

Urban Water Measures for Mega-Drought Times



Timothy Brick
Secretary of the Board
Alliance for Water Efficiency



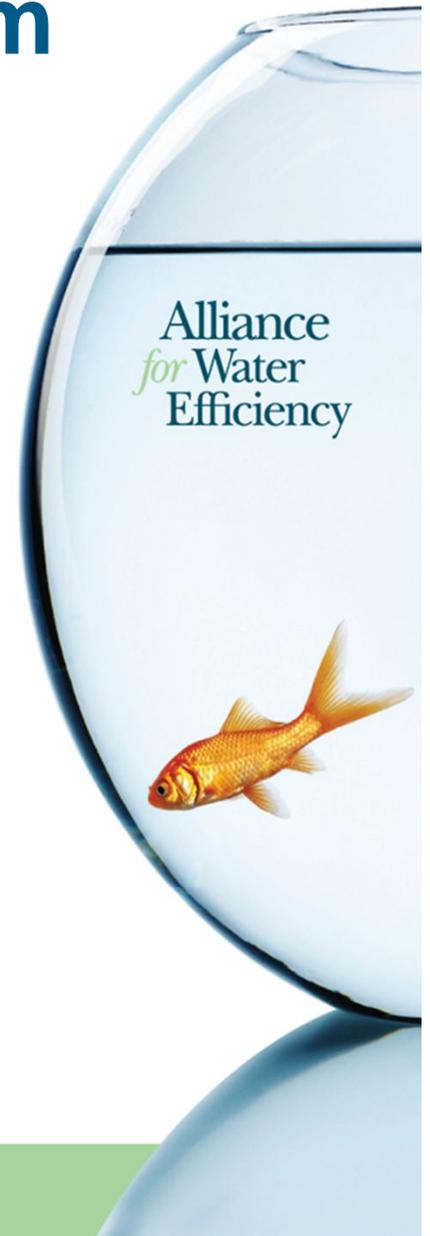
Alliance *for* Water Efficiency

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



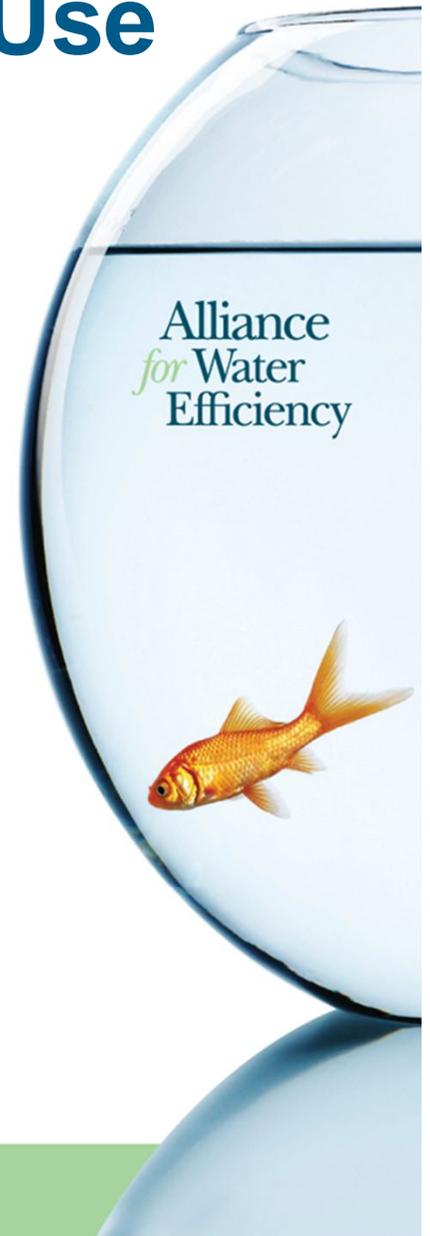
We Are in a Different Paradigm

- California has a 30 year history of aggressive conservation activity
- This epic drought calls for even more aggressive water efficiency measures:
 1. *Consumers need to be more engaged*
 2. *Curbing outdoor water waste is critical*
 3. *Indoor fixture retrofits will yield additional trackable savings*
 4. *Water agency leakage must be reduced*
 5. *Funding must be provided*
 6. *Revenues must be kept stable*



Misconceptions about Water Use

- Consumers do not realize how much water they use and where
- Outdoor water use is more than 50% of residential consumption
- Indoor leaks are 14% of indoor consumption
- Plumbing fixtures/clothes washers are 82% of indoor consumption
- “Turning off the tap while you brush your teeth or shave” is not a major conservation savings (maybe 4-5 gallon savings at most)





HOW MUCH WATER DO
YOU REALLY USE?

FIND MY WATER USAGE ▶



Explore Water Conservation With Our Water Use Calculator

Want to conserve water? Not sure where to start? Our Water Calculator quickly estimates how much water your household uses and compares it to a similar average and a highly efficient home.

The Water Calculator also shows you where to begin your home water conservation efforts. Throughout Home Water Works, you'll find useful tips and resources for saving water and money without sacrificing comfort or convenience.

How much
water do you use?



Get the bottle that will
CHANGE THE WAY
you think about
WATER.

Join our Never Waste
Campaign. [Click Here](#) ▶

Does Your Landscape Have a Drinking Problem?

Read about [outdoor water conservation](#) for helpful information on how to keep your landscape looking beautiful while staying water efficient.

Quick & Easy Tips For Saving Water at Home and Work

Looking for quick and easy ways to save water? Read our [water conservation and saving tips](#) to see how easy it can be to conserve water at home and in the workplace!

How much water do you use?



Let's Get Started!

Click an area on the home to input how much water you use, and learn how you can conserve water there. Answer for yourself only, and assume you are in your home for a 24-hour cycle.



My Daily Usage

Roll over for results



Carbon Footprint:

(lbs. CO2 /year)

Percent Complete



Areas to Complete

Roll over for number of questions



How much water do you use?



Using water in the bathroom

Click on one of the question marks to see if this is where your water is going.



How much water do you use in the bathroom?

The typical person in my household takes _____ showers per week at home.

4

Next Question

My Daily Usage

Roll over for results



Carbon Footprint:

(lbs. CO₂ / year)

Percent Complete



Areas to Complete

Roll over for number of questions



How much water do you use?

Choose another area

Click an area on the home to input how much water you use, and learn how you can conserve water there.

Category	My House	Average House	Water-Wise House
Toilet use	14590	21170	12210
Clothes washer use	8860	18350	8860
Shower use	8810	14450	8810
Faucet use	10500	12540	10500
Leaks	8240	10300	8240
Other/Miscellaneous use	3490	3490	1000
Bathtub use	5980	1490	5400
Dishwasher use	1330	1250	1330
INDOOR WATER USE	61790	83040	45340
HOT WATER USE	18410	24750	13510

Facebook Twitter Learn about how the Water Calculator works [here](#).

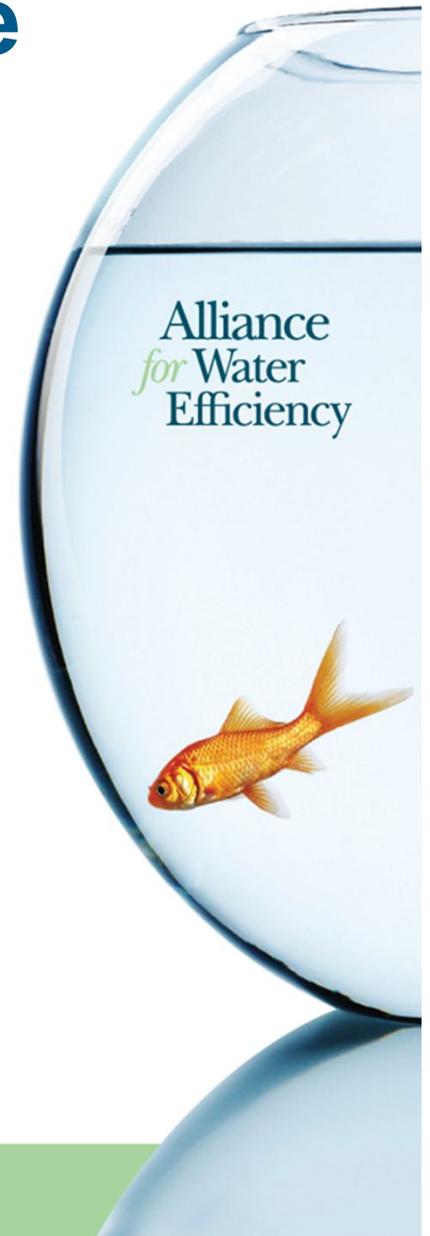
Carbon Footprint:

(lbs. CO₂ /year)

Show Results

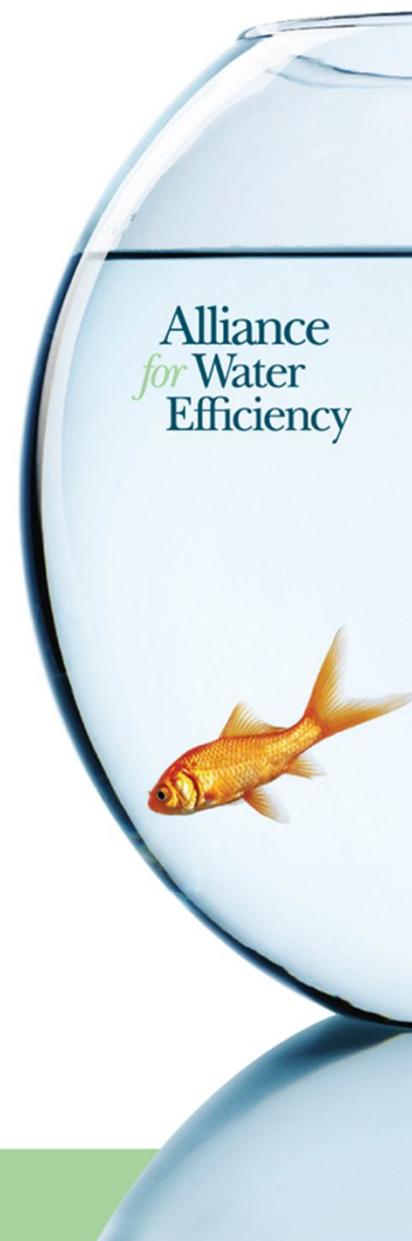
Curbing Outdoor Water Waste

- Over 50% of residential water use is outdoor landscape watering
- Most outdoor irrigation is highly inefficient
- Curbing outdoor water waste is critical
- Adoption and aggressive enforcement of outdoor watering schedules and water waste ordinances must be common practice in every water supplier district
- This fundamentally discretionary water use may have to be sharply curtailed if the drought continues



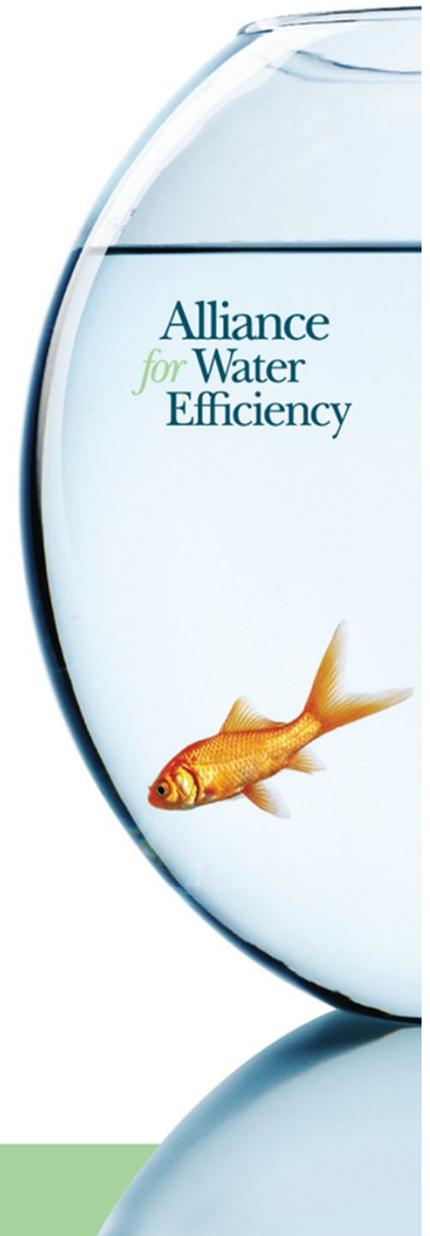
The Magic of Indoor Retrofits

- Outdoor water use may need to be eliminated
- But indoor fixture retrofits can yield significant additional savings, particularly in northern California where large scale retrofit programs are not already widespread
- One single-family toilet replacement will immediately yield over 9,000 gallons/year
- One multi-family toilet replacement will immediately yield almost 13,000 gallons/year



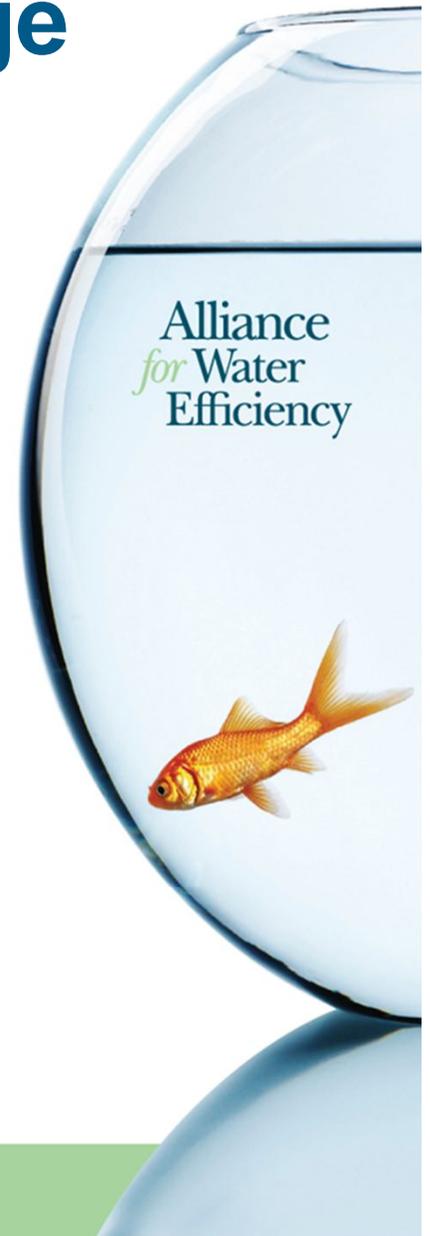
How Does that Add Up?

- Imagine a 2 year toilet retrofit program in 2014-2015
- If 500,000 SF toilets are replaced statewide
- If 500,000 MF toilets are replaced statewide
- **TOTAL SAVINGS: 33,939 AF PER YEAR**
- These savings are permanent savings irrespective of behavior
- These savings are in addition to drought restrictions
- Commercial users should also be retrofitted



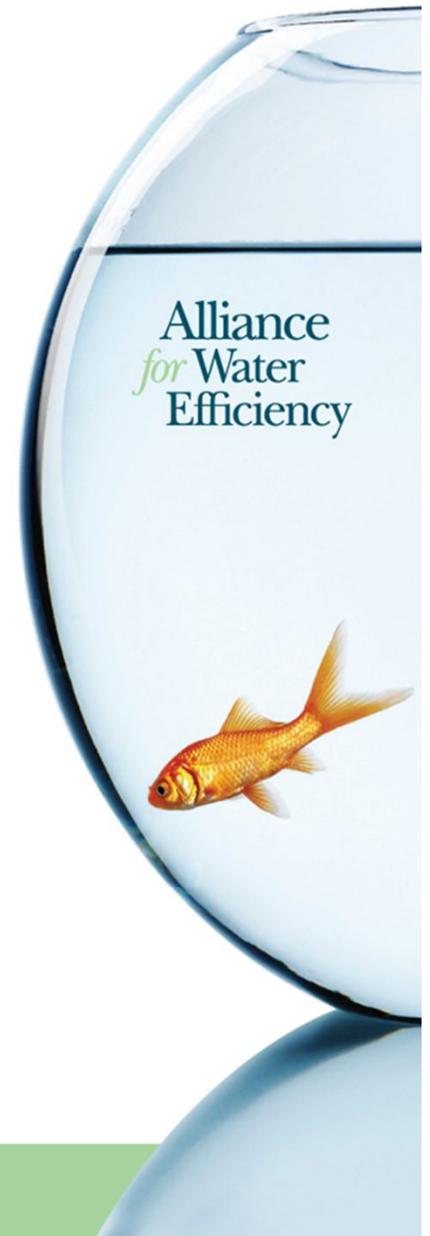
Reduce Water Agency Leakage

- It is difficult to ask consumers do to without when water agency distribution systems are leaking 10% or more water
- Recovering leaks is a cheap form of supply
- Checking for meter errors improves accuracy and collects additional revenue from customers
- Leak detection found by CPUC to save the most energy of any cold water conservation program



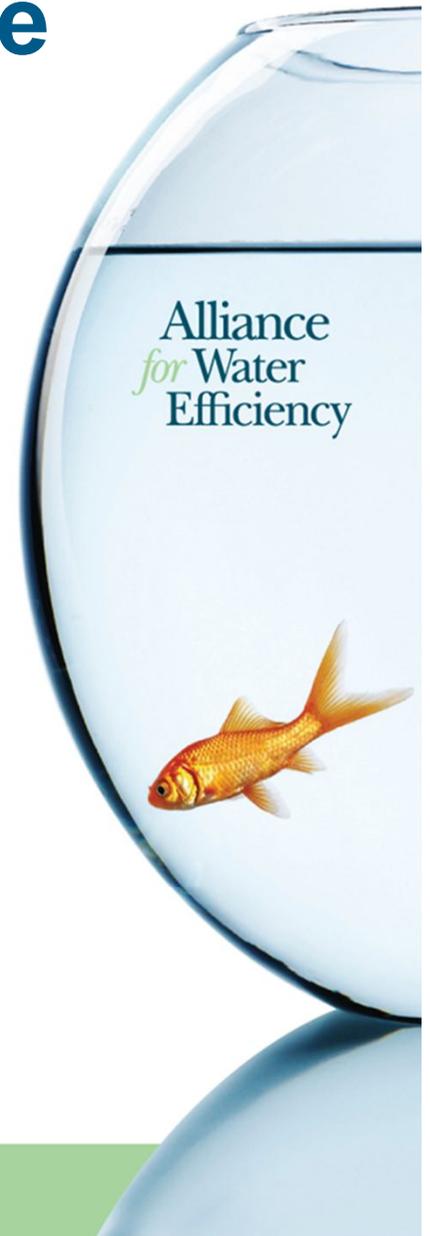
Funding Will be Needed

- A massive statewide retrofit program as well as leakage recovery should be funded with legislatively provided emergency funding
- The funding should be apportioned to those areas in most danger of severe shortages or future rationing
- Indoor and outdoor retrofitting should be the most important message to consumers rather than just behavioral changes
- Rate penalties could be charged where customers still have inefficient fixtures



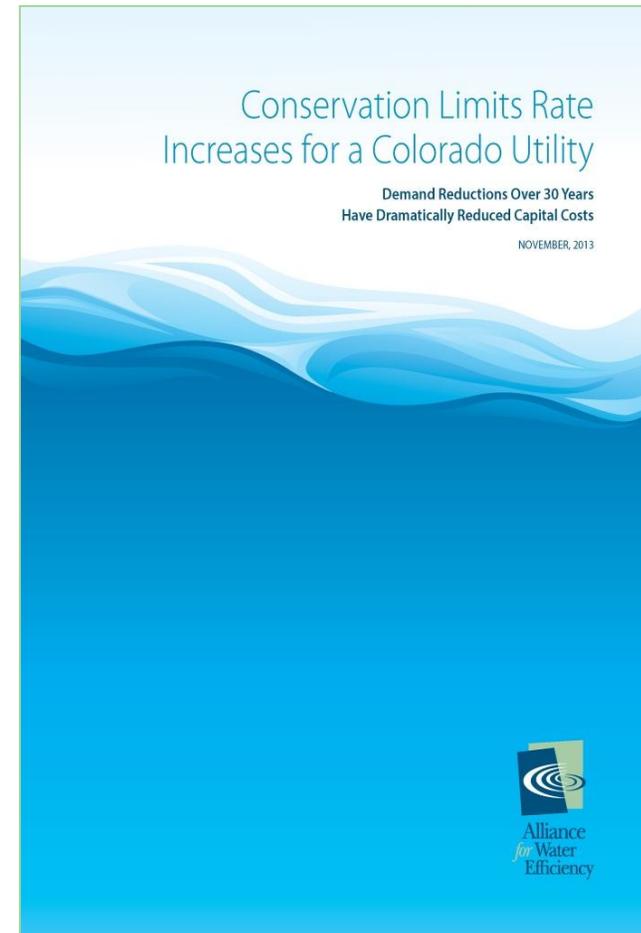
Revenues Must be Kept Stable

- Reduced demand will mean reduced water sales
- Many water agencies will be in trouble and unable to meet their system's fixed costs
- Revenue stabilizing mechanisms should be adopted immediately (i.e. drought surcharges, rate adjustments)
- Consumers must be educated that conservation is a long term cost reducer



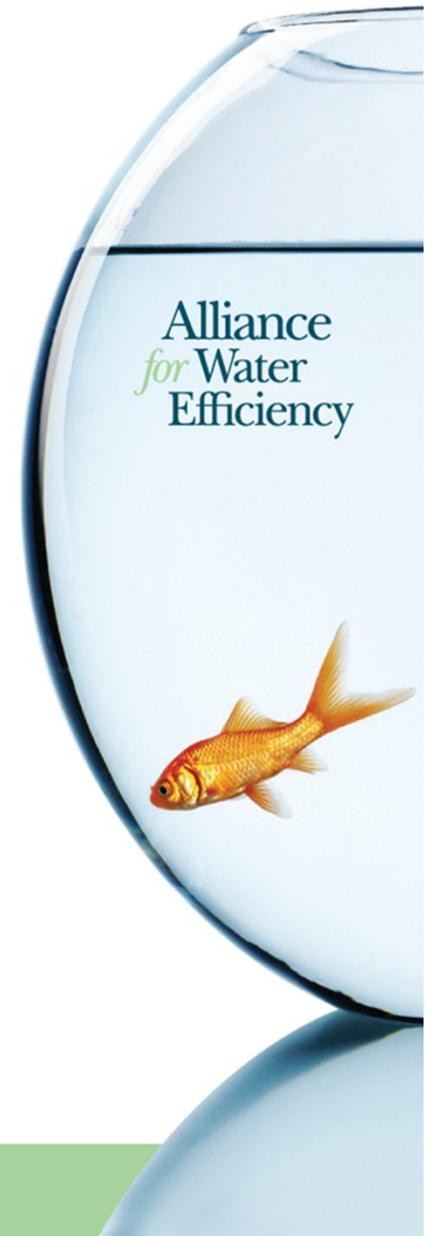
Financial Benefits of Conservation

- In Westminster Colorado, citizens complained about rate increases “due to conservation”
- Westminster reviewed marginal costs for future infrastructure if conservation had not occurred
- Since 1980 conservation has saved residents and businesses 80% in tap fees & 91% in rates compared to what they would have been without conservation
- Report posted: www.a4we.org



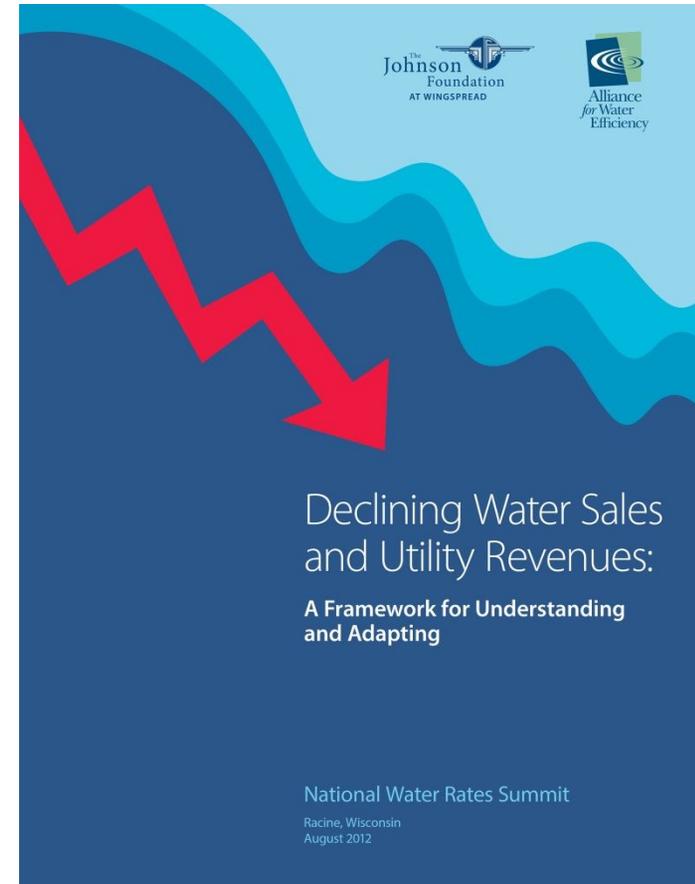
AWE Wants to Help

- North American non-profit dedicated to efficient and sustainable use of water
- 399 Member organizations
- 105 members in California – largest number of members of any state
- AWE provides technical assistance on conservation program planning & implementation
- AWE's Water Conservation Tracking Tool is used by many California water agencies to track their 20x2020 compliance



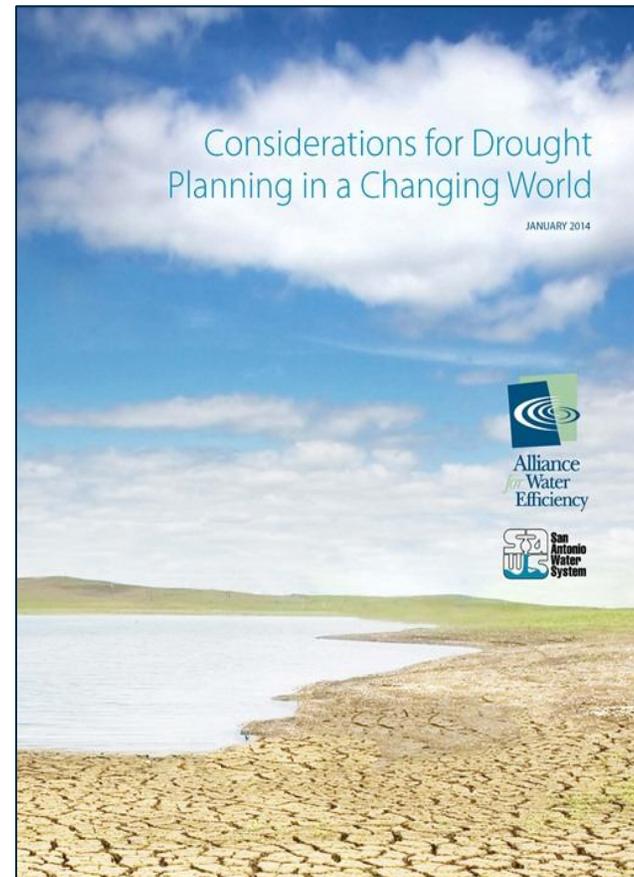
AWE Is Involved in the Rates Issue

- August, 2012 Rates Summit with rate experts, utility CFO's and economists
- Summary and background paper posted at a4we.org
- Follow-up project on solutions to problems identified
- Rates Handbook and Rates Model coming in June, 2014
- Digital Resource Hub online in Fall, 2014



AWE Drought Paper

- Recommendations for water supplier actions during prolonged mega- droughts
- Includes case examples
- Posted on AWE Website on Drought Introduction Page:
- <http://www.allianceforwaterefficiency.org/Considerations-for-Drought-Planning.asp>



Assessing Industrial Water Use Efficiency

The Alliance for Water Efficiency, with funding from the Great Lakes Protection Fund, assessed five representative industries within the Great Lakes watershed that are supplied with treated drinking water and that discharge to a local wastewater utility. Both water conservation savings and environmental benefits were documented. [Learn more here.](#)



AWE Publishes Results of Declining Water Sales Summit

In August 2012, AWE and The Johnson Foundation at Wingspread co-hosted a summit with water utility managers, rate experts, price regulators, economists, and advocacy groups to explore the issues surrounding declining water sales, utility revenue losses, and the impact on conservation programs. A report including the summit results, as well as a detailed background framing paper, can be downloaded [here.](#)



Supply Shortages Looming: Colorado River Basin Water Supply & Demand Study

The Colorado River - lifeblood of 7 western U.S. states - will not provide enough water to meet future demand according to a new study. The Colorado River Basin Water Supply and Demand was released by the U.S. Bureau of Reclamation in December after three years of research. The study forecasts a significant gap between available supply and the expected demands of a growing population within 50 years. [Learn more here.](#)



Calendar of Events



- | | |
|-----------|---|
| 1/9/2013 | WEAN-CRB Webinar: Water Efficiency and the Colorado River Basin Study Options |
| 1/15/2013 | IWA Efficient 2013 Conference Submission of Abstracts Deadline |
| 1/15/2013 | U.S. Water Alliance Webinar: Knowing Your Watershed and Assessing Potential Environmental, Economic, and Social Impacts |
| 1/16/2013 | PERC Webinar: Drainline Transport of Solid Waste in Buildings |
| 1/18/2013 | WSI 2013 Submission of Abstracts Deadline |

How Much Water Do You Use?



[Click Here to Learn More](#)

Latest Information



-  [Water Efficiency Watch Newsletter November 2012](#)
-  [Colorado River Basin Water Supply & Demand Study Released](#)
-  [JOBS BOARD](#)
-  [AWE Water Conservation Tracking Tool](#)
-  [ISAWWA Water Utility Survey Report March 2012](#)
-  [FedCenter.gov Announces New Water Efficiency Program Area](#)
-  [USGS Report - Estimated Use of Water in the U.S. in 2005](#)
-  [Executive Order Sets Water Efficiency Goal for Federal Agencies](#)
-  [Water Use Efficiency Guide for New](#)



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