

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

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

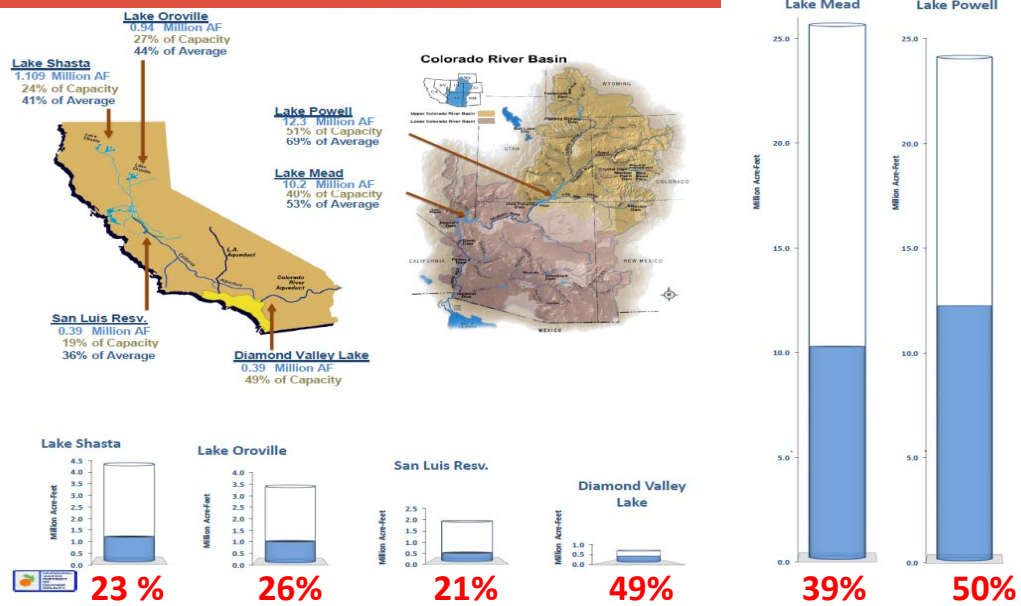
Municipal Water District of Orange County

## Agenda

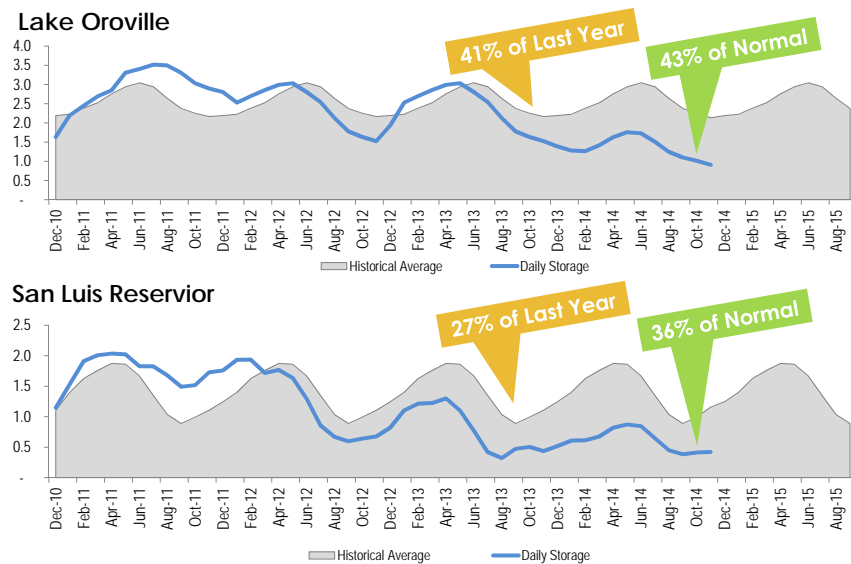
- 💧 Update on Water Supply Conditions
- 💧 Revisions to MET's Allocation Plan
- 💧 Chances of MET implementing allocations in 2015
- 💧 Schedule of Reviewing and modifying MWDOC's Allocation Plan



## RESERVOIR STORAGE – November 2014

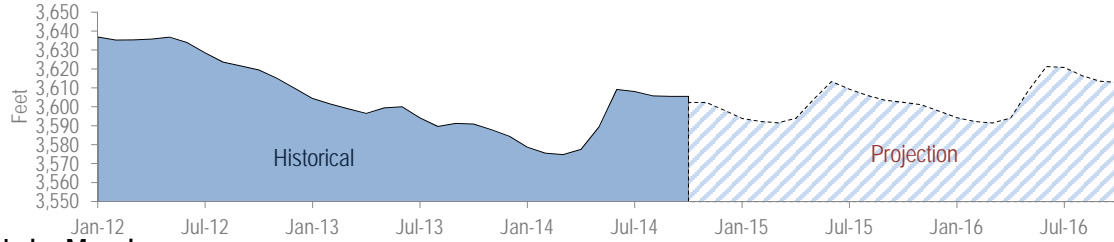


## Statewide Reservoir Elevations As of November 16, 2014

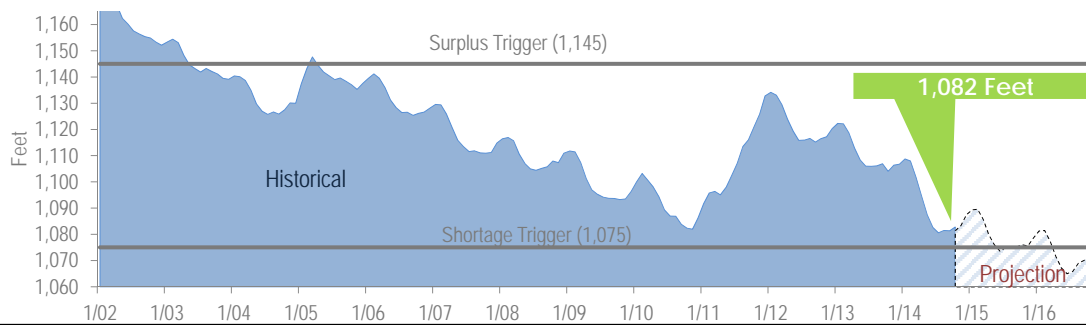


## Colorado River Reservoir Elevations As of Mid November 2014

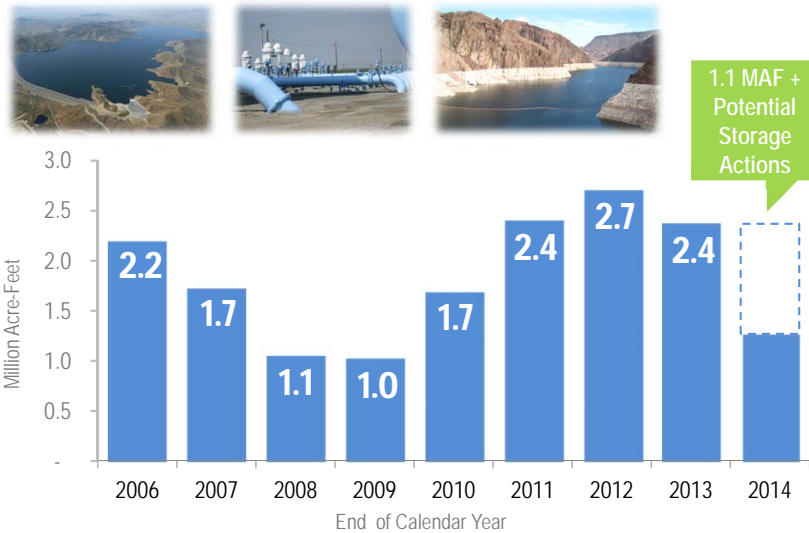
**Lake Powell**



**Lake Mead**



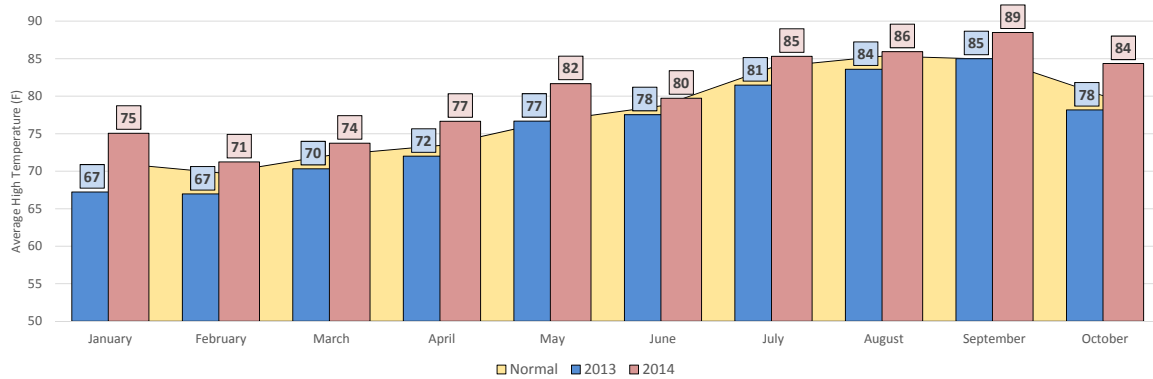
## Metropolitan Dry Year Storage



\* 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

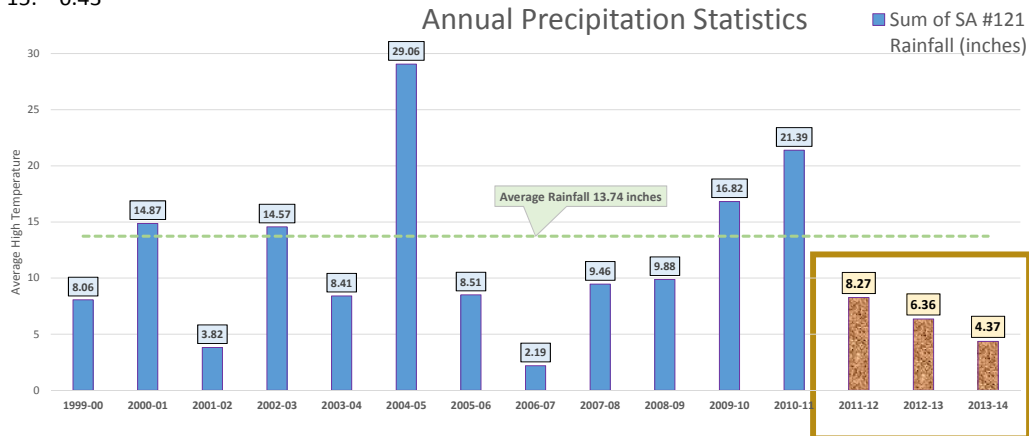


## Precipitation

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

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

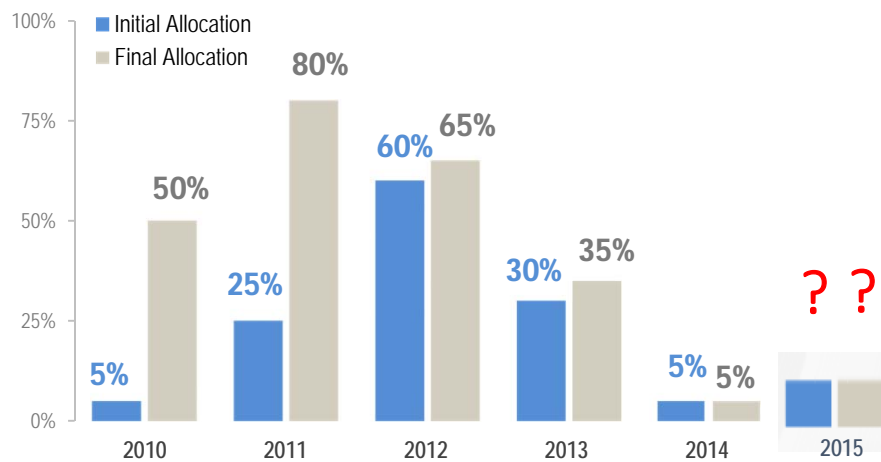
### Annual Precipitation Statistics



## 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

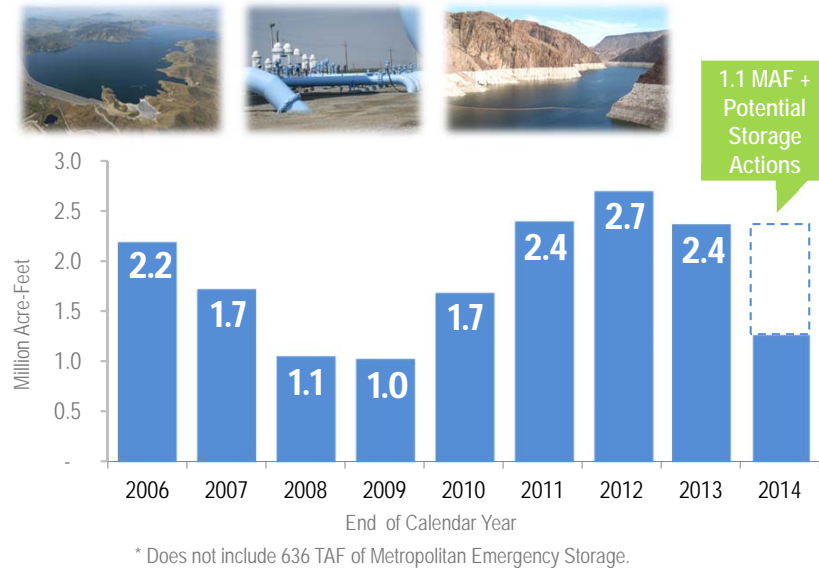
	Current Allocation Plan	Proposed Allocation Plan with Revisions
<b>Base</b>	421, 321 AF	435,069 AF
<b>Shortage Level 2</b> (85% Reduction)	±95% Reliability	±96% Reliability
<b>Shortage level 4</b> (70% Reduction)	±91% Reliability	±92% Reliability
<b>Shortage level 6</b> (55% Reduction)	±87% Reliability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

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

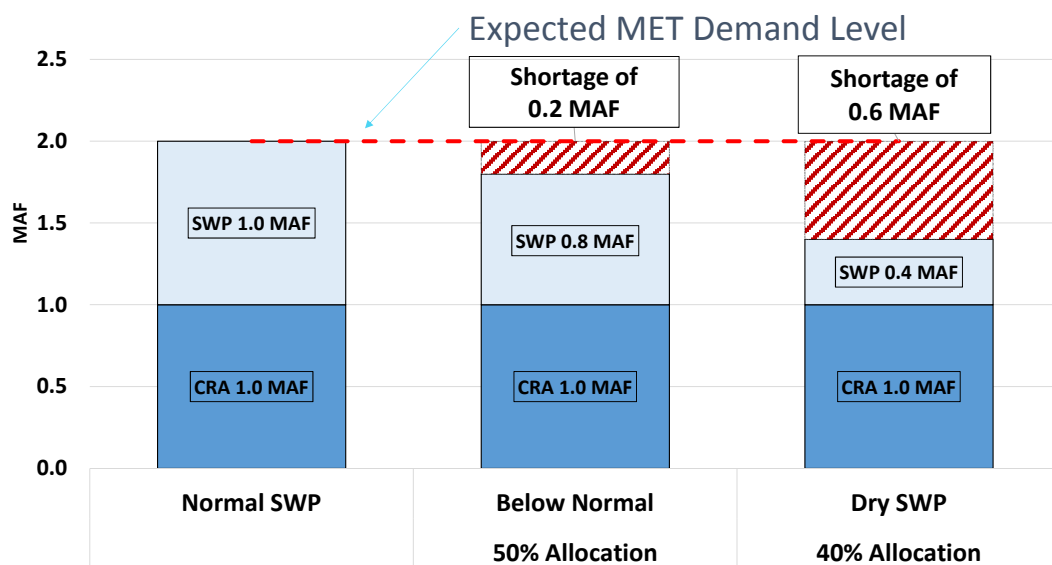


Chances of MET implementing Allocations in 2015

## 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 MWD OC'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

