

Water Supply Update

Board of Directors Meeting

March 10, 2020

Water Supply Briefing

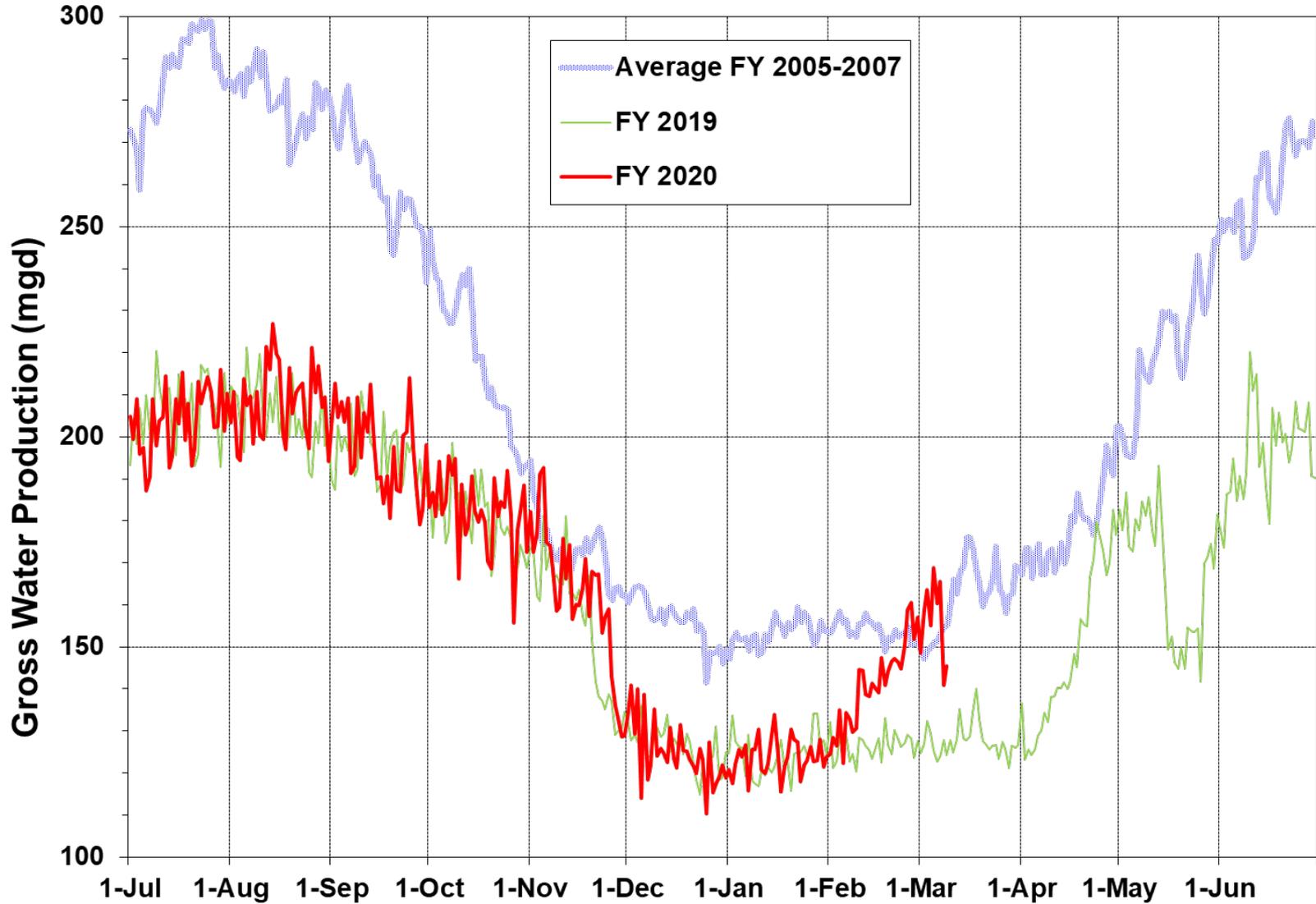


- Current Water Supply
- California Water Supply
- Water Supply Projections



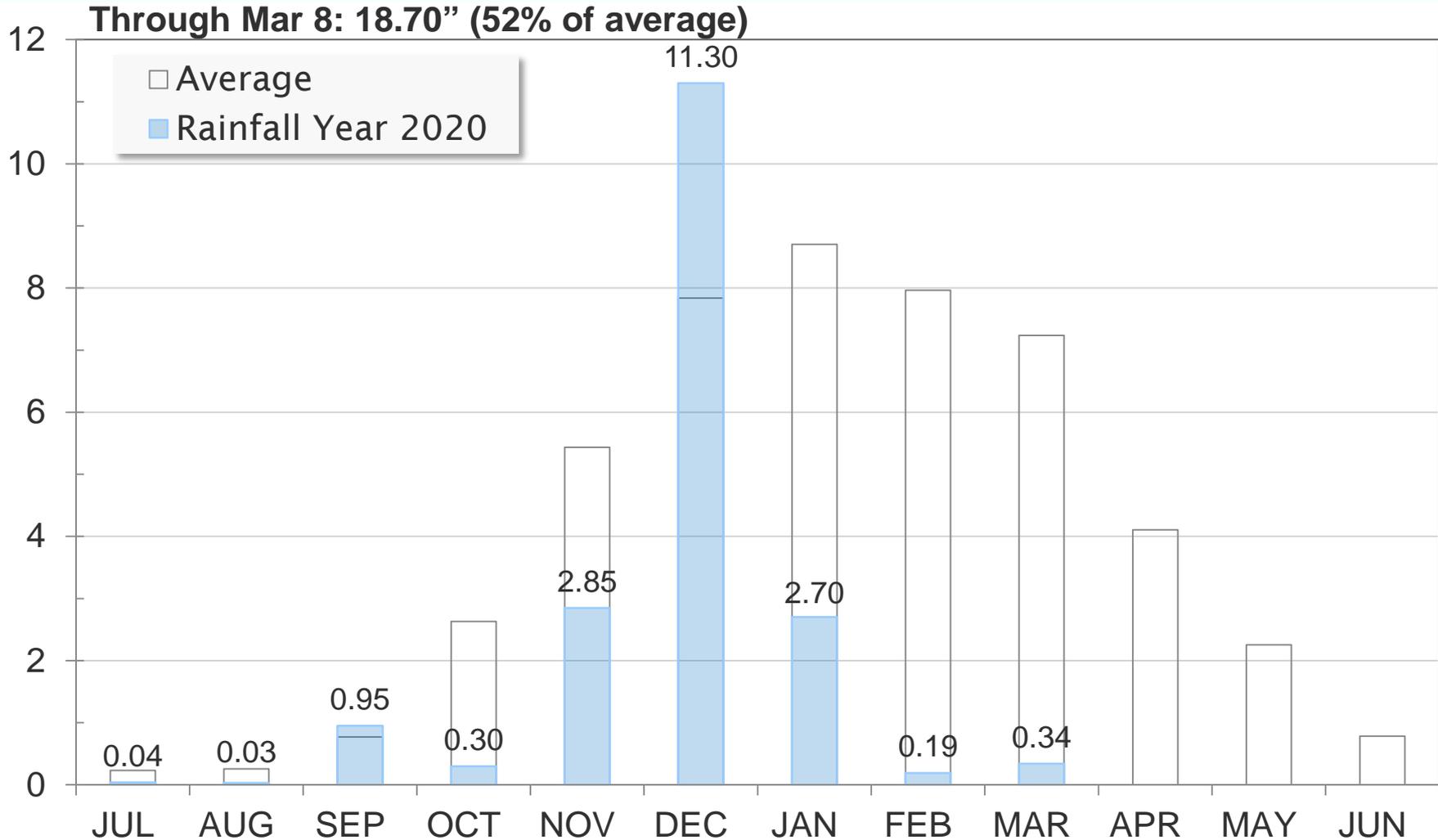
Current Water Supply

Gross Water Production



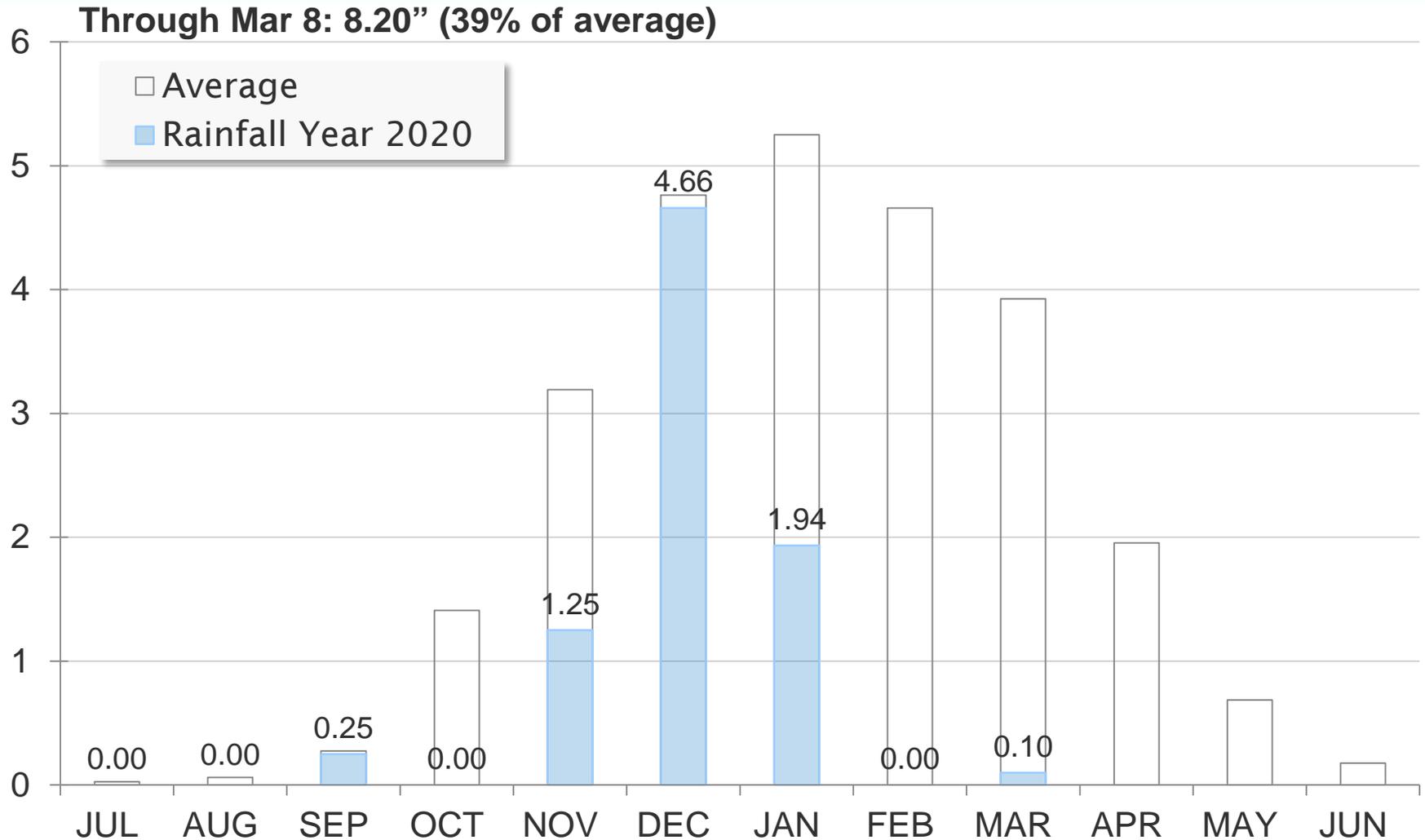
Current Water Supply

Mokelumne Precipitation



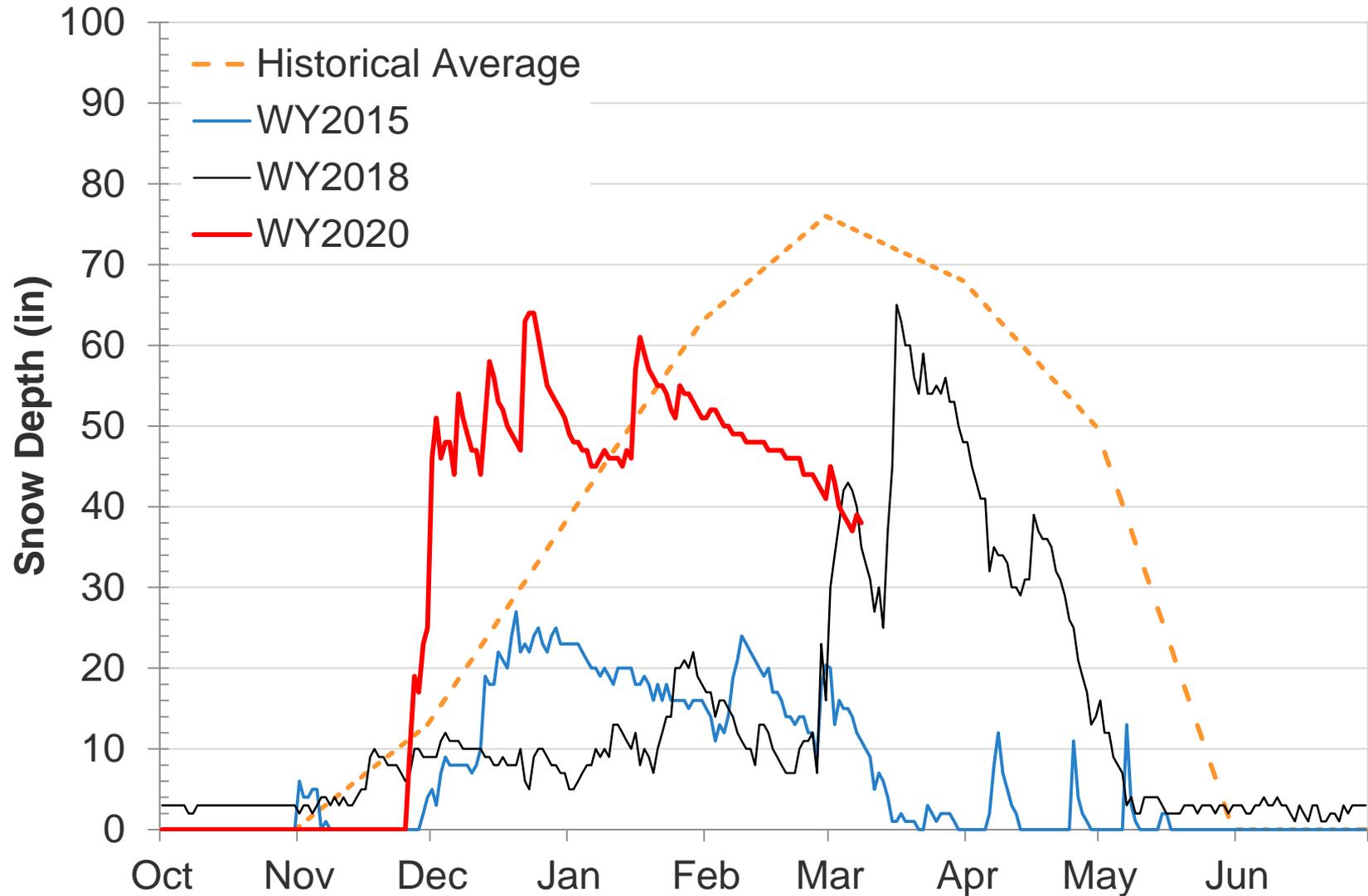
Current Water Supply

East Bay Precipitation



Current Water Supply

Caples Lake Snow Depth



Current Water Supply

Snow



As of Mar. 8, 2020	Cumulative Precipitation	% of Average
Caples Lake Snow Depth	38"	51%
Caples Lake Snow Water Content	14.25"	52%

Current Water Supply

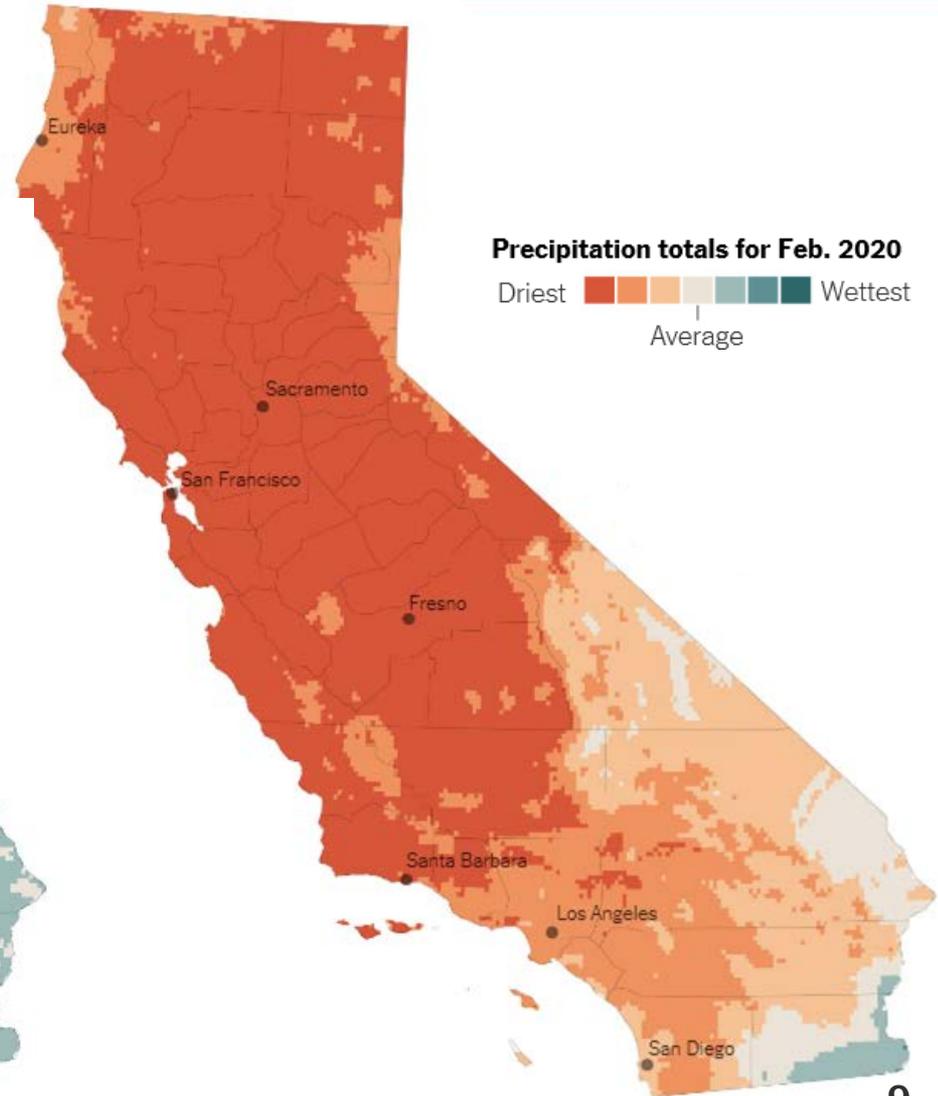
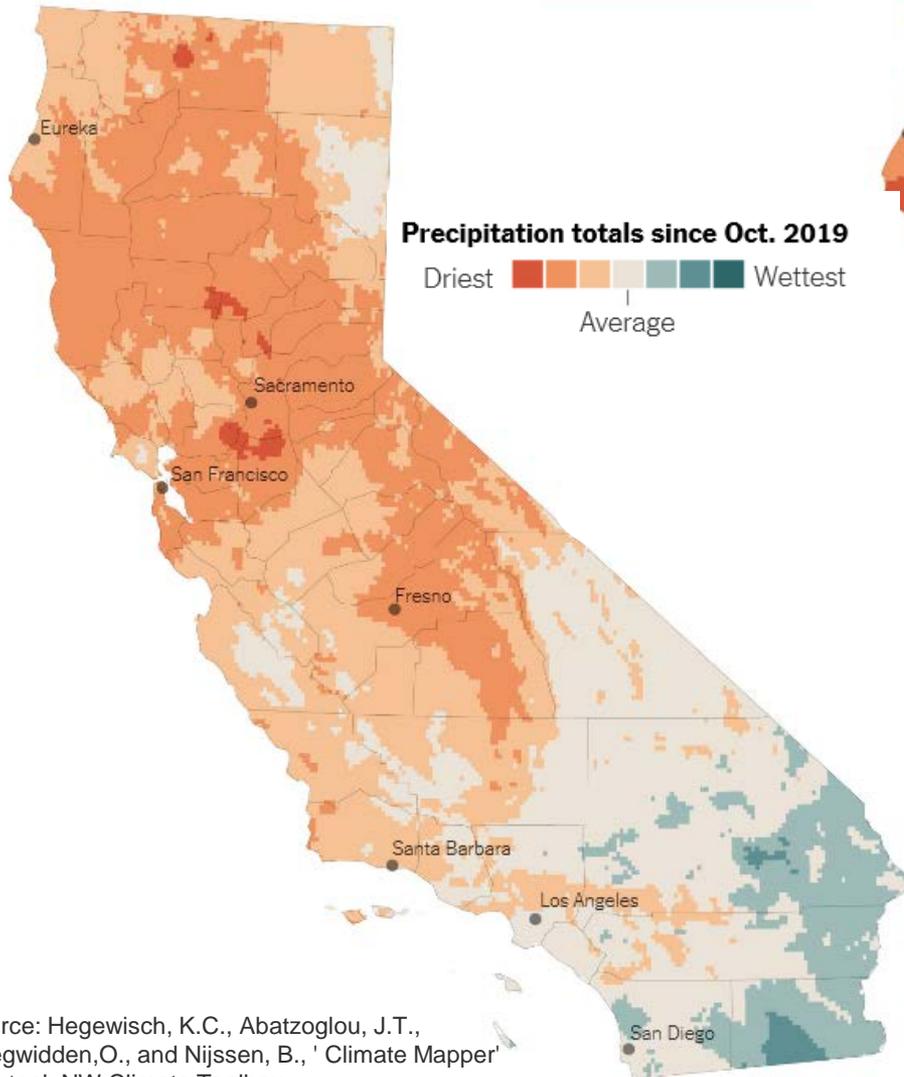
Reservoir Storage



As of 3/8/2020	Current Storage	Percent of Average	Percent of Capacity
Pardee	181,330 AF	99%	89%
Camanche	280,380 AF	100%	67%
East Bay	129,900 AF	96%	86%
Total System	591,610 AF	99%	77%

California Water Supply

Driest February on Record



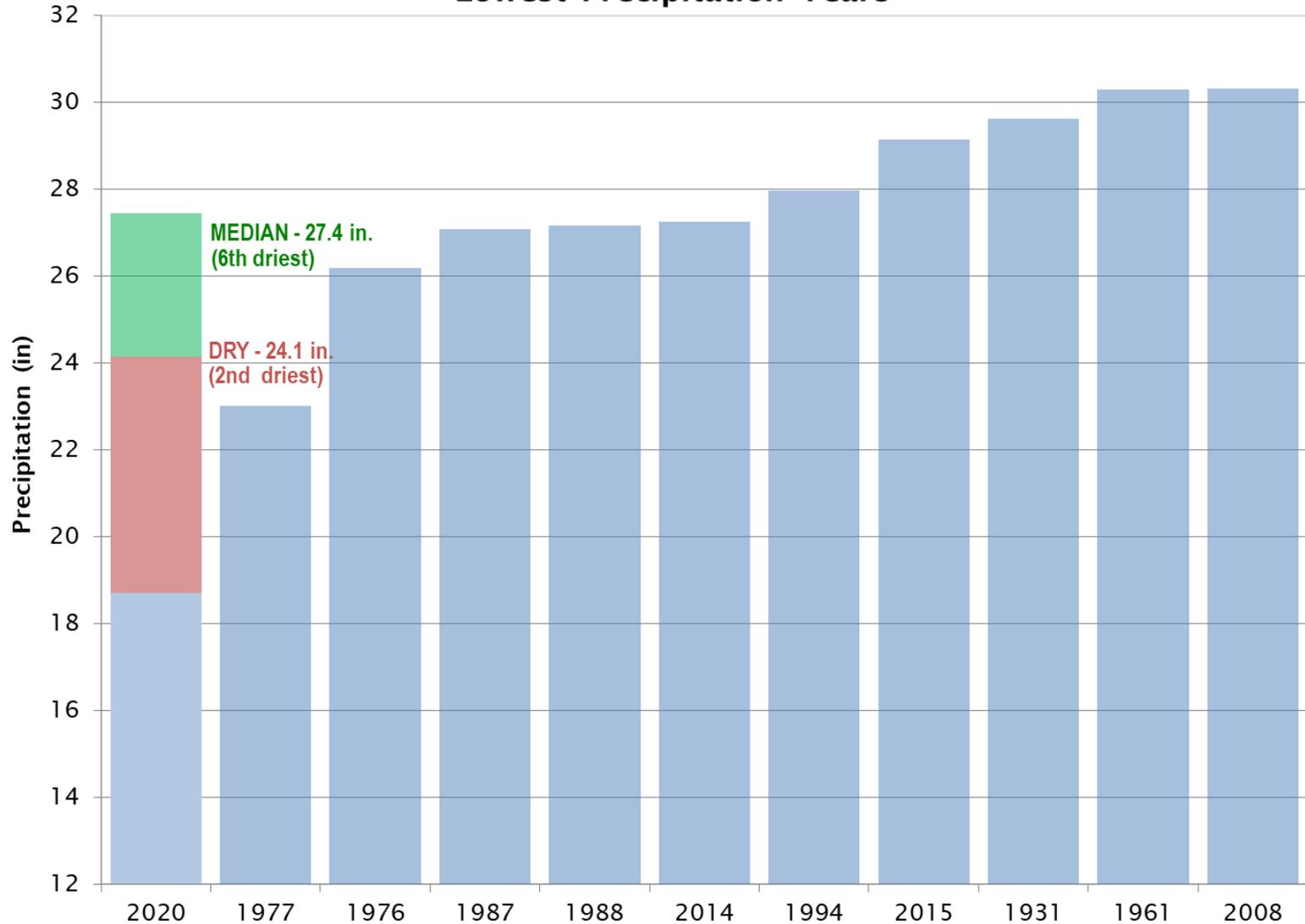
Source: Hegewisch, K.C., Abatzoglou, J.T., Chegwidde, O., and Nijssen, B., 'Climate Mapper' web tool. NW Climate Toolbox (<https://climatetoolbox.org/>) accessed on 3/1/2020.

Water Supply Projections

Dry Year Precipitation Comparison



Lowest Precipitation Years

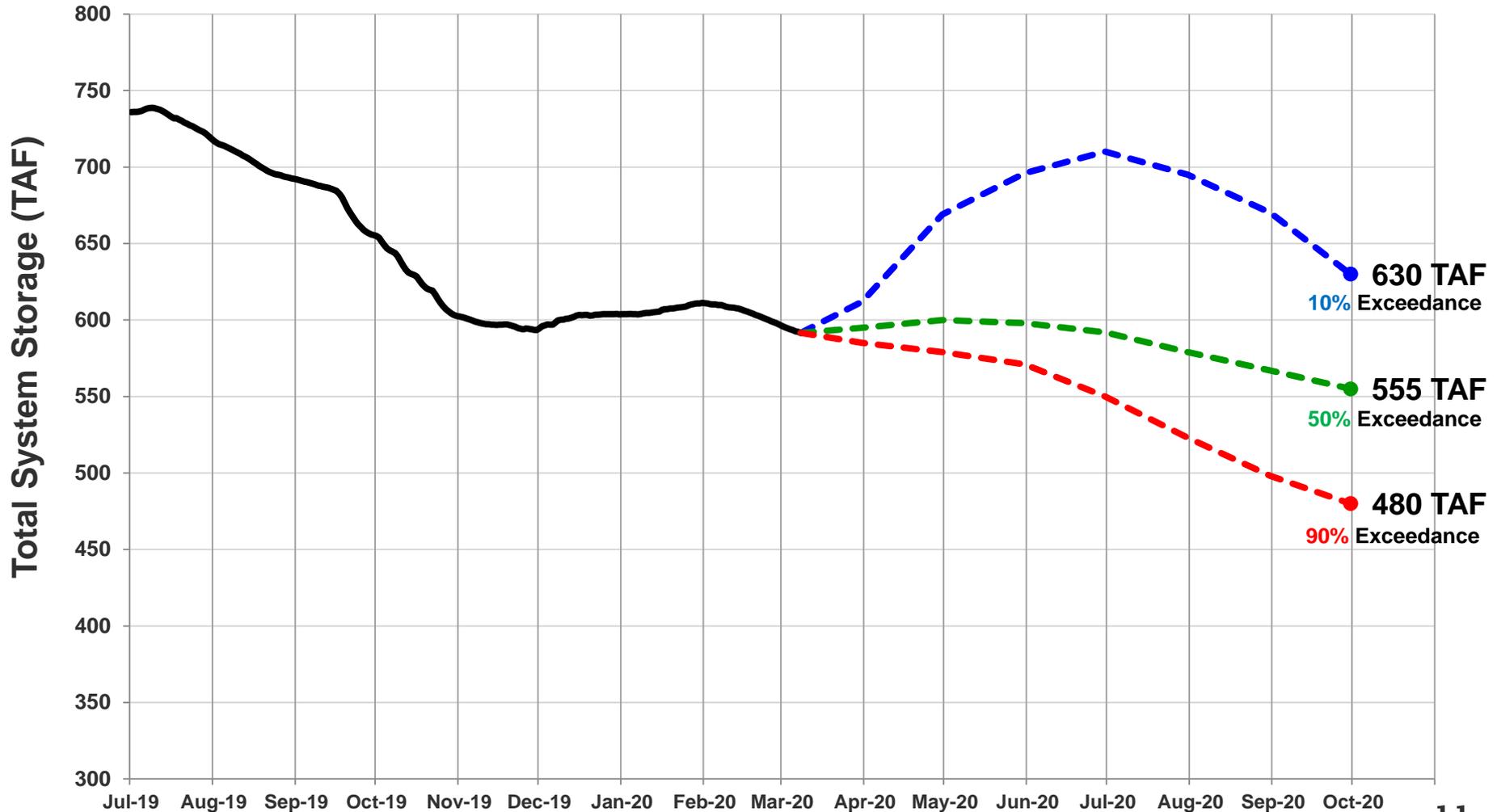


Water Supply Projections

Projected 2020 EBMUD Total System Storage



Total System Storage WY2020



Questions ?



WATER SUPPLY ENGINEERING DAILY REPORT

Monday, March 9, 2020

RESERVOIR STORAGE AND ELEVATION

	<u>WATER SURFACE</u>		<u>STORAGE</u>		<u>MAXIMUM CAPACITY</u>		Release <u>Cfs</u>	Spill <u>Cfs</u>
	Elevation <u>Feet</u>	+Gain <u>-Loss</u>	+Gain <u>Ac-Ft</u>	-Loss <u>-Loss</u>	Elevation <u>Feet</u>	Storage <u>Ac-Ft</u>		
<u>MOKELUMNE</u>								
Pardee	557.3	0.1	181540	210	567.65	203795	14	0
Camanche	215.43	-0.1	279760	-620	235.5	417120	330	0
<u>EAST BAY</u>								
Briones	570.66	0	55170	0	576.14	58960	0	0
Chabot	223.59	-0.01	9140	-10	227.25	10350	0	0
Lafayette	437.74	-0.01	2910	0	449.16	4250	0	0
San Pablo	303.98	0.02	30270	10	313.68	37915	0	0
Upper San Leandro	451.04	0	<u>32410</u>	<u>0</u>	459.98	<u>38905</u>	0	0
Total East Bay Res.			<u>129900</u>	<u>0</u>		<u>150380</u>		
TOTAL SYSTEM STORAGE			591200	-410		771295		

DISTRIBUTION SYSTEM		
<u>DISTRIBUTION RESERVOIRS</u>		
	Storage <u>MG</u>	Operating <u>Capacity</u>
Today	342	720
Total Previous Day	<u>358</u>	
Total Change	-16	
<u>WATER PRODUCTION AND DEMAND</u>		
	Million <u>Gallons</u>	Capacity <u>MGD</u>
Lafayette WTP	0	25
Orinda WTP	106	190
San Pablo WTP	0	30
Sobrante WTP	0	50
Upper San Leandro WTP	0	45
Walnut Creek WTP	29.3	90
TOTAL SURFACE PRODUCTION	135.3	430
Miscellaneous(Estimated)	0.4	
TOTAL WATER PRODUCTION	<u>135.7</u>	
Change in Distribution System	-16	
Wash Water from Distribution Sys.	0.3	
<u>SYSTEM DEMAND</u>		
	151.3	
East-of-Hills Demand	36.9	
West-of-Hills Demand	114.4	

MOKELUMNE SYSTEM		
<u>AQUEDUCT DELIVERIES</u>		
	<u>MG</u>	<u>Flow Conditions</u>
Line 1	37	GRAVITY
Line 2	48.4	GRAVITY
Line 3	<u>52.3</u>	<u>THROTTLE</u>
TOTAL	137.7	213 Cfs
<u>FSCC to MOK AQUEDUCTS (Measured at Brandt), MG</u>		
Mok 1	0	
Mok 2	<u>0</u>	
	0 MG	
<u>RIVER FLOWS AND RELEASES</u>		
		<u>Cfs</u>
Mokelumne River Natural Flow		441
Pardee Reservoir Inflow		338
Pardee Release to Camanche Res.		14
Pardee Release to JVID		0
Camanche Release to Mokel. River		330
<u>PG&E CO. STORAGE (Acre-feet)</u>		
	<u>Storage</u>	<u>Change</u>
		<u>Maximum Capacity</u>
Old Reservoirs	4969	-33
Salt Springs Res.	18292	78
Lower Bear Res.	<u>12060</u>	<u>159</u>
Total	35321	204

RAW WATER TRANSMISSION		
	<u>INPUT</u>	<u>DRAFT</u>
Briones Res.	0	0
San Pablo Res.	7	0
U. San Leandro Res.	0	0
TOTAL	7	0
<u>REMARKS</u>		
WID Canal Diversion = 55 cfs		
Mokelumne River below WID = 219 cfs		

PRECIPITATION (Inches)					
<u>STATION</u>	<u>THIS YEAR</u>			<u>AVERAGE YEAR</u>	
	<u>Today</u>	<u>Month</u>	<u>Season to-Date</u>	<u>Season to-Date</u>	<u>Season Total</u>
USL WTP	0	0.07	8.49	19.86	25.33
Orinda WTP	0	0.35	11.35	25.07	32.06
Lafayette Reservoir	0	0.13	7.9	22.28	28.18
Walnut Creek WTP	0	0	9.11	18.44	23.02
Camp Pardee	0	0.12	9.4	15.99	21.56
Salt Springs P.H.	0	0.41	18.51	33.63	45.51
<u>CAPLES LAKE (7,830 FT) DATA</u>					
	<u>Today</u>	<u>Average</u>			
Snow Depth	37 Inches	74 Inches			
Water Content	14.3 Inches	27.3 Inches			

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

Public Safety Power Shutoff 2020 Preparations

Board of Directors

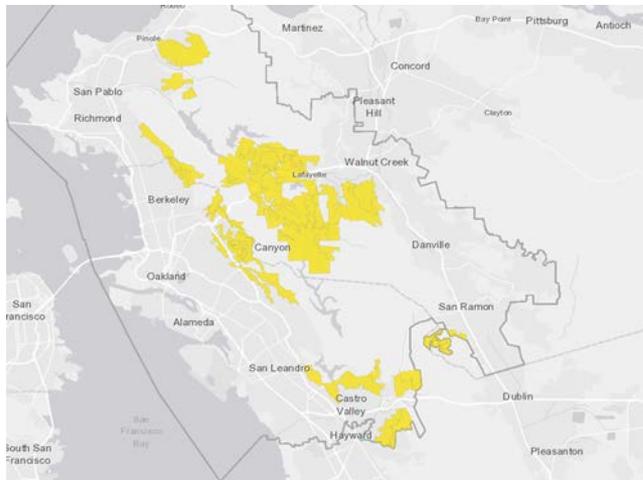
March 10, 2020

Summary of 2019 PSPS Events



Event	Total	Water Treatment Plants	Distribution Pumping Plants	Distribution Reservoirs	Upcountry
Oct 9	136	2	47	37	1
Oct 26	216	4	58	54	27

October 9



- 43 Pressure Zones Affected
- ~97,000 Customers Affected

October 26



- 73 Pressure Zones Affected
- ~236,000 Customers Affected

PSPS Triggers



While no single factor will drive a Public Safety Power Shutoff, some factors include:



A Red Flag Warning declared by the National Weather Service



Low humidity levels, generally 20% and below



Forecasted sustained winds generally above 25 mph and **wind gusts in excess of approximately 45 mph**, depending on **location and site-specific conditions** such as temperature, terrain and local climate



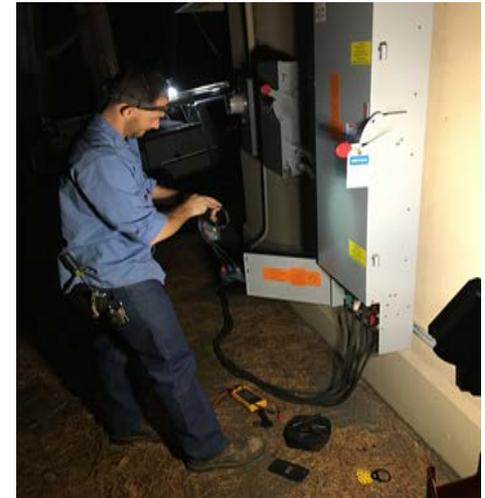
Condition of dry fuel on the ground and live vegetation (moisture content)



On-the-ground, real-time observations from PG&E's Wildfire Safety Operations Center and field observations from PG&E crews

PSPS Preparation

- Updated PSPS mitigation plan
- Conduct tabletop and field exercises
- Routine equipment testing
- Meeting with PG&E



PSPS Response Plan



- Pre-deploy equipment
- Coordinate with PG&E
- Maximize distribution reservoir storage
- PSPS communications
- Activate EOT



Backup Equipment



- Existing fleet of 32 portable generators and pumps
- Rental generator contract for Board consideration on April 14
- Outreach to communities

Vegetation Management



- Vegetation management
 - Service area
 - Mokelumne Aqueduct right-of-way
 - Pardee Powerhouse 7.2kV line
- Work done by
 - District forces
 - Civicorps
 - Goats



Home / About us / Vegetation management

What we are doing

In preparation for the fire season, vegetation management and weed abatement activities are planned around our facilities and along our rights-of-way. These activities include mowing, discing (pulling a mounted disc unit behind a tractor or other vehicle), weeding, pruning, limbing, chipping, the use of goats, and herbicide application. The work is performed by EBMUD staff and contractors. Schedules for these activities are shown below and are subject to change. If you have any questions or concerns, please contact us at 1-800-4CS-2683.

Work at EBMUD Facilities

City	Scheduled Work in 2019
Alamo	Complete
Berkeley	Complete
Castro Valley	Complete
Crocket	Complete

Board of Directors and management

- Who we are
- News
- Construction and maintenance
- Bond/Investors
- Community activities
- Education resources
- Sustainability
- Publications
- Public records
- Events
- Privacy Policy
- Vegetation management
- Public Safety Power Shutoff (PSPS)



Business Continuity



- Business Continuity Plans identify mitigation measures for critical business functions
 - Alternative work locations
 - Backup systems
- 2020 BCP exercises tested alternative work locations
- EOT will work with BCP coordinators
 - Identify needs and priorities
 - Develop plan to ensure business continuity

- Outreach materials (print)
 - Update fact sheet, Customer Pipeline article, and press releases
- Social media: Regular updates before, during, and after PSPS
- Interviews/field visits with regional media
- PSPS webpage/map on EBMUD.com
- Community meetings, briefings for elected officials and workshops
- Communications with fire agency partners

PSPS Communications Sequence



Notifications

- All-employee messages
- Emails to local electeds, city/county officials and stakeholders
- Targeted WaterSmart emails to customers in areas where operations may be affected
- Social media posts (Twitter, Facebook, and Nextdoor)
- Media advisories



East Bay Municipal Utility District
Published by Pio Ebmud 175 · 1 min · 3

Are you ready for potential power shutoffs by PG&E? EBMUD has prepared by topping off reservoirs and ensuring our backup equipment is ready to go to keep water flowing. Learn more on how #PSPS may affect water operations. <http://ebmud.com/psps>



EBMUD.COM
East Bay Municipal Utility District :: Public Safety Power Shutoff (PSPS)



Dear April,

Due to extreme fire danger, PG&E has announced it is planning to shut down power to parts of East Bay Municipal Utility District's service area beginning Wed, October 9. Your neighborhood is included in the affected areas.

East Bay Municipal Utility District (EBMUD) has topped off reservoirs and is ensuring backup equipment is ready. EBMUD asks that customers in affected areas to reduce water use indoors and turn off outdoor irrigation. This will help to conserve water in our local reservoir tanks.

EBMUD also recommends customers prepare emergency water supplies: two gallons per person per day, plus pets. More information on how to store emergency water is available at: ebmud.com/customers/pipeline/2019/10/storing-emergency-water/.

PSPS Communications – Map



- Website with impacted pressure zone map
- Interagency collaboration
 - County PIO updates
 - Sharing messaging with peer water agencies

Power shutoff impacts to water operations

Home / Customers / Alerts and outages / Power shutoff impacts to water operations

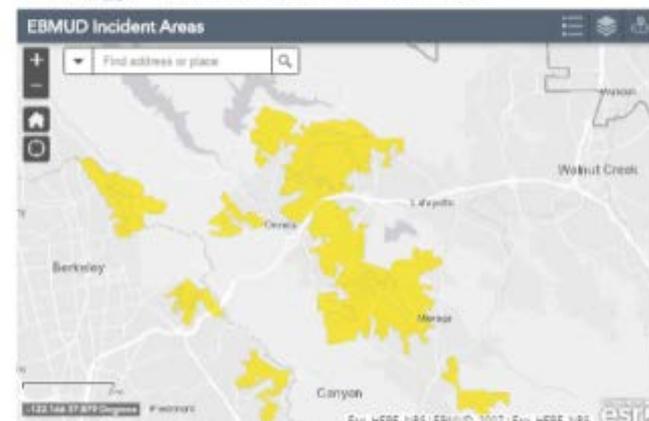
Moraga Creek landslide update

Below is important information about power shutoff impacts to water operations during the October 2019 Public Safety Power Shutoff event in the East Bay.

You may be asked to conserve water so EBMUD can maintain water in local reservoir tanks. If you are located within a highlighted area, EBMUD asks that you be prepared to limit water use indoors and turn off outdoor irrigation.

LEGEND:  Warning PSPS Initiated |  EBMUD boundary

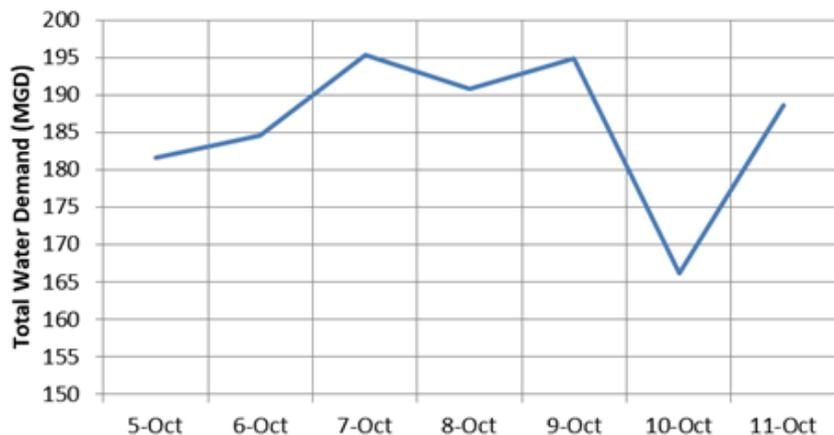
Please click on  icon and enter an address to search for water quality affected area.



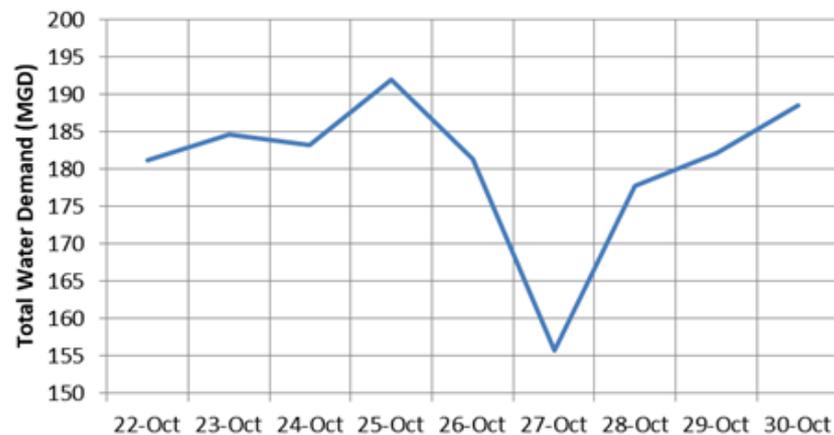
Water Consumption Customer Response – 2019 PSPS



Total Water Demand - October 10 PSPS



Total Water Demand - October 27-29 PSPS



	Prior 5-Day Avg.	Oct 10	% Difference
PSPS Pressure Zones	22 MGD	15 MGD	32%
Non-PSPS Pressure Zones	185 MGD	169 MGD	9%

	Prior 5-Day Avg.	Oct 27	% Difference
PSPS Pressure Zones	41 MGD	25 MGD	40%
Non-PSPS Pressure Zones	158 MGD	149 MGD	6%

Next Steps



- Rental generator contract for 2020
- Prepare RFP for
 - Generator purchase
 - Multi-year generator rental
- Meeting with PG&E
- Continue PSPS preparations
- Continue to participate in CPUC process

Questions



Communicable Disease Emergency Response Plan

Board of Directors

March 10, 2020

What We Know

- 129 confirmed cases in California
- 79 confirmed cases in the Bay Area
- Cases in Alameda and Contra Costa counties



Source: SF Chronicle

Communicable Disease Emergency Response Plan



- Plan objectives
 - Reduce the transmission among employees, customers, and vendors
 - Maintain essential operations and services
 - Minimize the impact to the District
 - Provide employees with timely and useful information
- Information from CDC, WHO, CDPH, and local health departments
- CDC has interim guidelines for businesses and employers

Communicable Disease Emergency Response Plan



District Level	Impact to the District	Example Actions
1	No impact	Routine awareness, preparedness, training
2	General impact to the service area	Increased awareness, communication, progressive cleaning procedures
3	Moderate impact to the District	EOT activity, communication to employees and customers, increased cleaning procedures, some restrictions
4	Severe impact to the District	Shutting buildings, restricting access, customer service impacts, additional restrictions

- Communicable disease working group activated
- EOT transition at level 3 or 4

District Actions



- Communication
 - Regular communication with staff
 - Meeting with the Unions
 - Posted information on social media
- Increased cleaning procedures

- Coordination and planning
 - Working group activated
 - Senior Management Team
 - Reviewing IT capabilities
 - Business Continuity Plans
 - Monitoring supply chains for disruption
- Reviewing policies and procedures

Possible Additional Actions



- Evaluate other actions as the situation evolves
- Evaluating potential restrictions
 - Travel and conferences
 - Non-essential public events
 - Other events
- Conducting remote meetings
- Telecommuting

Questions

