## Water Supply Board Briefing

Water Operations Department November 22, 2016

## **Water Supply Briefing**

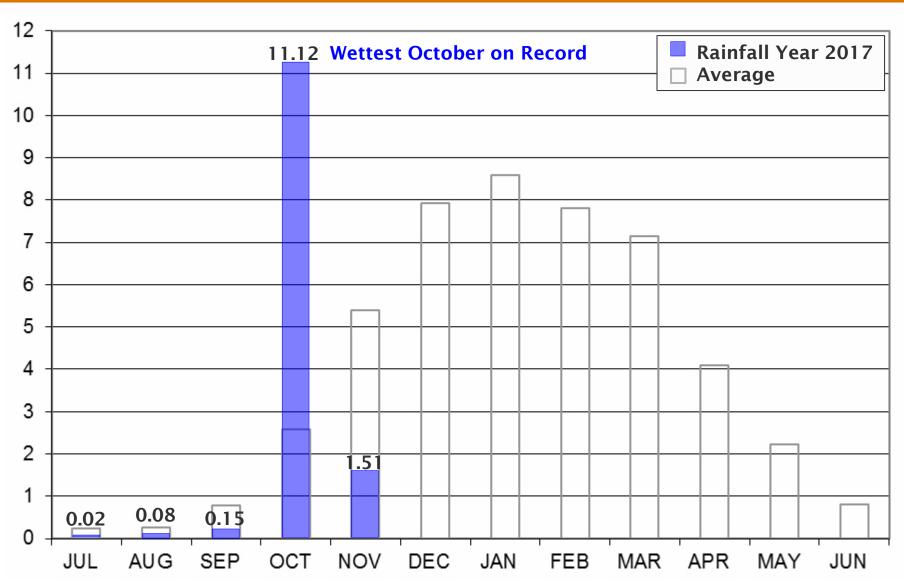


- Precipitation
- Storage
- Gross Water Production
- Water Supply Projections



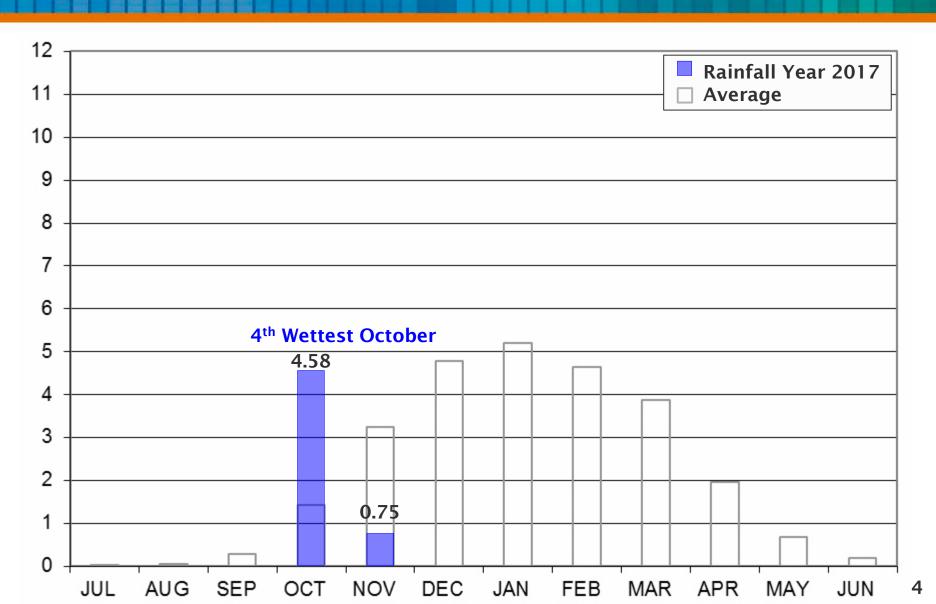
## **Mokelumne Precipitation**





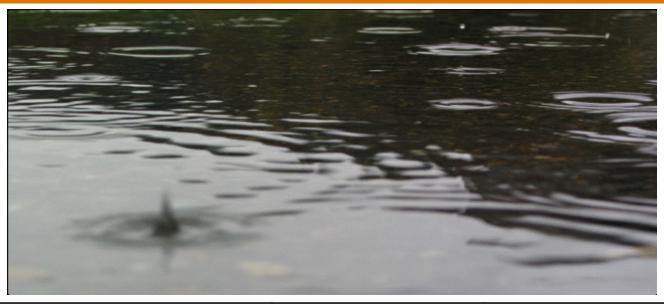
## **East Bay Precipitation**





## Precipitation





| As of 11/21/2016               | Cumulative<br>Precipitation | % of Average |  |  |
|--------------------------------|-----------------------------|--------------|--|--|
| East Bay                       |                             |              |  |  |
| East Bay Watershed             | 5.33"                       | 130%         |  |  |
| Mokelumne Basin                |                             |              |  |  |
| 4-Station Average              | 12.88"                      | 167%         |  |  |
| Caples Lake Snow Depth         | 9"                          | 99%          |  |  |
| Caples Lake Snow Water Content | 0.7"                        | 35%          |  |  |

## Reservoir Storage





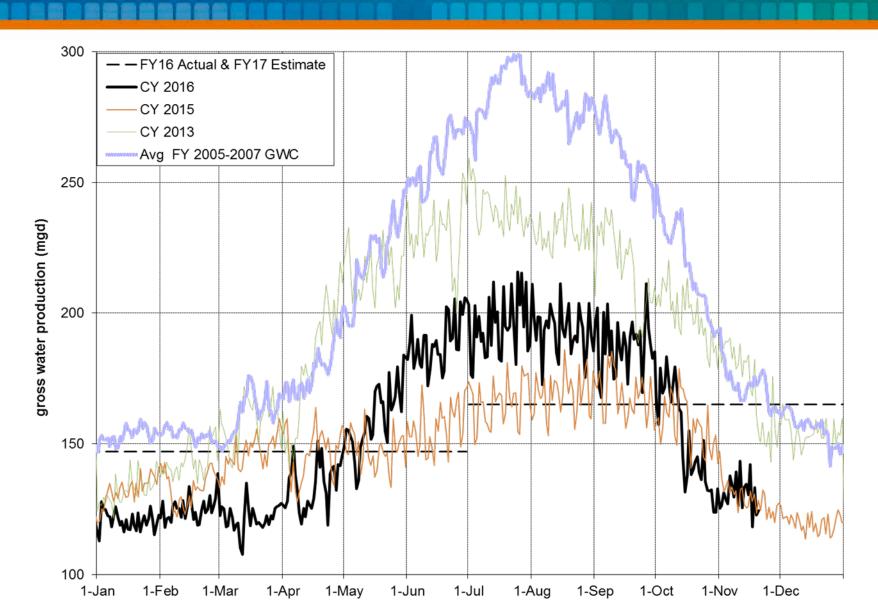




| As of 11/21/16 | Current<br>Storage | Percent of Average | Percent of Capacity |  |
|----------------|--------------------|--------------------|---------------------|--|
| Pardee         | 192,000 AF         | 111%               | 94%                 |  |
| Camanche       | 281,190 AF         | 110%               | 67%                 |  |
| East Bay       | 136,800 AF         | 120%               | 91%                 |  |
| Total System   | 609,990 AF         | 112%               | 79%                 |  |

# Current Water Supply Gross Water Production

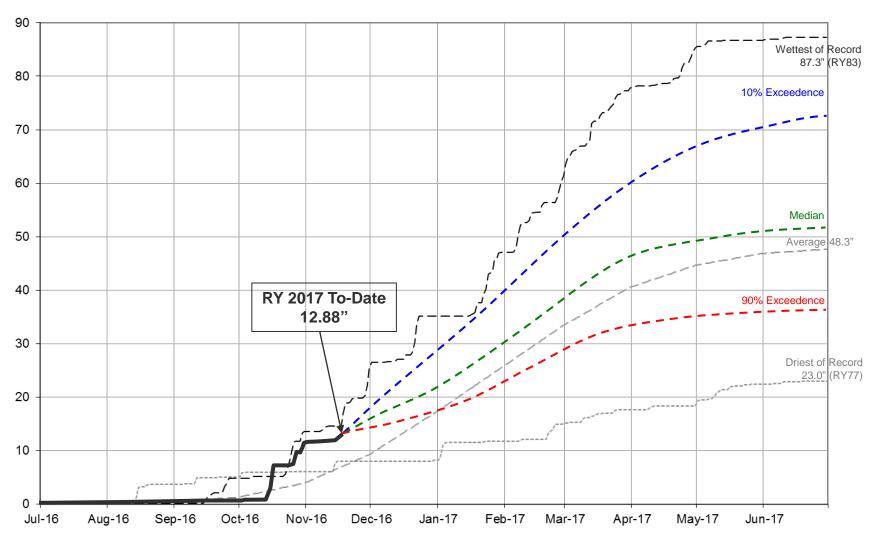




# Water Supply Projections Mokelumne Precipitation Rainfall Year 2017



### Mokelumne 4-Station Average Precipitation (in) Rainfall Year 2017 Projection



## Water Supply Projections

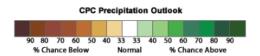




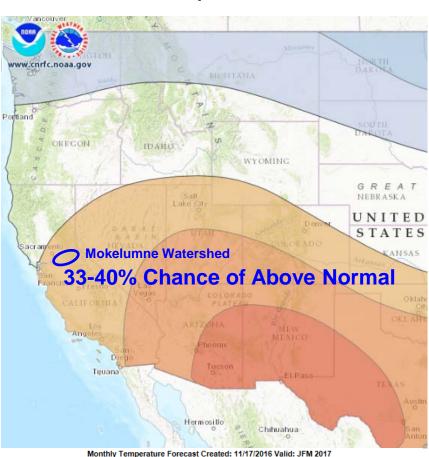
### Precipitation

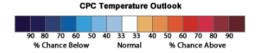
### ww.cnrfc.noaa.gov DAROTA GREAT NEBRASKA UNITED Denver STATES COLORADO **Mokelumne Watershed** San Chance of Above Normal to 33% Chance of Below Normal Hermosillo Chihuahua

#### Monthly Precipitation Forecast Created: 11/17/2016 Valid: JFM 2017



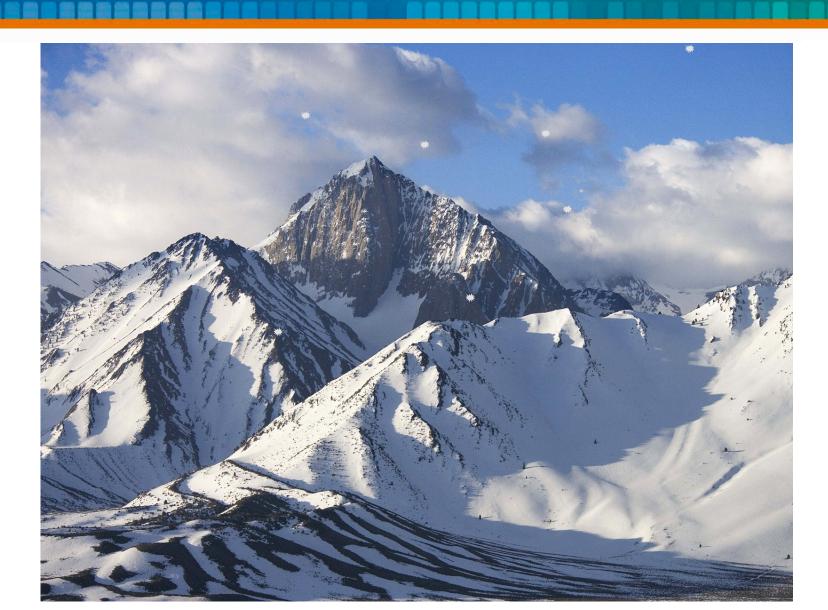
### **Temperature**





# Hoping for continued snow!





### WATER SUPPLY ENGINEERING DAILY REPORT

Monday, November 21, 2016

#### RESERVOIR STORAGE AND ELEVATION

|   |                    | KLSLI                | VOIK BIO  | MIGE III                             | DELEVATION   | l             |                   |                   |            |
|---|--------------------|----------------------|---|--------------------------------------|--------------|---------------|-------------------|-------------------|------------|
|   | WATER S            | <u>SURFACE</u>       | STOR A  |                                      | MAXIMUM (    |               | <del>-</del>      |                   |            |
|   | Elevation          | +Gain                |   | +Gain                                | Elevation    | Storage       |                   | Release           | Spill      |
| <u>MOKELUMNE</u>                          | <u>Feet</u>        | <u>-Loss</u>         | Ac-Ft   | <u>-Loss</u>                         | <u>Feet</u>  | Ac-Ft         |                   | <u>Cfs</u>        | <u>Cfs</u> |
| Pardee                                    | 562.26             | -0.07                | 192000  | -150                                 | 567.65       | 203795        |                   | 519               | 0          |
| Camanche                                  | 215.66             | -0.02                | 281190  | -120                                 | 235.5        | 417120        |                   | 557               | 0          |
| EAST BAY                                  |                    |                      |   |                                      |              |               |                   |                   |            |
| Briones                                   | 573.9              | -0.01                | 57400   | 0                                    | 576.14       | 58960         |                   | 0                 | 0          |
| Chabot                                    | 220.3              | 0                    | 8130  | 0                                    | 227.25       | 10350         |                   | 0                 | 0          |
| Lafayette                                 | 442.48             | 0                    | 3440  | 0                                    | 449.16       | 4250          |                   | 0                 | 0          |
| San Pablo                                 | 308.85             | 0.04                 | 34690   | 30                                   | 313.68       | 38600         |                   | 0                 | 0          |
| Upper San Leandro                         | 452.09             | -0.16                | <u>33140</u>  | <u>-110</u>                          | 459.98       | <u>38905</u>  |                   | 0                 | 0          |
| Total East Bay Res.                       |                    |                      | <u>136800</u>   | <u>-80</u>                           |              | <u>151065</u> |                   |                   |            |
| TOTAL SYSTEM STORAG                       | GE                 |                      | 609990  | -350                                 |              | 771980        |                   |                   |            |
| DISTRIBU                                  | TION SYS           | STEM                 |   | MOKELUMNE SYSTEM                     |              |               |                   |                   |            |
| DISTRIBUTION RESERVO                      | <u>DIRS</u>        |                      |   | AQUEDUCT DELIVERIES                  |              |               |                   |                   |            |
| -   |                    | Storago              | Operating   |                                      |              | MG            |                   | —<br>Flow Con     | ditions    |
|   |                    | Storage<br><u>MG</u> | Operating<br>Capacity   |                                      | Line 1       | 13.4          |                   | THROT             |            |
| Today                                     |                    | 355                  | 720   |                                      | Line 2       | 0             |                   | SHUTD             |            |
| Total Previous Day                        |                    | 371                  | 720   |                                      | Line 3       | 49.8          |                   | THROT             |            |
| Total Change                              |                    | -16                  |   |                                      | TOTAL        | 63.2          |                   | 98 C              |            |
| Total Change                              |                    | -10                  |   |                                      | FSCC to MOE  |               | ICTS (Mes         |                   |            |
| WATER PRODUCTION                          |                    | Million              | Capacity  |                                      | Mok 1        | 0             | C15 (MC           | isurca at Dra     | andt), MO  |
| AND DEMAND                                |                    | Gallons              | MGD   |                                      | Mok 2        | 0             |                   |                   |            |
|   | •                  | 7.6                  | 25  |                                      | 1110K 2      |               | MG                |                   |            |
| Lafayette WTP<br>Orinda WTP               |                    | 0                    | 190   |                                      | RIVER FLOW   |               | _                 |                   | Cfs        |
| San Pablo WTP                             |                    | 15                   | 30  |                                      | Mokelumne R  |               |                   |                   | 318        |
|   |                    | 23.5                 | 50  |                                      |              |               | I FIOW            |                   | 532        |
| Sobrante WTP                              |                    | 36.2                 | 50 Pardee Reservoir Inflow 45 Pardee Release to Camanche Res. |                                      | aha Daa      |               | 519               |                   |            |
| Upper San Leandro WTP<br>Walnut Creek WTP |                    | 37.6                 | 90  |                                      |              |               | che Kes.          |                   | 0          |
| walliut Creek w IP                        |                    | 37.0                 | 90  | Pardee Release to JVID               |              | 557           |                   |                   |            |
| TOTAL SURFACE PRODU                       | ICTION             | 119.9                | 430   | Camanche Release to Mokel. River 557 |              |               |                   |                   | 331        |
| Miscellaneous(Estimated)                  | <del>Je Hort</del> | 0                    | 150   | PG&E CO. STORAGE (Acre-feet)         |              |               |                   |                   |            |
| TOTAL WATER PRODUC                        | TION               | <u>119.9</u>         |   |                                      | roce co. br  | OR IGE (      | icre rect)        | Maximum           |            |
| Change in Distribution Sys                |                    | -16                  |   |                                      |              | Storage       | Change            | Capacity          |            |
| Wash Water from Distribu                  |                    | 1.6                  |   | Old Re                               | eservoirs    | 8565          | -199              | 26560             |            |
| SYSTEM DEMAND                             | J                  | 134.6                |   | Salt St                              | orings Res.  | 75698         | -192              | 141857            |            |
| East-of-Hills Demand                      |                    | 32                   |   |                                      | Bear Res.    | 25440         | -132<br>-34       | 52025             |            |
| West-of-Hills Demand                      |                    | 102.6                |   | Total                                | Dear Res.    | 109703        | -425              | 220442            |            |
| RAW WATER TRANSMI                         | SSION A            |                      |   |                                      | PRECIPITA    | TION (Inc     | ches)             |                   |            |
|   |                    | <u>DRAFT</u>         |   |                                      | THIS Y       |               | /                 | AVERAGI           | VEAD       |
| Briones Res.                              | 0                  | 0                    |   |                                      | 11115 11     | LAK           |                   | AVERAGI           | SILAN      |
|   |                    |                      | CTATION   |                                      |              | Th:           | C                 | C                 | C          |
| San Pablo Res.<br>U. San Leandro Res.     | 55<br>0            | 123                  | STATION   |                                      | Todov        | This          | Season<br>to Data | Season<br>to Data | Season     |
| U. San Leandro Res.                       | U                  | 119                  |   |                                      | <u>Today</u> | Month         | to-Date           | to-Date           | Total      |
| mom                                       |                    | 2.12                 | USL WTP   |                                      | 0.01         | 0.77          | 5.99              | 4.15              | 25.33      |
| TOTAL                                     | 55                 | 242                  | Orinda W  |                                      | 0            | 1.34          | 6.53              | 4.74              | 32.06      |
| REMARKS                                   |                    |                      | Lafayette l   |                                      | 0.01         | 0.73          | 4.66              | 4.07              | 28.18      |
| WID Canal Diversion = 42 o                |                    |                      | Walnut Cr   |                                      | 0.01         | 0.88          | 4.95              | 3.28              | 23.02      |
| Mokelumne River below W                   | ID = 241  cf       | Es .                 | Camp Parc   |                                      | 0.14         | 1.5           | 5.81              | 3.33              | 21.56      |
|   |                    |                      | Salt Spring   | gs P.H.                              | 0.3          | 1.14          | 10.75             | 7.36              | 45.51      |
|   |                    |                      | CAPLES LAKE (7,830 FT) DATA                                   |                                      |              |               |                   |                   |            |
| PG&E data as of 4:00 pm pr                | evious date        | <br>2.               |   |                                      | Today        |               | Average           |                   |            |
| All other data as of midnight             |                    |                      | Snow Dep  | th                                   | 9 Inches     |               | 9 Inches          |                   |            |
| WTP capacities are sustainal              |                    |                      | Water Cor   |                                      | 0.7 Inches   | 2             | 2.0 Inches        |                   |            |