

**Updated Water Supply
Report and Revisions to
MET's Water Supply
Allocation Plan**

**Planning & Operation Committee
December 1, 2014**

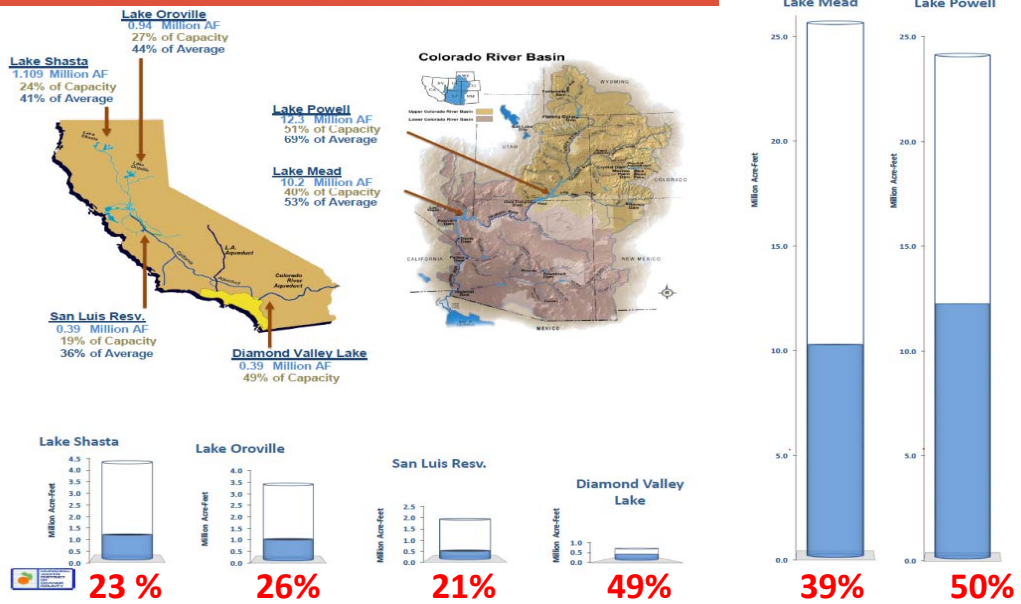
Municipal Water District of Orange County

Agenda

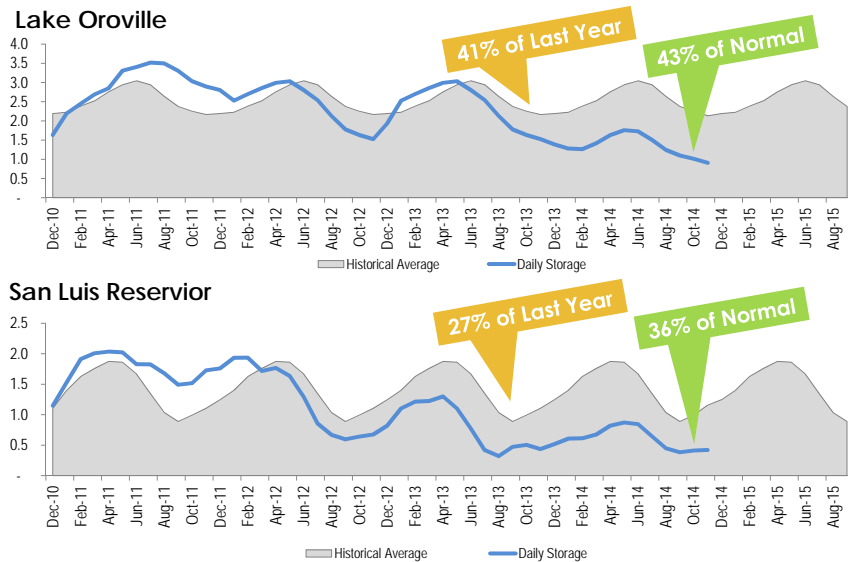
- 🚰 Update on Water Supply Conditions
- 🚰 Revisions to MET's Allocation Plan
- 🚰 Chances of MET implementing allocations in 2015
- 🚰 Schedule of Reviewing and modifying MWDOC's Allocation Plan



RESERVOIR STORAGE – November 2014

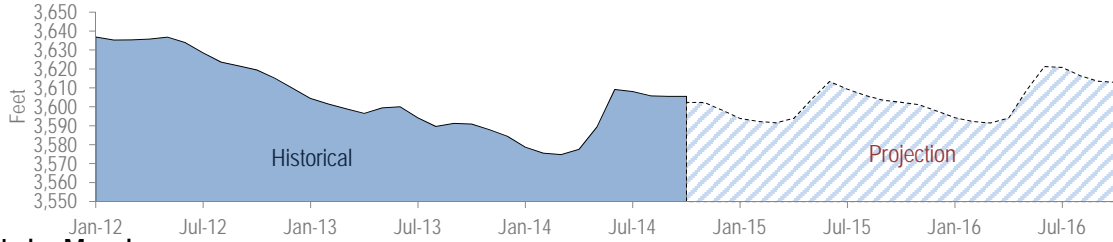


Statewide Reservoir Elevations As of November 16, 2014

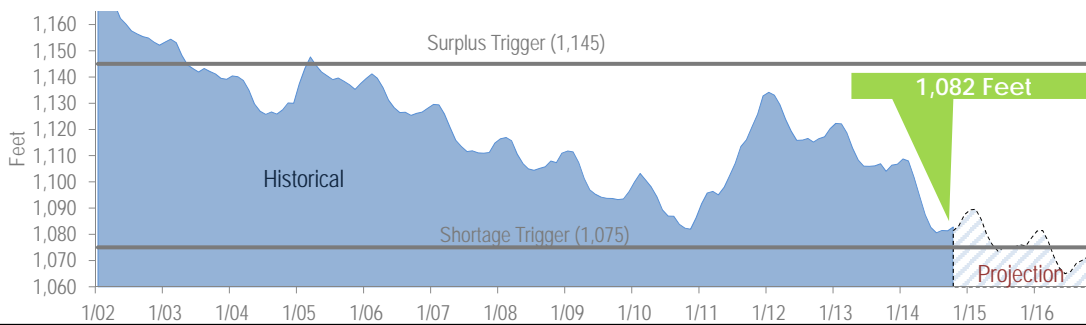


Colorado River Reservoir Elevations As of Mid November 2014

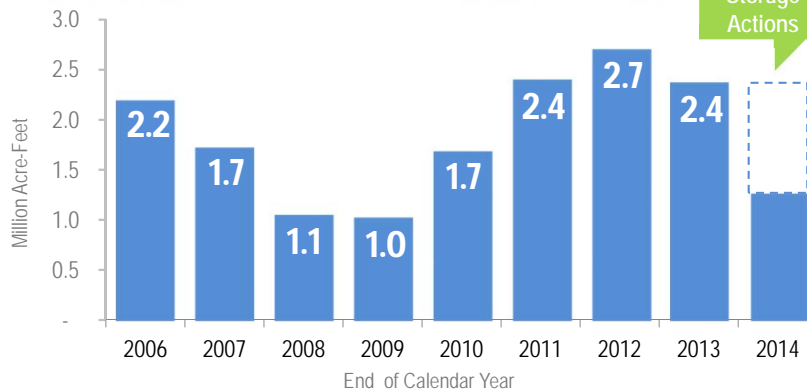
Lake Powell



Lake Mead



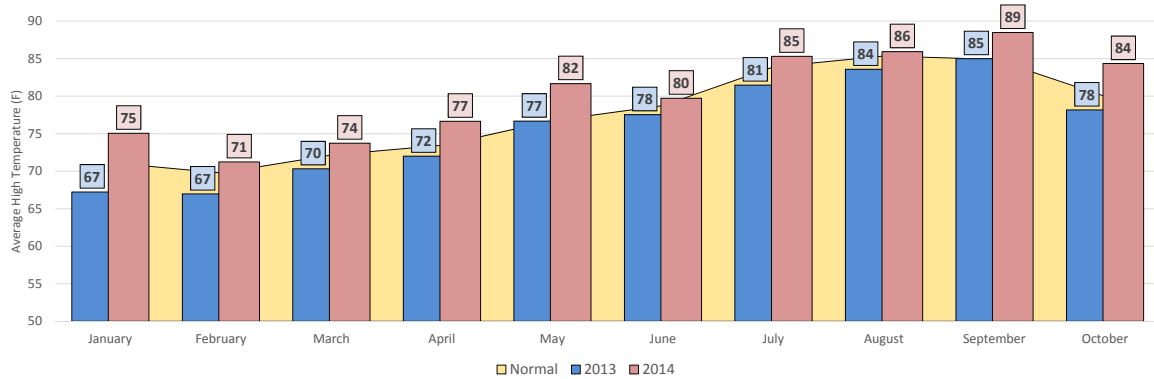
Metropolitan Dry Year Storage



* Does not include 636 TAF of Metropolitan Emergency Storage.

2014 vs. 2013 Temperatures

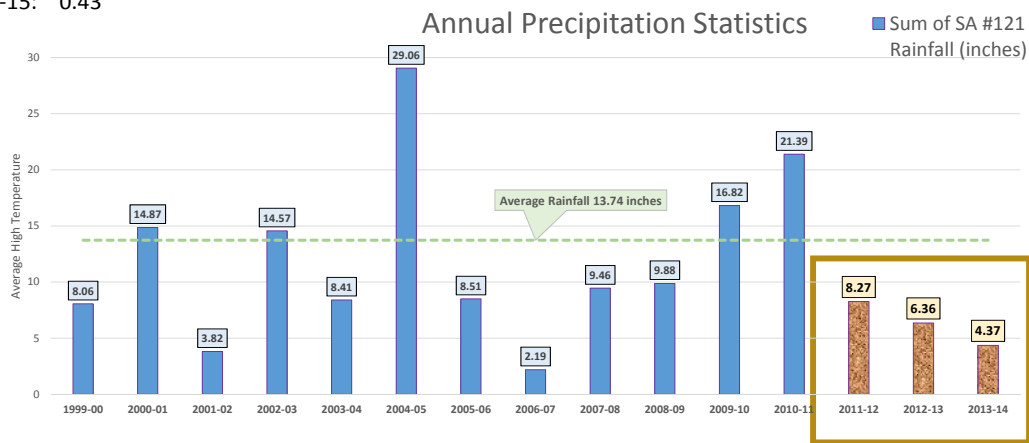
- Monthly temperatures in 2014, have been **hotter** than average with October, September and January being the highest
 - California: 4.7 degrees above average
 - Southern California: 5.7 degrees above average
 - Orange County: 2 degrees above 15 year average at John Wayne Airport



Precipitation

Cumulative Year-to-Date
 Average: 1.95"
 2014-15: 0.43"

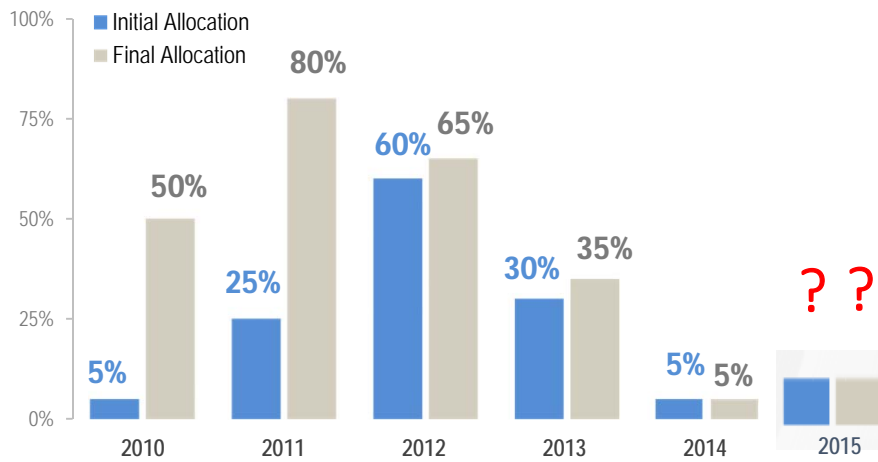
Average Annual Rainfall: 13.74"
 3-Year Deficit: 22.32"



Weather Outlook



State Water Project "Table A" Allocation





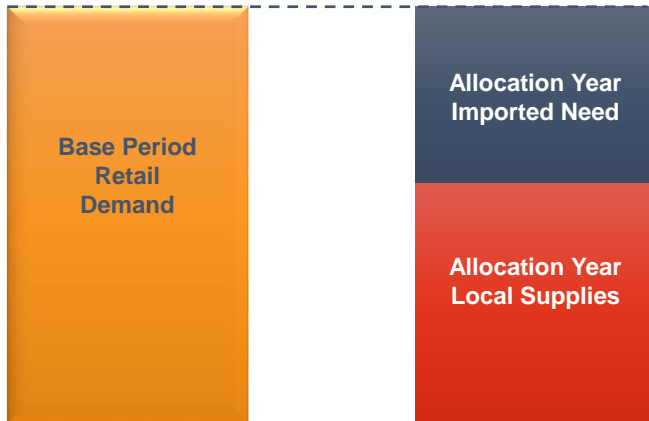
Revisions to MET's WSAP and Impact to MWDOC's Plan

Background on MET's WSAP

- 💧 Seek to “minimize the impacts of water shortages on the region’s retail consumers and economy during periods of shortage”
- 💧 A Plan that is “based on Need”
 - 💧 Provides Flexibility
 - 💧 Equity among the member agencies
- 💧 Ensure local investments always result in improved reliability



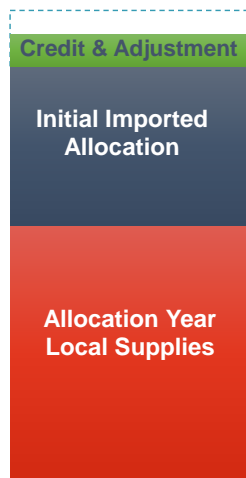
Water Supply Allocation Plan: Baseline



- 💧 **Step 1 – Determine Agency’s Baseline**
 - 💧 Retail Demand – Total usage of potable water



Water Supply Allocation Plan: Formula



- 💧 **Step 2 - Declare a “Regional Shortage Level”**
 - 💧 This is the reduction % is off the “Imported Demand” amount
- 💧 **Step 3 – Add Credits and adjustments:**
 - 💧 Growth
 - 💧 Retail Impact Adjustment
 - 💧 Conservation Hardening credits
 - 💧 Extraordinary Supply credits



WSAP Calculation Factors

| Regional Shortage Level | Wholesale Minimum Percentage | Max. Retail Impact Adjustment Percentage |
|-------------------------|------------------------------|--|
| 1 | 92.5% | 2.5% |
| 2 | 85.0% | 5.0% |
| 3 | 77.5% | 7.5% |
| 4 | 70.0% | 10.0% |
| 5 | 62.5% | 12.5% |
| 6 | 55.0% | 15.0% |
| 7 | 47.5% | 17.5% |
| 8 | 40.0% | 20.0% |
| 9 | 32.5% | 22.5% |
| 10 | 25.0% | 25.0% |



Review of MET Water Supply Allocation Plan

Three Areas MET and the Member Agencies reviewed and updated on the WSAP Plan are:

- 💧 Baseline
- 💧 Conservation Hardening Credit
- 💧 Groundwater Replenishment Allocation
- 💧 Allocation Penalty Structure



Updating the Baseline

- Updated the WSAP base period to Fiscal Years ending 2013 and 2014
 - Currently, the WSAP base period is CY 2004-06
 - Provides a more recent depiction of water use
 - Reduces distortions that result from growth adjustments to base period retail demand over time
- Provide an new Adjustment to the baseline to account for agencies that had mandatory restrictions or similar actions during the new Base Period
 - Basing future cuts from the restricted observed water use is inequitable



MWDOC Impact - Baseline

- Updating the Baseline is favorable to MWDOC
 - Approximately 13,748 AF increase
 - Includes one year of growth

| Current Baseline (Avg. CY 2004-06) | Updated Baseline (Avg. FY 2013 and 2014) | Difference |
|---------------------------------------|---|------------|
| 421,321 AF | 435,069 AF | +13,748 AF |
| 11.31 %* | 12.29%* | |

[*] This is MWDOC's % share of the total retail demand for the MET service area



Revising the Demand Hardening Conservation Credit

- Current WSAP has a methodology to account for conservation hardening using device-based water savings estimates and qualifying conservation rate structures
 - Number of Devices = AF Savings x Imported Reduction %
- Recommend changing methodology to be based on Per Capita water use (observed demands)



MWDOC Impact – GPCD Savings Calculation

- Seeking a better metric for calculating Conservation Savings
 - Calculation using a historic 10-yr GPCD Avg. minus current GPCD usage to determine conservation savings
- Apply 10% credit to the declared regional shortage level; in order to recognize that more conservation creates “harder” demands
 - Example: Under Level 2 leads to 20% of GPCD savings credit
- The GPCD Calculation is favorable to MWDOC

Under a Stage level 2 (15% Reduction) Allocation

| Current Conservation Hardening Credit | Proposed Conservation Hardening Credit | Difference |
|---------------------------------------|--|------------|
| 3,768 AF | 8,856 AF | +5,088 AF |



Groundwater Recharge Allocation

- 💧 Recognize potential consumptive use and basin impacts that may occur without groundwater recharge
 - 🔸 Groundwater recharge was not included in the last WSAP
- 💧 Develop a method that allows for basins to receive an allocation of groundwater recharge :
 - 🔸 Qualifying agencies that took groundwater recharge since 2010
 - 🔸 Consultation Process with Basin Manager to verify basin overdraft or water quality/regulatory conditions
 - 🔸 Receive an allocation of a historic 10-year average
 - 🔸 Separate allocation based on Regional Shortage Level



MWDOC Impact – Groundwater Recharge Allocation

- 💧 Understand the importance of groundwater basin conditions during allocation
 - 🔸 Recharge water helps support the groundwater basin and pumping production
- 💧 OCWD ten year average = 51,000 AF
- 💧 Appeal process, if additional recharge water is needed



Current Allocation Plan's Penalty Rate Structure

| Water Use | Penalty Rate | Penalty Rate – Below Preferential Right |
|---------------------|----------------------|---|
| 100% of Allocation | 0 | 0 |
| Between 100% & 115% | 2 x Tier 2 Untreated | 1 x Tier 2 Untreated |
| Greater than 115% | 4 x Tier 2 Untreated | 3 x Tier 2 Untreated |

ENFORCEMENT NOTICE



- 💧 Current Fully Loaded Tier 2 Untreated Rate for 2015 is \$714
- 💧 2 x Tier 2 = \$1,428
- 💧 4 x Tier 2 = \$2,856



Proposed Allocation Penalty Structure

- 💧 Put in place a cost-of-service based charge
 - 💡 Example of a Turf removal \$2/sq. ft. of 44 gallons x 10 years = \$1,480 AF
 - 💡 \$4/sq. ft. = \$2,960 AF
- 💧 Apply the charge to water purchases in excess of WSAP Allocation
- 💧 Consider two tiers of charge based on overuse levels

| Water Use | Allocation Surcharge |
|---------------------|----------------------|
| 100% of Allocation | 0 |
| Between 100% & 115% | \$1,480 |
| Greater than 115% | \$2,960 |



MWDOC Comparison

MWDOC Reliability % Current MET Allocation Plan vs. Proposed MET Allocation Plan

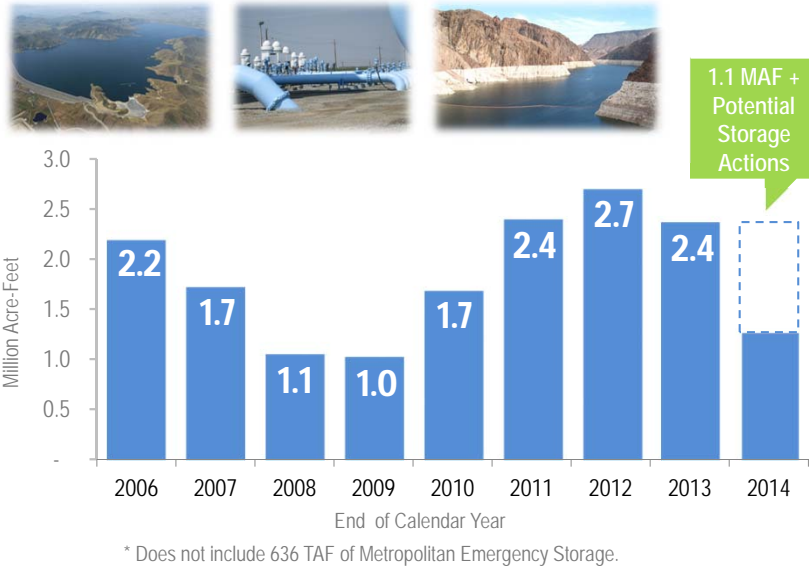
| | Current Allocation Plan | Proposed Allocation Plan with Revisions |
|--|-------------------------|---|
| Base | 421, 321 AF | 435,069 AF |
| Shortage Level 2 (85% Reduction) | ±95% Reliability | ±96% Reliability |
| Shortage level 4 (70% Reduction) | ±91% Reliability | ±92% Reliability |
| Shortage level 6 (55% Reduction) | ±87% Reliability | ±88% Reliability |

[*] The Reliability % above are for MWDOC and will vary among the member agencies based on their dependence on MET

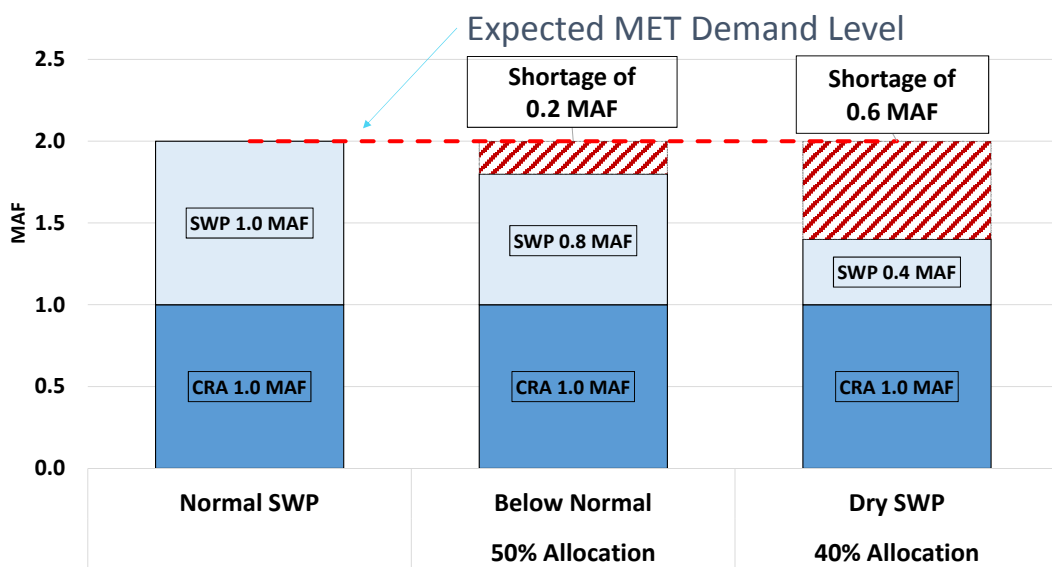


Chances of MET implementing Allocations in 2015

Metropolitan Dry Year Storage



2015 SWP Supply Scenarios



MET Water Supply Allocation Plan

Projected Timeline

- Information Package on Plan to MET Board - November 2014
- Action Item on Plan to MET Board - December 2014
- Implementation of the Plan could be in early 2015**



Schedule of Reviewing and modifying MWDOC's Allocation Plan



MWDOC Workgroup Process with Member Agencies

- 💧 MWDOC Workshop #1 – December 9
 - 📅 Detail overview of the MWDOC Allocation Plan
 - 📅 Discuss potential modification/revisions to the MWDOC Allocation Plan
- 💧 MWDOC Workshop # 2 – December 18
- 💧 Present recommendations to the MWDOC Board for review and approval of the MWDOC Allocation Plan in January or February

