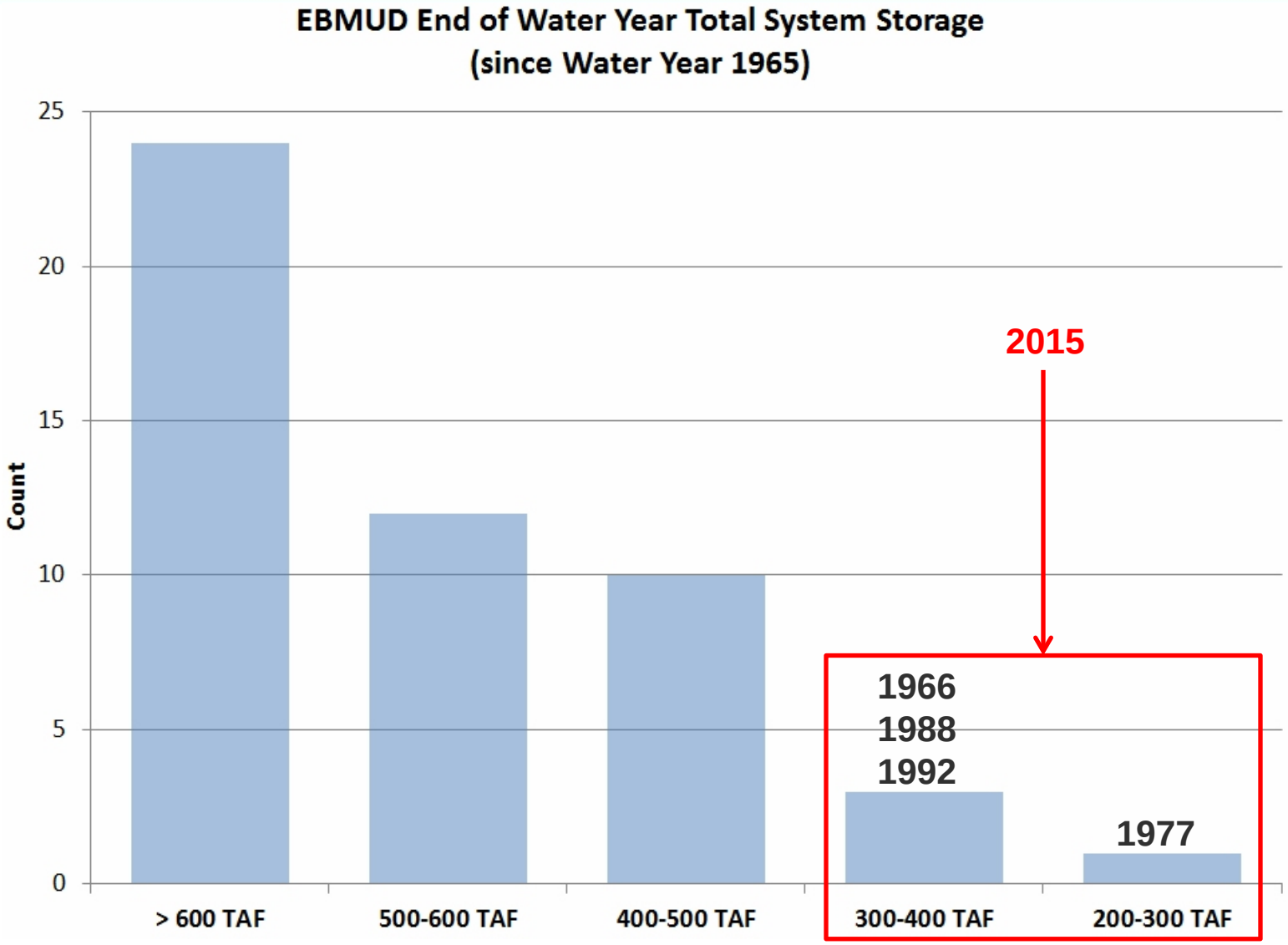
Water Supply Projections

Storage Comparison



Water Supply Projections

Historically Low Storage



WY15 Drought Actions

CONSERVATION

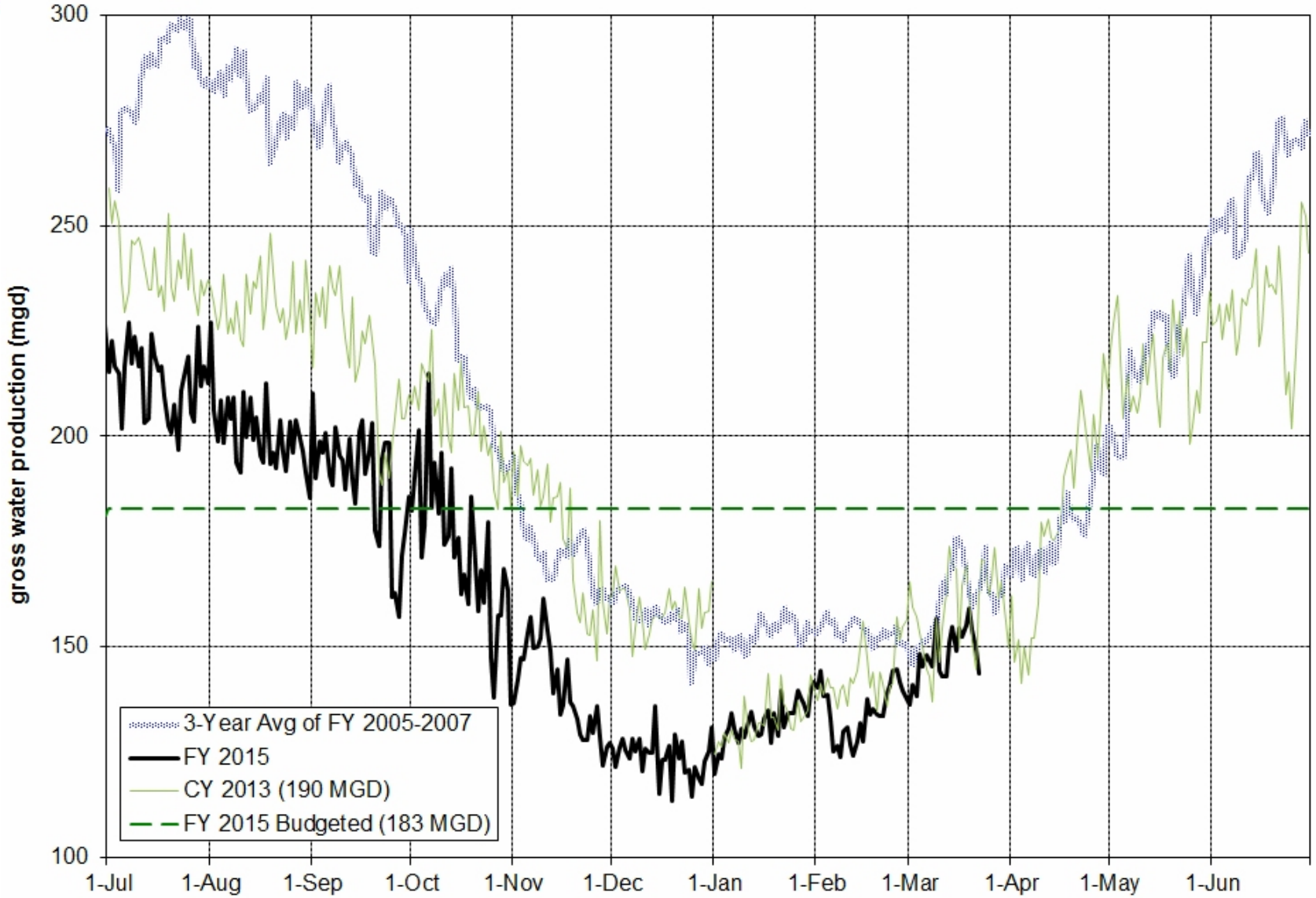
RECYCLING

FREEPORT

INTERTIES

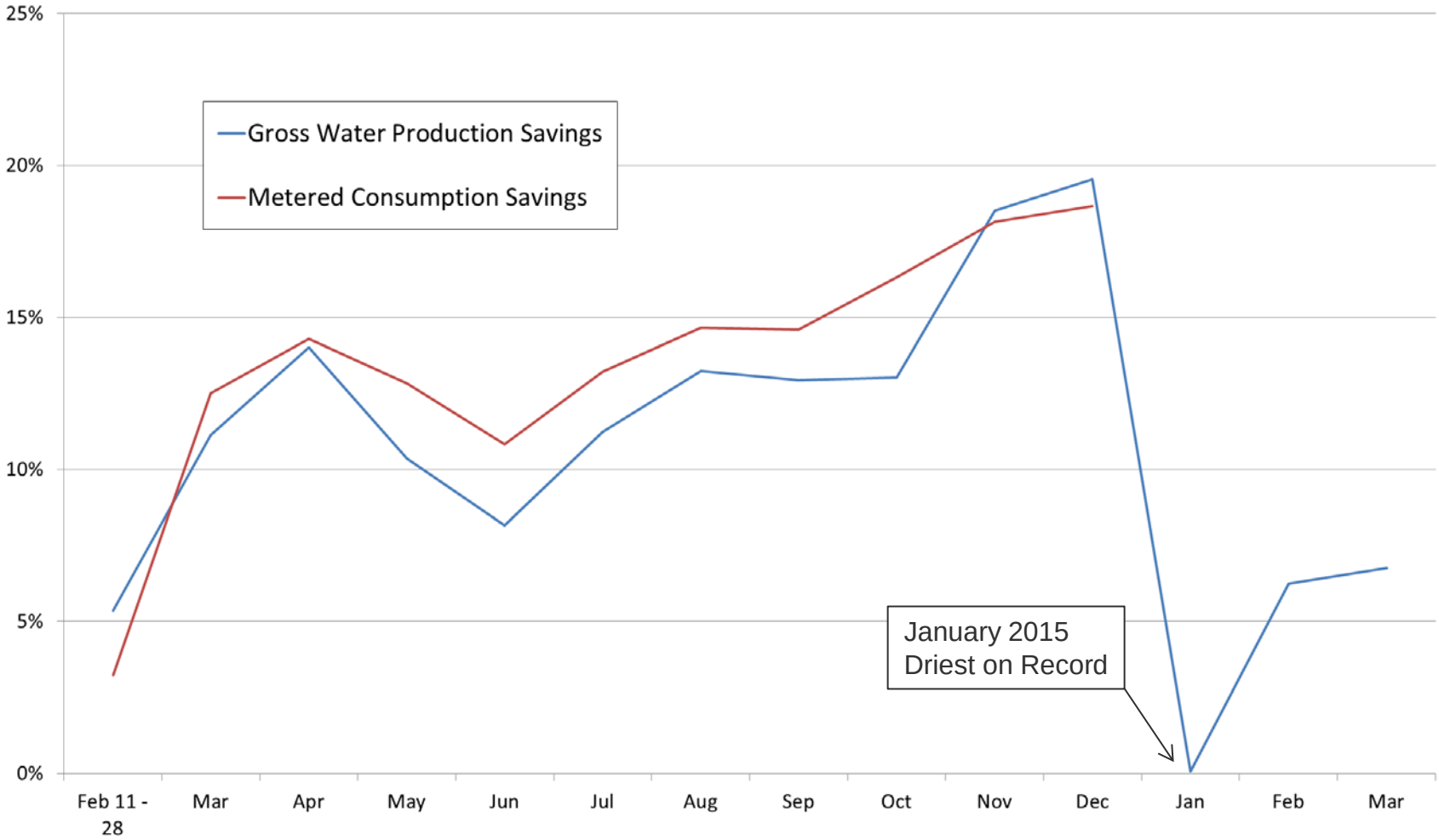
WY15 Drought Actions

Gross Water Production



WY15 Drought Actions

Water Savings Rate



5%	11%	14%	10%	8%	11%	13%	13%	13%	19%	20%	0%	6%	7%
3%	13%	14%	13%	11%	13%	15%	15%	16%	18%	19%	-	-	-

WY15 Drought Actions

Customer Demand Savings

Calendar Year	Savings Rate (2013 Baseline)	Savings Rate (Avg of 2005-2007 Baseline)
2014	13%	20%
2015	4%	12%

WY15 Drought Actions

Customer Conservation

Agency	Drought Response
Alameda County – Zone 7	25% reduction (mandatory)
Marin Municipal Water District	25% reduction (voluntary)
Santa Clara Valley Water District	20% reduction (mandatory)
Alameda County Water Agency	20% reduction (mandatory)
Contra Costa Water District	15% reduction (voluntary)
EBMUD	15% reduction (voluntary)
San Francisco Public Utilities Commission	10% reduction (voluntary)

WY15 Drought Actions

2015 Drought Management Program Guidelines

STAGE		PROJECTED TSS (TAF)	SUPPLEMENTA SUPPLY QUANTITY (TAF)	CUSTOMER DEMAND REDUCTION
0	**NORMAL**	> 500	0	Wise water use
1	**MODERATE**	500-425	0	0-15% voluntary
2	**SIGNIFICANT**	425-390	Up to 35	0-15% voluntary
3	**SEVERE**	390-325	35-65	15% mandatory
4	**CRITICAL**	< 325	>65	15% mandatory

WY15 Drought Actions

USBR – Central Valley Project (CVP)

Central Valley Project

- Supplies about a million California homes and 3 million acres of agricultural land
- Dedicates water to support fish and wildlife habitat
- EBMUD CVP Contract max annual drought supply = 133 TAF

Water Allocation

- WY2014 = 50%
- WY2015 initial allocation = 25% or health & safety needs, whichever is greater

Shasta Dam

WY15 Drought Actions

Freeport Regional Water Project

- EBMUD supply = 100 million gallons per day
- Coordinated operation
  - Sacramento County Water Agency
  - U.S. Bureau of Reclamation
- Startup preparation underway for standby pumping plants and transmission pipelines

FREEPORT REGIONAL WATER AUTHORITY

DEPARTMENT OF WATER RESOURCES
SACRAMENTO COUNTY WATER AGENCY

EBMUD

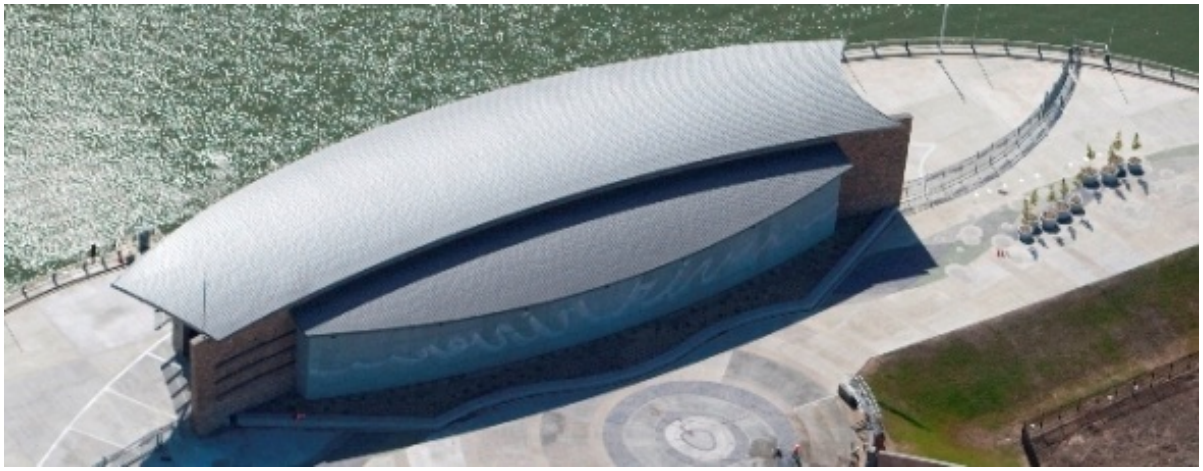
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Water Year 2015

Water Supply Review

- Mokelumne River basin runoff is 130 TAF
- Projected end of water year storage is 260 to 330 TAF
- Mokelumne River basin season precipitation is 56% of average
- Mokelumne precipitation late-Dec through late March = 7” (median = 25”)
- Precipitation accumulation season – 82% complete (18% remaining)

Making Plans for a Dry 2015



EAST BAY MUNICIPAL UTILITY DISTRICT

Water Shortage Emergency

Customer Demand Reduction

Considerations

Board of Directors
March 24, 2015

Customer Demand Reduction Criteria

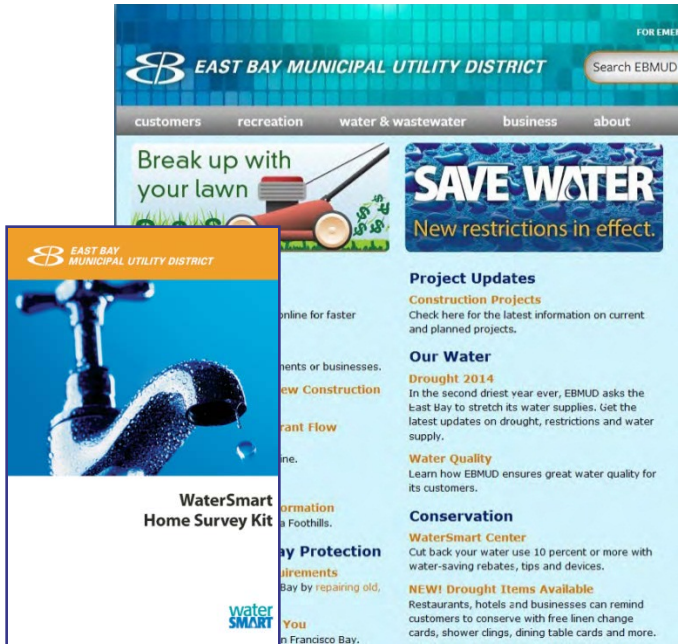
- Balance water use reductions across customer groups
  - Emphasize reductions in non-essential water use
  - Avoid/limit impacts to the economy and environment
  - Safeguard water supplies for public health needs
  - Consider the perceived equity of water use reductions
- Evaluate each customer group's historical consumption
  - Determine the percent of total water demand by customer group
  - Determine the percent of customer indoor and outdoor demand
- Gauge customer response to water savings measures
  - Assess the likelihood of achieving potential measure savings
  - Consider experience on customer savings

Customer Demand Reduction Levels

- Voluntary
  - discretionary
  - elective
  - best practice/guidance
- Mandatory
  - required
  - regulation or law
  - water use prohibitions
- Considerations
  - Prohibitions & restrictions (Sections 28 & 29)
  - Enforcement actions/penalties
  - Financial implications

Drought Operational Impacts

- Direct Contact & Customer Support
- Increased Community Outreach and Education
- Expanded Conservation Services & Rebates
- Enforcement of Regulations
- Increased Advertising & Media
- Leak Detection and Repair



State Drought Emergency Regulations – March 17, 2015

- Extend existing regulations another 270 days *(~Dec. 2015)*
- Prohibition on certain irrigation practices *(during and after measurable rain event)*
- Restrictions on certain commercial activities *(restaurant, hotel, motel patron notifications)*
- Urban water suppliers to implement mandatory restrictions on outdoor irrigation *(# of days of watering, etc.)*
- Water suppliers with 3,000 or more service connections to provide monthly data *(water production, compliance actions, outdoor conservation measures)*

Customer Demand Reduction Requirements

Criteria	15% Demand Reduction Level	20% Demand Reduction Level
Customer impact	Moderate	Somewhat Difficult
Consistent with District Policy	Yes	No
Consistent with State Actions	Yes	Yes
Representative Savings[1]	30 TAF	41 TAF
Implementation Cost	Within proposed FY16/17 budget	May require add'l funding from reserves

[1] Savings over a twelve month period

Water Year 2015

Next Steps – April 14 Board Meeting

- Water Supply Update
- Water Supply Availability and Deficiency Report
- Water Shortage Emergency Continuation
- Drought Management Program Guidelines
- Drought Action Plan
- Regulation Updates
- Excessive Use and Theft Ordinances

WATER SUPPLY ENGINEERING DAILY REPORT

Monday, March 23, 2015

RESERVOIR STORAGE AND ELEVATION

	WATER SURFACE		STORAGE		MAXIMUM CAPACITY			
	Elevation	+Gain		+Gain	Elevation	Storage	Release	Spill
MOKELUMNE	Feet	-Loss	Ac-Ft	-Loss	Feet	Ac-Ft	Cfs	Cfs
Pardee	558.11	-0.11	177,440	-230	567.65	197,950	11	0
Camanche	183.10	-0.13	119,060	-490	235.50	417,120	225	0
EAST BAY								
Briones	572.44	0.21	57,870	150	576.14	60,510	0	0
Chabot	218.53	0.02	7,620	0	227.25	10,350	0	0
Lafayette	443.82	0.00	3,600	0	449.16	4,250	0	0
San Pablo	291.64	-0.17	22,690	-100	313.68	38,600	0	0
Upper San Leandro	435.78	-0.01	22,810	-10	459.98	37,960	0	0
Total East Bay Res.			114,590	40		151,670		
TOTAL SYSTEM STORAGE			411,090	-680		766,740		

DISTRIBUTION SYSTEM

DISTRIBUTION RESERVOIRS

	Storage MG	Operating Capacity
Today	401.0	812
Total Previous Day	400.0	
Total Change	1.0	

WATER PRODUCTION AND DEMAND	Million Gallons	Capacity MGD
Lafayette WTP	0.0	25
Orinda WTP	59.8	190
San Pablo WTP	0.0	30
Sobrante WTP	45.2	50
Upper San Leandro WTP	10.0	45
Walnut Creek WTP	35.9	90
TOTAL SURFACE PRODUCTION	150.9	430
Miscellaneous(Estimated)	0.4	
TOTAL WATER PRODUCTION	151.3	
Change in Distribution System	1.0	
Wash Water from Distribution Sys.	1.2	
SYSTEM DEMAND	149.0	
East-of-Hills Demand	36.5	
West-of-Hills Demand	112.5	

MOKELUMNE SYSTEM

AQUEDUCT DELIVERIES

	MG		Flow Conditions
Line 1	38.0		GRAVITY
Line 2	39.5		THROTTLE
Line 3	66.5		THROTTLE
TOTAL	144	223 Cfs	
FSCC TO MOK AQUEDUCTS			0

RIVER FLOWS AND RELEASES	Cfs
Mokelumne River Natural Flow	478
Pardee Reservoir Inflow	132
Pardee Release to Camanche Res.	11
Pardee Release to JVID	15
Camanche Release to Mokel. River	225

PG&E CO. STORAGE (Acre-feet)

	Storage	Change	Maximum Capacity
Old Reservoirs	10,163	119	26,560
Salt Springs Res.	40,553	454	141,857
Lower Bear Res.	25,964	114	52,025
Total	76,680	687	220,442

RAW WATER TRANSMISSION Ac-ft

	INPUT	DRAFT
Briones Res.	151	0
San Pablo Res.	0	143
U. San Leandro Res.	0	33
TOTAL	151	176

REMARKS

WID Canal Diversion = 21 cfs

Mokelumne River below WID = 118 cfs

PG&E data as of 4:00 pm previous date.
All other data as of midnight.
WTP capacities are sustainable rates.

PRECIPITATION (Inches)

	THIS YEAR			AVERAGE YEAR	
STATION	Today	This Month	Season to-Date	Season to-Date	Season Total
USL WTP	0.14	0.20	18.47	21.53	25.33
Orinda WTP	0.19	0.49	22.06	27.3	32.06
Lafayette Reservoir	0.14	0.21	16.66	24.14	28.18
Walnut Creek WTP	0.25	0.38	17.09	20.02	23.02
Camp Pardee	0.15	0.32	15.45	17.56	21.56
Salt Springs P.H.	0.54	1.34	21.31	36.67	45.51

CAPLES LAKE (7,830 FT) DATA

	Today	Average
Snow Depth	3 Inches	70 Inches
Water Content	0.4 Inches	27.7 Inches