

Urban Water Conservation: What's Next for California?

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AWE Board Secretary

Urban Water Conservation Workshop
State Water Resources Control Board
December 17, 2014



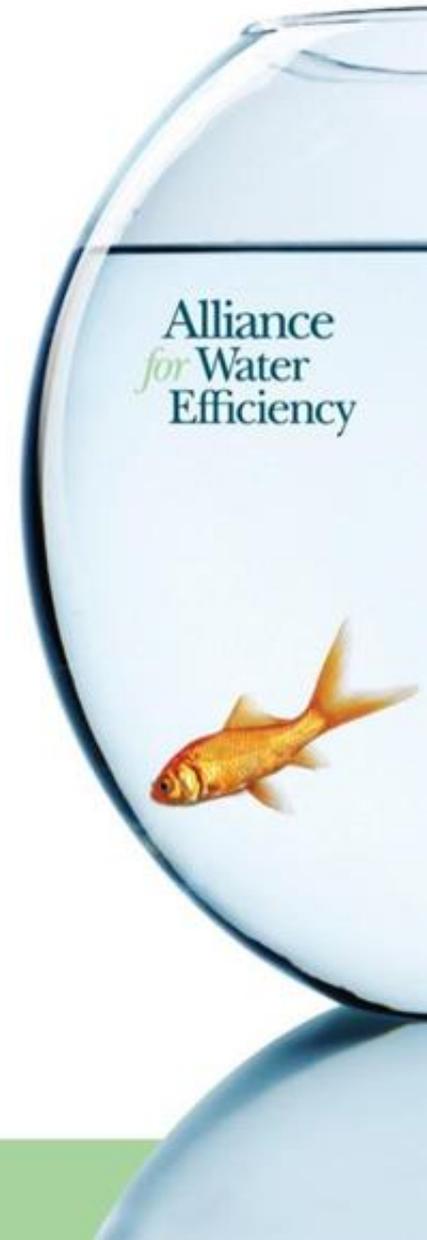
A VOICE AND
A PLATFORM
PROMOTING THE
EFFICIENT AND
SUSTAINABLE
USE OF WATER



Alliance *for* Water Efficiency

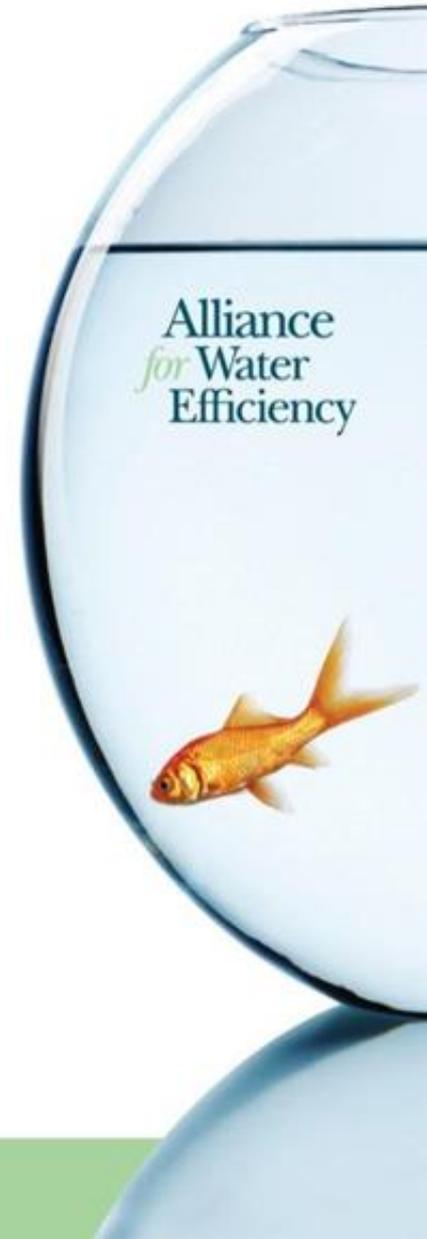
Alliance for Water Efficiency

- North American non-profit organization dedicated to the efficient and sustainable use of water
- Advocate for water efficiency policies, programs, best practices and research
- Provide technical assistance to water utilities and other water-using stakeholders
- Focus areas: water and energy, conservation rates, planning tools, research on outdoor water use
- Based in Chicago, but 26% of our members are in California



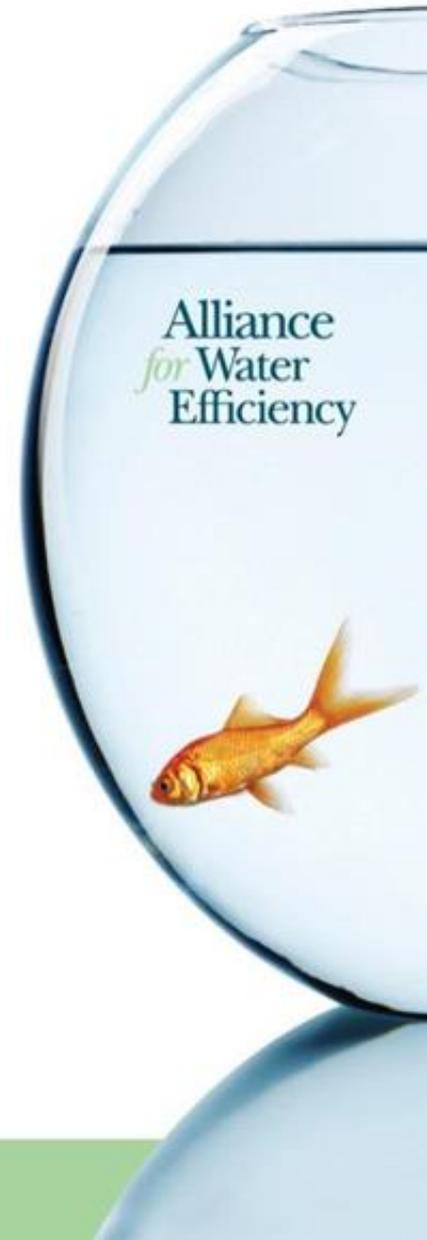
Issues to Cover

1. Measuring Reductions from Conservation Programs
2. Replacing Inefficient Plumbing Throughout the State
3. Reducing Outdoor Water Use
4. Reducing Water Loss in Water Distribution Systems
5. Designing Drought Rates
6. Designing Guidelines for New Development



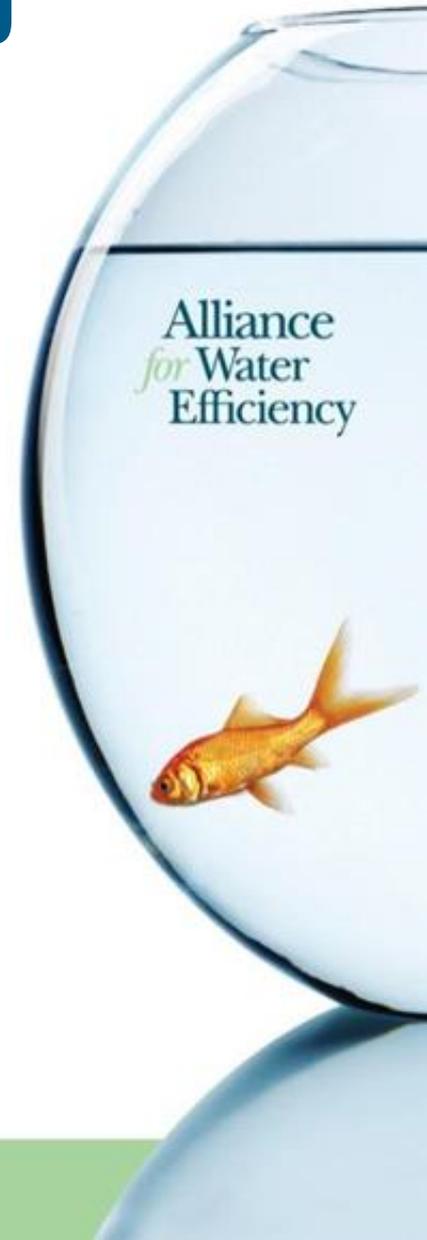
Measuring Reductions

- Comparing current monthly % reductions across all water providers is an imperfect metric
- Does not measure overall efficiency for the provider nor does it account for past reductions pre-drought
- Compare residential per capita numbers, but still adjust for local ET
- January residential per capita numbers will be more comparable since outdoor water use will distort the results as much



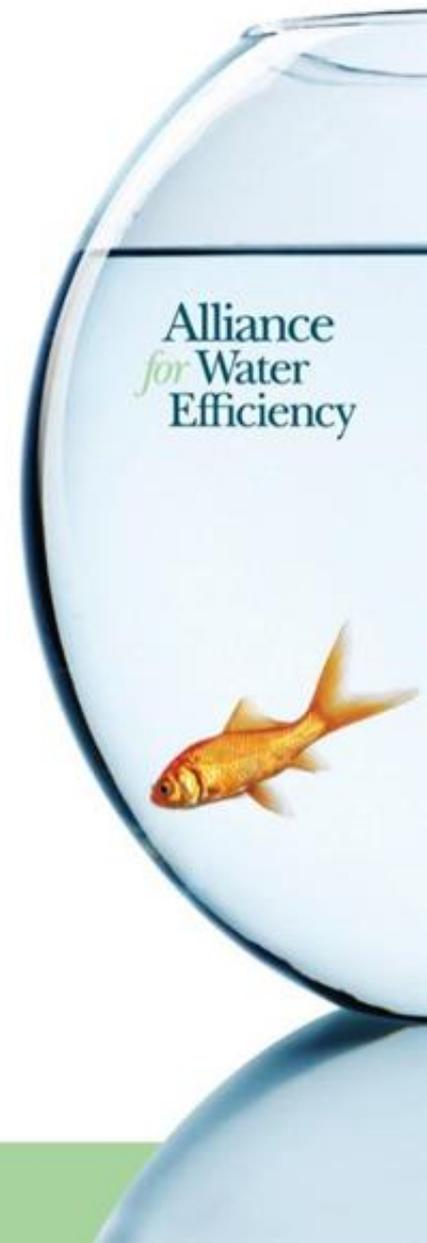
Replacing Inefficient Plumbing

- A significant water savings opportunity still exists in replacing existing high flow plumbing fixtures
- An estimated 4 million existing 3.5 gpf and 5.0 gpf toilets remain in CA homes
- Replacing those 4 million toilets in a statewide retrofit program could yield **90,000 AFY for 20 years**
- This totals **1,800,000 AF** of water at a cost as low as **\$333 per AF**
- This is highly cost effective water supply



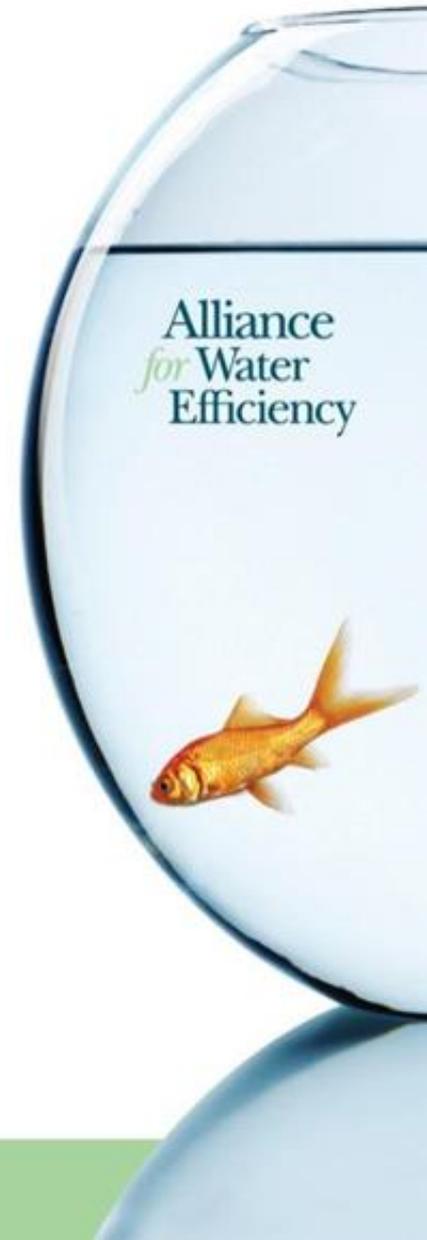
Reducing Outdoor Water Use

- Still our highest urban water use – in some parts of CA up to 80% of urban residential water use is urban outdoor irrigation
- More work needs to be done in this important area
- Drought restrictions not very effective if they allow 3 days a week watering
- Comprehensive standards are needed for irrigation equipment efficiency, landscape redesign, and outdoor water budgeting



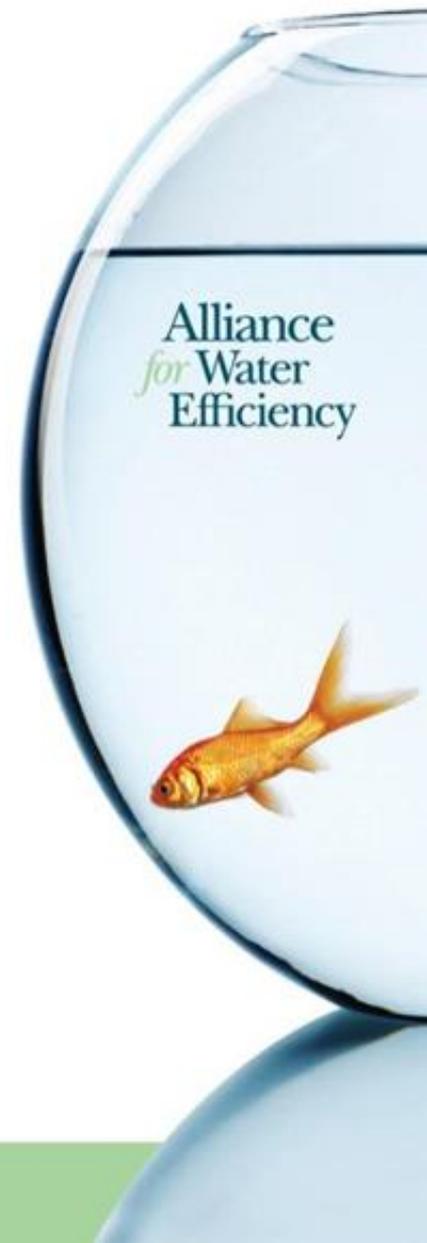
Reducing Water Loss

- New methods developed for water providers to measure their true non-revenue water, adopted by AWWA in the M36 Manual and software
- “Unaccounted for water” is no longer an acceptable term or practice
- % non revenue water comparisons across water providers do not measure system efficiency
- State Board should require annual M36 audits and tracking of performance indicators (e.g. gallons/connection/day)



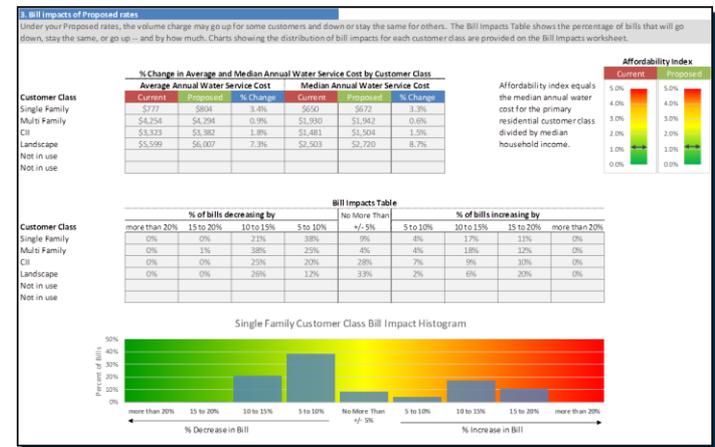
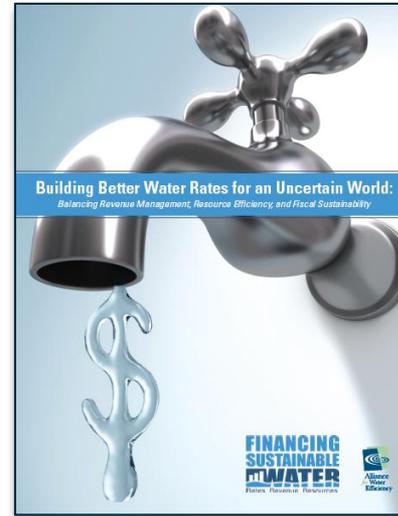
Designing Drought Rates

- Lower demand from drought restrictions means reduced sales revenue
- Reduced sales revenue can mean not fully collecting system fixed costs
- Drought Rates are effective if designed to encourage conservation but don't sacrifice revenue stability
- AWE has developed a program to assist California water agencies with a handbook and a rates model
- Regional Workshops could demonstrate the rates tools to water agency managers



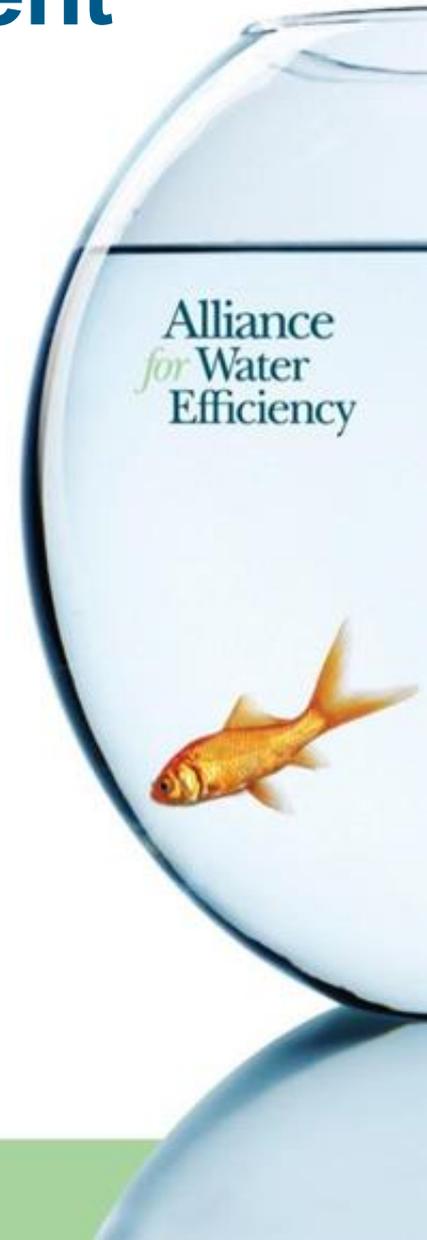
Financing Sustainable Water

- **Building Better Rates in an Uncertain World: A Handbook to explain key concepts, provide case studies and implementation advice**
- **AWE Sales Forecasting and Rate Model: An innovative, user-friendly tool to model scenarios, solve for flaws, and incorporate uncertainty into rate making**
- **Financing Sustainable Water.org: Web-based resources to convene the latest research and information in one location**



Guidelines for New Development

- New construction should maximize water reuse on site
- AWE developing a new overlay land use ordinance for “water neutral” development
- Adoption by local communities would be voluntary
- New development would need to “offset” their water use by retrofitting somewhere else in the service area, reusing all water on site, or storing rain and storm water for irrigation use
- Ordinance will be ready in 2016

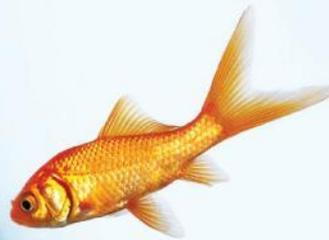




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