

# Water Supply Update

Board of Directors Meeting

March 10, 2020

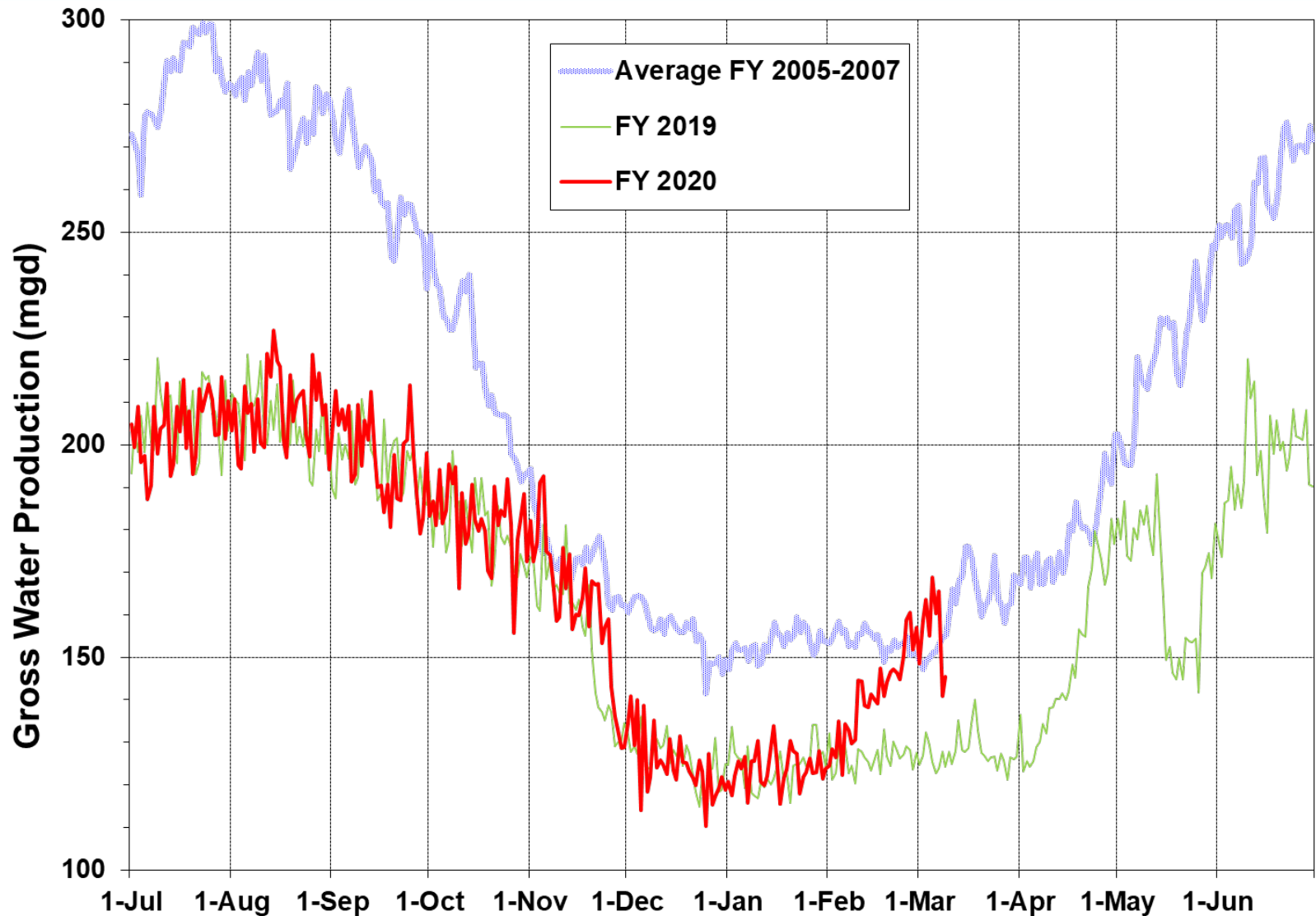
# Water Supply Briefing

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



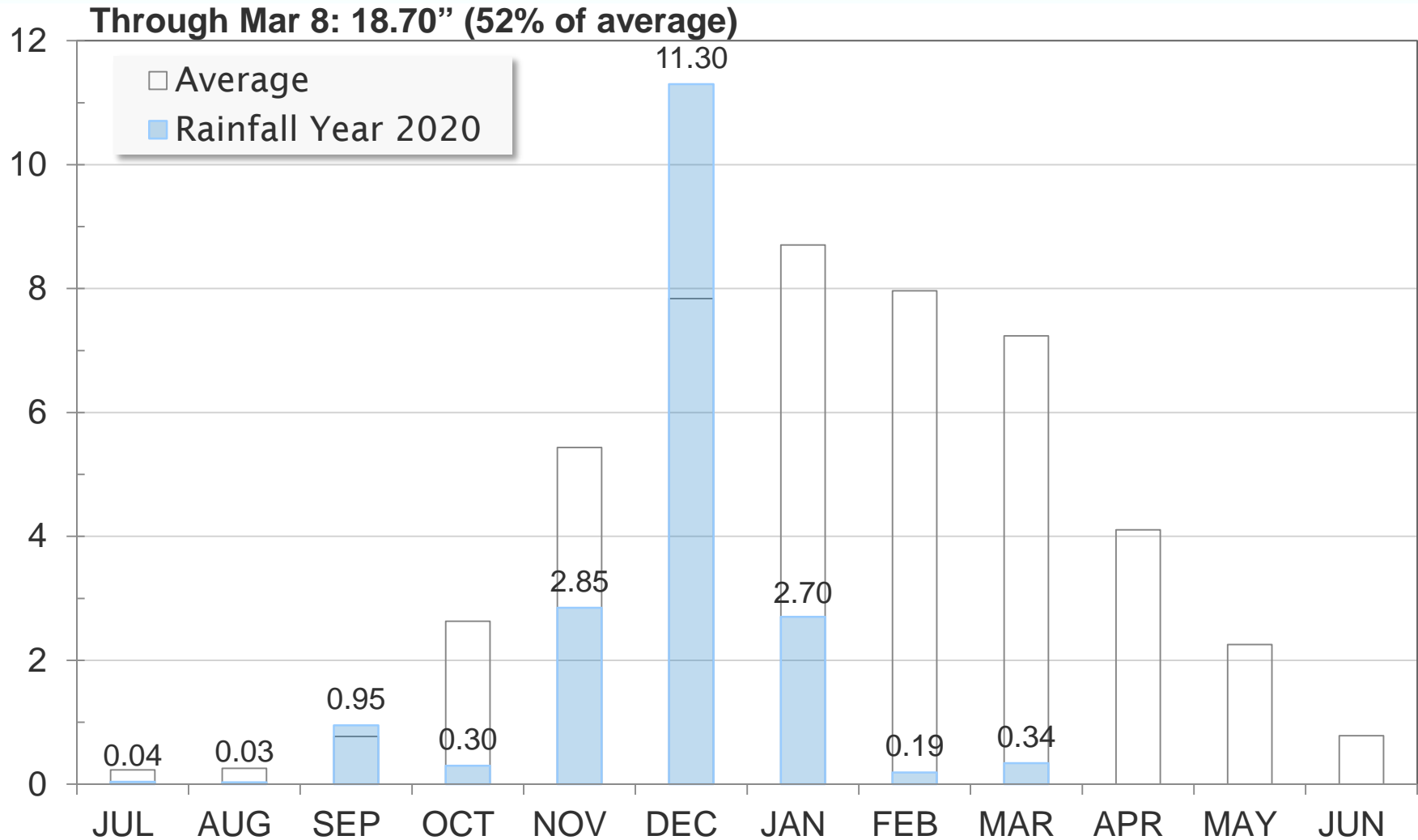
# Current Water Supply

## Gross Water Production



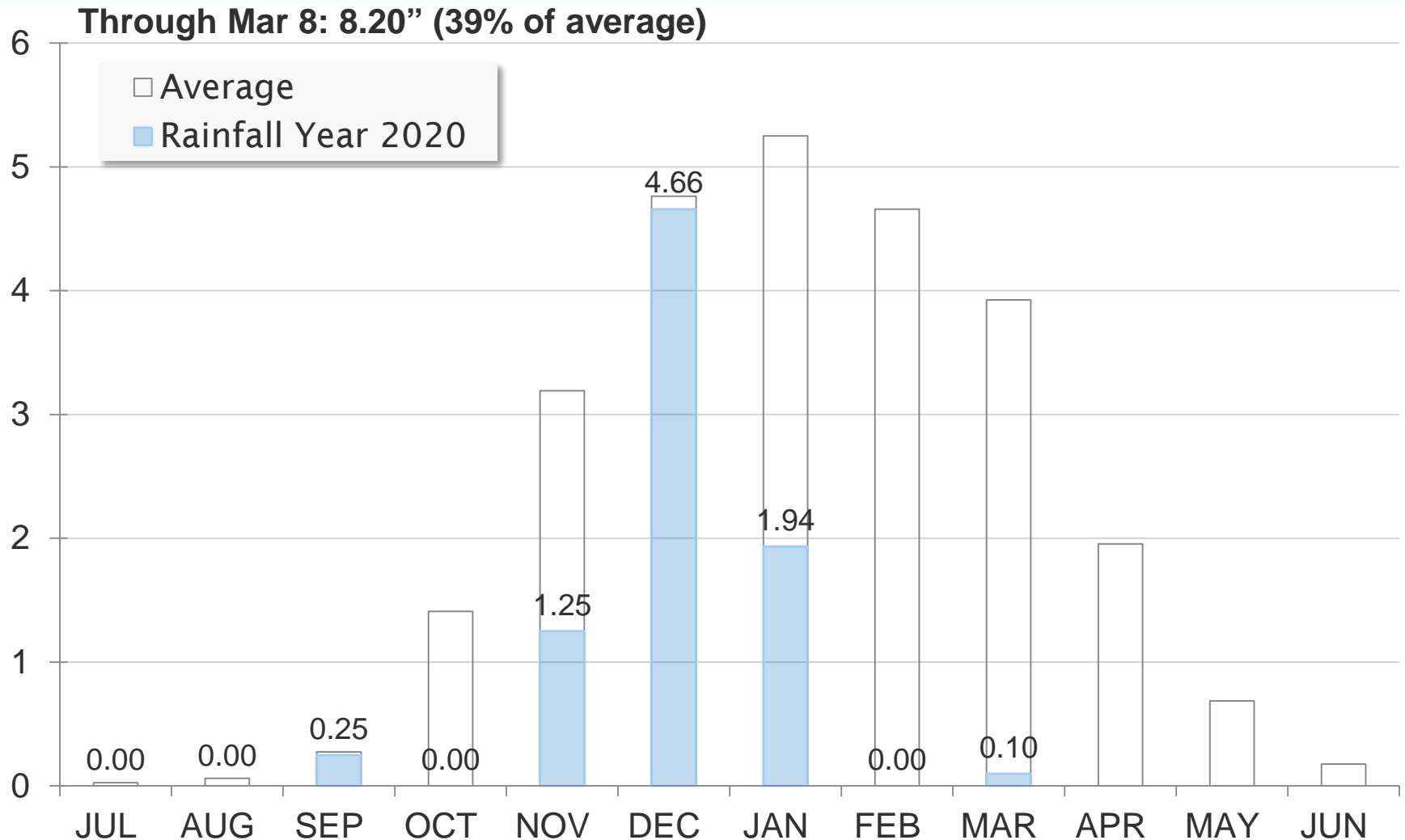
# Current Water Supply

## Mokelumne Precipitation



# Current Water Supply

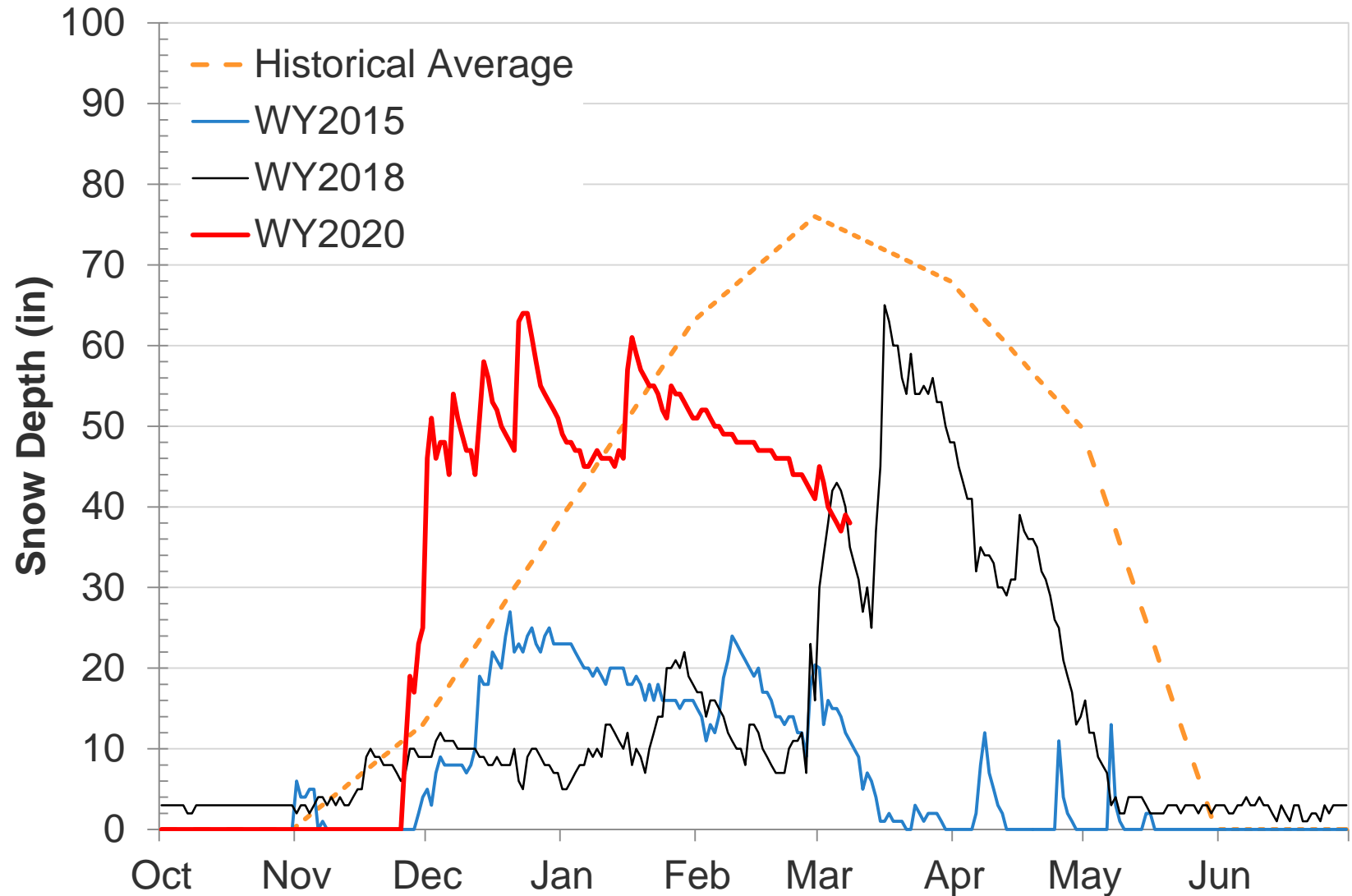
## East Bay Precipitation





# 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

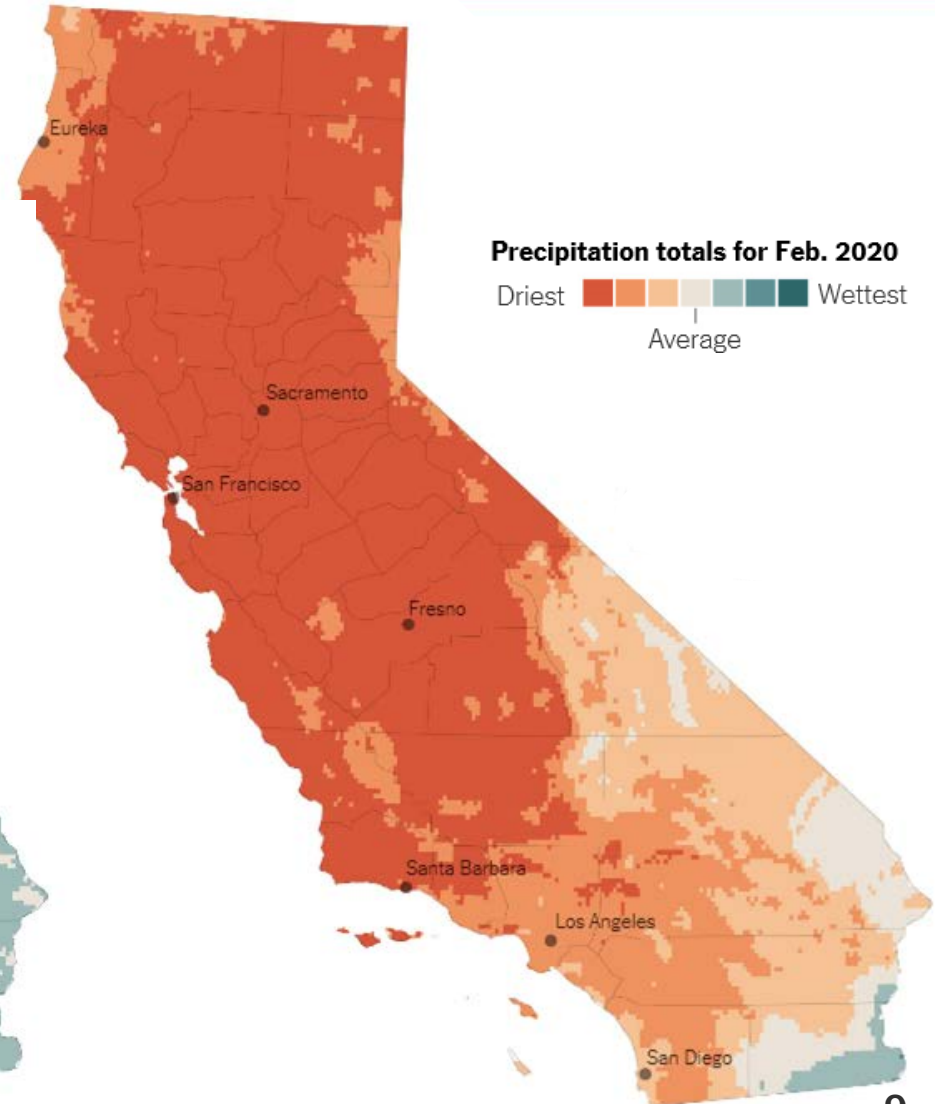
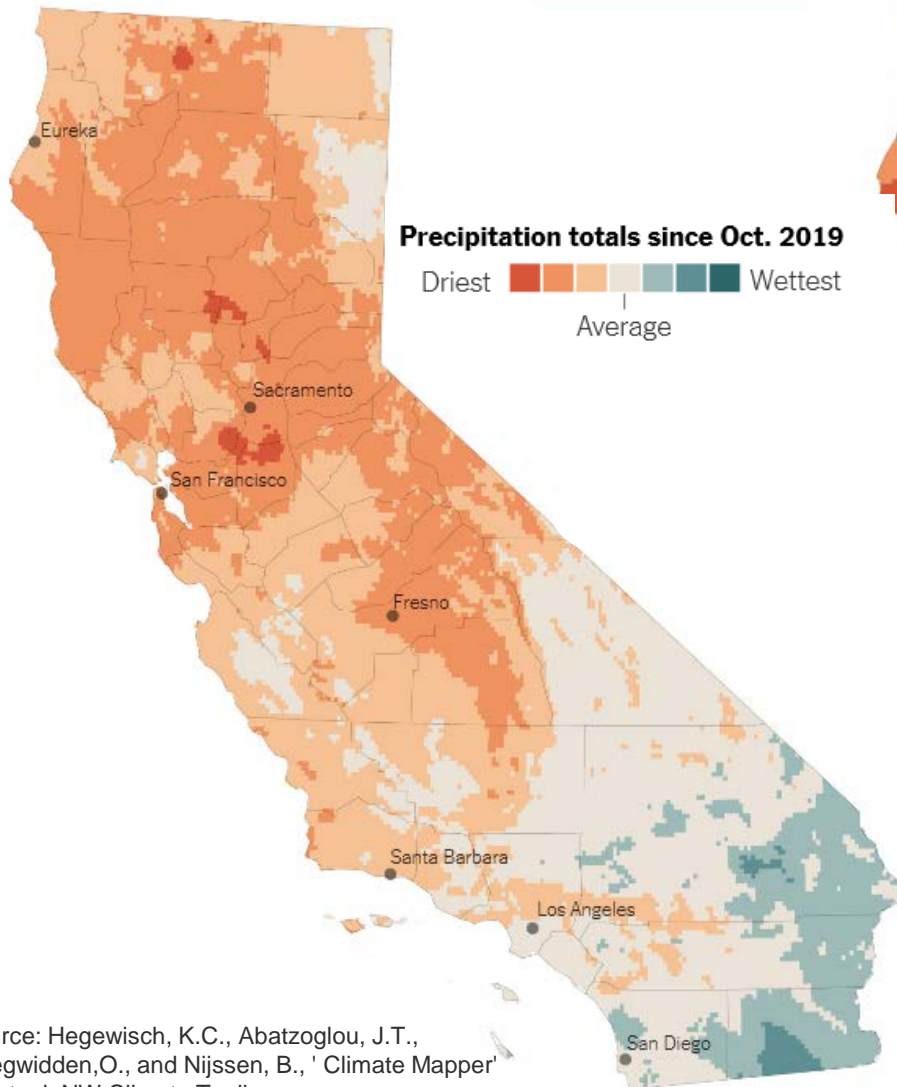


As of 3/8/2020	Current Storage	Percent of Average	Percent of Capacity
Pardee	181,330 AF	99%	89%
Camanche	280,380 AF	100%	67%
East Bay	129,900 AF	96%	86%
Total System	591,610 AF	99%	77%



# California Water Supply

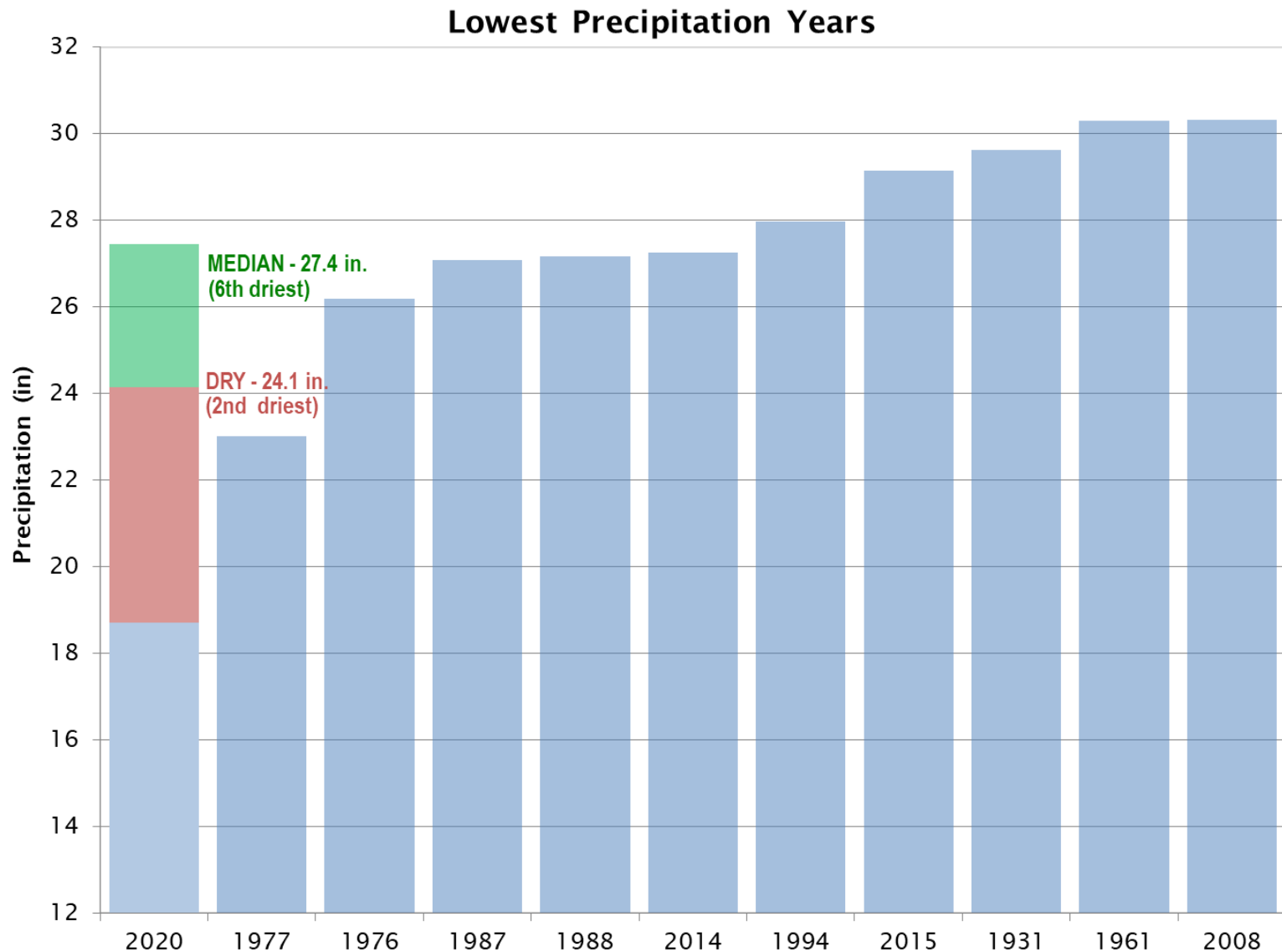
## Driest February on Record



Source: Hegewisch, K.C., Abatzoglou, J.T., Chegwiddden, 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

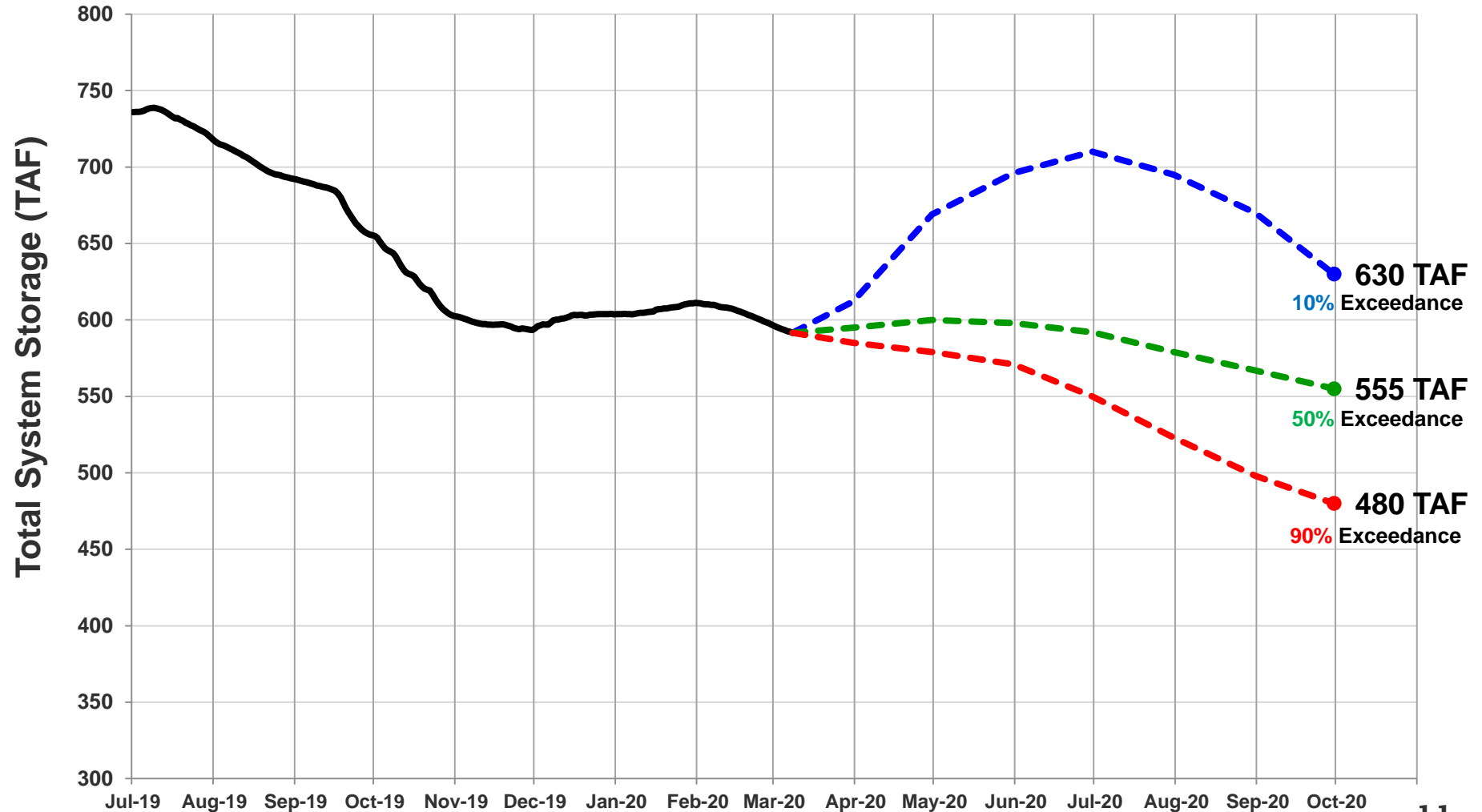


# Water Supply Projections

## 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	Spill
	Elevation	+Gain		+Gain	Elevation	Storage		
	Feet	-Loss	Ac-Ft	-Loss	Feet	Ac-Ft	Cfs	Cfs
<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	32410	0	459.98	38905	0	0
Total East Bay Res.			129900	0		150380		
TOTAL SYSTEM STORAGE			591200	-410		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>	Line 1	37	GRAVITY
Today	342	720	Line 2	48.4	GRAVITY
Total Previous Day	358		Line 3	52.3	THROTTLE
Total Change	-16		TOTAL	137.7	213 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	0	
Orinda WTP	106	190		0 MG	
San Pablo WTP	0	30	<u>RIVER FLOWS AND RELEASES</u>		<u>Cfs</u>
Sobrante WTP	0	50	Mokelumne River Natural Flow		441
Upper San Leandro WTP	0	45	Pardee Reservoir Inflow		338
Walnut Creek WTP	29.3	90	Pardee Release to Camanche Res.		14
<u>TOTAL SURFACE PRODUCTION</u>	135.3	430	Pardee Release to JVID		0
Miscellaneous(Estimated)	0.4		Camanche Release to Mokel. River		330
<u>TOTAL WATER PRODUCTION</u>	135.7		<u>PG&amp;E CO. STORAGE (Acre-feet)</u>		
Change in Distribution System	-16			<u>Storage</u>	<u>Change</u>
Wash Water from Distribution Sys.	0.3				<u>Maximum Capacity</u>
<u>SYSTEM DEMAND</u>	151.3		Old Reservoirs	4969	-33
East-of-Hills Demand	36.9		Salt Springs Res.	18292	78
West-of-Hills Demand	114.4		Lower Bear Res.	12060	159
			Total	35321	204

<u>RAW WATER TRANSMISSION</u>			<u>PRECIPITATION (Inches)</u>				
	<u>INPUT</u>	<u>DRAFT</u>	<u>THIS YEAR</u>		<u>AVERAGE YEAR</u>		
Briones Res.	0	0	<u>STATION</u>	<u>Today</u>	<u>This Month</u>	<u>Season to-Date</u>	<u>Season to-Date</u>
San Pablo Res.	7	0	USL WTP	0	0.07	8.49	19.86
U. San Leandro Res.	0	0	Orinda WTP	0	0.35	11.35	25.07
<u>TOTAL</u>	7	0	Lafayette Reservoir	0	0.13	7.9	22.28
<u>REMARKS</u>			Walnut Creek WTP	0	0	9.11	18.44
WID Canal Diversion = 55 cfs			Camp Pardee	0	0.12	9.4	15.99
Mokelumne River below WID = 219 cfs			Salt Springs P.H.	0	0.41	18.51	33.63
			<u>CAPLES LAKE (7,830 FT) DATA</u>				
PG&E data as of 4:00 pm previous date.				<u>Today</u>		<u>Average</u>	
All other data as of midnight.			Snow Depth	37 Inches		74 Inches	
WTP capacities are sustainable rates.			Water Content	14.3 Inches		27.3 Inches	

EAST BAY MUNICIPAL UTILITY DISTRICT

# **Public Safety Power Shutoff 2020 Preparations**

Board of Directors

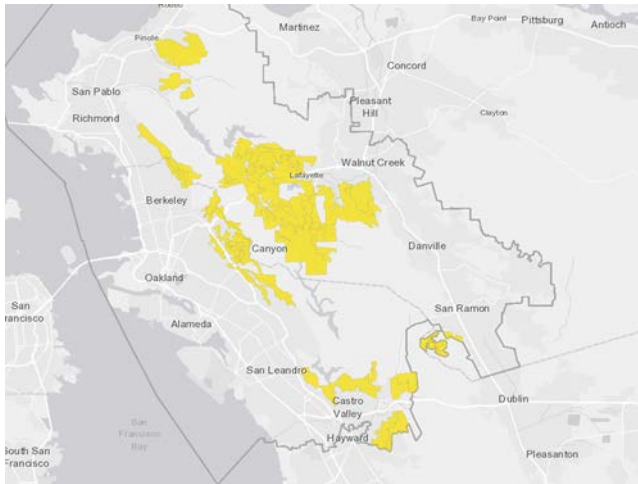
March 10, 2020

# Summary of 2019 PSPS Events



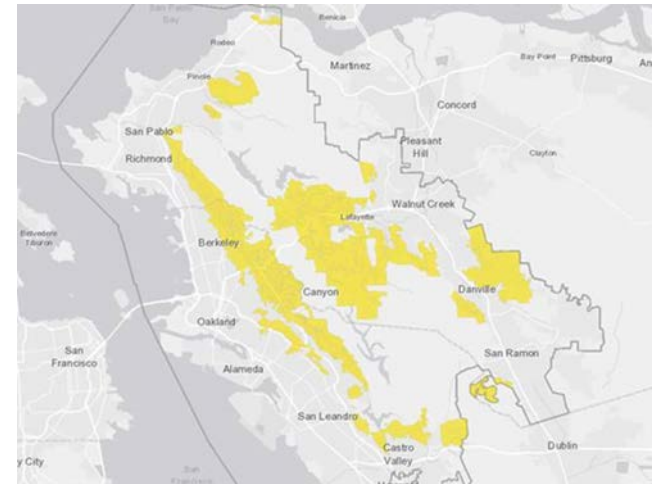
Event	Total	Water Treatment Plants	Distribution Pumping Plants	Distribution Reservoirs	Upcountry
Oct 9	136	2	47	37	1
Oct 26	216	4	58	54	27

## 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)

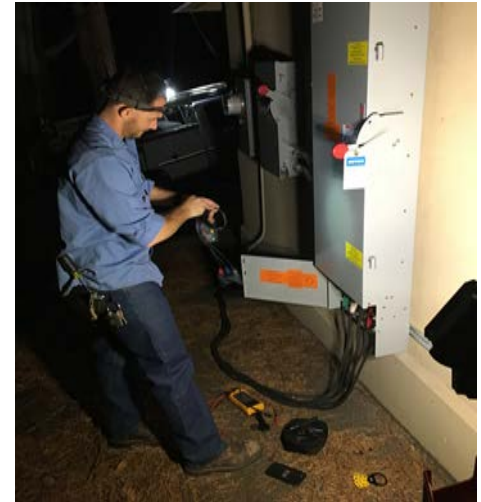


**On-the-ground, real-time observations** from PG&E's Wildfire Safety Operations Center and field observations from PG&E crews



# 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, trimming, 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 1-866-WCS-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



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/](http://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

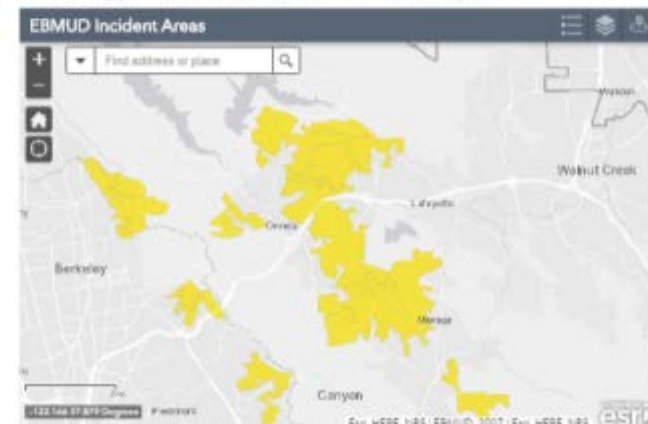
Moraga Creek landslide update

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.

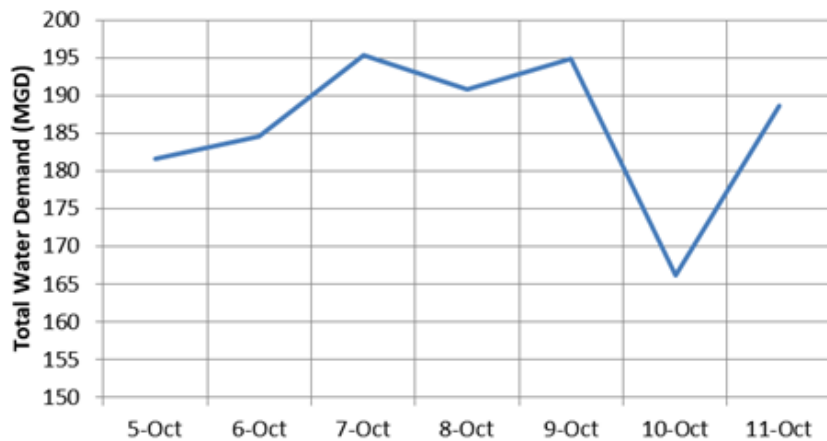




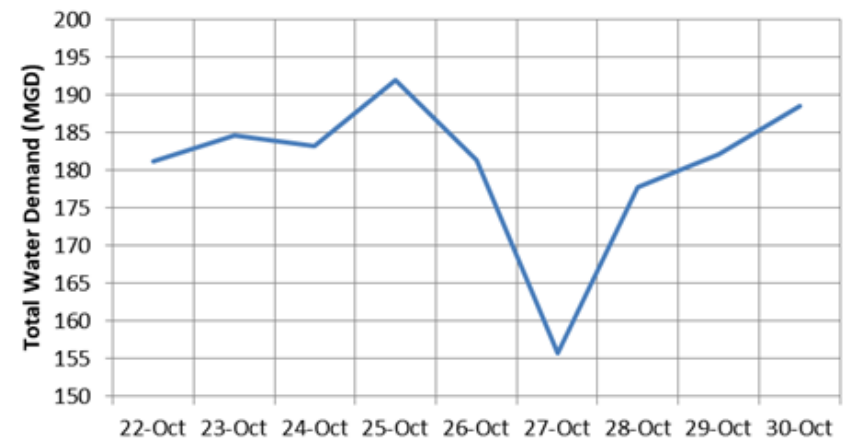
# Water Consumption Customer Response – 2019 PSPS



**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



# District Actions



- 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

