MET's Water Supply and Drought Allocations

Joint Planning Committee
Municipal Water District of Orange County
Orange County Water District

July 23, 2014

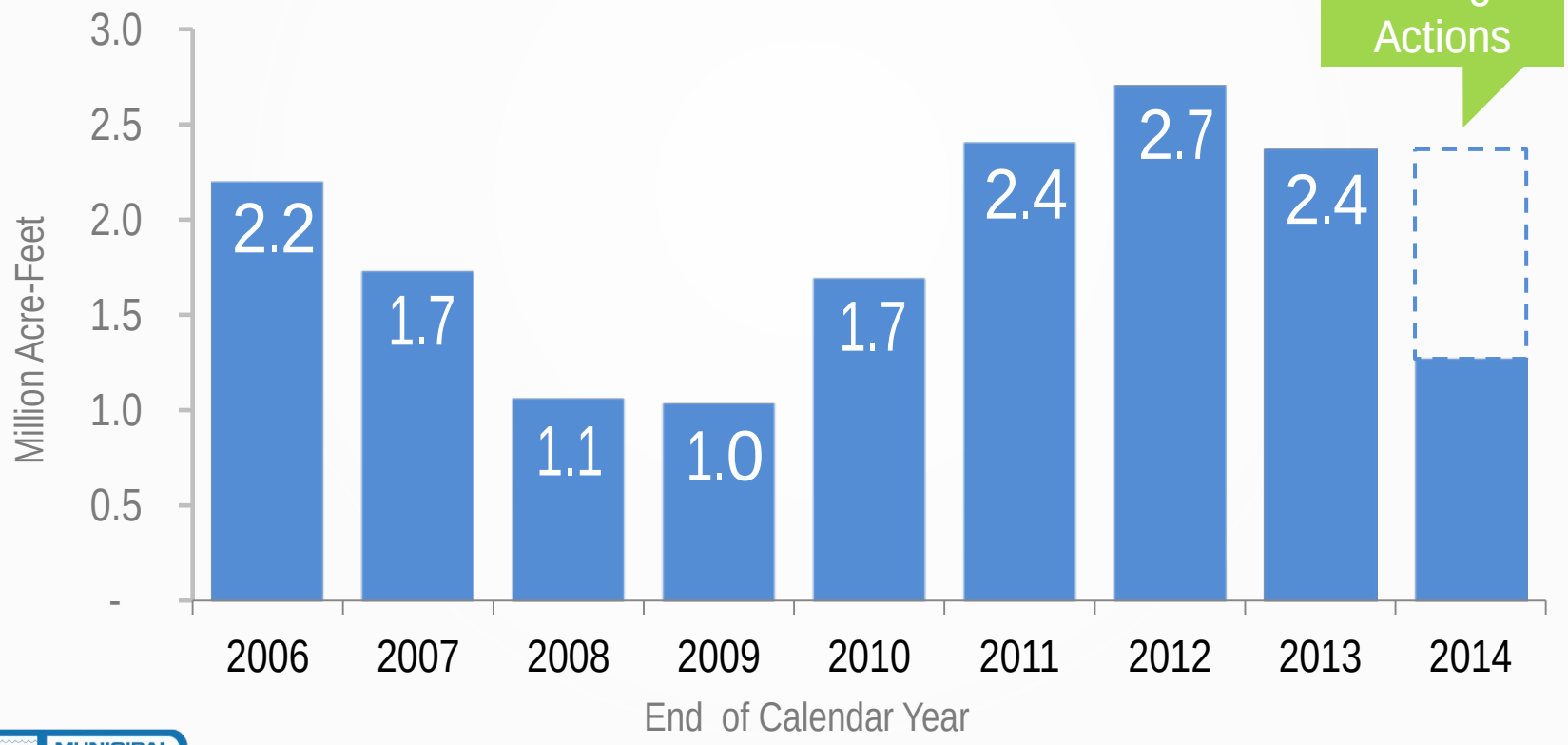
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

MET's 2014
Water Supply & Demand Balance

Water Balance	Acre-Feet
Total Supplies	1,038,000
Estimated Demands	2,117,000
Estimated Net Water Balance	**-1,079,000**

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Metropolitan Dry Year Storage



* Does not include 636 TAF of Metropolitan Emergency Storage.

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Metropolitan's
Water Supply Allocation Plan (WSAP)

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

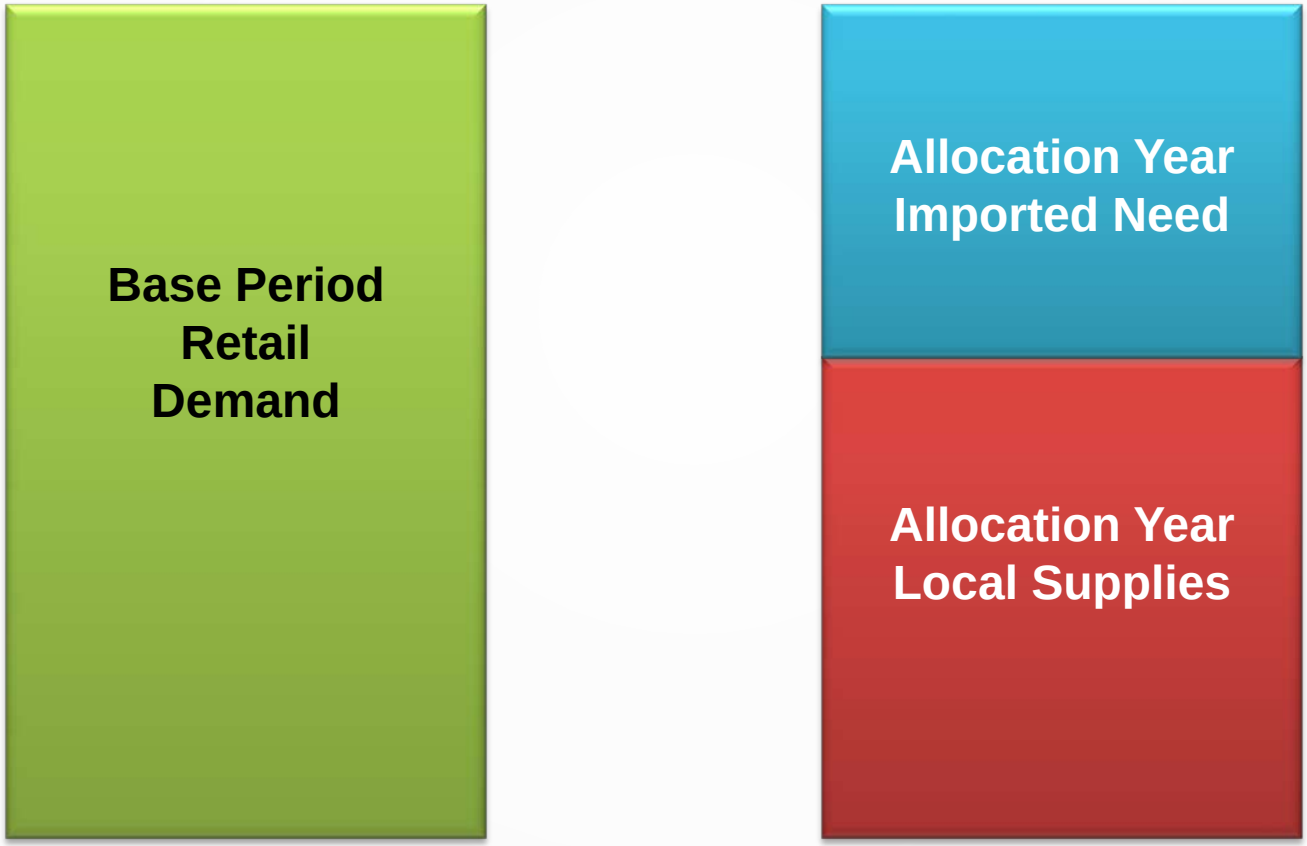
Shortage Allocation Balance

Objectives of MET's WSAP

- Seeks to "minimize the impacts of water shortages on the region's retail consumers and economy during periods of shortage"
- Plan that is "Based on Need"
  - Provide flexibility
  - Equity among the member agencies
- Ensure local investments always results in improved Reliability

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Water Supply Allocation Plan: Baseline



MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

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%

Water Supply Allocation Plan: Formula

- **Once a Allocation "Regional Shortage Level" is declared. The reduction % is off the "Imported Demand" amount**
- **After the initial reduction, credits and adjustments are added:**
  - **Retail Impact Adjustment**
  - **Conservation Hardening credits**
  - **Minimum Per Capita Use credit**
  - **Extraordinary Supply credits**

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

WSAP with a Ocean Desal Project

(Assumes 50,000 AF production of Desalination)

Under a 15% Reduction

- Total reliability increases from 95% to 96%
- Gain of 5,500 AF in Total Supplies

Under a 30% Reduction

- Total reliability increases from 89% to 92%
- Gain of 11,500 AF in Total Supplies

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

MET Workgroup on the Allocation Plan

- Held first meeting on July 14
- Purpose is to review and identify any areas in the Plan that need changes or updates
- Issues discussed:
  - Updating the Baseline/Base Period
  - Including groundwater recharge in the Baseline
  - Changes in how we account for Local supply development
  - Do we need to change the penalty rates

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Three Areas for Discussion

- Baseline
  - Determines retail demands and MWD needs
  - This is what "cuts" are taken from in an allocation
- Allocation Formula
  - Determines how much to cut MWD needs
  - Incorporates various elements (MWD dependence, demand hardening, GPCD floor, credits)
- Allocation Enforcement
  - Determines how to ensure agencies don't exceed their allocations
  - Currently a "Penalty Rate" disincentive

Why is the Baseline Important?

- Correct estimate of water needs
- Promotes “Fairer” balance between agencies
- A key determinant for when “mandatory allocations” are needed
  - Baseline Too High = Frequent and/or Large Cutbacks
  - Baseline Too Low = No Mandatory Cutbacks when reduced demands are needed

Proposed Process Timeline

- Baseline
  - July – August 2014
- Formula
  - August – September 2014
- Enforcement
  - September – October 2014

Questions?

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Backup Slides

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

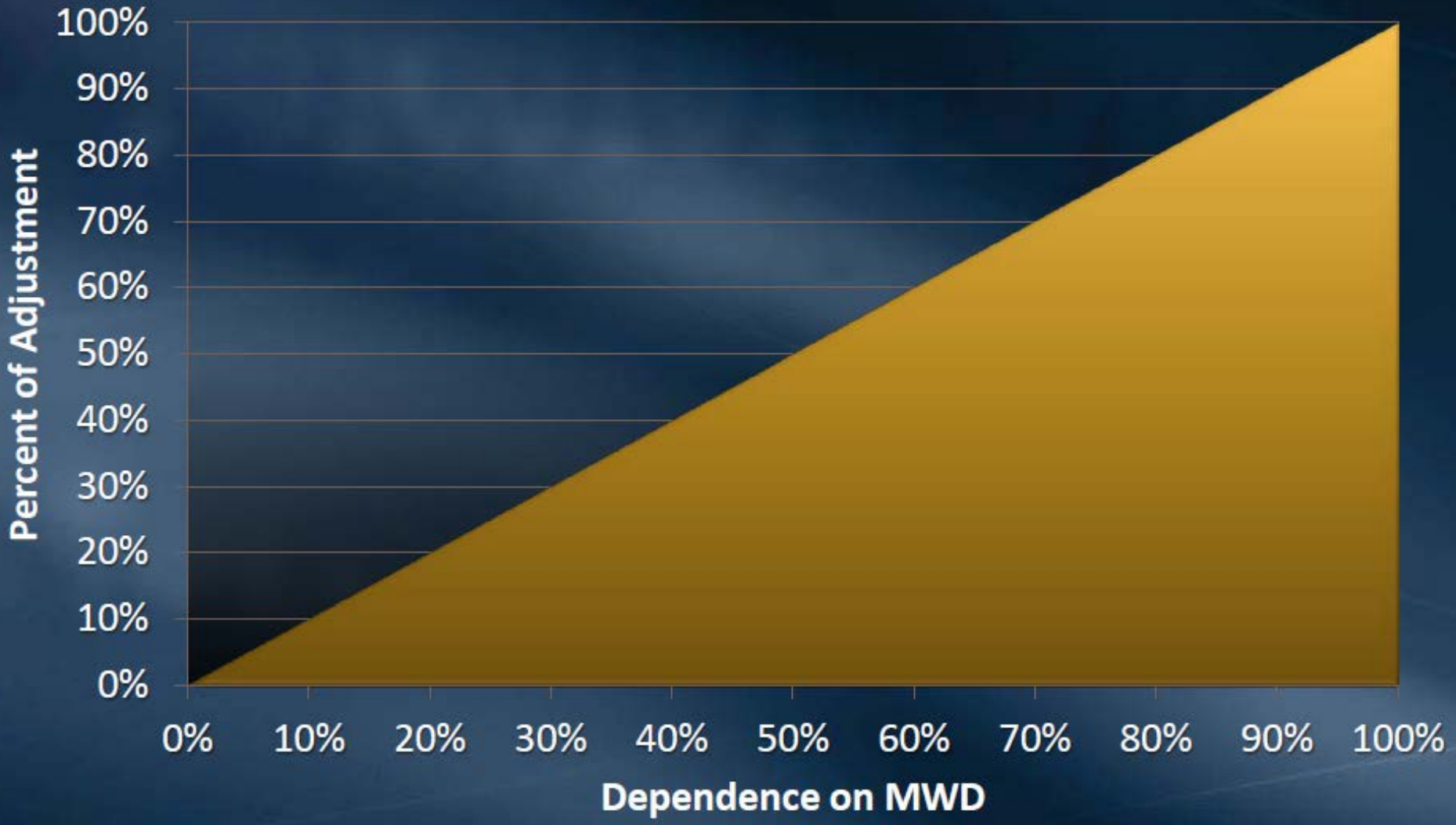
Current Allocation Plan's Penalty Rates

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

- **MWDOC's 2014 Preferential Rights = 13.78%**

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Retail Impact Adjustment Factor



WSAP Scenario Under Level 2

Under a Shortage Level 2 – 15% Reduction
Comparing 50,000 AF Ocean Desal

	W/O Desal	w/Desal
Total Retail Demand (Baseline)	**450,000**	**450,000**
Local Supplies	250,000	300,000
Imported Needed	200,000	150,000
Stage Level 2 – 15%	170,000	127,500
Credits & Adjustments (Est.)	7,500	5,500
Imported Allocation	177,500	133,000
Total Supplies	**427,500**	**433,000**
Reliability %	**95%**	**96%**

Gain of 5,500 AF in Total Supplies
1% increase in Reliability

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

WSAP Scenario Under Level 4

Under a Shortage Level 4 – 30% Reduction Comparing 50,000 AF Ocean Desal

	W/O Desal	w/Desal
Total Retail Demand (Baseline)	**450,000**	**450,000**
Local Supplies	250,000	300,000
Imported Needed	200,000	150,000
Stage Level 4 – 30%	140,000	105,000
Credits & Adjustments (Est.)	12,500	9,000
Imported Allocation	152,500	114,000
Total Supplies	**402,500**	**414,000**
Reliability %	**89%**	**92%**

Gain of 11,500 AF in Total Supplies
3% increase in Reliability

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY