

# This presentation premiered at WaterSmart Innovations

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# Offsetting the Impact of New Development with Efficiency: A Review of Municipal Water Demand Offset Policies Throughout the U.S.

Bill Christiansen  
Program Manager

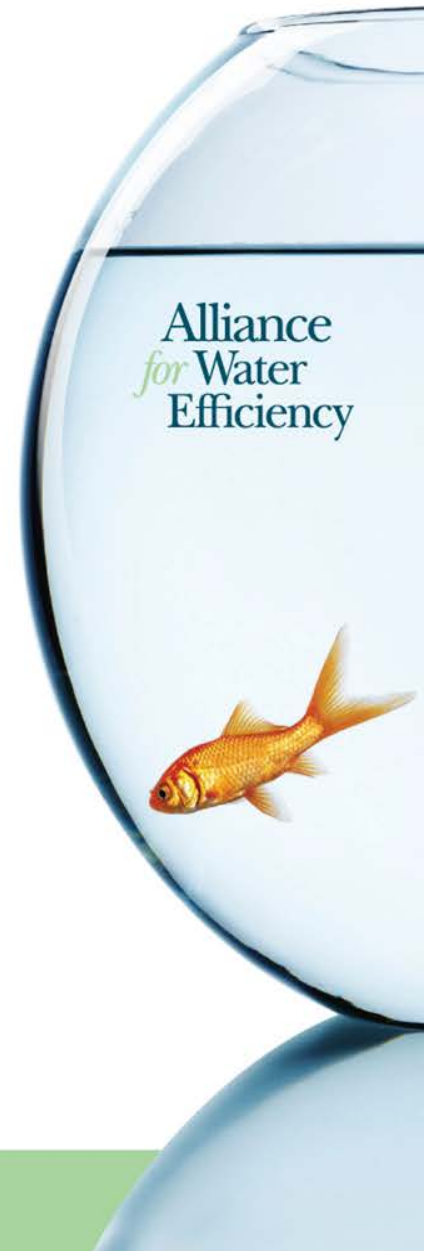
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# Background

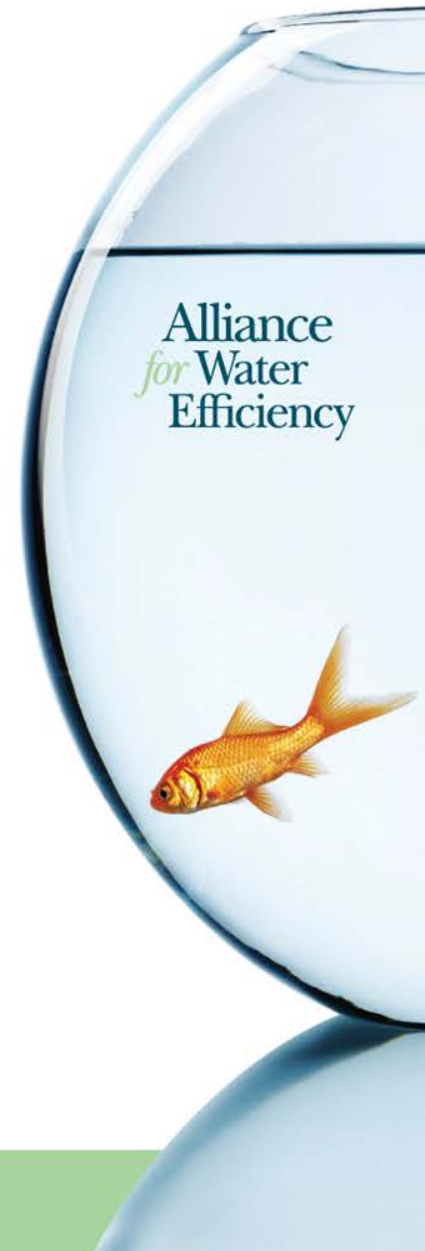
- In 2013/2014 AWE conducted research related to water demand offset policies
  - Reviewed terminology
  - Reviewed literature
  - Reviewed existing and past policies
  - Posted draft paper on AWE website (accepting feedback until November 1, 2014)  
<http://a4we.org/water-offset-draft.aspx>
- Funded by the Walton Family Foundation
- Provided basis for the future development of a model ordinance with additional partners





# Terminology

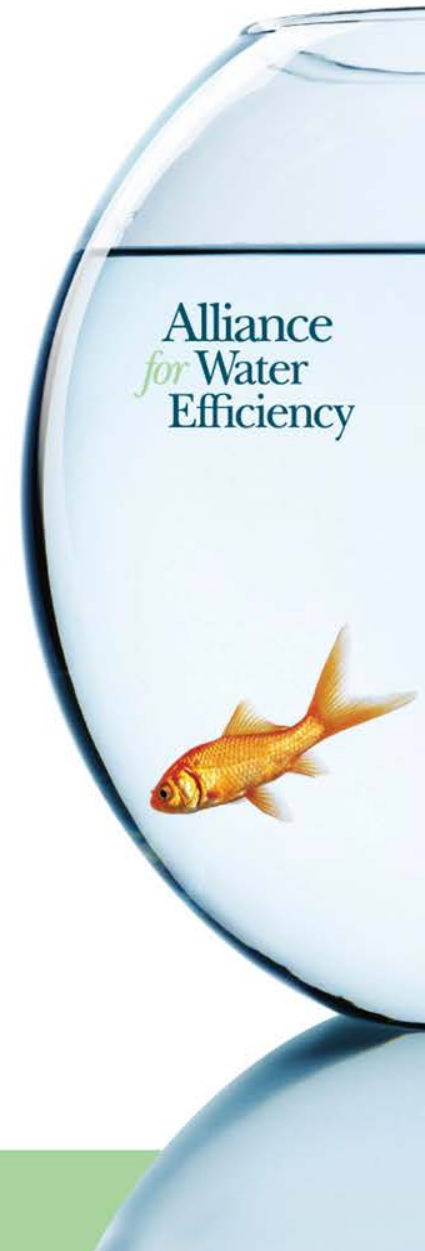
- Zero Water Footprint
- Net Zero Water
- Water Offset or Water Demand Offset
- Water Credits
- Water Bank or Water Banking
- Water Neutral Development
- Water Neutral Growth





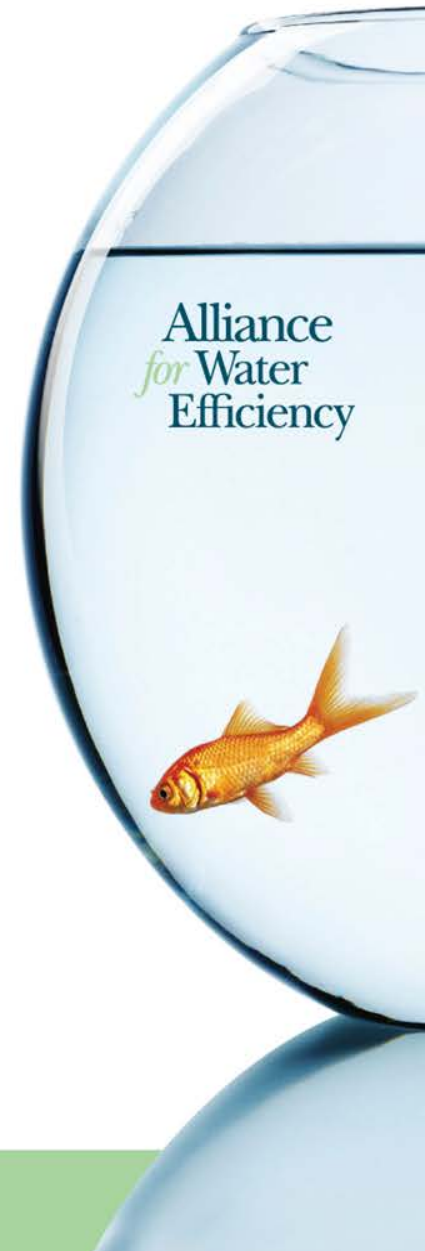
# Types of Policies

- Offset requirements for new development
- Offset requirements for expanded use of existing connections
- New development fees to fund efficiency programs
- Water bank
- Offsets only required for development requiring annexation



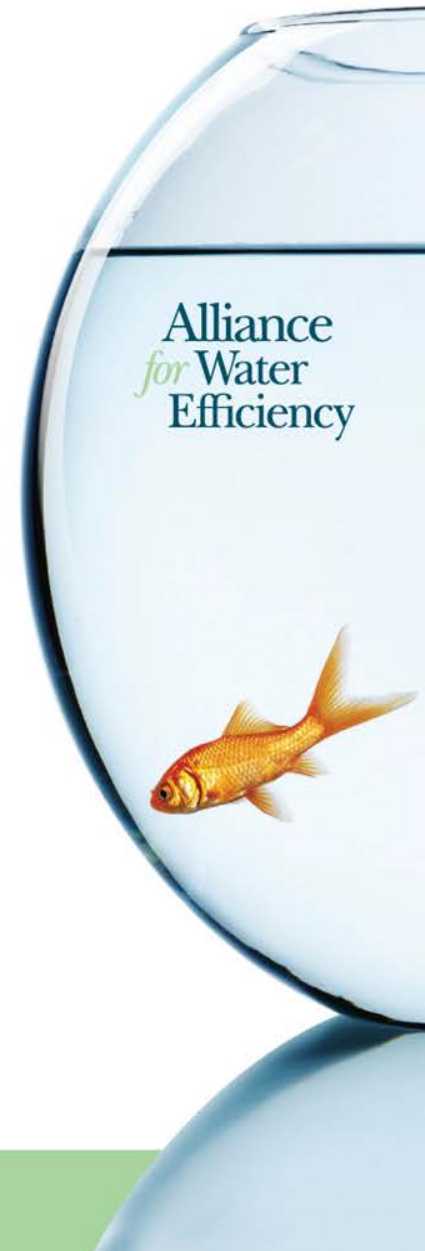
# Past Programs Identified

- City of San Luis Obispo, California (~1990-2005)
- Abington Rockland Joint Water Works, Massachusetts (Ended 2004)
- City of Ojai, California
- Town of Sharon, Massachusetts (bylaw drafted, not implemented)



# Current Programs Identified

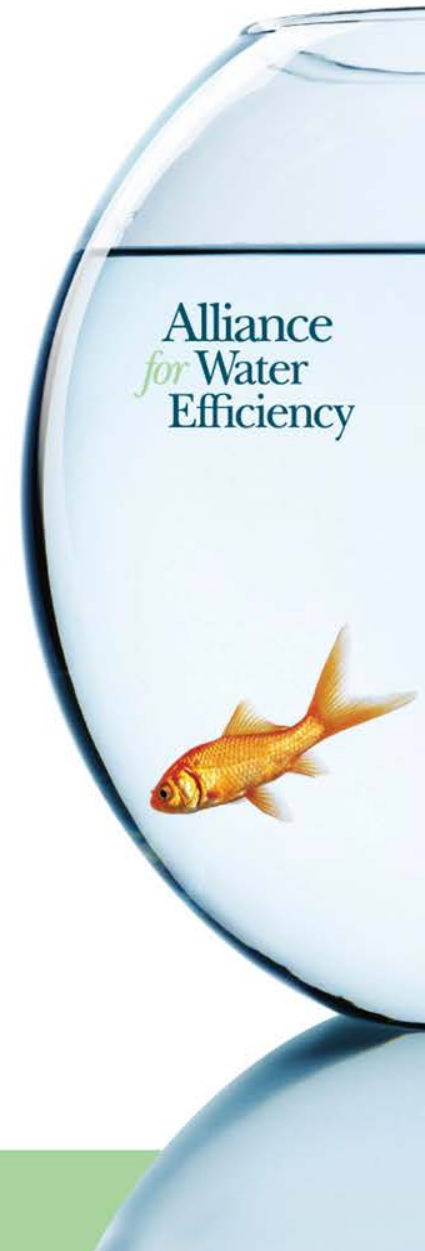
- Village of Cambria, California
- Town of Danvers, Massachusetts
- East Bay Municipal Utility District, California
- City of Lompoc, California
- Monterey Peninsula Water Management District, California (water use credits, not offsets)
- City of Morro Bay, California
- City of Napa, California
- City of St. Helena, California
- City of Santa Fe, New Mexico
- The Soquel Creek Water District, California
- Town of Weymouth, Massachusetts





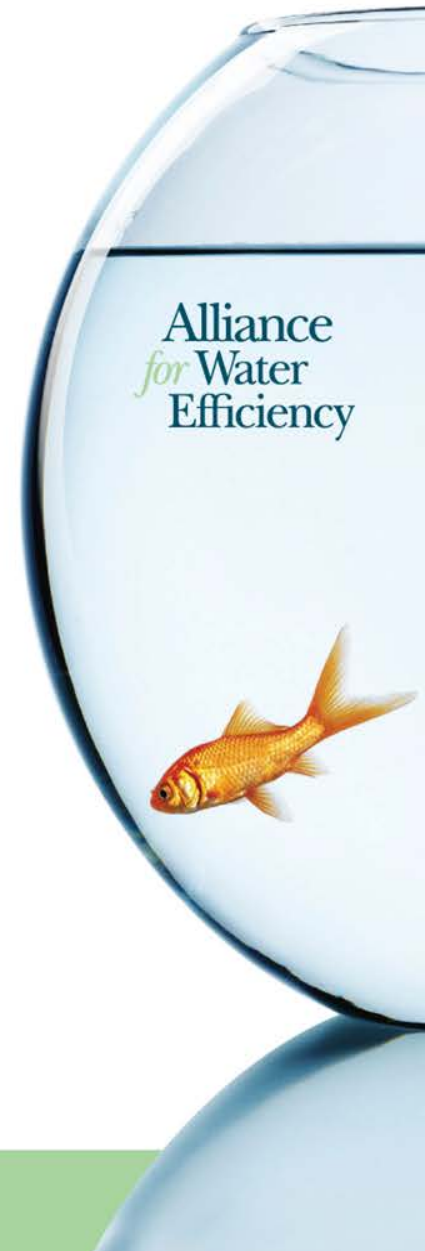
# Danvers, Massachusetts

- Service area population 26,493
- Fees to offset new or expanded use as a condition of its water permit
- Efficiency requirements for new construction
- Fees based on size of dwelling for residential \$1,980 per bedroom
- Fees are \$9.00/gpd for commercial
- Danvers uses offset fees to fund rebates:
  - Toilets
  - Clothes washers
  - Showerheads
  - Faucets
  - Rain sensors for existing irrigation systems
- 2:1 offset ratio



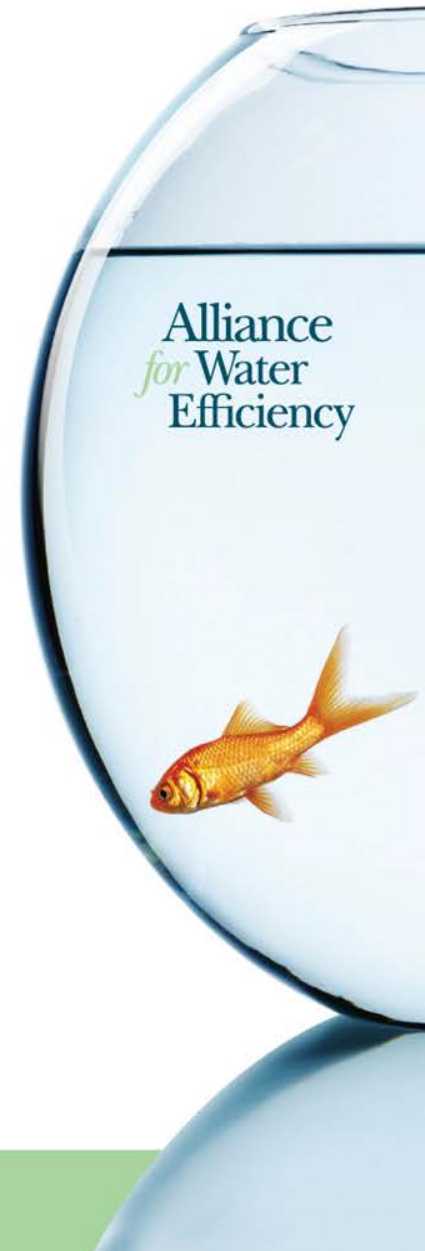
# East Bay Municipal Utility District, California

- Service area population approximately 1.3 million
- Water demand offsets have been required for new development requiring annexation
- New development within the service area does not require water demand offsets, but there are efficiency requirements
- Offsets via on-site and off-site water conservation, and recycled water
- Covenants, conditions, and restrictions for development to ensure the on-site conservation remain permanent



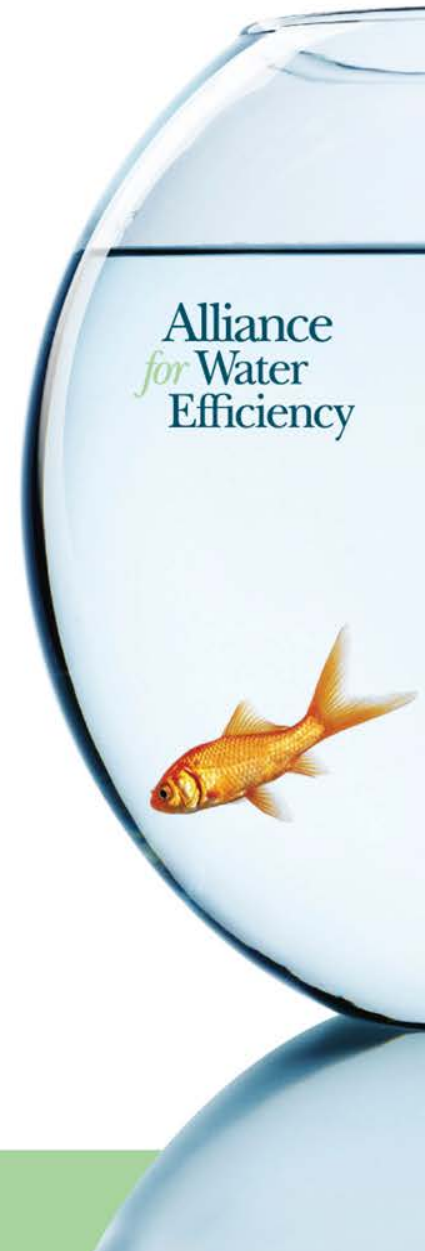
# Santa Fe, New Mexico

- Service area population ~68,000
- Has a water bank that contains accounts of consumptive water right holders, holders of water credits, and water conservation credits
- Water demand offset for new development projects via credits or water rights transfer
- Water budget must be approved by the Water Budget Administrative Office
- Offset amount is equal to the water budget plus an additional 9.8 percent, “contingency water”



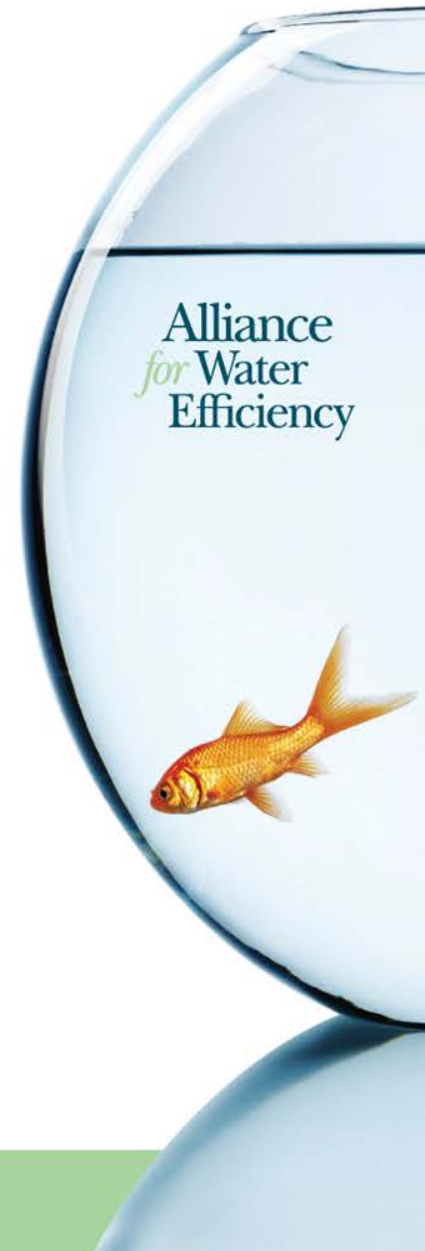
# Soquel Creek Water District, California

- Service area population 37,720
- Offsets required for all development requiring new water service, and projects that will increase demands of an existing connection
- Offset credits are achieved through replacing 1.6 gpf and greater toilets with toilets that use 1.0 gpf or less
- Green credits can also be earned
- Developers are required to offset 160 percent of the projected water demand
- Very thorough verification process, requires licensed plumbers to install toilets



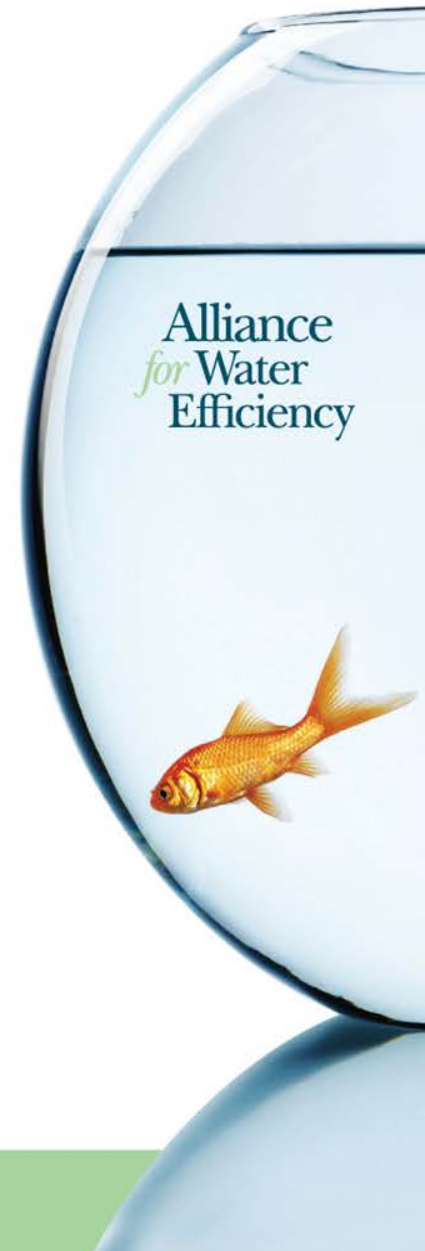
# Policy Components

- Demand calculation methodology
- Offset calculation methodology
- Offset ratio
- Demand mitigation options
  - On-site efficiency measures
  - Off-site efficiency measures
  - On-site recycled water use



# Policy Components

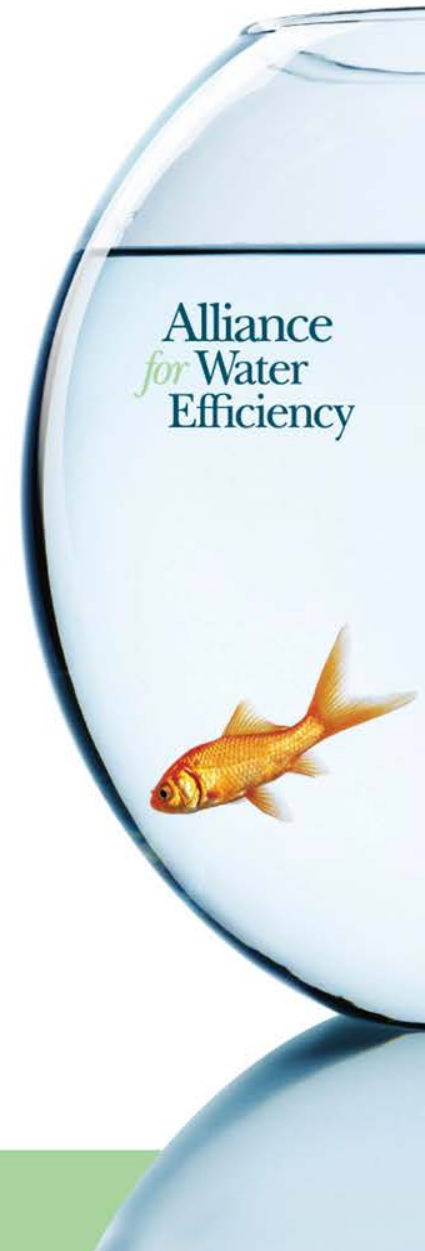
- Developer performed retrofits
- In-lieu fees
  - Places onus on water provider or municipality
  - May have difficulty expending funds
  - Are permits approved after fee is paid and possibly before retrofits occur?
- Permanence





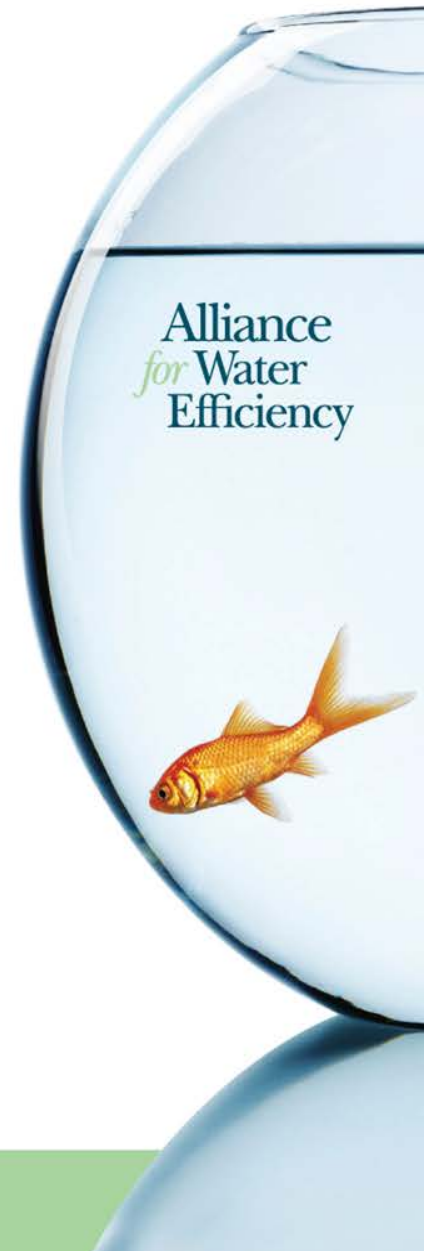
# Policy Strengths Identified

- Requirements for licensed plumbers to perform retrofits
- Demand mitigation verification
- Offset ratio of 2:1 or greater
- Covenants
- Communication



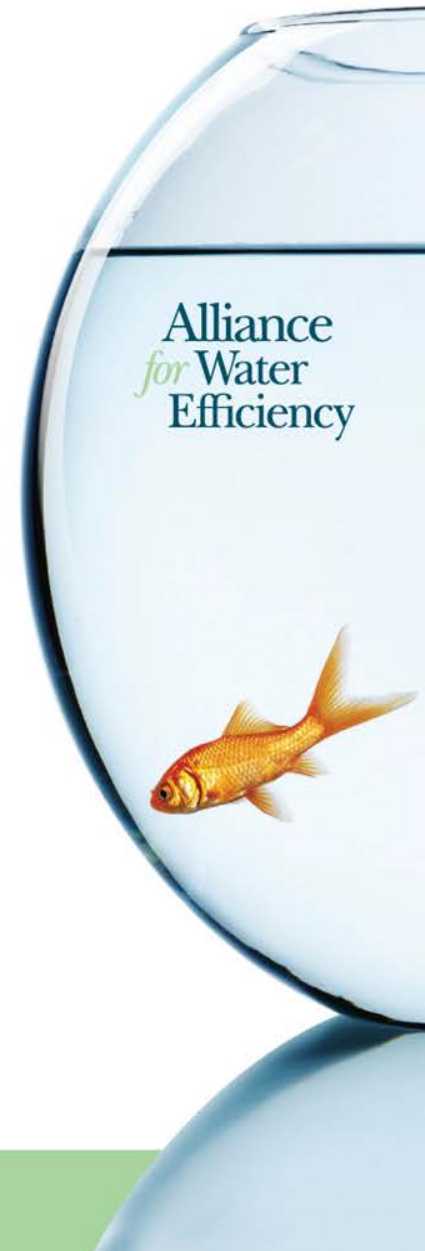
# Policy Weaknesses Identified

- Low offset ratios (i.e., 1:1)
- Limited offset options
- Outdated language in ordinances
- Development project approval before demand mitigation implemented
- Exorbitant rebates and potential freerider promotion



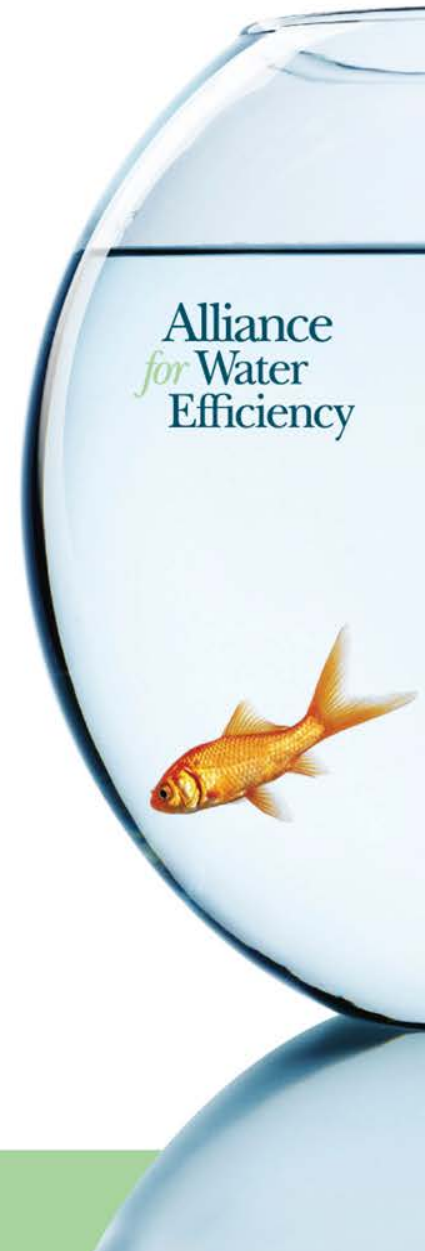
# Next Steps

- Expanding work through partnership with the Environmental Law Institute and River Network
- Deepening analysis
- Developing model ordinance and other resources
- Piloting with cities
- Financial support from the Rosin Fund



# Your Thoughts???

- What do you think about water demand offset policies?
  - Pros?
  - Cons?
  - Challenges?
  - Opportunities?
- Would a policy like this be useful in your community?
- Would a model ordinance and other resources be helpful?





# Alliance *for* Water Efficiency

Bill Christiansen  
Program Manager  
bill@a4we.org

**www.a4we.org**

(773) 360-5100

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