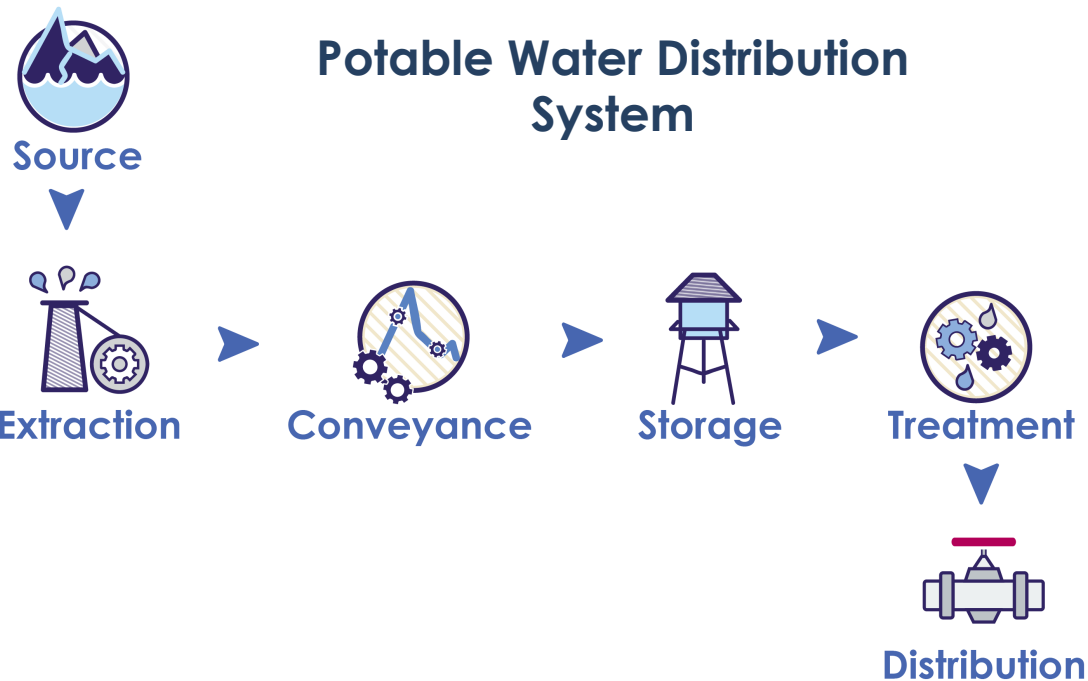


Water Conservation Leads to Energy and Carbon Savings

Why are water utilities not receiving credit?

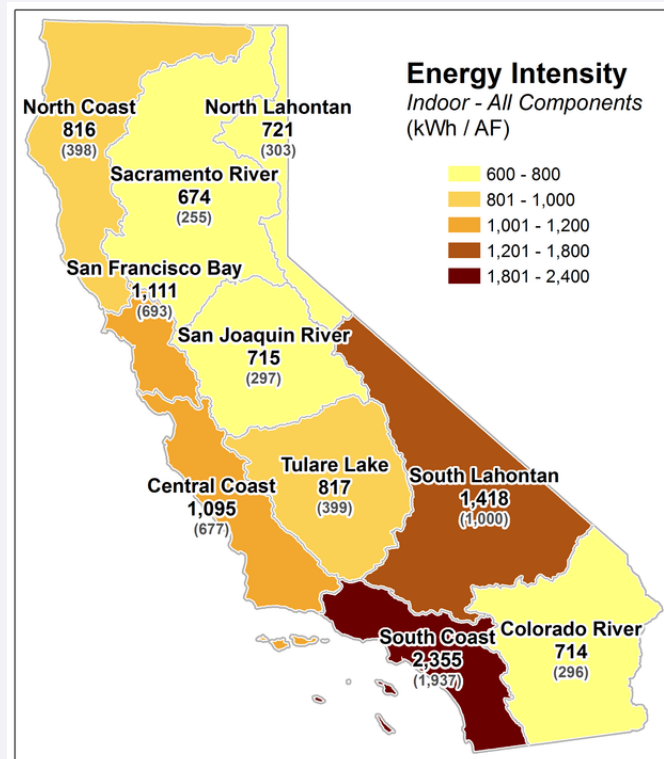
Kendra Olmos

Center for Water-Energy Efficiency
University of California, Davis



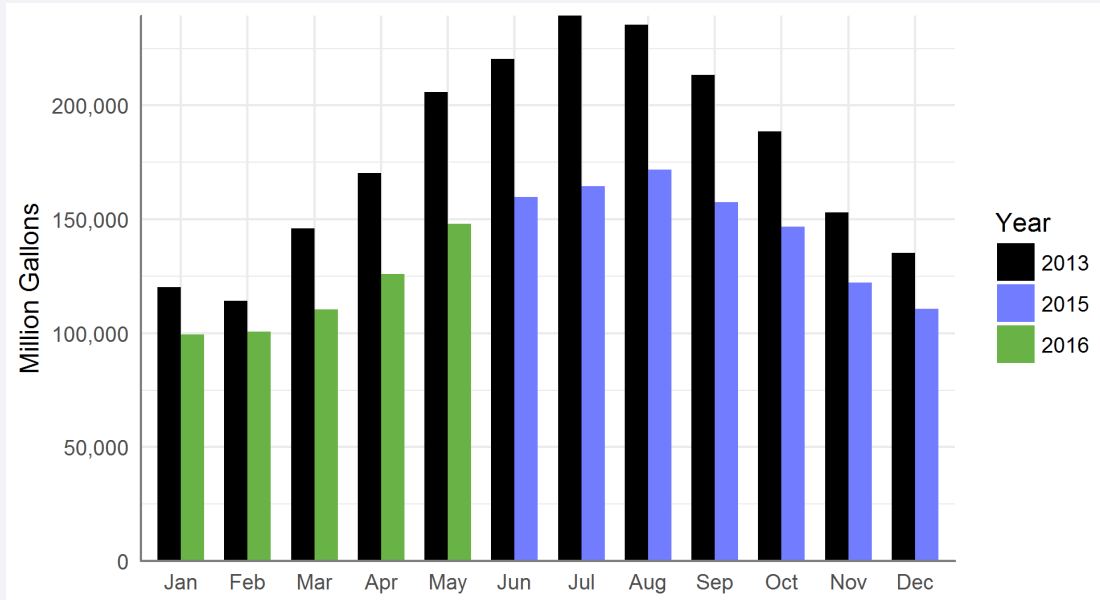
Source: Wilkinson, 2007

California Hydrological Zones' Energy Intensity

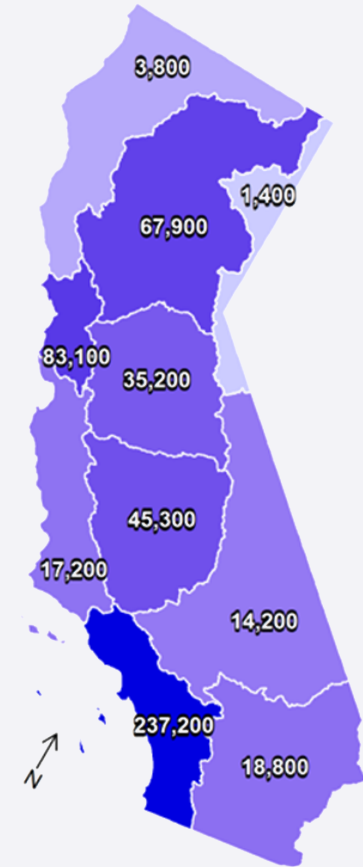


Data Source: Navigant (for CPUC), 2015
Image: CWEE, 2016

24.5% Savings

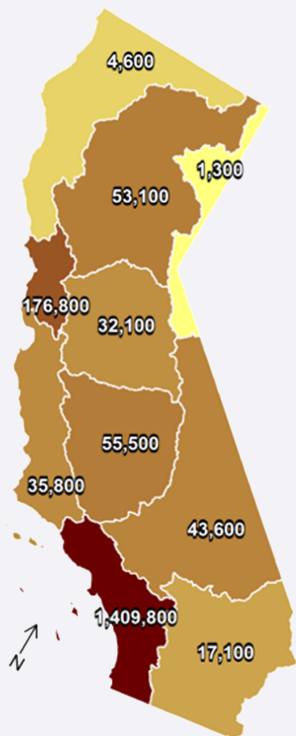


Total Water Savings 524,000 MG

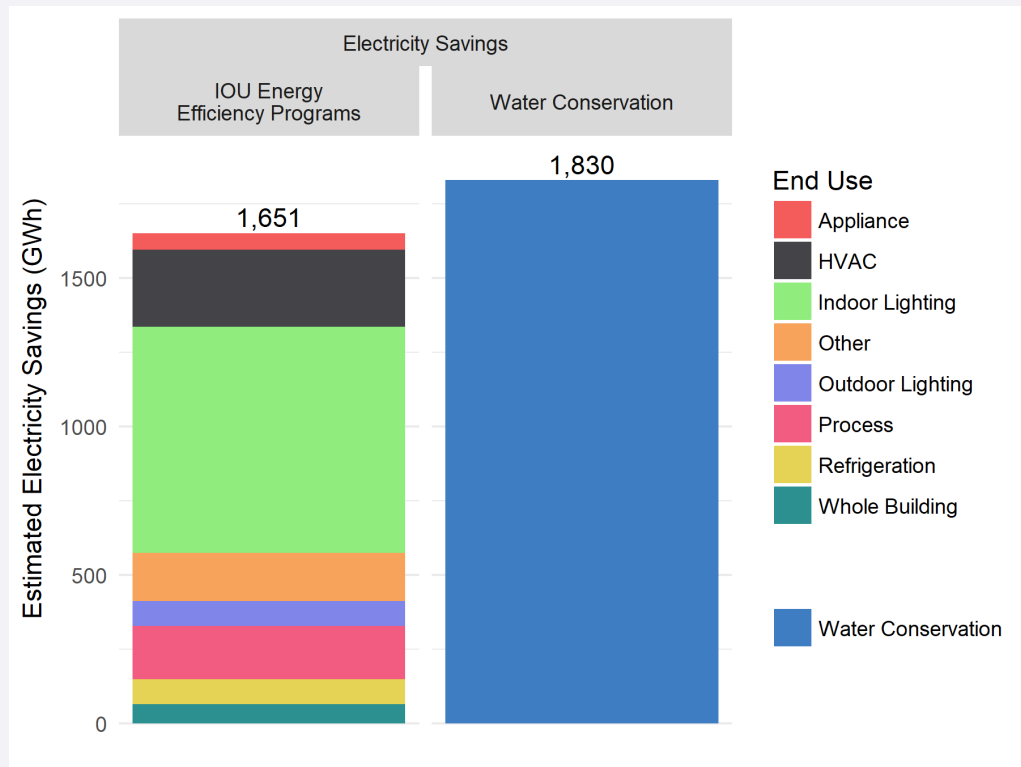
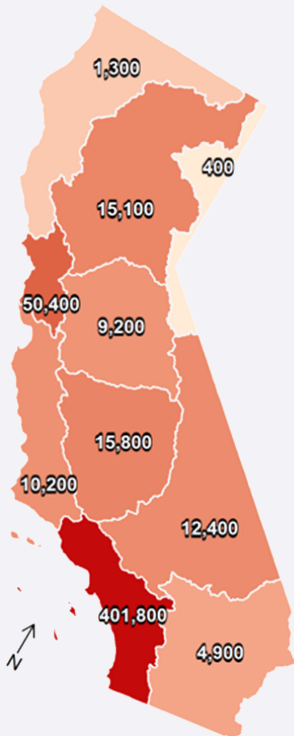


Conservation mandated statewide water reduction relative to 2013 baseline

Total Electricity Savings
1,830,000 MWh

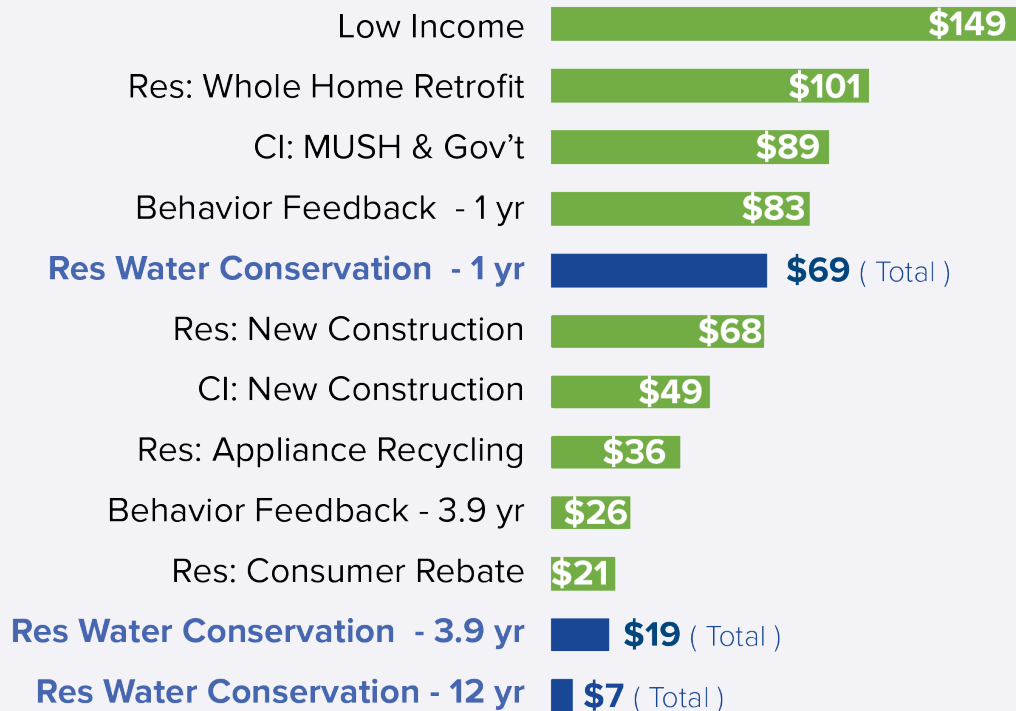


Total GHG Savings
521,000 MT CO₂e

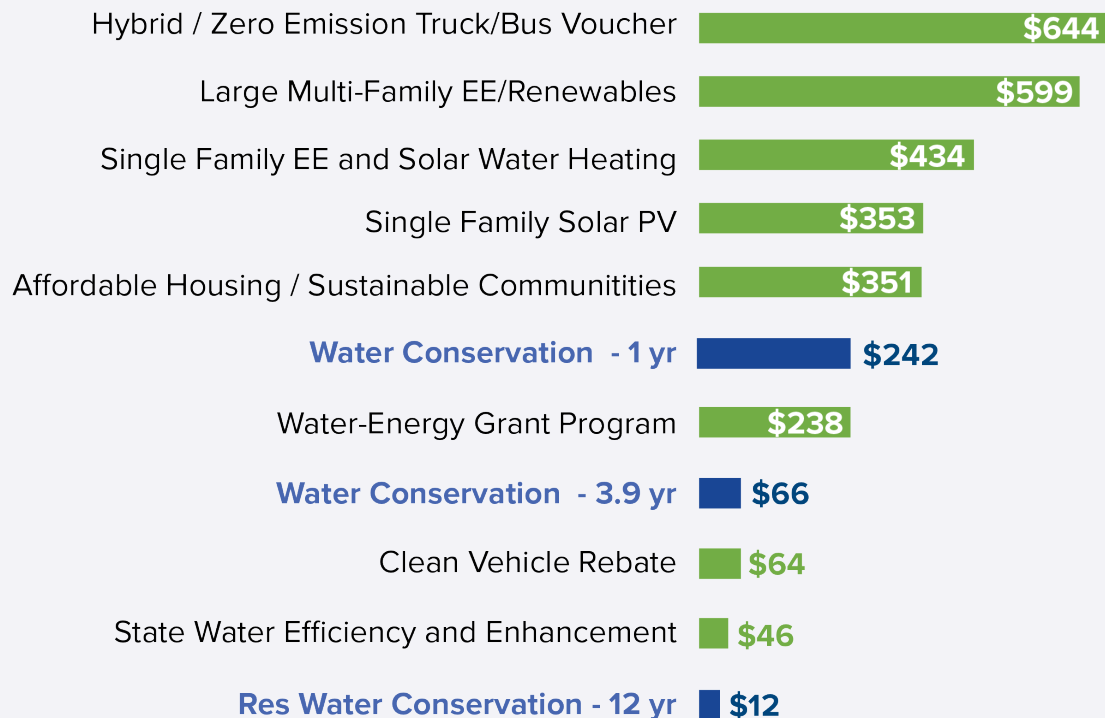


Estimated electricity savings from statewide water conservation (June 2015 – May 2016) vs. total electricity savings from IOU EE program savings (July 2015 – June 2016)

Levelized Cost of Electricity Savings (\$/MWh)



Levelized Cost of Carbon Savings (\$/MTY CO₂e)

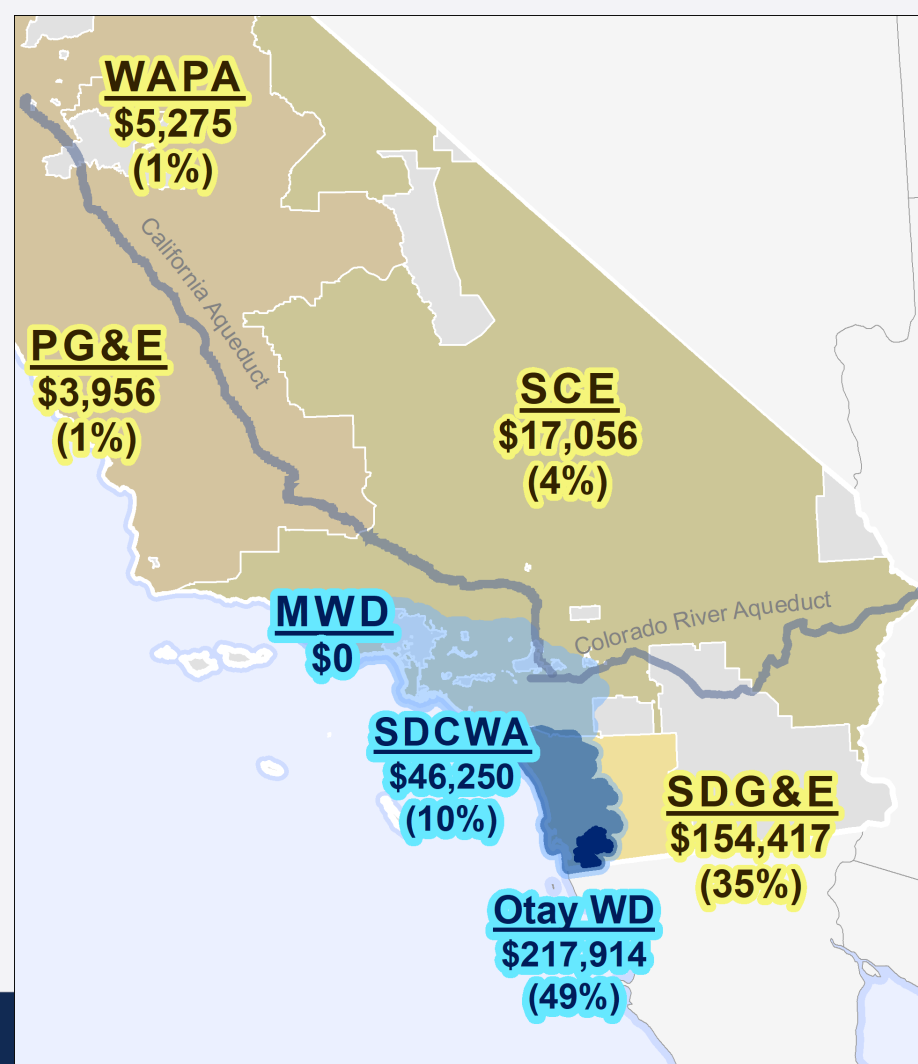


Cost of carbon savings through statewide water conservation relative to GGRF program investments

- Tracking Savings w/in Water Service Territory:
 - Common energy intensity metrics
 - Verify energy & carbon savings
 - CARB & CPUC approved
- Tracking Savings Upstream
 - Who benefits, who pays?
 - CPUC policy change



Otay Water Example



Direct Install Program



Total Cost: \$444,868

Who Benefits/Who Pays

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Thank you