



Los Angeles  
Department of  
Water & Power

# LA's Water Supply Future



**“Attaining a Sustainable Wet Infrastructure  
for Southern California”**

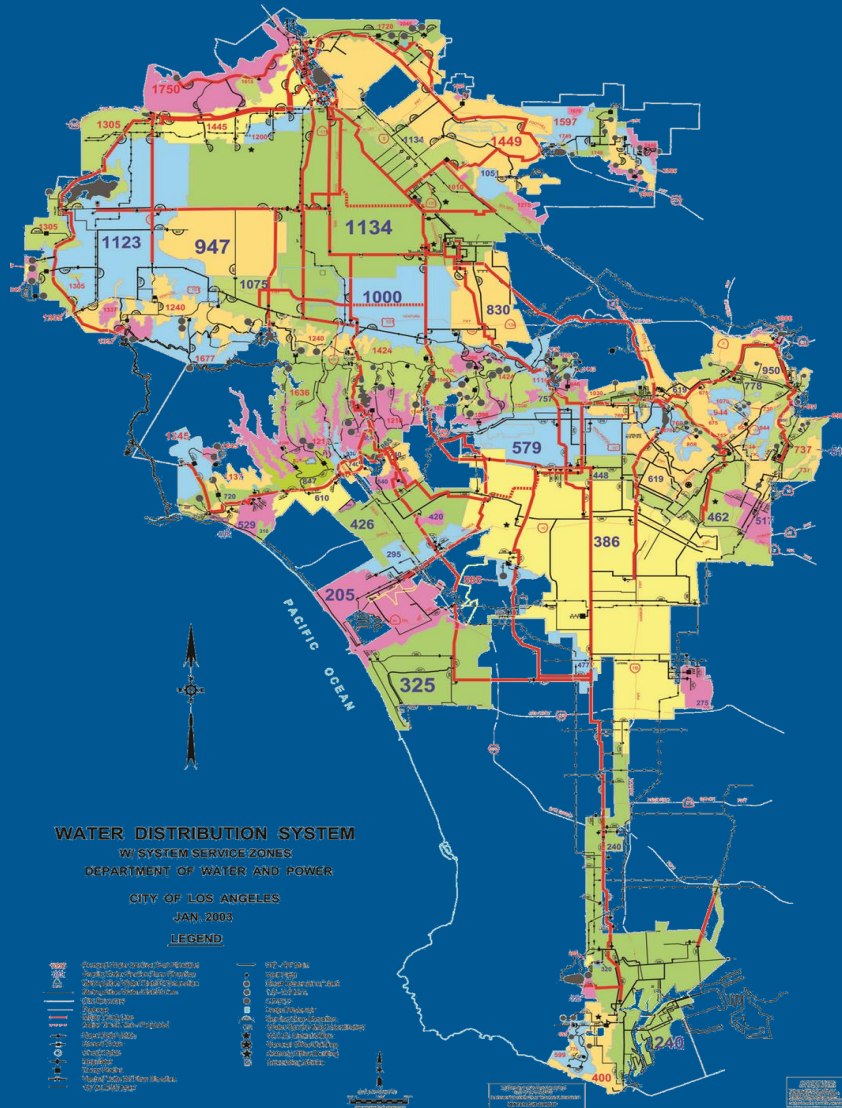
**Loyola Marymount University**

**October 22, 2015**

**Martin L. Adams, P.E.**

**Senior Assistant General Manager – Water System  
Los Angeles Department of Water and Power**

# LADWP Today



- Service area (469 square miles)
- Provide Water and Power to approximately 4 million people every day
- Over 494 million gallons of water delivered per day – 553,900 acre-feet per year
- Provide over 77 million kilo-watt hours of electricity on typical day





# Sources of Water for Los Angeles



Sierra Mountains

Bay Delta

LA Aqueduct

State Water Project

Colorado River Aqueduct

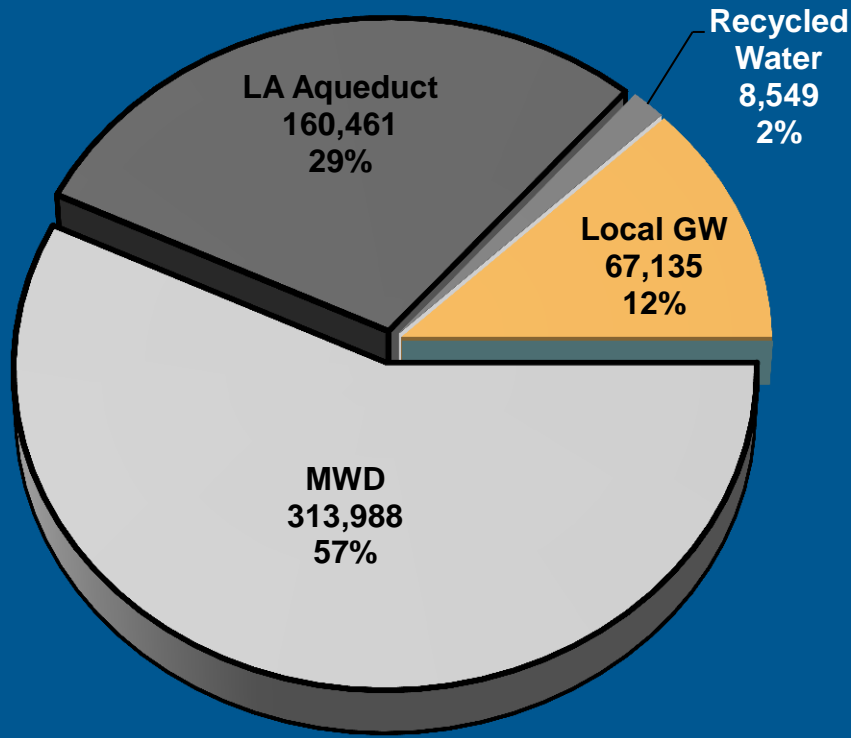
Local Groundwater, Stormwater, Conservation & Recycling



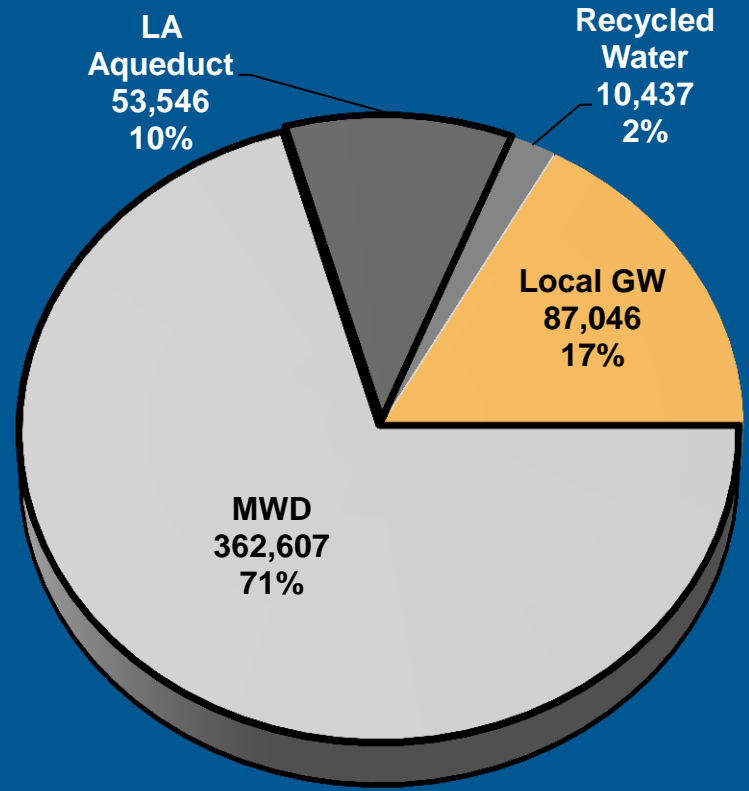


# Reliance on MWD in Dry Years

Fiscal Year Ending 2011 - 2015  
Average Production: 550,355 AFY



Fiscal Year 2014 - 2015  
Total Production: 513,540 AFY



# Local Water Supply Reliability

## Key Programs



**Increase Stormwater Capture**



**Develop Recycled Water Recharge**

- Conservation
- Recover Use of Aquifer
- Handle Stormwater and Indirect Potable Reuse
- Explore Options for Direct Potable Reuse



**Remediate the San Fernando Groundwater Basin**

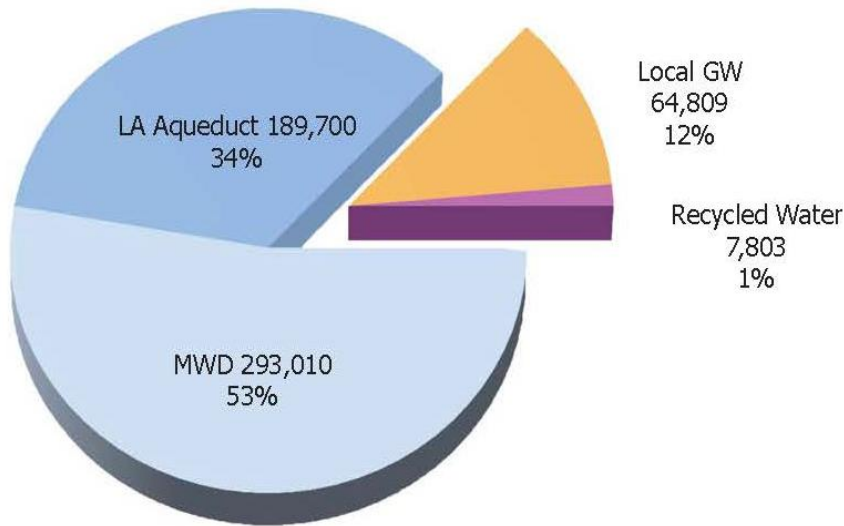




# Urban Water Management Plan Supply Growth

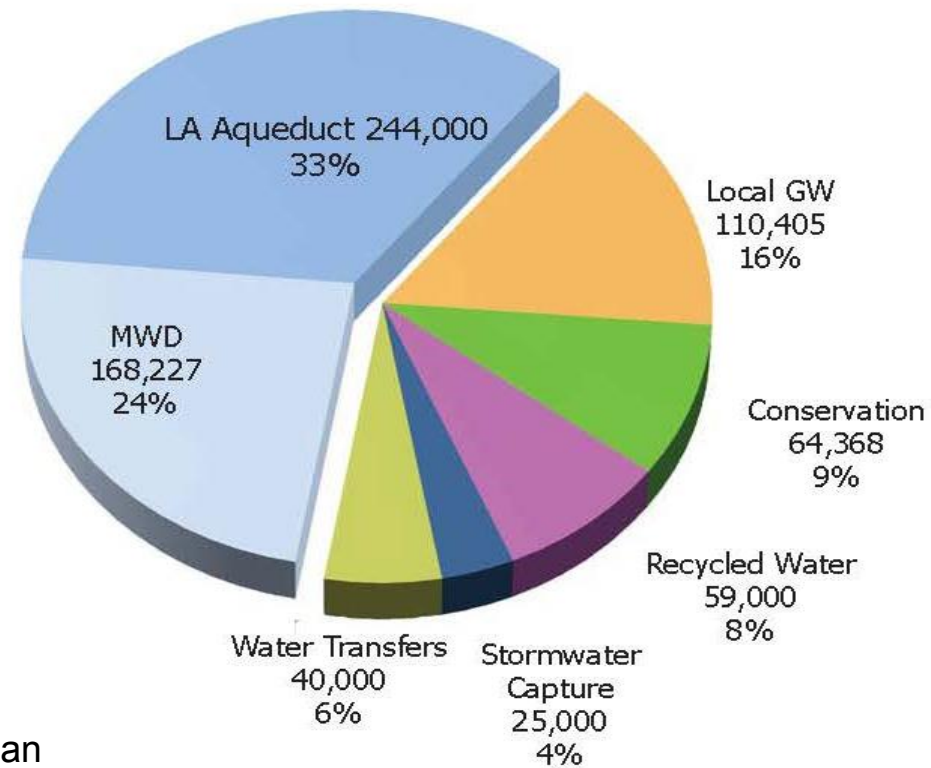
## TODAY

FYE 2010-2014 Average  
Total: 553,876 AFY



## FUTURE\*

FYE 2035  
Total: 711,000 AFY

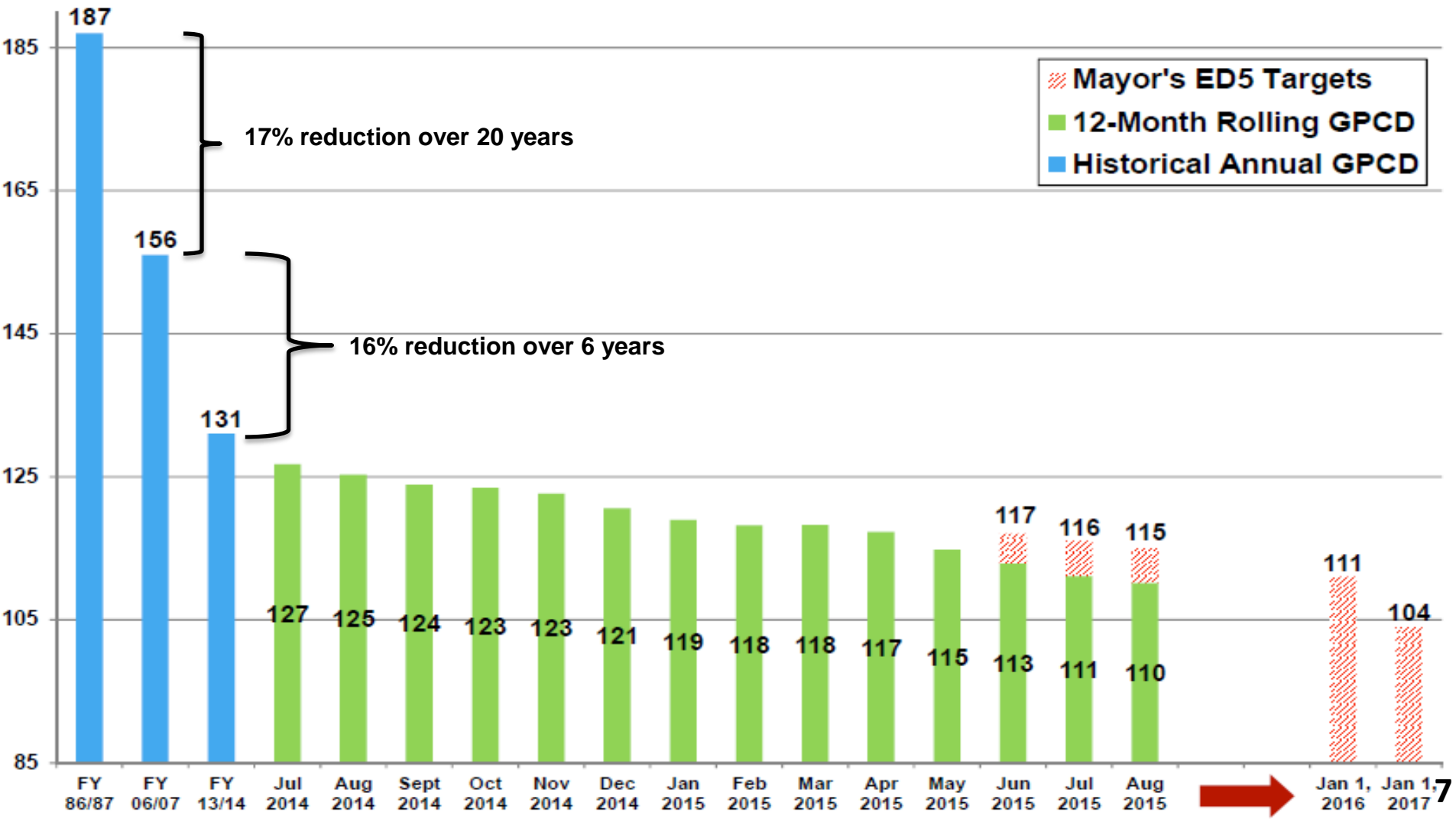


\*Estimated from the 2010 Urban Water Management Plan



# ED5 Progress Tracking – Total GPCD

## LADWP 12-Month Rolling Total GPCD







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# Water Loss Control





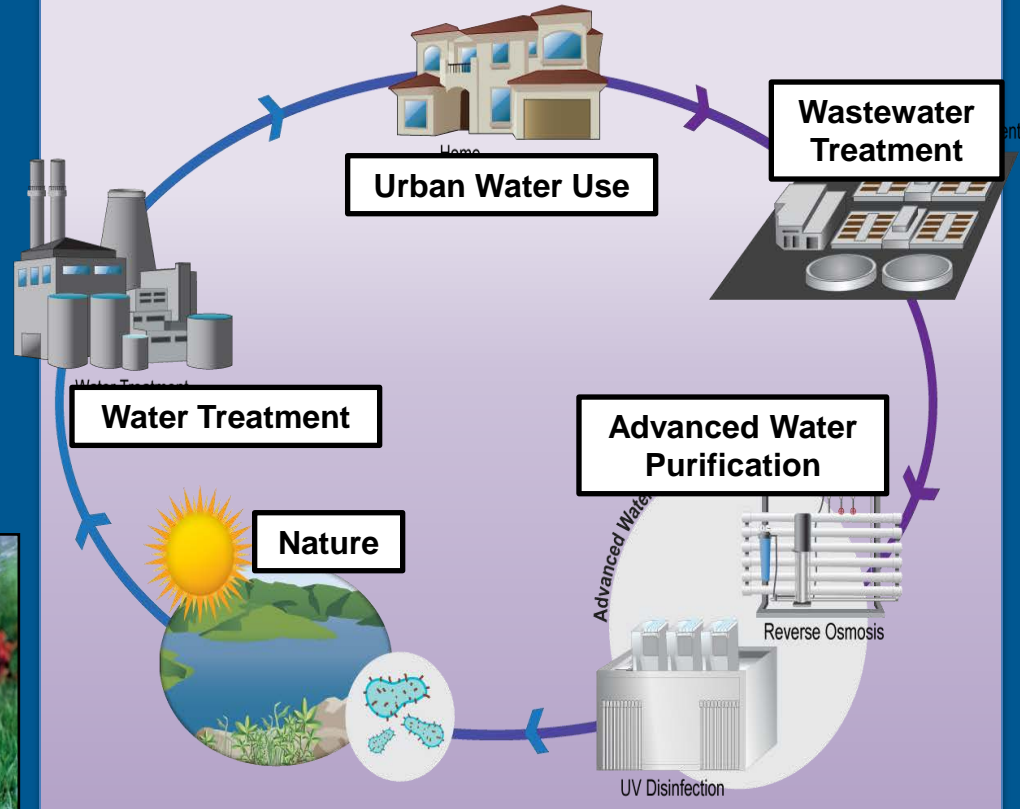
# Local Supply Development Recycled Water

Reuse

## Non-Potable Reuse



## Indirect Potable Reuse



# Local Supply Development Stormwater Capture

**Dam Improvements**



**Cisterns**



Centralize ←

**CAPTURE**

→ Distributed



**Spreading Basins**



**Rain Gardens**



**Rain Barrels**





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# SF Groundwater Basin Remediation

Remediation of San Fernando Basin and Restoration of up to 110,405 AFY groundwater supplies

Planned groundwater basin remediation crucial to fully utilize the San Fernando Basin

GAC Treatment at Tujunga Well Fields – Pilot Study



Pollock Water Treatment Facility

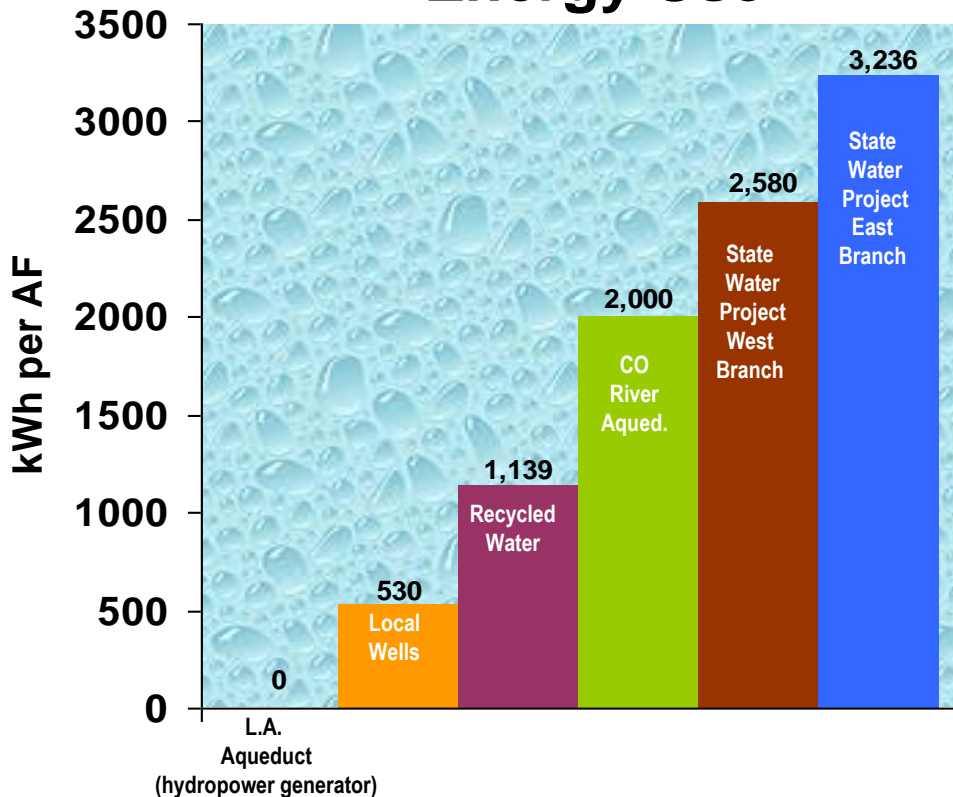




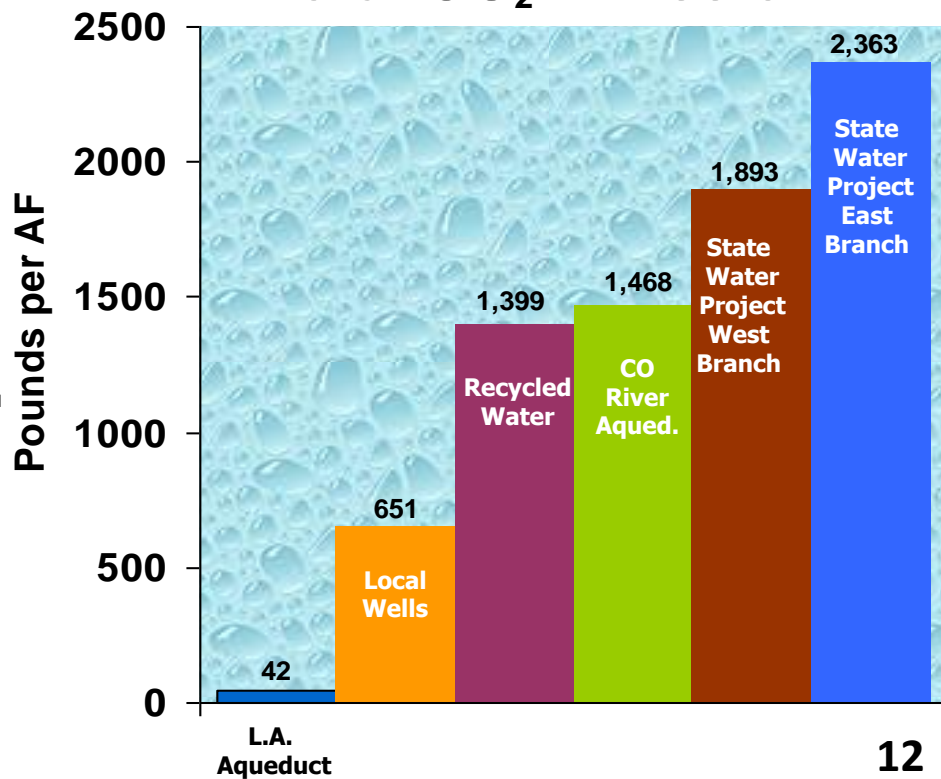


# Summary Comparison of Energy / Carbon Intensity

## Energy Use



## Total CO<sub>2</sub> Emission



# ADDRESSING ENERGY CHALLENGES, EARLY ACCOMPLISHMENTS, AND WHAT'S AHEAD

## To Date:

- Use of energy efficient pumps and motors
- Planned start –up and testing to reduce grid and bill impacts

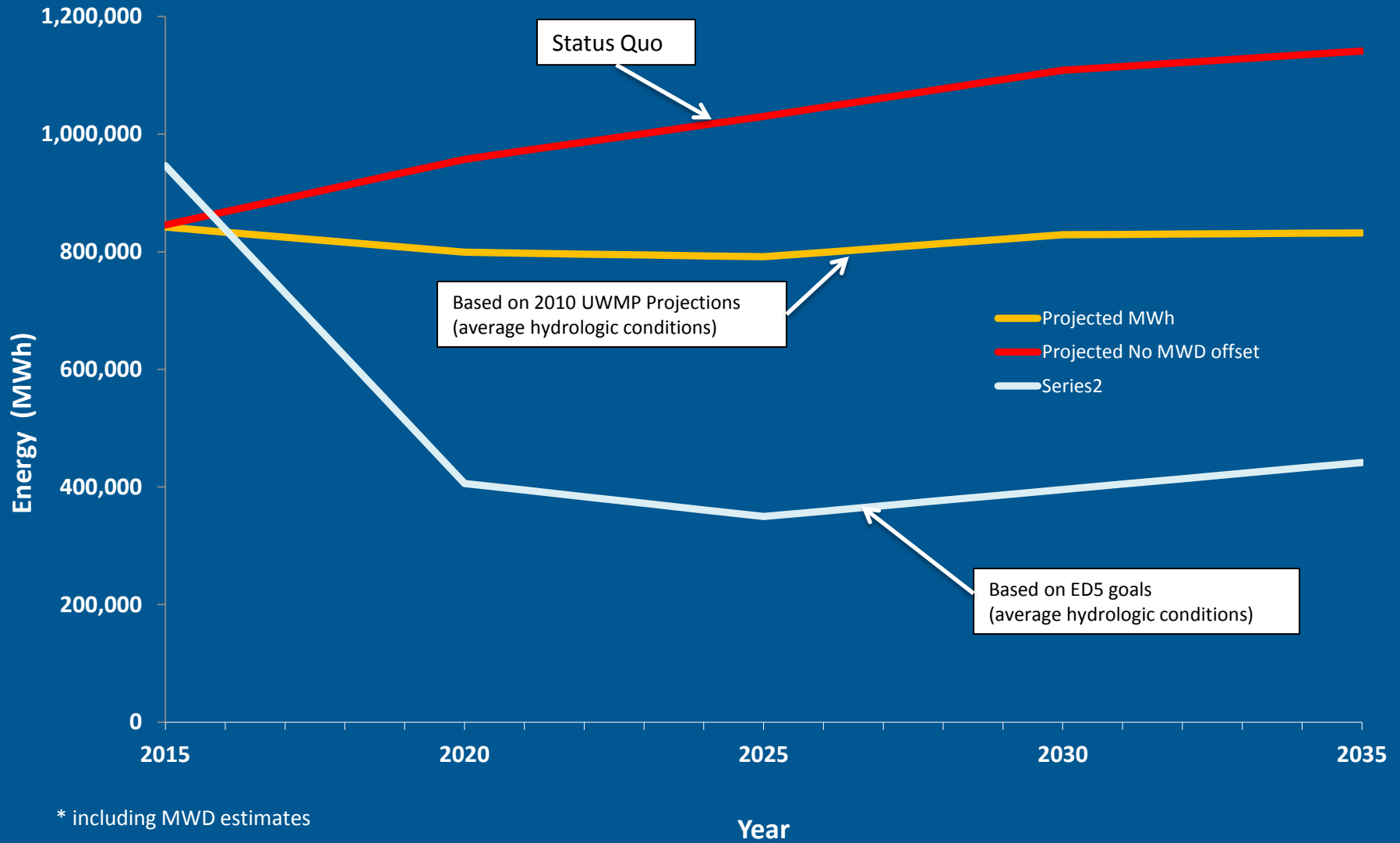


## The Future:

- Optimizing equipment selection
- Time of day pumping
- Set realistic pricing structures
- Reduce overall water usage



# Projected Water Supply Energy Demands



\* including MWD estimates

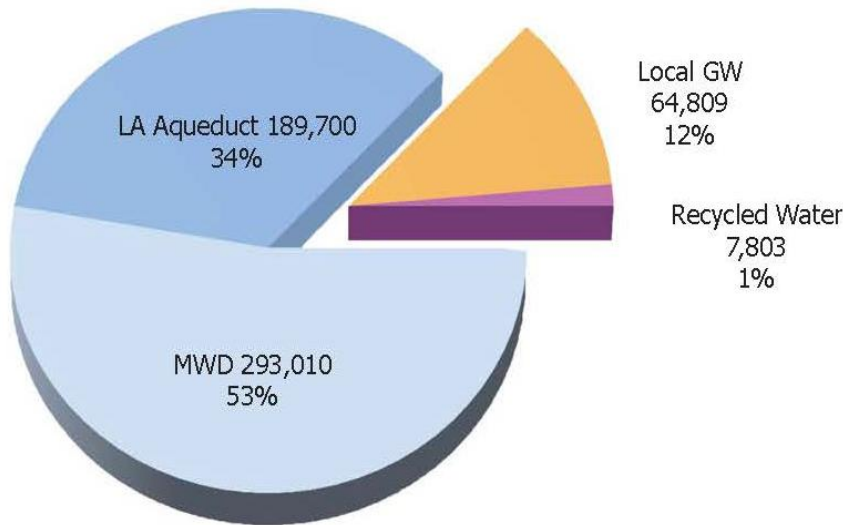




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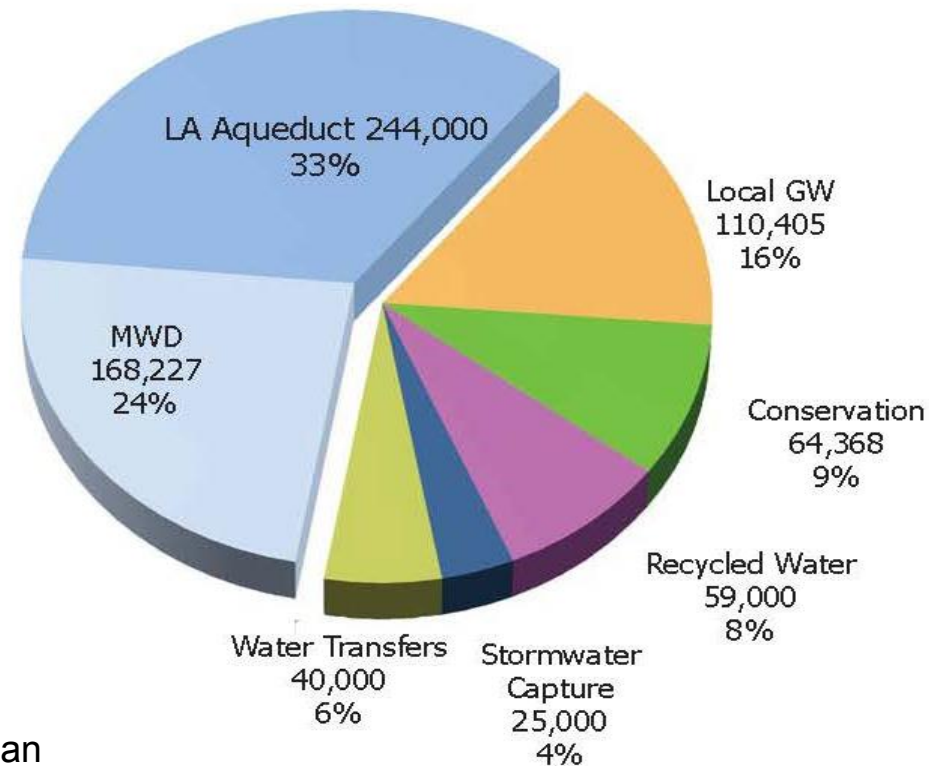
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# Local Water is Critical to Secure our Water Future

Increased Reliability by using a local,  
drought-resistant supply

More Sustainable with lower carbon  
footprint associated with greenhouse gas  
emissions

Provides Local Jobs for the construction  
and operation of new facilities

Will Cost Less than projected purchased  
imported water costs







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# New Normal – Vision for future LA Landscaping

