

This presentation premiered at WaterSmart Innovations

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DROUGHT PLANNING THROUGH INTEGRATED RATE DESIGN

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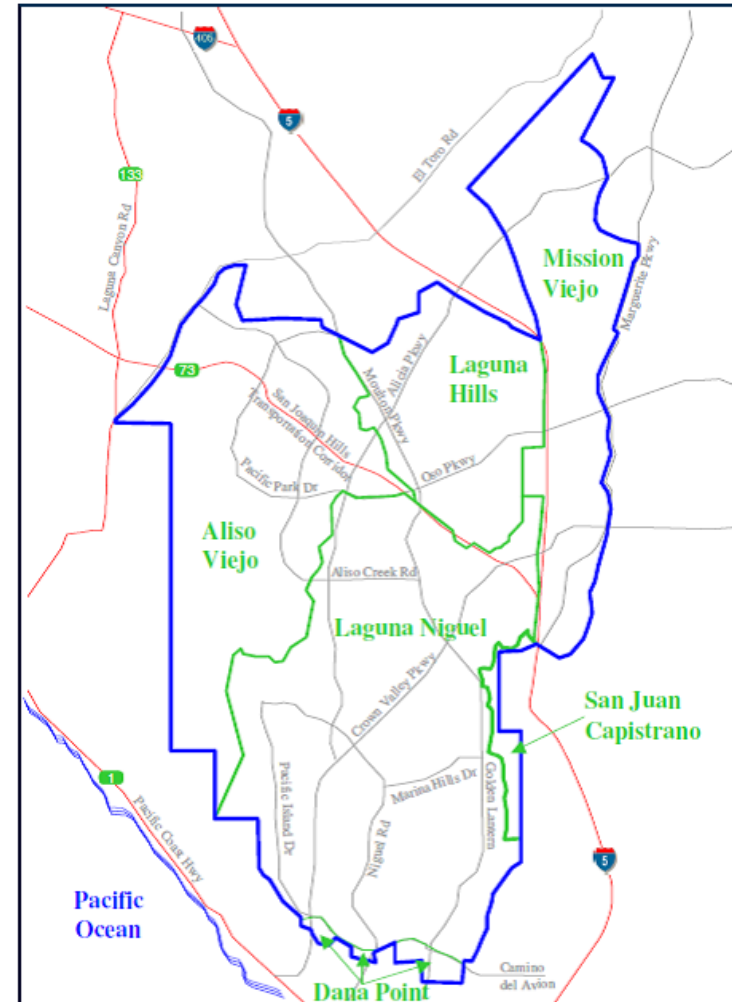
October 8, 2015

AGENDA

- District background
- Historical demand management actions
- Components of integrated rates
- Rate design
- Drought Actions
- Results
- What's next?

ABOUT MNWD

- Water, recycled water & sewer service
 - 170,000 people
 - 5 Cities in South Orange County
- 100% dependent on imported water
 - MWD (\approx 29,000 AFY)
- Recycle Water \approx 25% Total Demand
- Annual budget: \$126 M
- Key revenues:
 - Rates
 - Property tax



SERVICE AREA SNAPSHOT

- Residential
- Median Household Income ~\$150,000



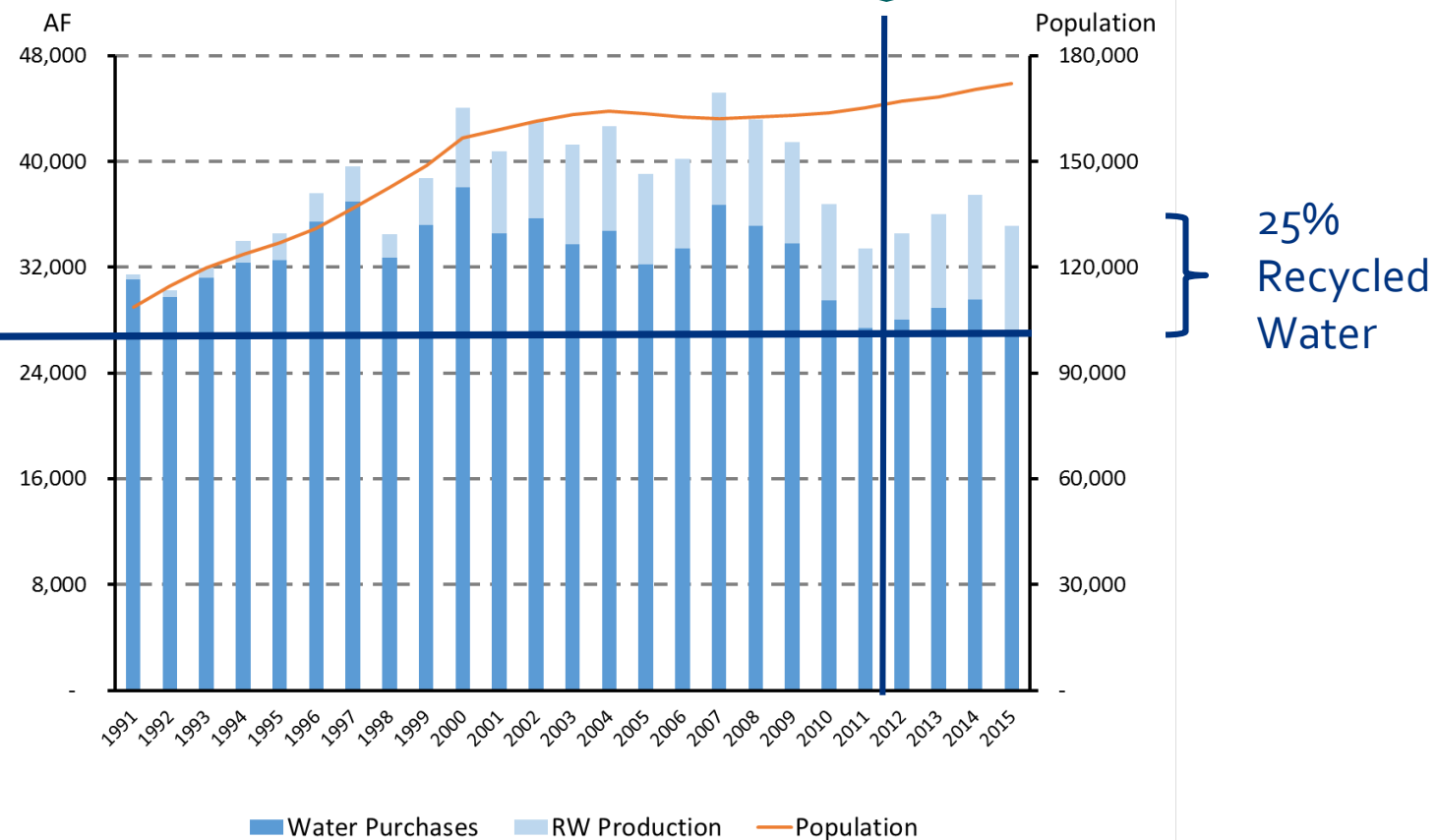
WATER SUPPLY



DEMAND MANAGEMENT EFFORTS

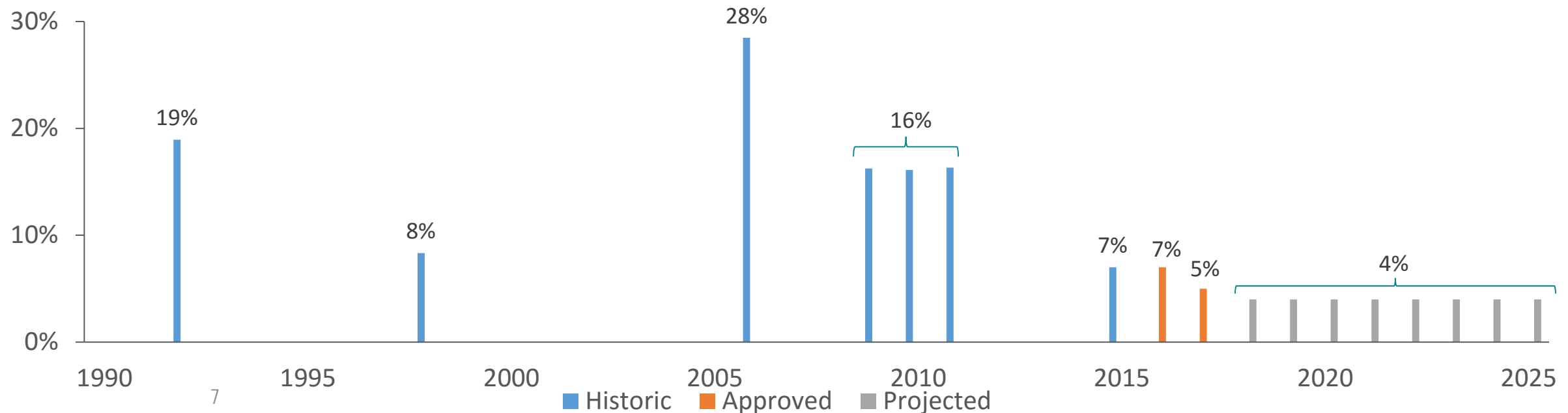
2015 = Lowest
potable water
use since
1990

Water Budget Rates
Implemented



RATE HISTORY

- 7 annual rate increases in the past 30 years
- Water Budget Based Rates implemented in 2011
 - 2009 Drought enforcement experience
 - Need for demand management tool
- Adopted new rates Feb. 11, 2015



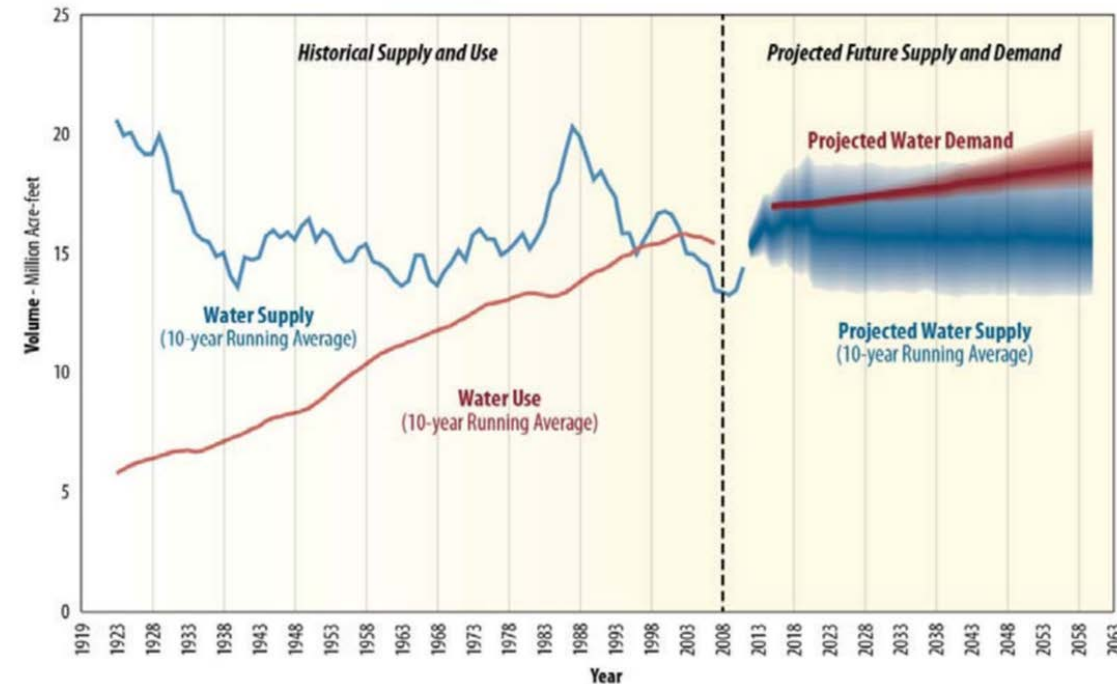
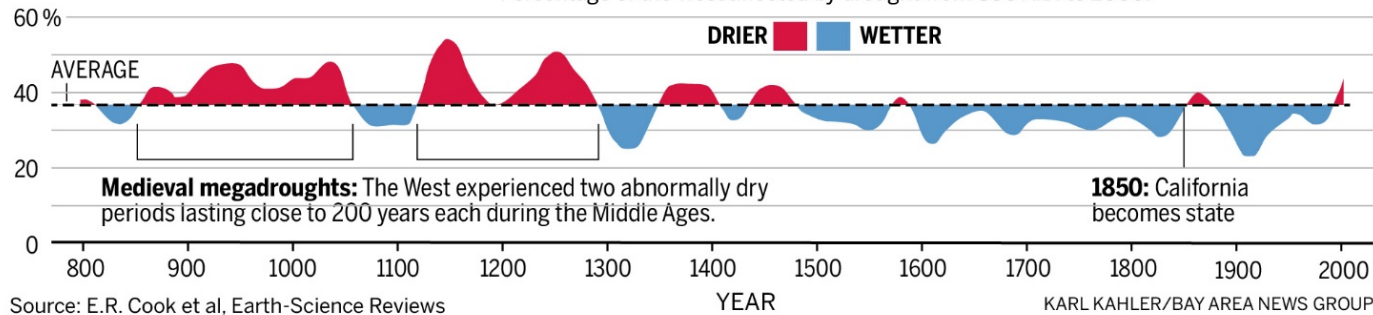
COMPONENTS OF INTEGRATED RATES

- Drought planning
- Behavioral change
- Prop. 218
- Marketing
- Capital intensive industry
- Local agency outreach
- Internal coordination

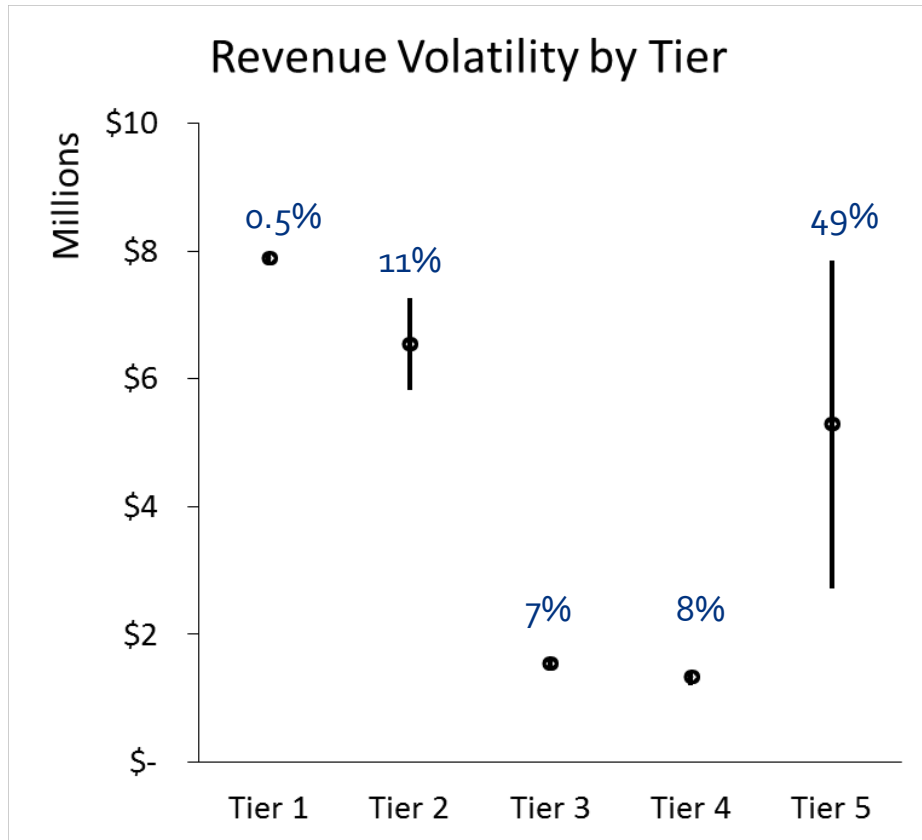
WHY WORRY ABOUT VOLATILITY?

A 200-year drought?

Evidence from tree rings shows that drought was historically much more widespread in the American West than now, while the 20th century was wetter than normal. Percentage of the West affected by drought from 800 A.D. to 2000:



PLANNING FOR VOLATILITY

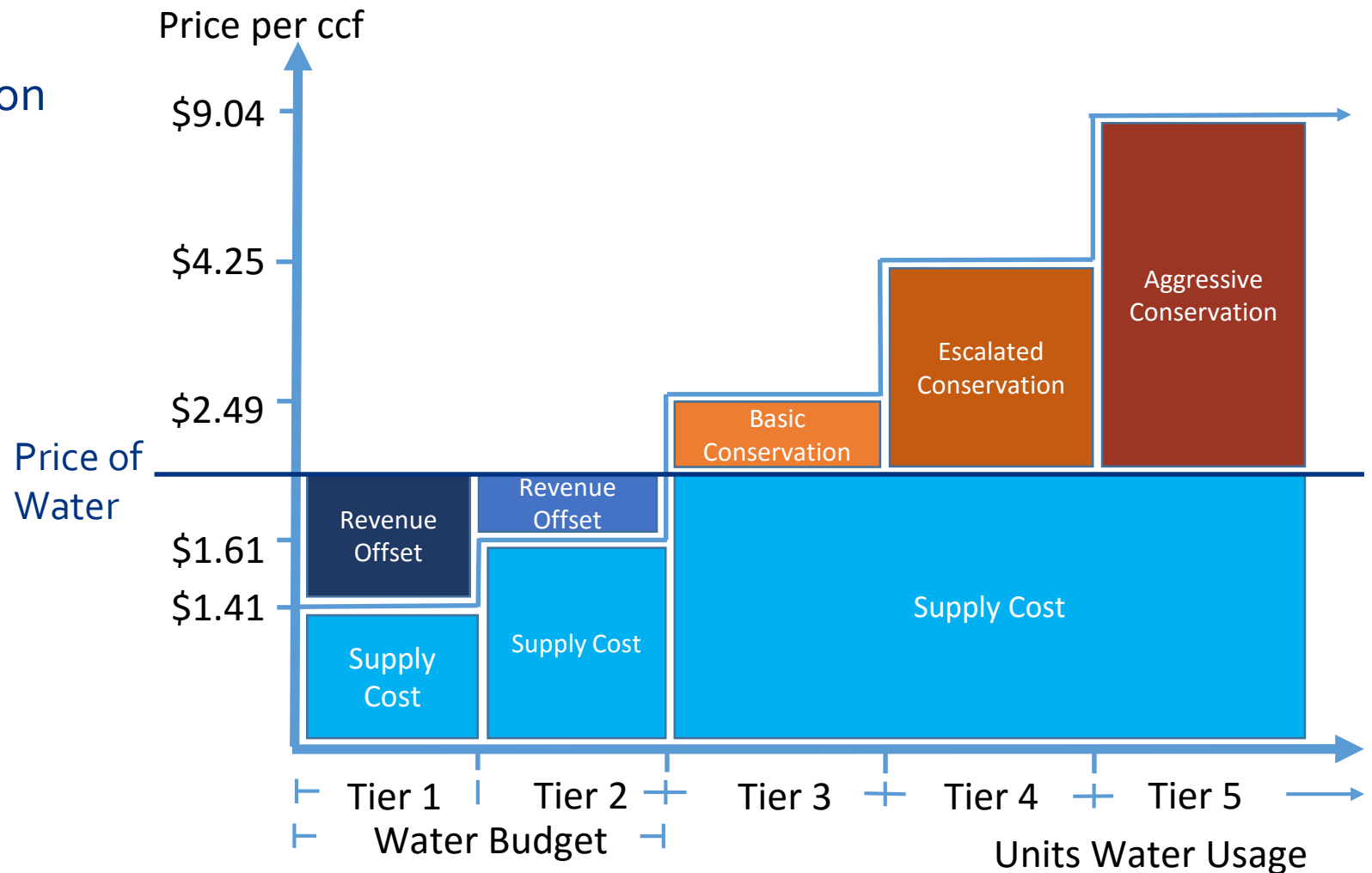


- Lower Tier 1 from 65 to 60 GPCD
- Tier 2 with Rate Stabilization Reserve
- Tier 3, 4, & 5 set at price of water

- = Average Annual Revenue 2011 to 2014 by Tier
- | = Standard Deviation of Annual Revenue 2011 to 2014

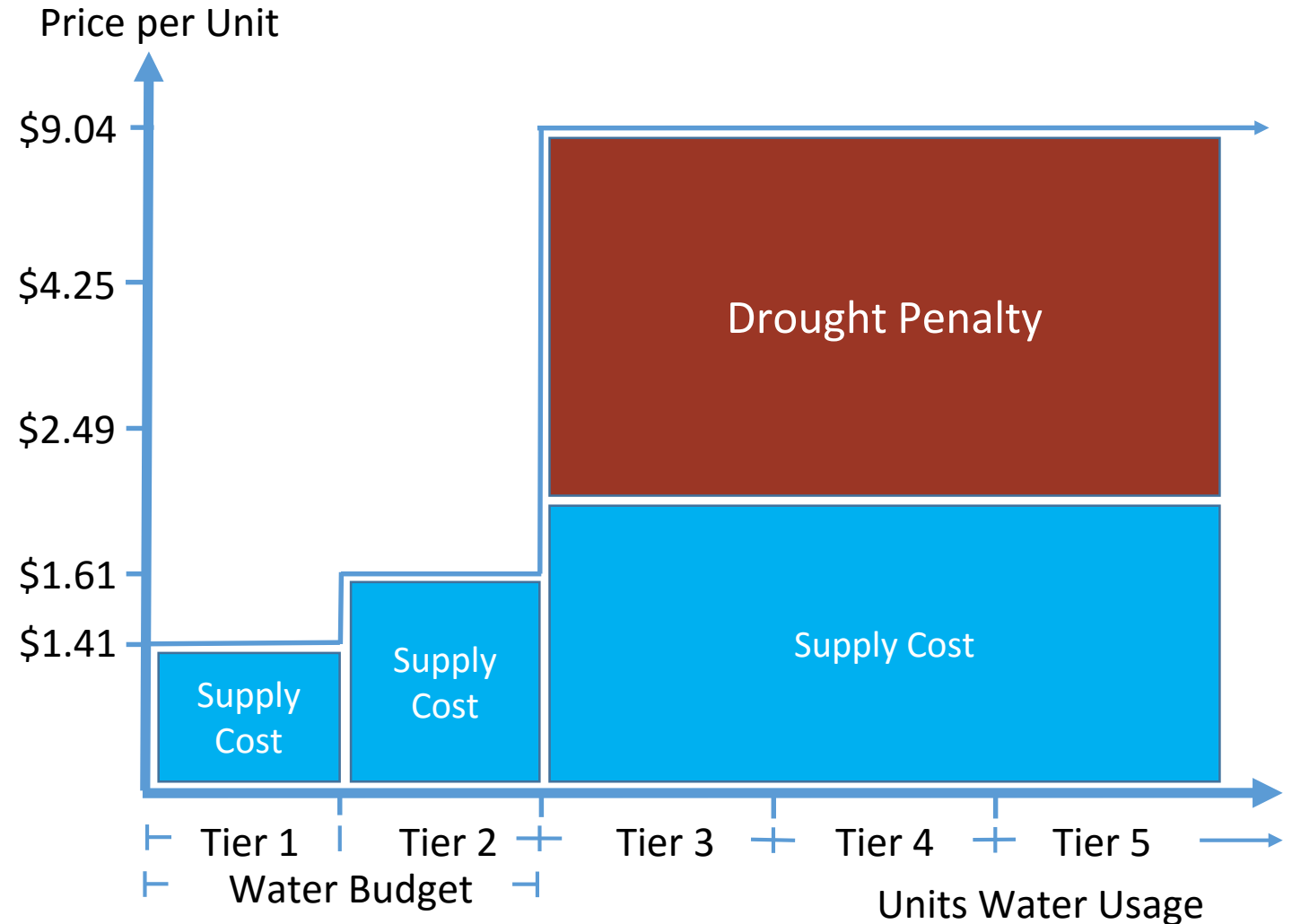
RATE DESIGN

- Increased water demand creates increased conservation funding
- Decreases in Tier 1 & 2 water use increase net revenue
- Increases planned for with Reserves



DROUGHT PENALTY DESIGN

- Rate design offsets need for drought rates
- Penalties to encourage conservation
- No penalties for past conservation efforts



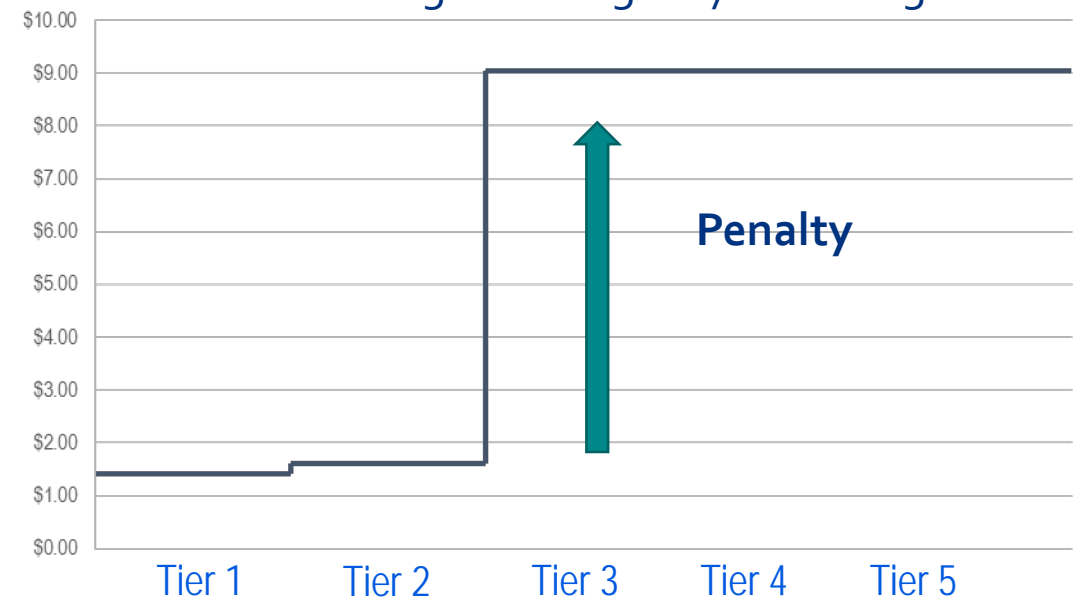
INTEGRATED DROUGHT ACTIONS

20%

- Alternate plan approval by SWRCB
 - 1 of 2 in California
- Water Budget Based Rates
- Water Shortage Contingency Plan
- Customer communications
- Recycled Water Master Plan
- Partnership with cities
- Media

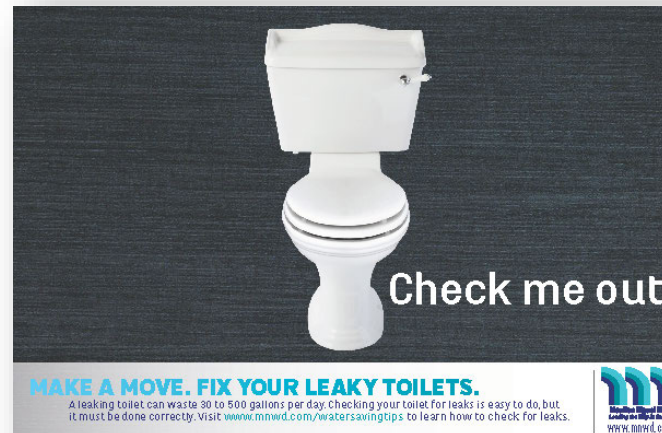


Water Shortage Contingency Plan Stage 2



CUSTOMER COMMUNICATIONS

- Bill Messages
- Summer Newsletter
- Postcards
- Press Release
- Newspaper Ads



OUTDOOR FOCUS

- 50 to 70% for outdoor usage
- Approximately 300 million square feet of irrigable area in service area
- Approximately 3 million square feet of turf removed



RESULTS

- Exceeded targets for June, July, August, and September
- Highest ever percentage of customers within their water budget
- Financially stable after greater than 20% reduction in demand
- Lowest overall water use since 1990
- Currently at approximately 50% of per capita water use in 1991
- SWRCB
 - Rate Structure - Best Practices/Examples for Conservation Water Pricing
- CA Department of Water Resources
 - Urban Water Management Plan Case Study



WHAT'S NEXT?

- Research with academic Institutions to inform innovation
- Stanford- Marketing
- UC Riverside- Rates & Rebates



THE NEXT FRONTIER



- California water data collaborative: putting the entire lifecycle of California's water usage data in a centralized cloud database on a voluntary, bottom up basis.

