Item No. 2

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

Planning & Operation Committee

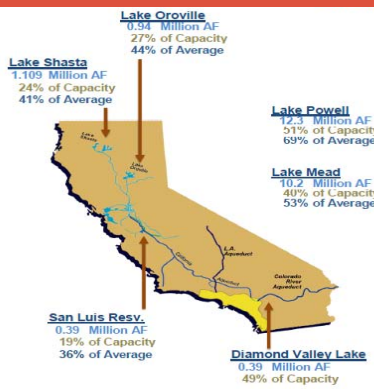
December 1, 2014

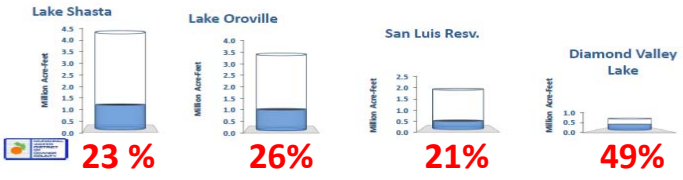
Municipal Water District of Orange County

Agenda

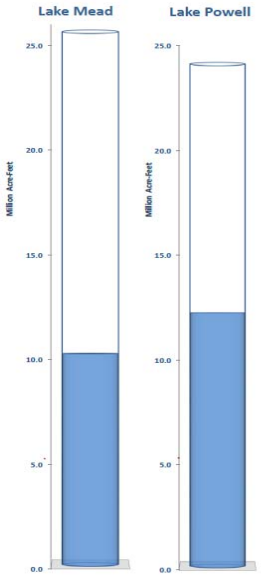
- Update on Water Supply Conditions
- Revisions to MET's Allocation Plan
- Chances of MET implementing allocations in 2015
- Schedule of Reviewing and modifying MWDOC's Allocation Plan

RESERVOIR STORAGE – November 2014



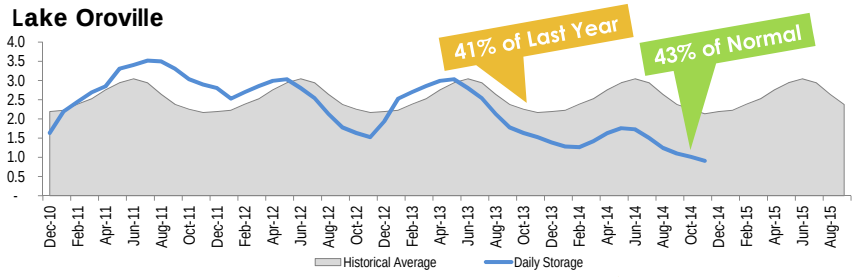


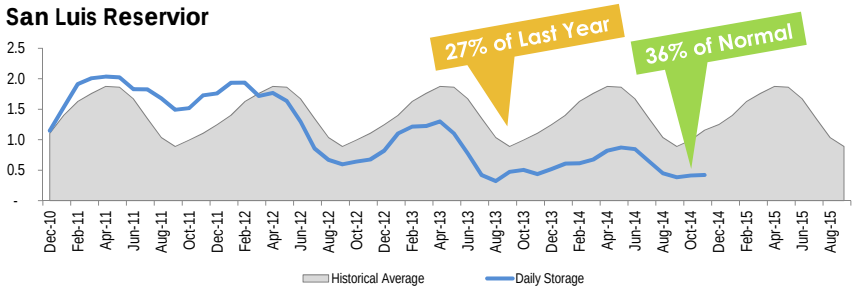
23 % 26% 21% 49%



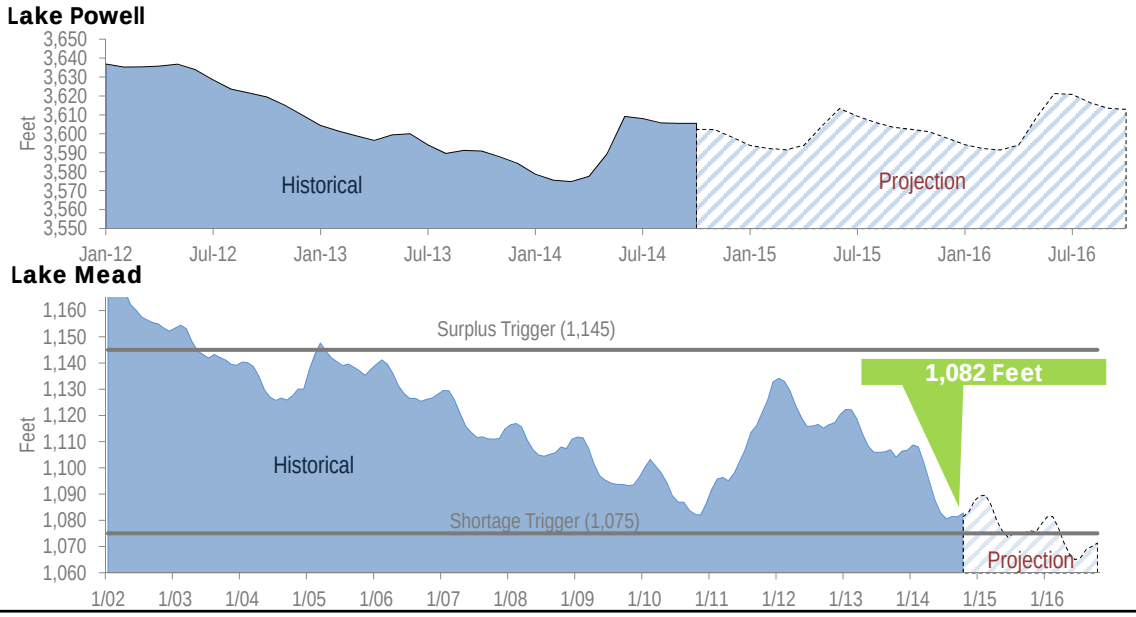
39% 50%

Statewide Reservoir Elevations
As of November 16, 2014

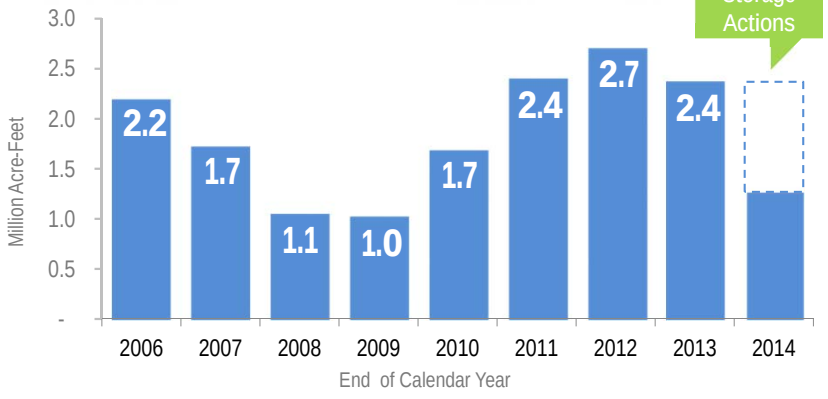




Colorado River Reservoir Elevations
As of Mid November 2014



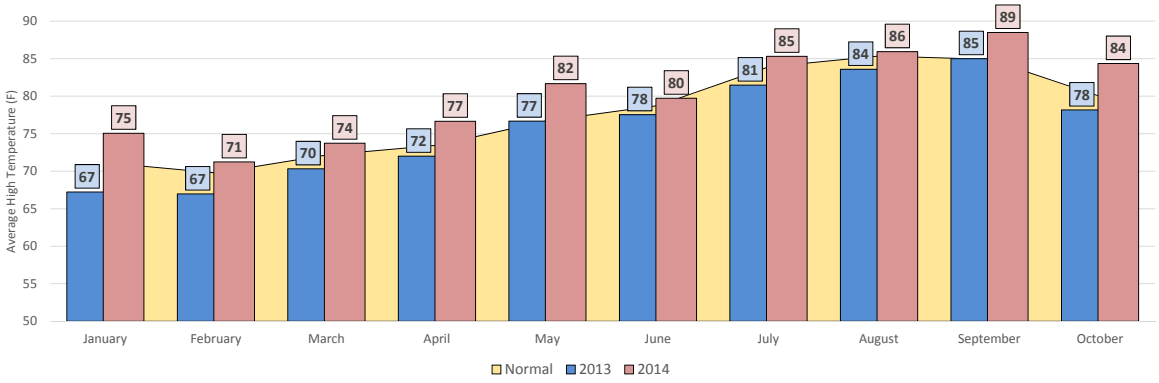
Metropolitan Dry Year Storage



* Does not include 636 TAF of Metropolitan Emergency Storage.

2014 vs. 2013 Temperatures

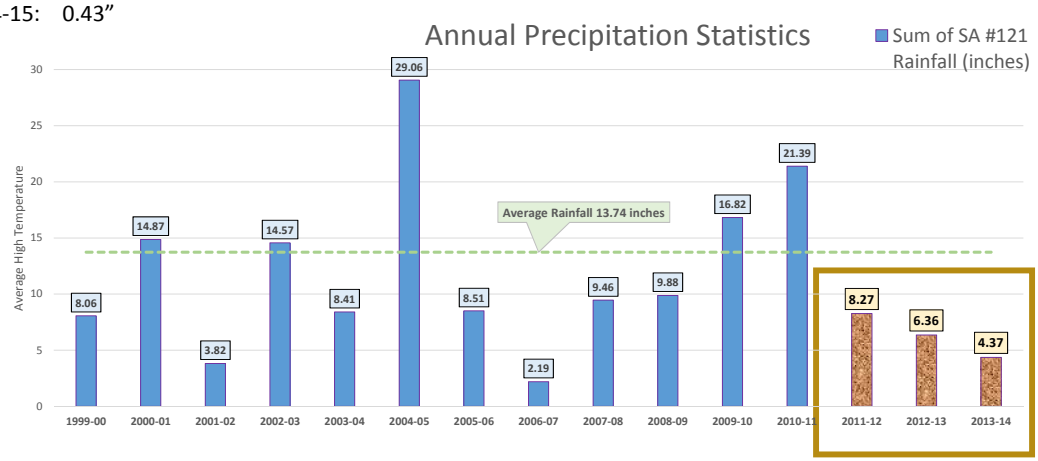
- Monthly temperatures in 2014, have been hotter than average with October, September and January being the highest
  - California: 4.7 degrees above average
  - Southern California: 5.7 degrees above average
  - Orange County: 2 degrees above 15 year average at John Wayne Airport



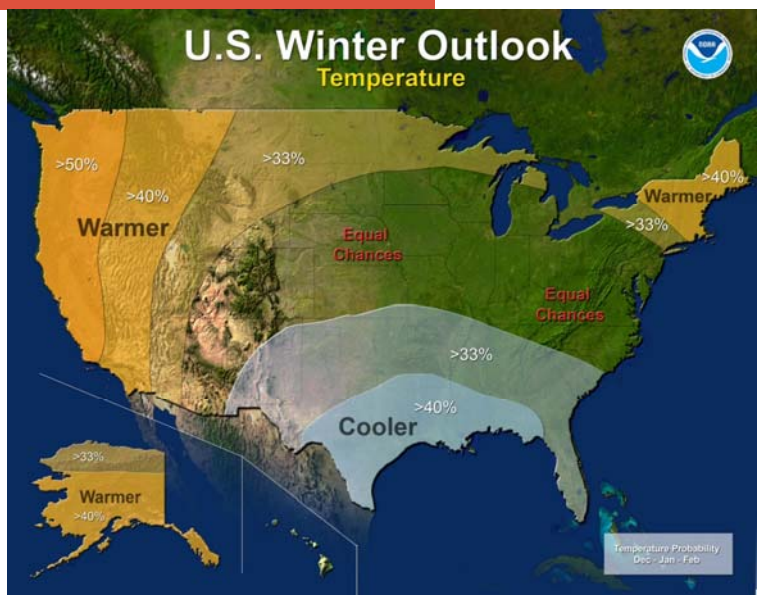
Precipitation

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

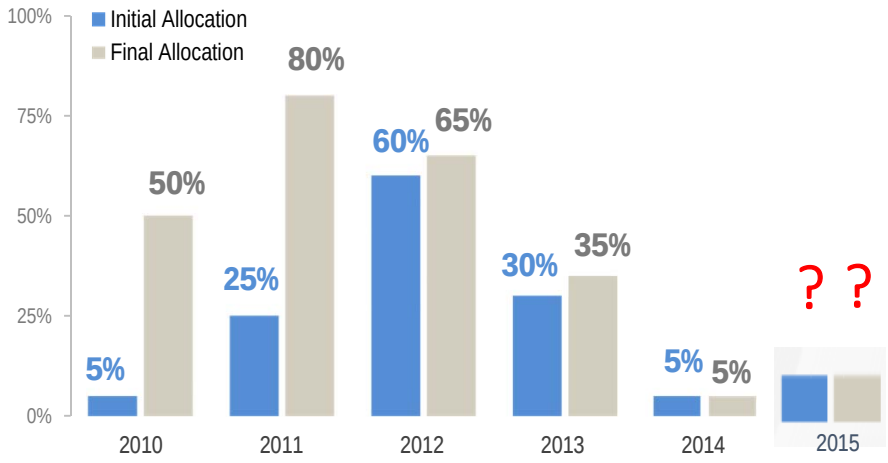
Average Annual Rainfall: 13.74”
3-Year Deficit: 22.32”



Weather Outlook



State Water Project
"Table A" Allocation

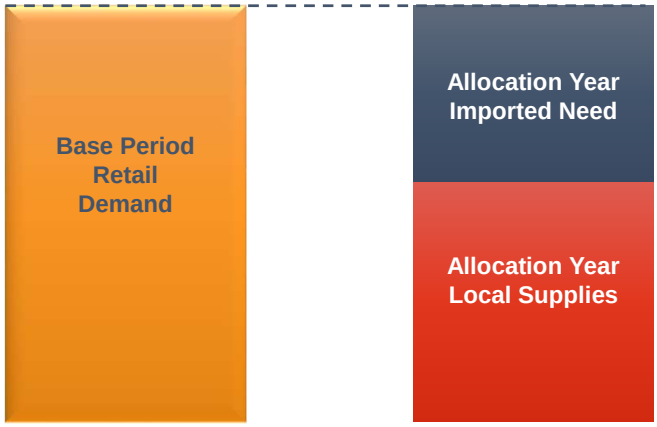


Revisions to MET's WSAP and Impact to MWDOC's Plan

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%

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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

baseline

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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

- 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

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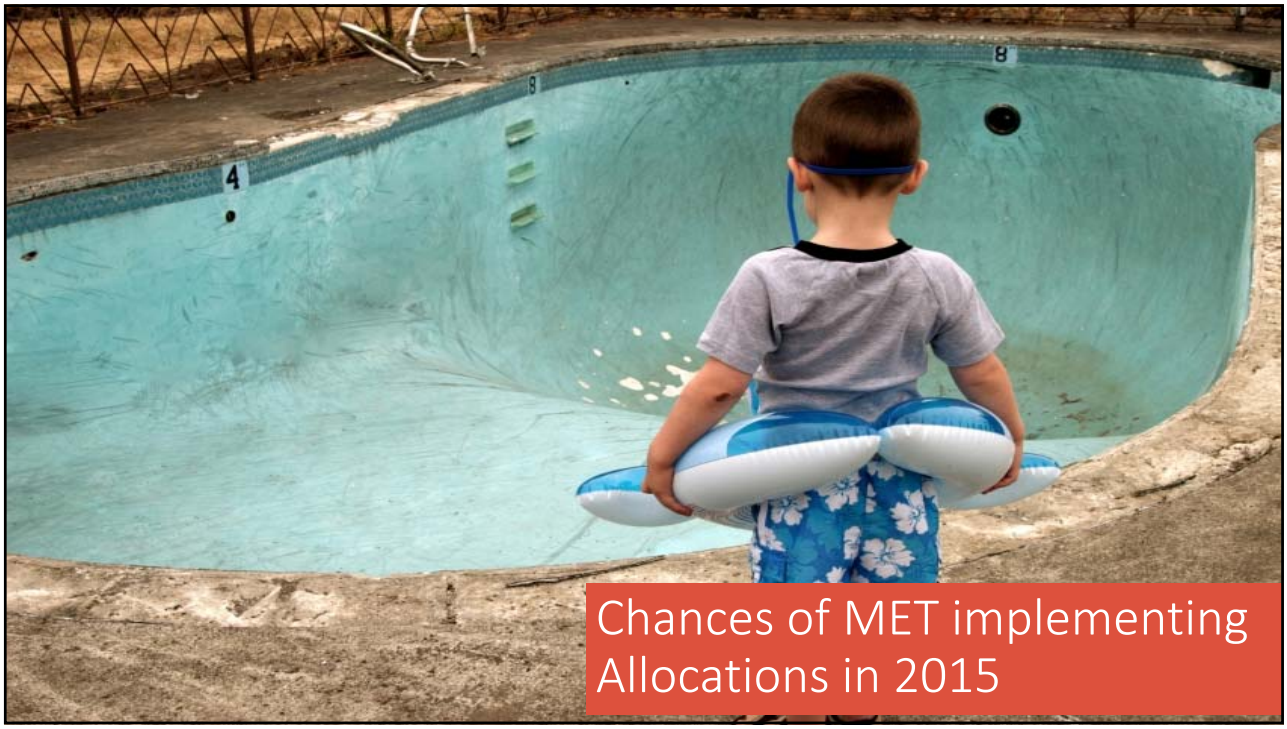
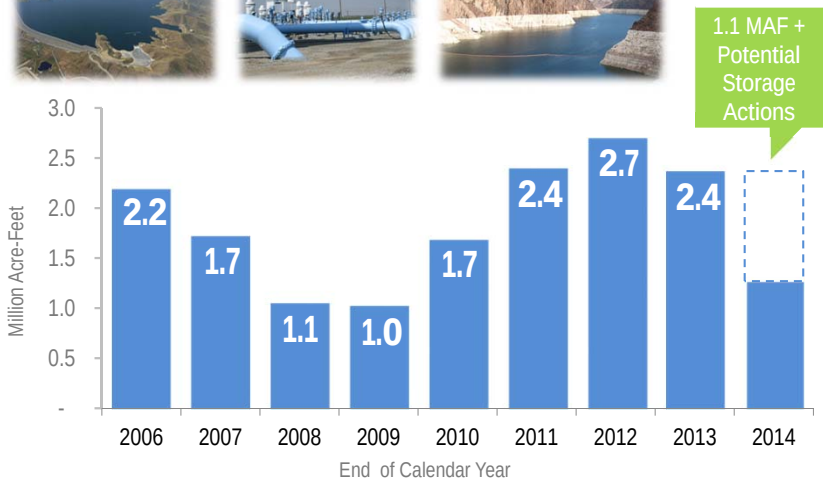


Chances of MET implementing Allocations in 2015

Metropolitan Dry Year Storage



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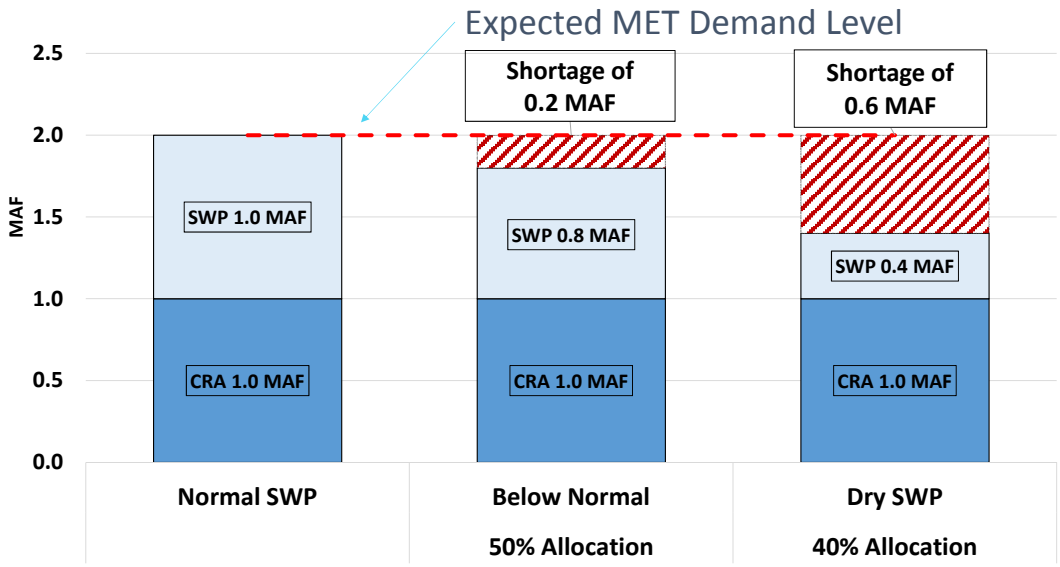
2015 SWP Supply Scenarios



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**

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Schedule of Reviewing and modifying MWDOC's Allocation Plan

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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