

WUE Standards Economic Analysis Study

MWDOC ADMINISTRATION & FINANCE COMMITTEE MEETING

SEPTEMBER 14, 2022

Presentation Overview

- Consultant Team and Background
- Urban Water Use Standards Review
- Study Overview & Data
- Findings
- Next Steps



Consultant Team



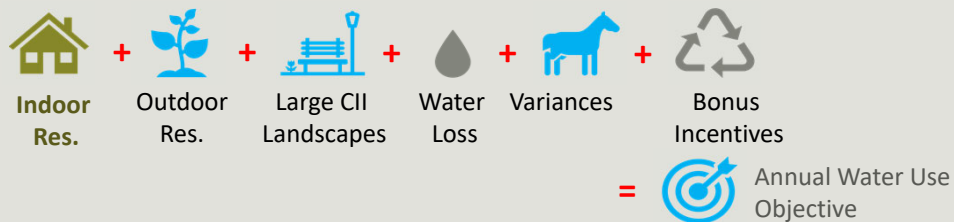
Ian Castillo
Spencer Waterman
Kirsten Plonka



David Mitchell

Urban Water Use Standards

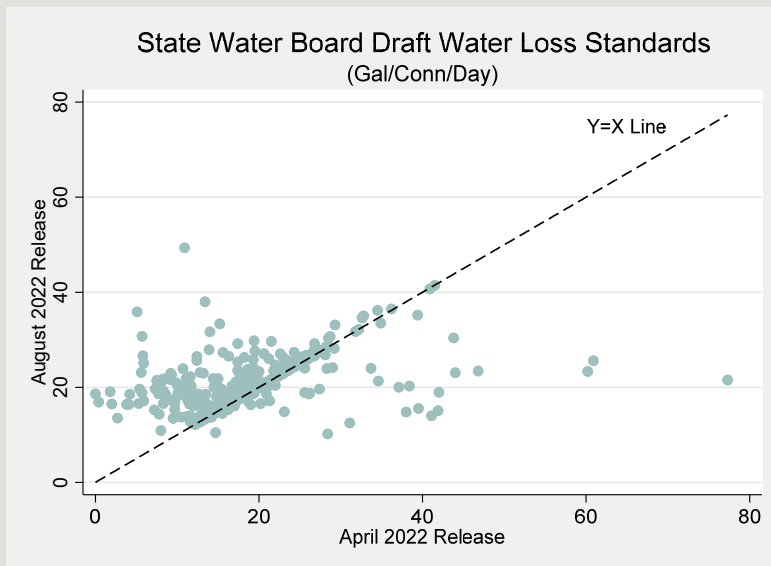
- 2018 Water Conservation Legislation (AB 1668/SB 606) – Sets Annual Water Use Objectives for Urban Retail Water Suppliers
- Annual Objectives are determined by sum of standards, variances, and potable reuse bonus incentives:



Standards DWR Expected to Recommend

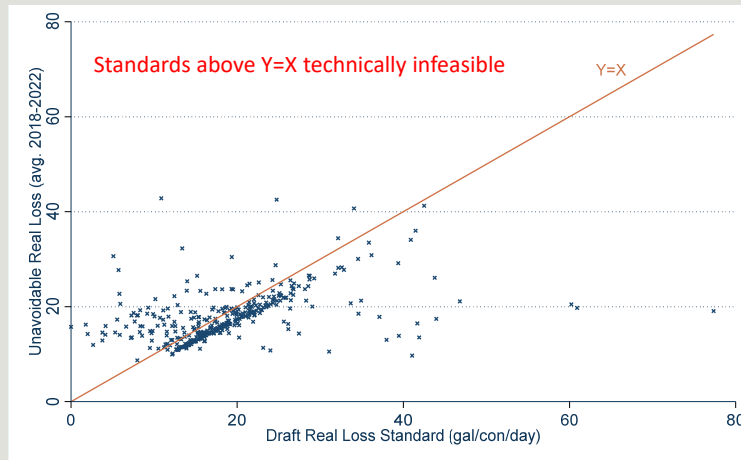
| | Period | Indoor Residential Water Use | Outdoor Residential Water Use | Non-Residential DIM | Distribution System Losses |
|---------------------|-------------|------------------------------|---|--|--|
| Interim Standards | Before 2025 | 55 GPCD | 80% of net ET _o applied to 100% II + 20% INI | 80% of net ET _o applied to 100% of Regular Landscape Area + 100% of net ET _o applied to Special Landscape Area | Current System Losses |
| | 2025-2027 | 47 GPCD | | | |
| | 2028-2029 | | | | |
| Long-Term Standards | 2030 onward | 42 GPCD | 65% of net ET _o applied to 100% II + 20% INI | 65% of net ET _o applied to 100% of Regular Landscape Area + 100% of net ET _o applied to Special Landscape Area | State Water Board Draft Standards (Updated August 8, 2022) |

Study's focus is on the long-term standards



Keep in Mind that Standards Still in Flux

Feasibility of Water Loss Standards Continues to be an Issue



Study Objectives

Assess Impacts of Pending Urban Water Use Standards:

- Reduction Requirements
- Compliance Costs
- DAC Impacts
- Orange County Data Review and Impacts



Data & Methods

Water Use Reduction Requirements, Compliance Costs, and DAC Impacts Estimated for **398 Suppliers** with Customized Version of *DWR Urban Water Use Objective Analyzer*



Model Data Sources:

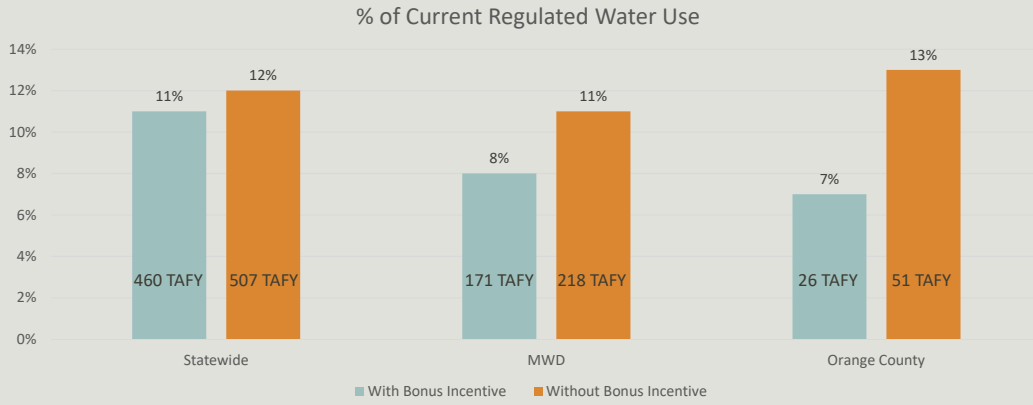
| | | | | | | | | |
|-----------------------------------|----------------|--------------------|--|---------------------------|--|--------------------------------|----------------------|--|
| SWB Electronic Annual Report Data | Supplier UWMPs | Water Loss Reports | Census and DOF Population and Housing Data | DWR LAM Program Estimates | DWR Residential Indoor Water Use Study | DWR CIMIS and Cal SIMETAW Data | DWR DAC Mapping Tool | Nicholas Institute Water Affordability Data Repository |
|-----------------------------------|----------------|--------------------|--|---------------------------|--|--------------------------------|----------------------|--|



Preliminary Findings

- Based on supplier data compiled by DWR
- Orange County results have been updated following OC data review/update process
- Using draft water loss standards released by State Water Board August 8, 2022
- Final standards adopted by State Water Board may differ from the ones evaluated for this project.

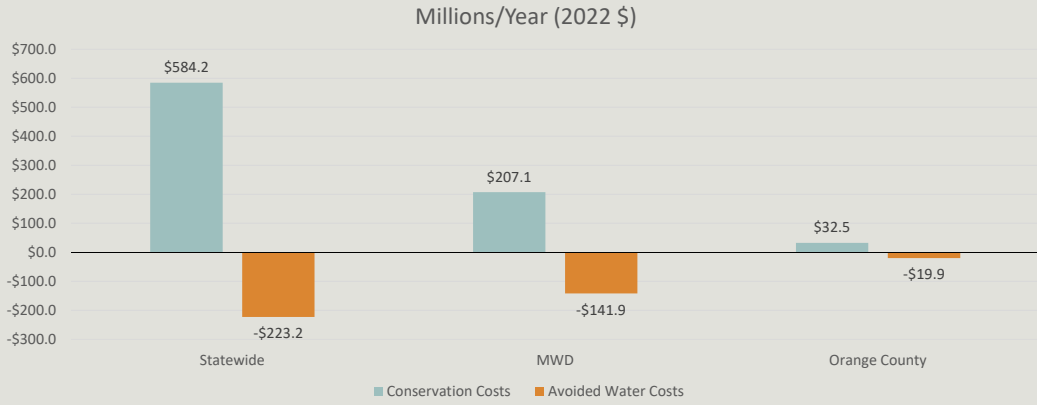
Long-Term Standards Aggregate Reduction Requirements



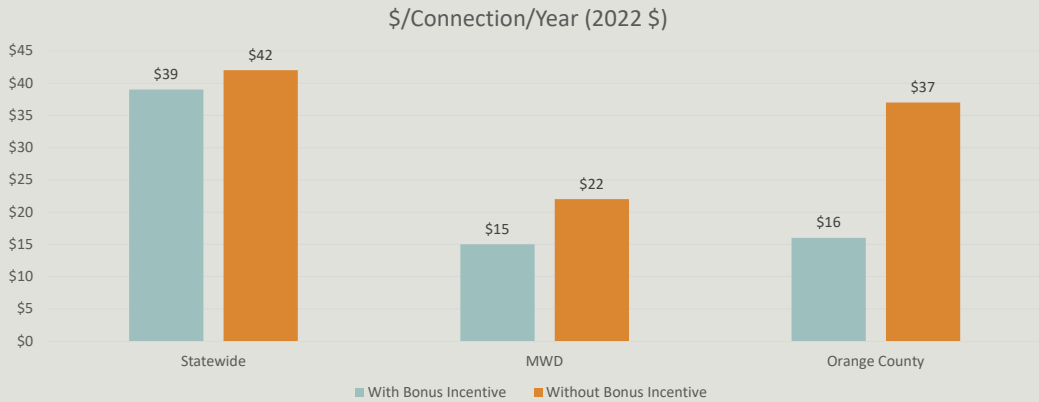
Long-Term Standards Compliance Cost



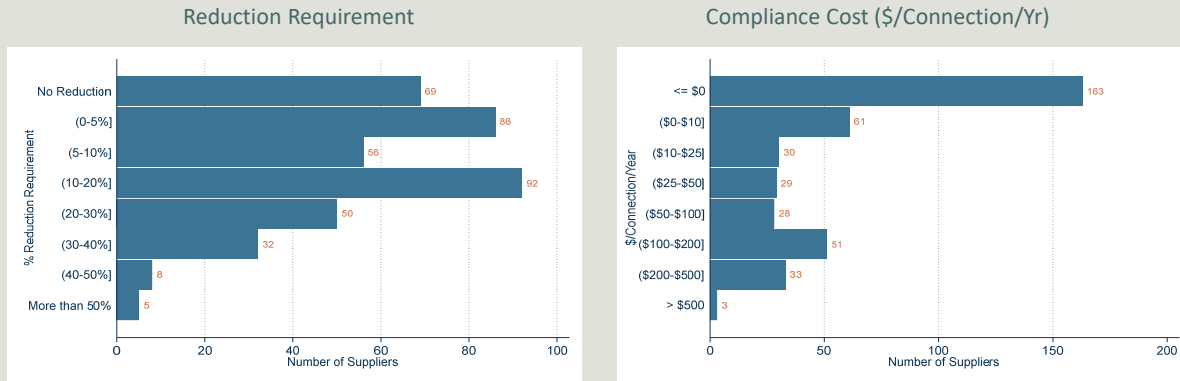
Conservation Costs vs Avoided Water Costs



Average Compliance Cost Per Connection



Large Variation in Reduction Requirement and Cost Across All Suppliers



Large Variation Across OC Retailers

REDUCTION REQUIREMENT

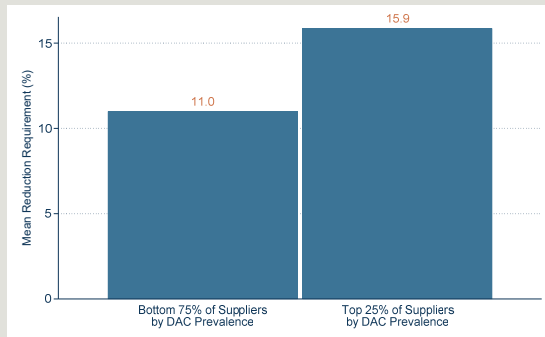
| Reduction Category | No. of OC Retailers |
|--------------------|---------------------|
| 0-5% | 10 |
| 5-10% | 7 |
| 10-20% | 8 |
| > 20% | 4 |

COMPLIANCE COST (\$/CONNECTION/YR)

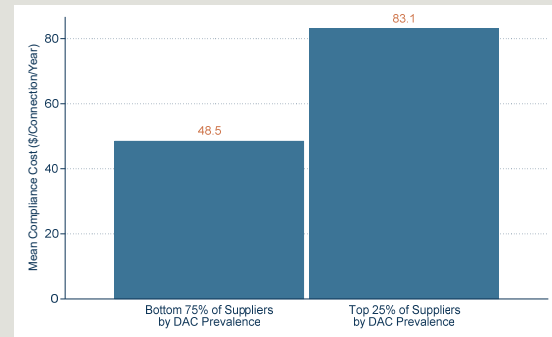
| Cost Category | No. of OC Retailers |
|---------------|---------------------|
| < \$0 | 9 |
| \$0-25 | 8 |
| \$25-50 | 6 |
| > \$50 | 6 |

Standards Disproportionately Impact Suppliers with High DAC Prevalence

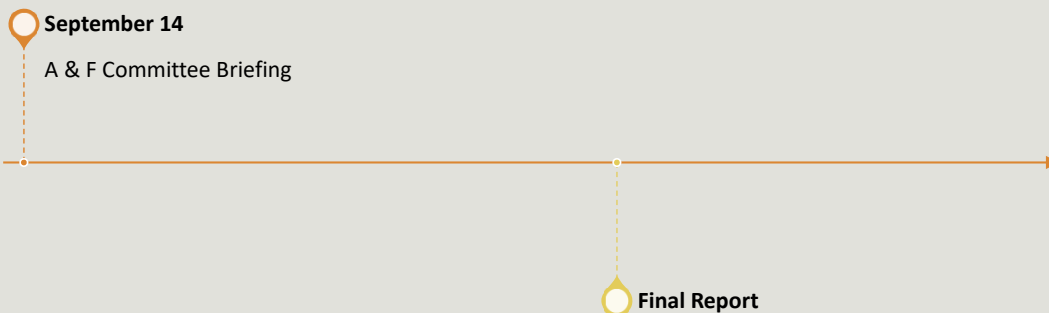
Mean Reduction Requirement



Mean Compliance Cost (\$/Connection/Yr)



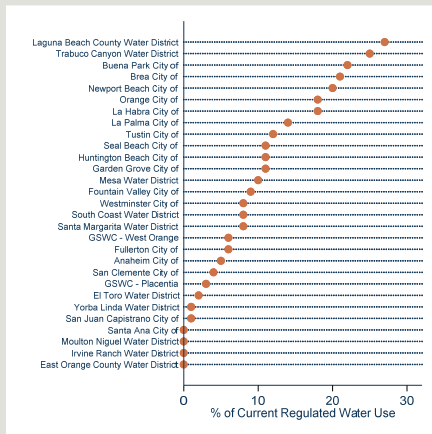
Next Steps



Q & A

Large Variation Across OC Suppliers (Based on DWR Data)

Reduction Requirement



Compliance Cost (\$/Connection/Yr)

