Orange County Drought Performance & Water Supply Report

January 25, 2017
Municipal Water District of Orange County

O.C. Water Conservation
O.C. Water Savings Reported to SWRCB

Average Monthly Water Savings for Orange County Compared to CY 2013

Cumulative Savings for O.C. 21.11%

O.C. Water Savings (Cumulative)

Savings = 183,000 AF (21.1%)

= Approx storage capacity of Lake Mathews

= $169 Million Treated MWD
O.C. Water Savings Since June 2016

- Savings = 59,500 AF (18.95%)
- 2016 Usage: 254,134 AF
- CY 2013 Usage: 313,568 AF

O.C. Water Savings VS California Savings

- OC Savings, 183,139 AF (8%)
- Rest of South Coast Savings, 869,462 AF (37%)
- Rest of CA Savings, 1,297,399 AF (55%)

Acre Feet Saved (June 2015 - November 2016)
Orange County Rain Report

Average Monthly Precipitation in Orange County, Ca
Santa Ana Civic Center Gage #121

<table>
<thead>
<tr>
<th>Month</th>
<th>Rainfall (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>0.01</td>
</tr>
<tr>
<td>August</td>
<td>0.04</td>
</tr>
<tr>
<td>September</td>
<td>0.19</td>
</tr>
<tr>
<td>October</td>
<td>0.49</td>
</tr>
<tr>
<td>November</td>
<td>1.19</td>
</tr>
<tr>
<td>December</td>
<td>4.41</td>
</tr>
<tr>
<td>January</td>
<td>2.17</td>
</tr>
<tr>
<td>February</td>
<td>2.67</td>
</tr>
<tr>
<td>March</td>
<td>2.76</td>
</tr>
<tr>
<td>April</td>
<td>2.09</td>
</tr>
<tr>
<td>May</td>
<td>0.93</td>
</tr>
<tr>
<td>June</td>
<td>0.25</td>
</tr>
<tr>
<td>July</td>
<td>0.06</td>
</tr>
</tbody>
</table>

85% of Local Precipitation occurs from November to March (10.88 Inches)
58% of Local Precipitation occurs from January to March (7.52 Inches)

Historical Local Precipitation

Average Rainfall 12.9 Inches

Santa Ana Annual Precipitation Statistics (Fiscal Year July-June)

<table>
<thead>
<tr>
<th>Year</th>
<th>Rainfall (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>20.34</td>
</tr>
<tr>
<td>2018</td>
<td>0.01</td>
</tr>
<tr>
<td>2019</td>
<td>0.04</td>
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Regional Weather and Water Supply Conditions

Northern California Accumulated Precipitation

Monthly Precipitation (8 Station Precip Index)

Accumulated Precipitation (8-Station Precip Index)

- **Historical Average**
- **Monthly Total**

- **Historical Average**
- **Water Year 16-17**

- **53.2 Inches**
- **214% of Normal**

INCHES

OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP

INCHES

INCHES

INCHES

INCHES

INCHES
PRELIMINARY DATA
SUBJECT TO REVISION WITHOUT NOTICE

EXECUTIVE OPERATIONS SUMMARY ON 1/23/2017

This summary can also be found at:
http://www.water.ca.gov/swp/operationscontrol/docs/delta/deltaops.pdf

SCHEDULED EXPORTS FOR TODAY:
Clifton Court Inflow = 10,300 cfs
Jones Pumping Plant = 4,100 cfs

State Water Project Informational Data can be found at:
http://www.water.ca.gov/swp/operationscontrol/projectwide.cfm

ESTIMATED DELTA HYDROLOGY
Total Delta Inflow ~ 180,250 cfs
Sacramento River = 74,400 cfs
San Joaquin River = 17,888 cfs

Data for previous 30-days is available at:
http://www.water.ca.gov/swp/operationscontrol/docs/delta/DeltaWQ.pdf

DELTA OPERATIONS:
Delta Conditions = Excess
Delta x-channel Gates (% of day is open) = 0%
Outflow Index ~ 181,200 cfs
% Inflow Diverted = 6.9% (14-day avg)
X2 Position < 56 km
Controlling Factor(s) = Available Capacity

2016-17 SWP Table Allocation

- Initial Allocation
- Final Allocation

![Bar Chart: 2016-17 SWP Table Allocation](image-url)
Colorado River Basin Outlook

Lake Powell Unregulated Historical Inflow

Runoff (MAF)

Lake Mead projected Levels

Lake Powell

Lake Mead

1,080 Feet

1,075 Feet

Shortage Trigger (1,075)

Historical

Projection
MWD Preliminary Outlook

![Bar chart showing water storage from 2006 to 2017 with MWD 2017 Demand 1.7 MAF and 0.4 MAF Added to Storage.]

Drought Information

![Image of a sign reading "Serious Drought Help Save Water." and a map of California's drought status.]

California's Drought Isn't Over Yet

Yes, it's raining, no the drought.
The Great California Drought

1. Drought conditions begin in January 2012.
2. January 17th 2014 Governor Jerry Brown Declares Drought State of Emergency. Californians are asked to voluntary conserve 20% of their water use.
3. December 2015 a study released reporting that the current drought is the worst in 1,200 years.
4. April 1st 2015 Governor Jerry Brown issued a new Executive Order that directs the SWRCB to impose restrictions on urban water suppliers to achieve a statewide 25 percent reduction on potable water usage. MWD Board also approves an water supply allocation.
5. March 2016 El Nino finally arrives to Northern California bring precipitation above average for the first time in 4 years and ending state mandatory regulations. The drought conditions improve but still persist.
6. January 2017 multiple storm brings large quantities of rain and snow to California, Northern California drought ends while conditions in the central and south greatly improve.

California Drought Monitor (Dec-2015 VS Jan-2017)

- **December 2015**: California 99% Drought
- **January 2017**: California 64% Drought

1/25/2017
Water Supply Conclusions

- Orange County residents continue to save large amounts of water compared to CY 2013.
- Accumulated Precipitation is **well above** the historical average in North California. Northern California Snowpack is **above average**.
- Precipitation in Southern California is **above average** for the 2016-17 water year. **Below average precipitation** has occurred the last 5 Water Years.
- There still a lot of winter to go and more potential for wet weather.
- Key State/Federal Reservoirs Levels Continue to **improve** and our hovering around the top of their conservation pools.
- Table A allocation has increased to **60%**, which is about **1.2 MAF** of water to MWD. With good hydrological conditions allocation could be raised in the future.
- Drought conditions are weakening in Southern/Central California and are not present in Northern California.
- The Colorado River System is still in **decline** and Lake mead could possibly see a shortage trigger at the end of CY 2018.

Questions