

MWDOC's Water Supply Allocation Plan

Moulton Niguel Water District

Board of Directors

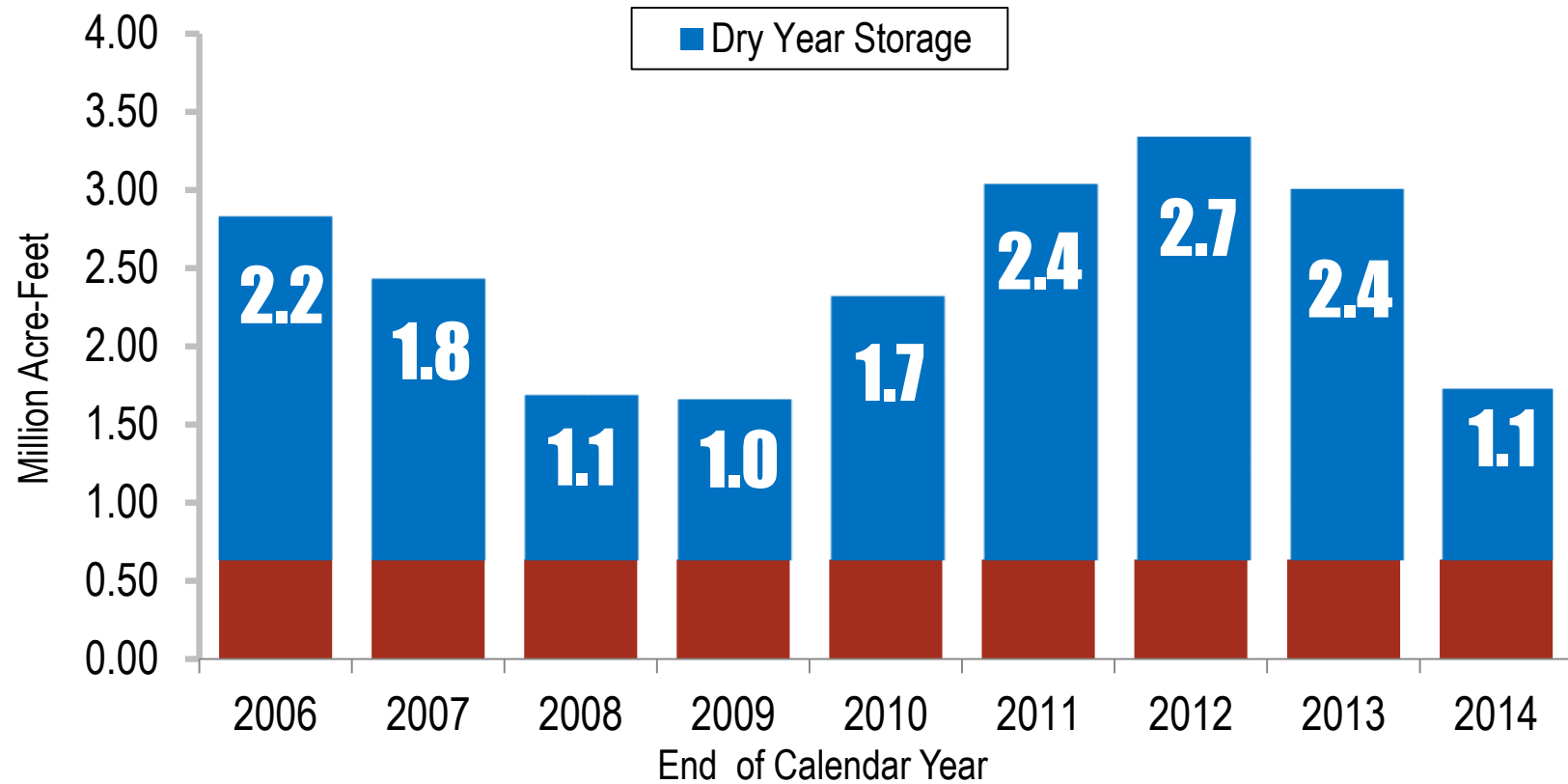
February 19, 2015

2014 Water Supply and Demand Balance

Water Supply and Demand Balance for 2014

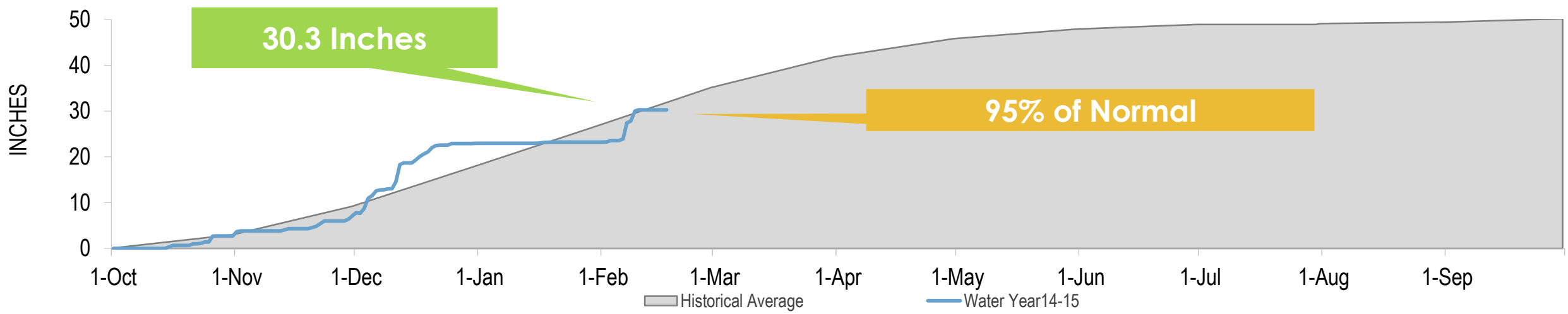
Total State Water Project Supplies	108,000 AF
Total Colorado River Aqueduct Supplies	834,000 AF
Total Demands, Obligations, and Losses	2,117,000 AF
Net Water Supply and Demand Balance	-1,175,000 AF

Metropolitan Dry-Year Storage

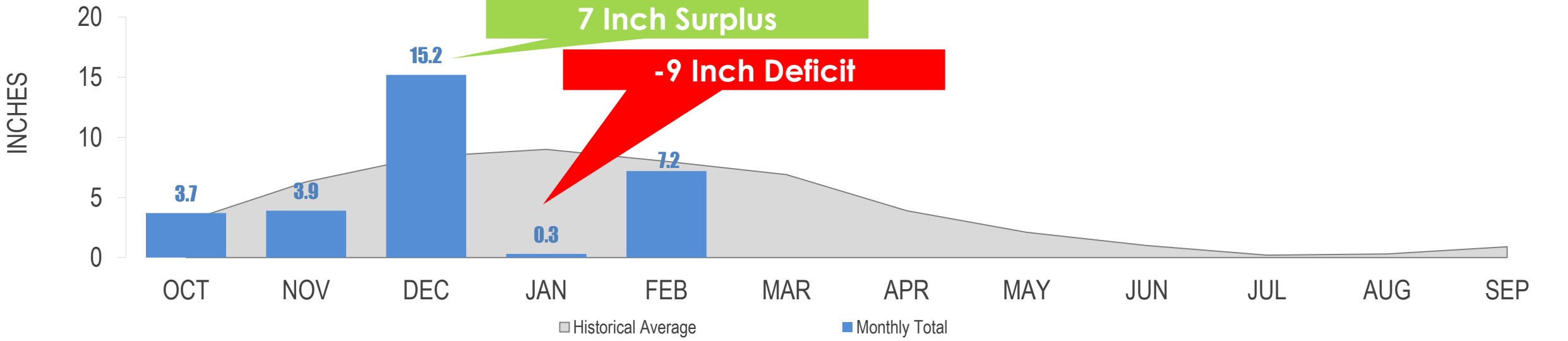


Sierra Nevada Accumulated Precipitation

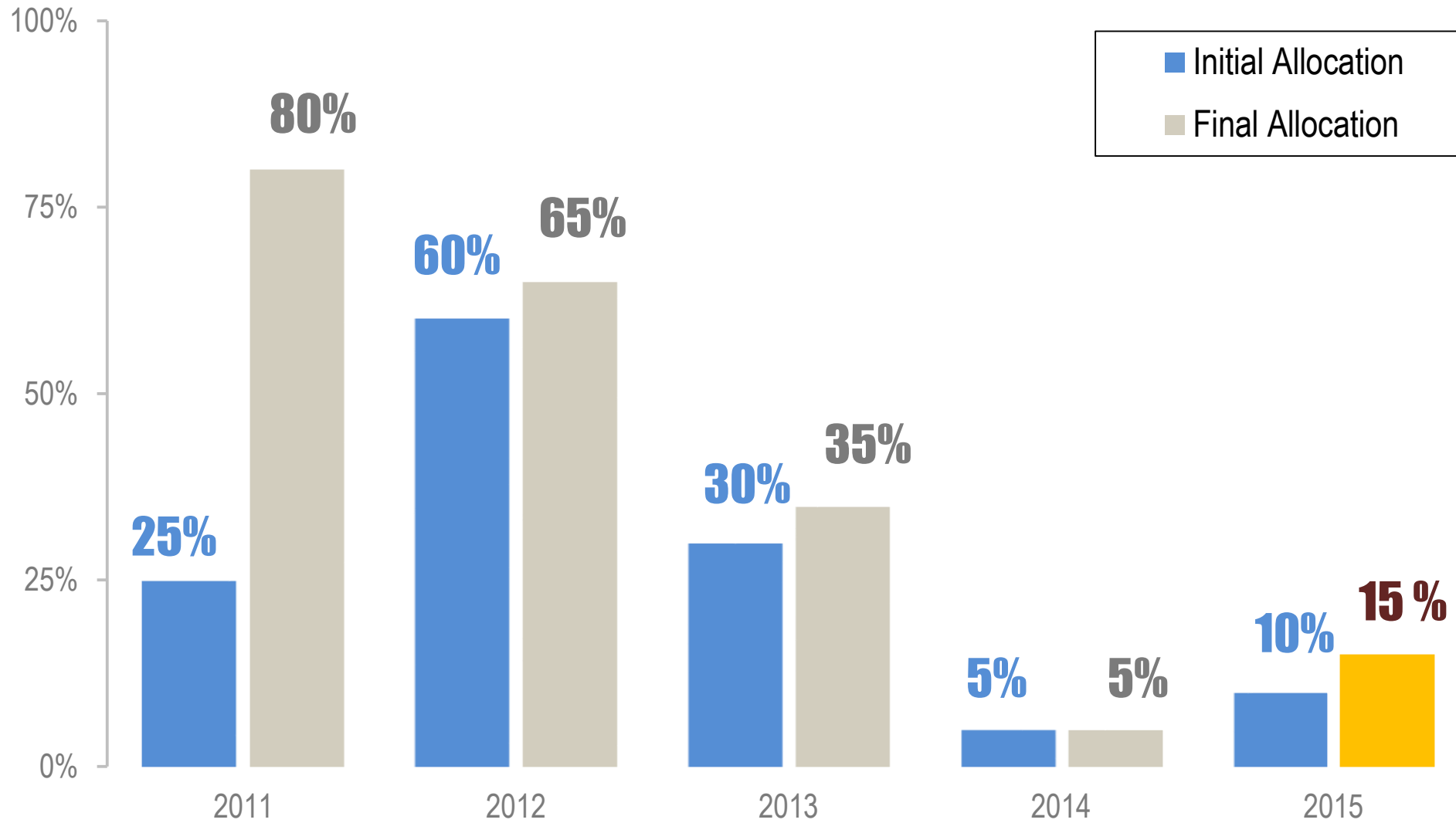
Accumulated Precipitation (8-Station Precip Index)



Monthly Precipitation (8 Station Precip Index)

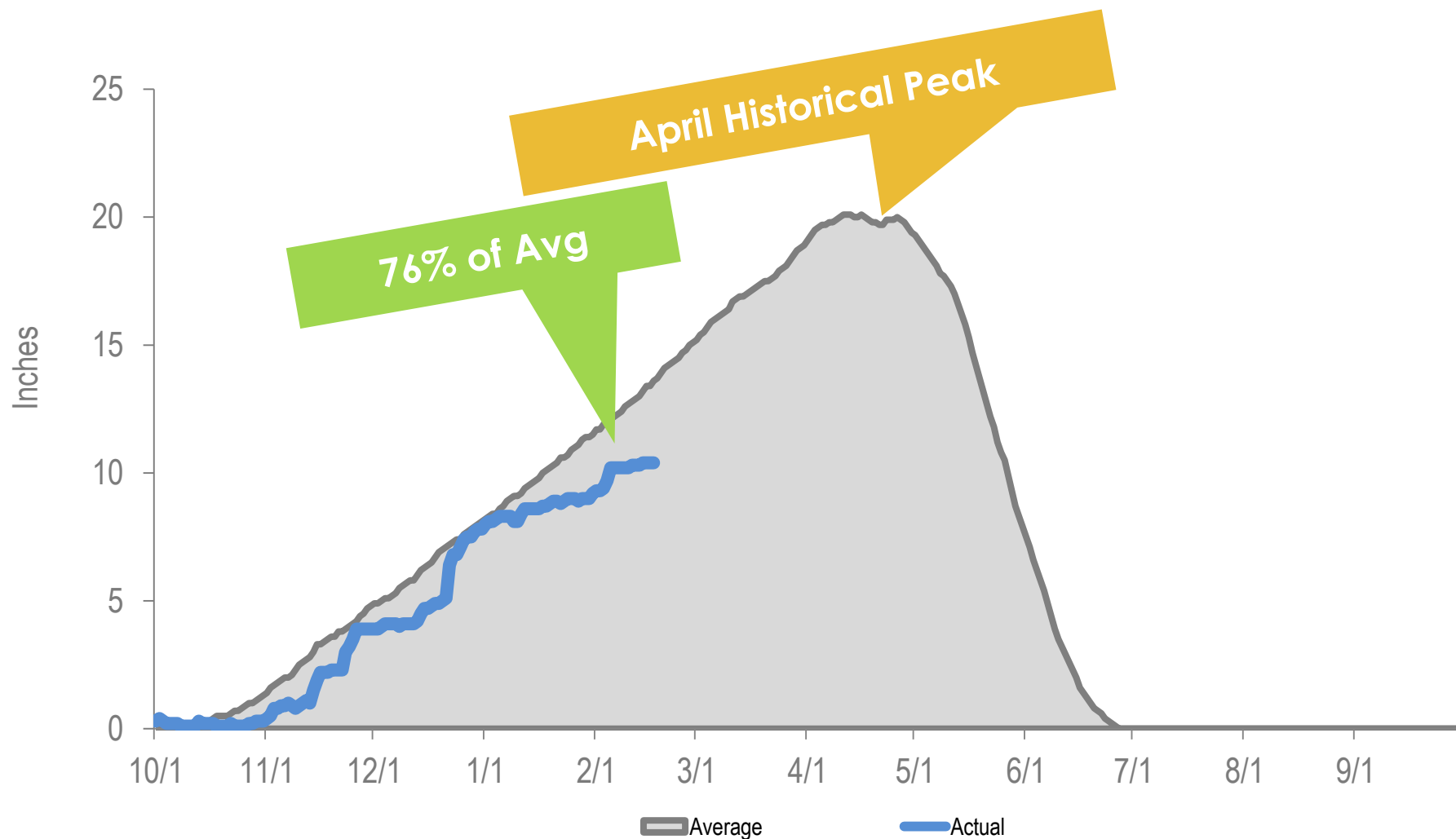


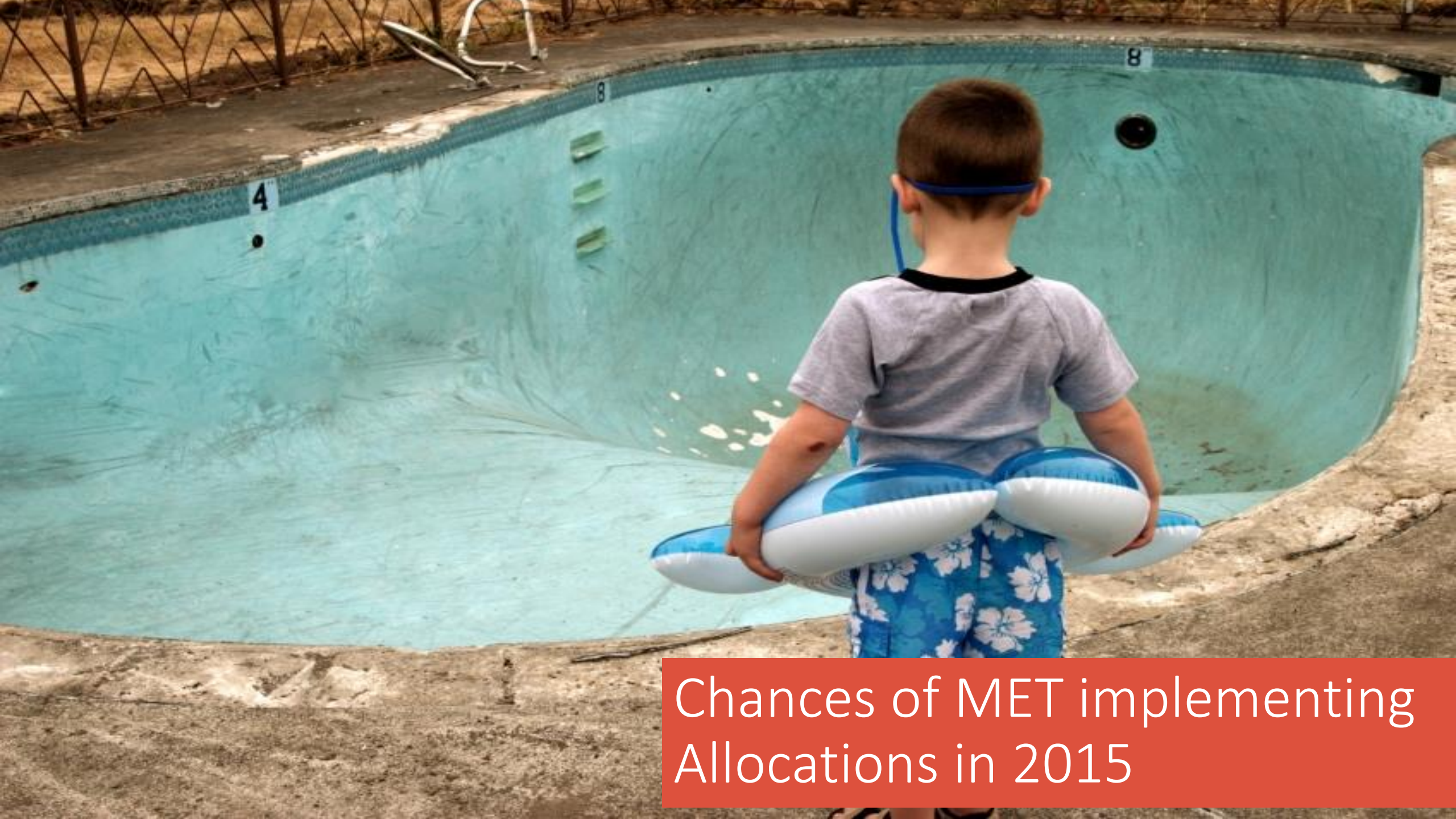
State Water Project "Table A" Allocation



Colorado River Basin Snowpack

Snowpack Water Equivalent

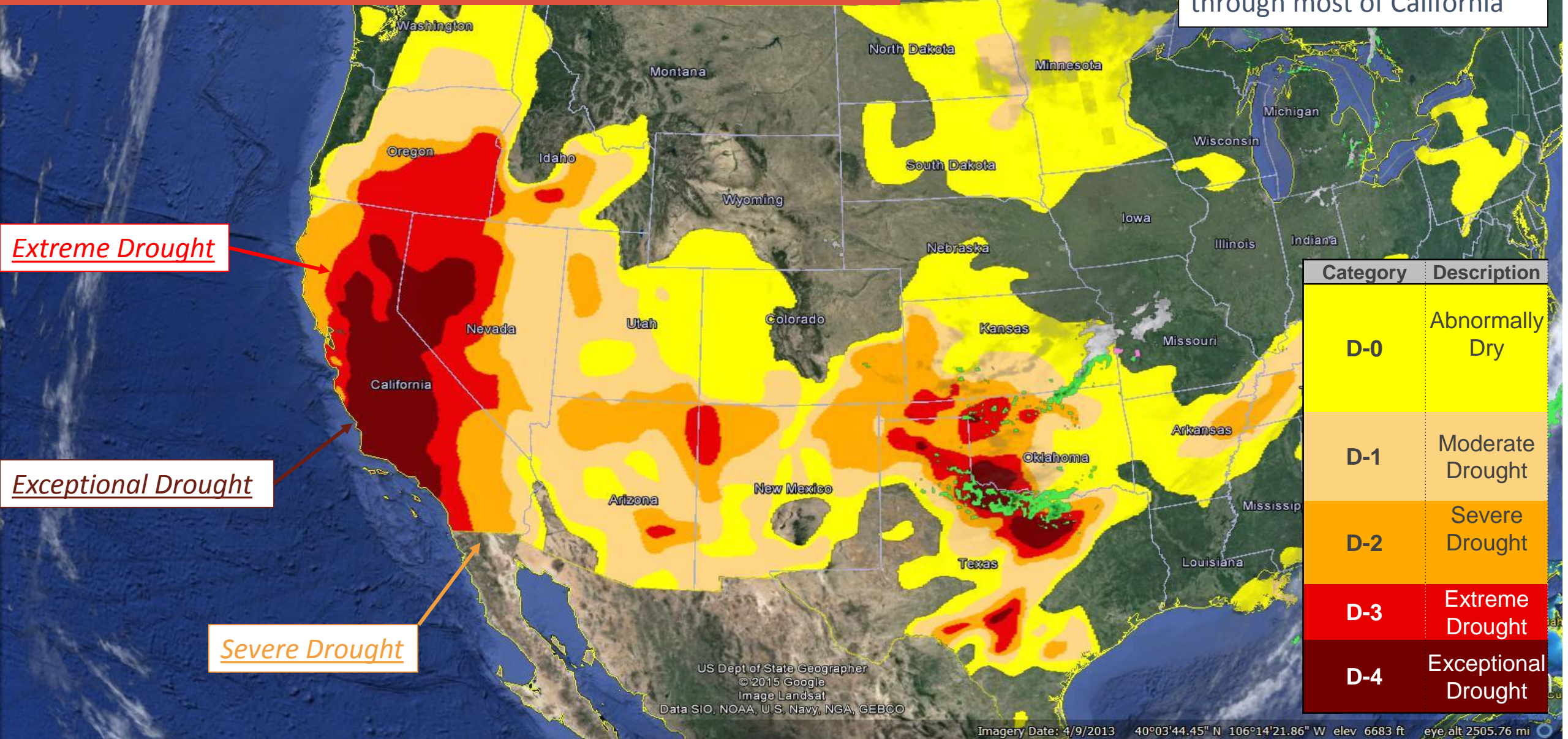




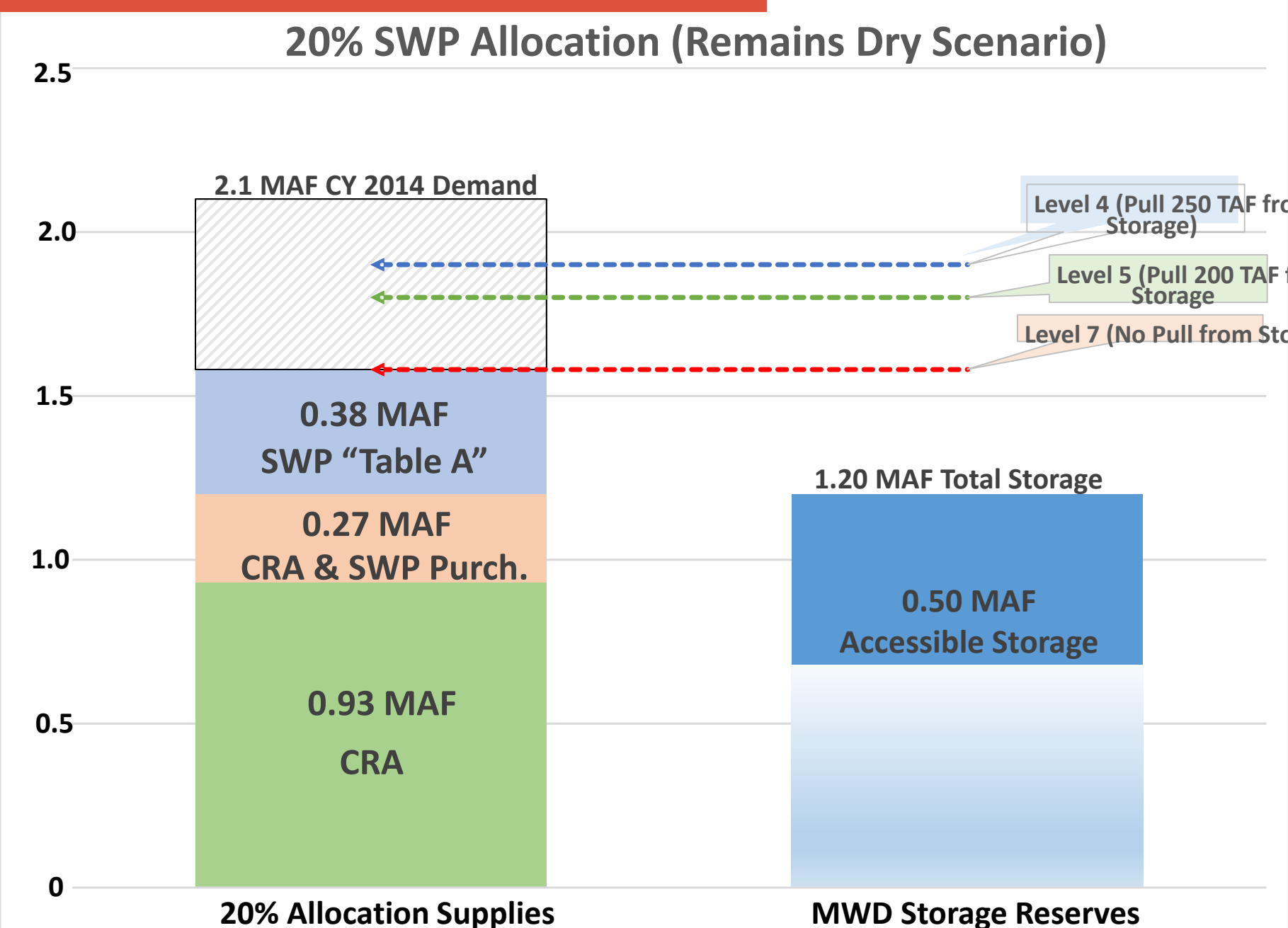
Chances of MET implementing
Allocations in 2015

Current Drought Conditions

*As of Early February 2015
Extreme and *Exceptional*
Drought Condition remain
through most of California



Chances of Allocation in 2015 – 20% SWP



Million Acre Feet

2.5
2.0
1.5
1.0
0.5
0

2.1 MAF CY 2014 Demand

Level 4 (Pull 250 TAF from Storage)

Level 5 (Pull 200 TAF from Storage)

Level 7 (No Pull from Storage)

0.38 MAF
SWP "Table A"

0.27 MAF
CRA & SWP Purch.

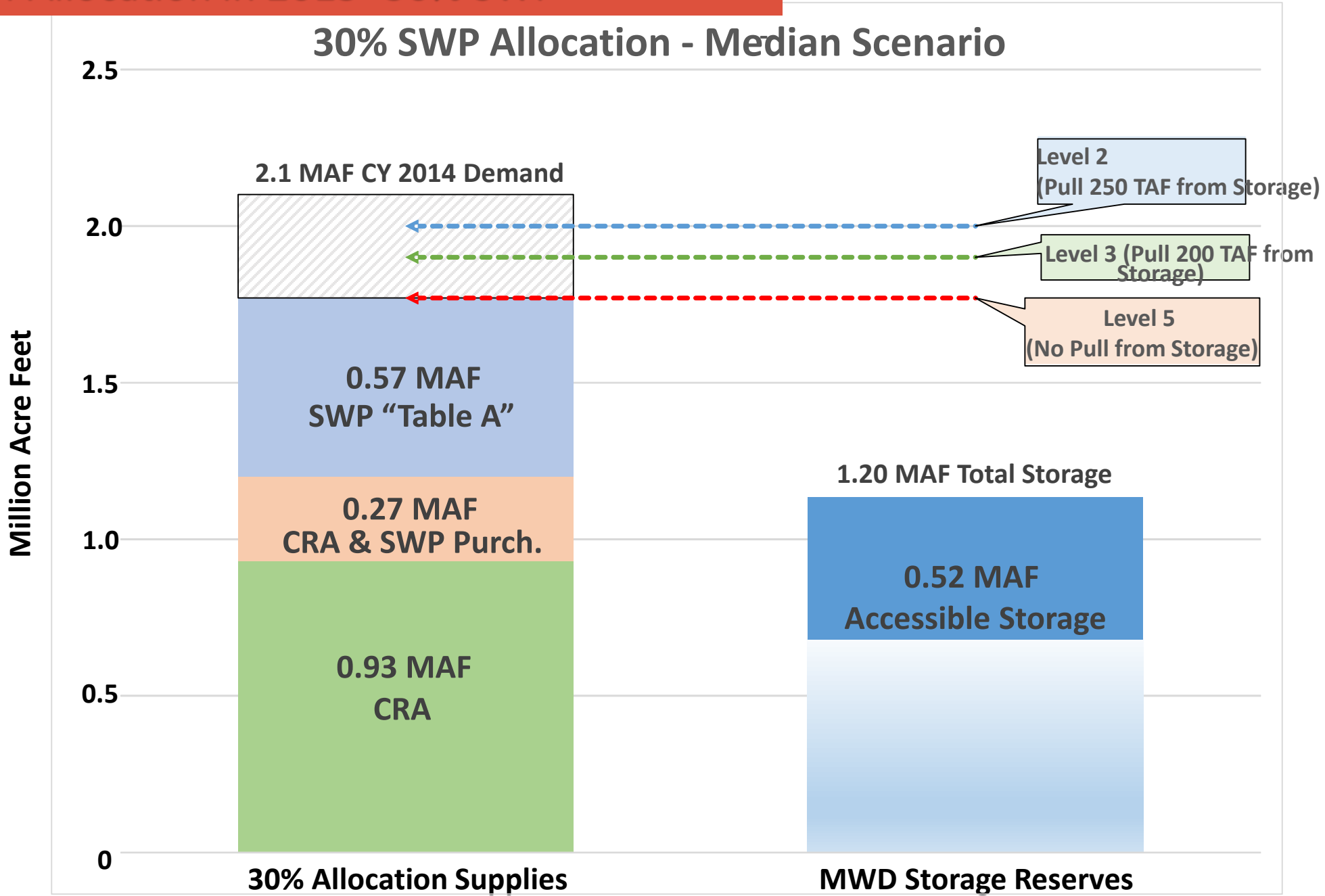
0.93 MAF
CRA

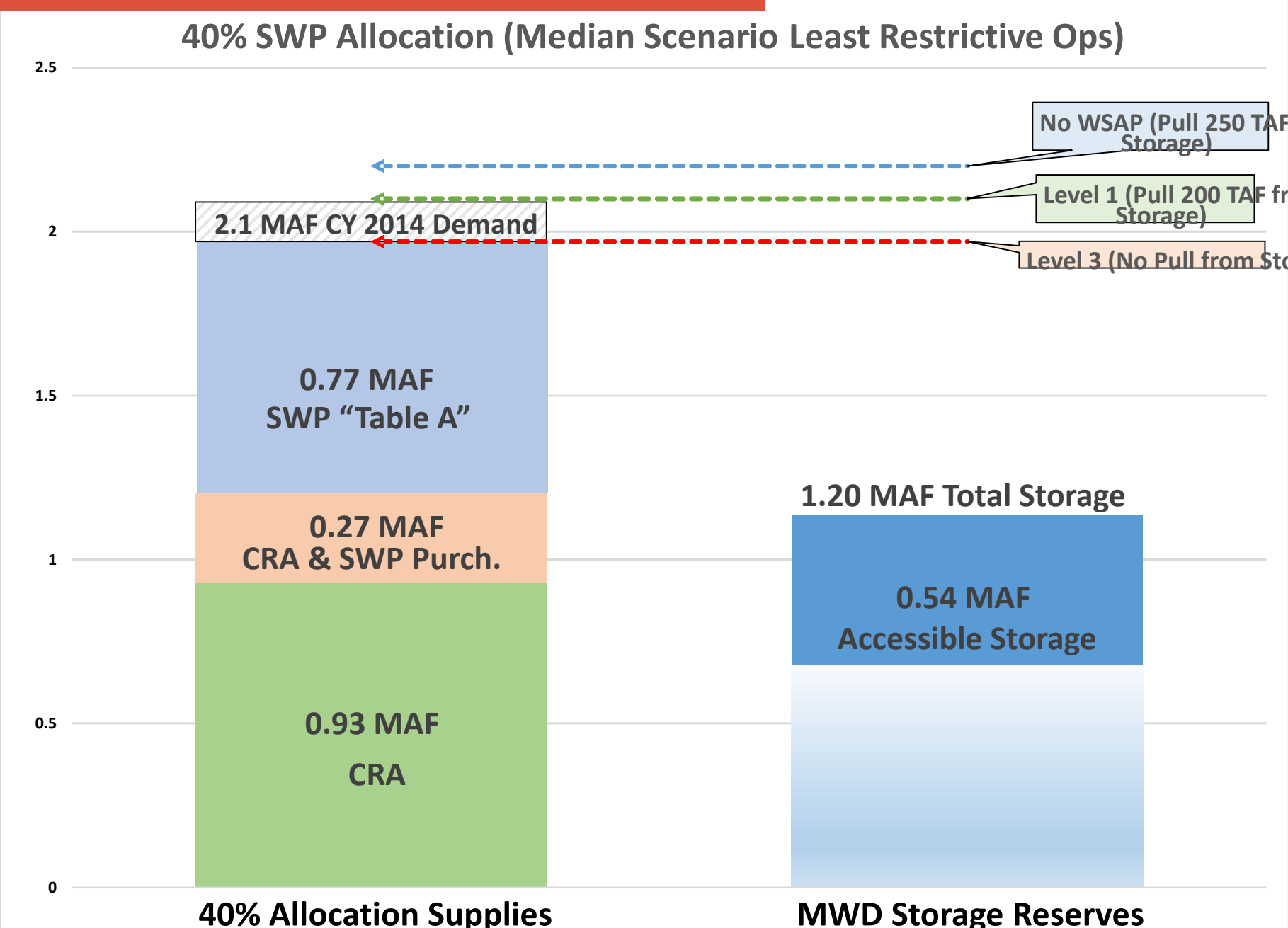
1.20 MAF Total Storage

0.50 MAF
Accessible Storage

20% Allocation Supplies

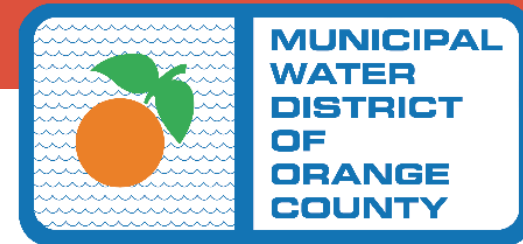
MWD Storage Reserves







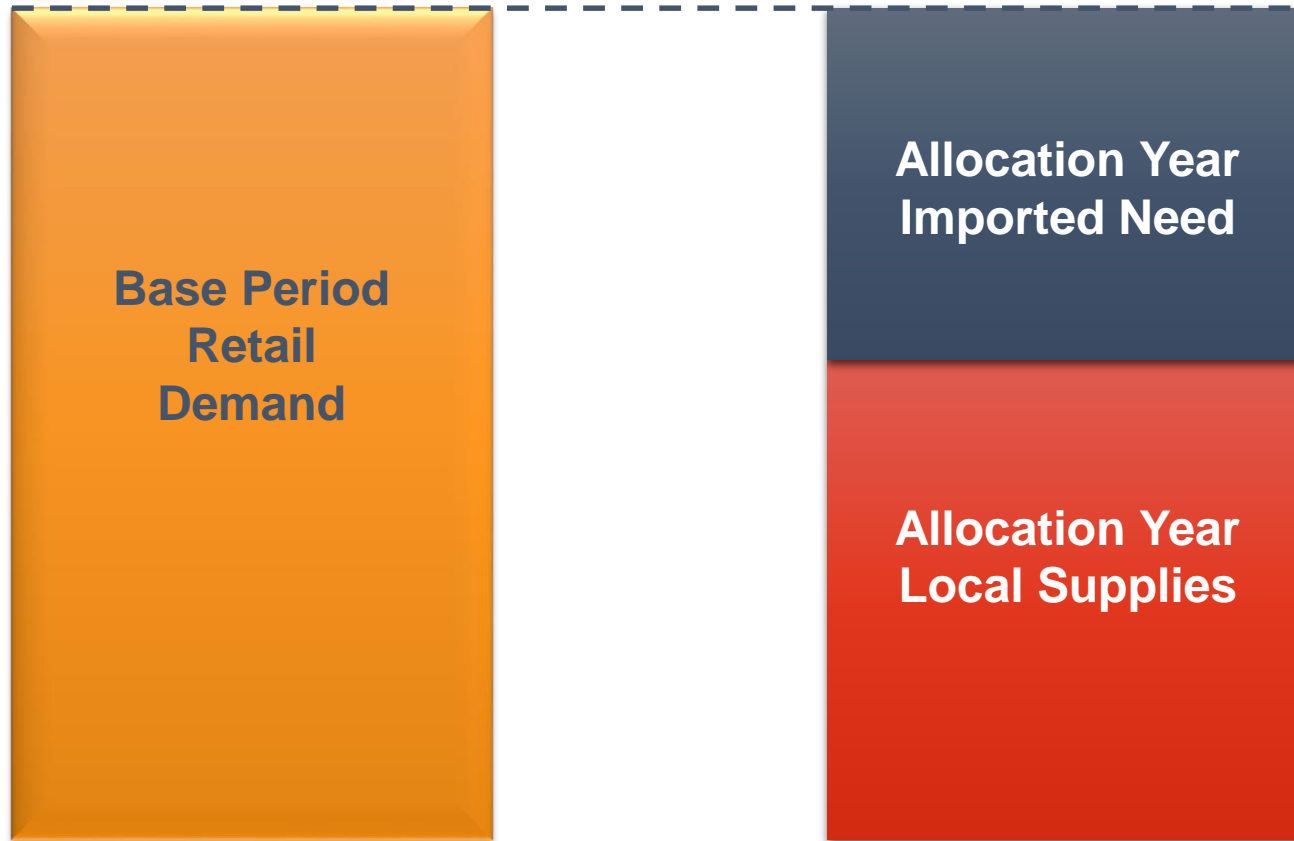
Overview of the Water Supply Allocation Plan



Background on MWDOC's WSAP

- 💧 When reasonable, we use similar method/approach as MET
- 💧 MWDOC plan is a “Needs-based” Plan
 - 💧 Equity among the MWDOC member agencies
 - 💧 Develop accurate data on local supply, conservation, growth, imported dependence and other relevant adjustment factors
 - 💧 Seek opportunities within MWDOC service area to provide mutually beneficial shortage mitigation

MWDOC Water Supply Allocation Plan Steps



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

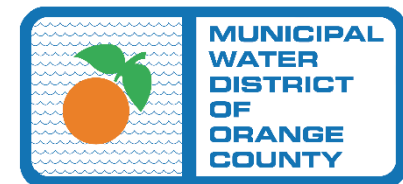
MWDOC Water Supply Allocation Plan Steps



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

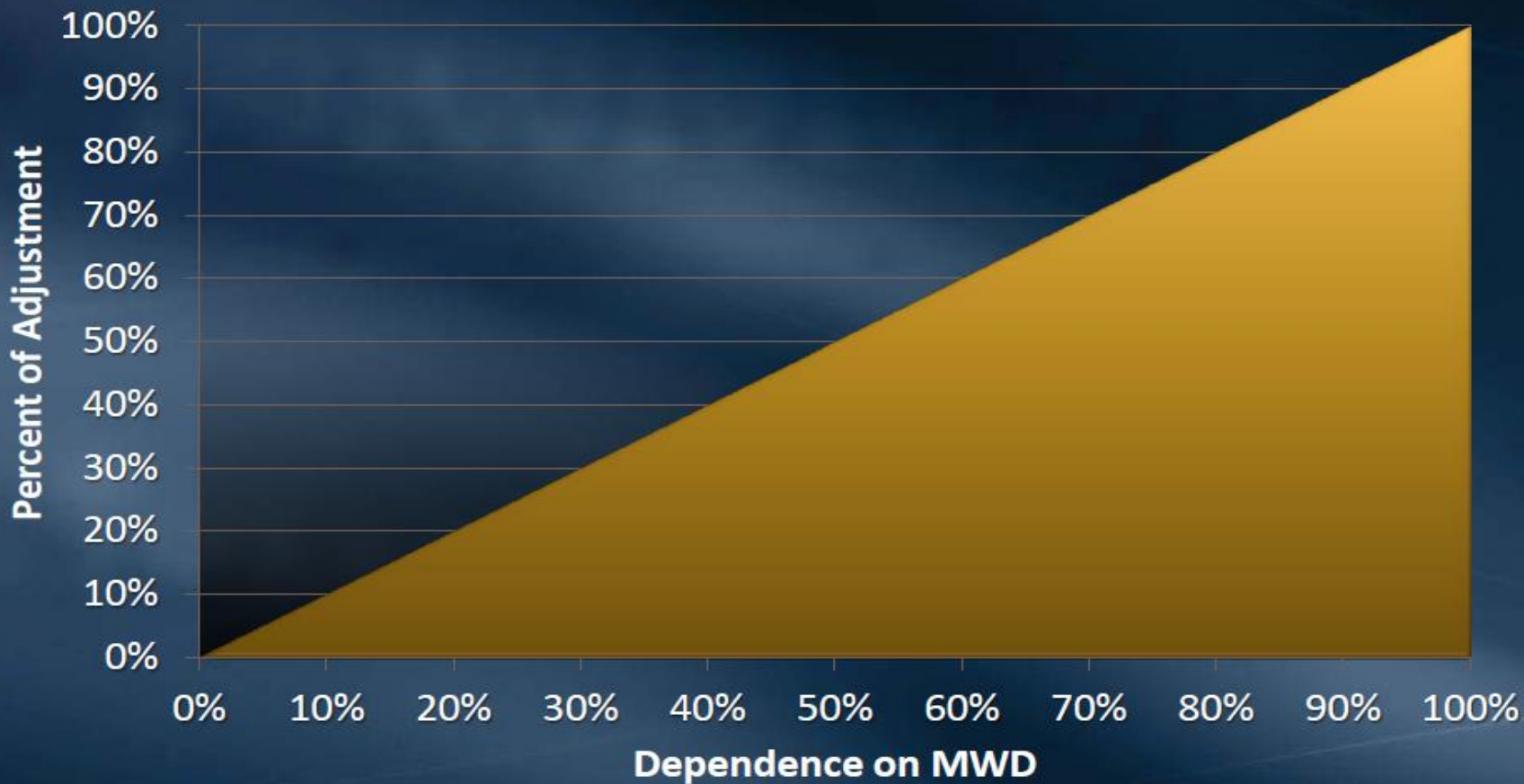
WSAP Calculation Factors

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%



Credits and Adjustments

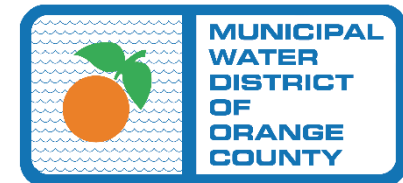
Retail Impact Adjustment Factor



Example

Agency's Dependence
on MET Water = 50%

Retail Impact
Adjustment under
Stage 4 = $.50 \times 10\% = 5\%$





Refinements to the WSAP

Review of Water Supply Allocation Plan

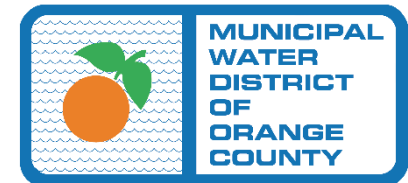
Areas MET and the Member Agencies reviewed and updated on the WSAP Plan are:

- 🔹 Baseline
- 🔹 Conservation Hardening Credit
- 🔹 Groundwater Replenishment Allocation
- 🔹 Allocation Surcharge



Updating the Baseline

- 💧 Update 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
- 💧 Adjustment needed to account for agencies that had mandatory restrictions or similar actions in the new Base Period



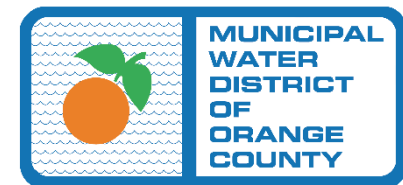
Changing the Conservation Demand Hardening Credit

- 💧 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)

MWD's Allocation Surcharge

- 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 per AF
 - \$4/sq ft = \$2,960 per 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 Penalties: Melded Penalty Rate Structure

Example

Pay 25% Share
Total \$184,800

+250 AF

- 100 AF

Pay 75% Share
Total \$554,400

+750 AF

-200 AF

Agency A

Agency B

Agency C

Agency D

MWDOC Client Agencies

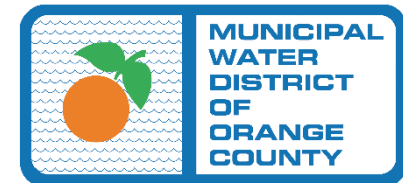
MWDOC Exceeds its
Allocation with MWD

+ 700 AF



MWDOC will pay MET
Penalties Totaling
\$739,200

Allocation Limits

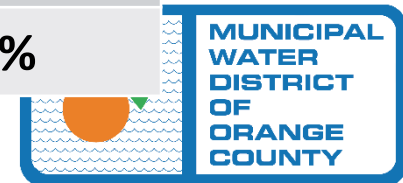


Example of MNWD Final Allocation

Moulton Niguel Water District under Shortage Level 2 & 4

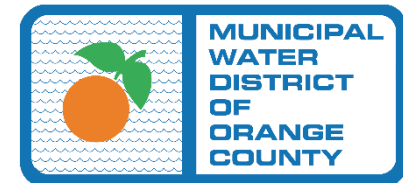
	Level 2 (15% Reduction)	Level 4 (30% Reduction)
SMWD's Baseline	29,218 AF	29,218 AF
Growth Adjustment	126 AF	126 AF
Allocation Year Baseline	29,344 AF	29,344 AF
Allocation Year Planned Local Supplies	0 AF	0 AF
Allocation Year Demand on MWD	29,344 AF	29,344 AF
Initial MWD Allocation (Imported - Reduction %)	24,942 AF	20,540 AF
Retail Impact Adjustment AF	1,050 AF	2,101 AF
Conservation Demand Hardening Adjustment AF	1,974 AF	2,961 AF
Total Imported Allocation	27,966 AF*	25,602 AF*
Total Reliability %	95.3%	87.3%

[*] These are current estimates and are subject to change



Next Steps

- Based on current water supply conditions, the Metropolitan Board would declare if water supply allocations are needed in **April 2015**; and what stage level.
- MWDOC Board would follow MWD's actions
- Effective date: July 1, 2015
- Duration: 12 month period





Questions


Conservation Demand Hardening Credit

Objective

-  Accurate calculation of your agency's conservation savings

Conservation Savings Table

-  Based on MWDOC 20% by 2020 Model

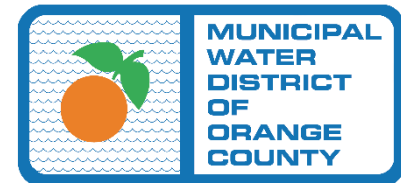
-  We estimated your highest 10-year average to determine your “GPCD baseline”

-  We estimated your current GPCD for 2014

-  Determine your changed GPCD from the Baseline to your current GPCD

-  Calculate the AF Savings

-  Use the Demand Hardening Credit Formula



MNWD's Conservation Demand Hardening Credit Calculation

Examples under a Regional Shortage Level 2

Conservation Demand Hardening Credit – GDCP	MNWD
Dependence on MWD %	100%
Baseline GPCD	237
Allocation Year GPCD	195
Change in GPCD	42
GPCD Based Conservation Savings*	7,953 AF
Regional Shortage level % (+ Additional 10%)	20.0%
GPCD % Reduction	17.6%
Prorated Conservation Demand Hardening Adjustment AF**	1,974 AF

[] Assume a population of 100,000*

*[**] Credit = Conservation AF x RSL% x (1+GPCD % Reduction) x Dependence on MWD%*

