

Goals for the Workshop

Mary Ann Dickinson
President and CEO

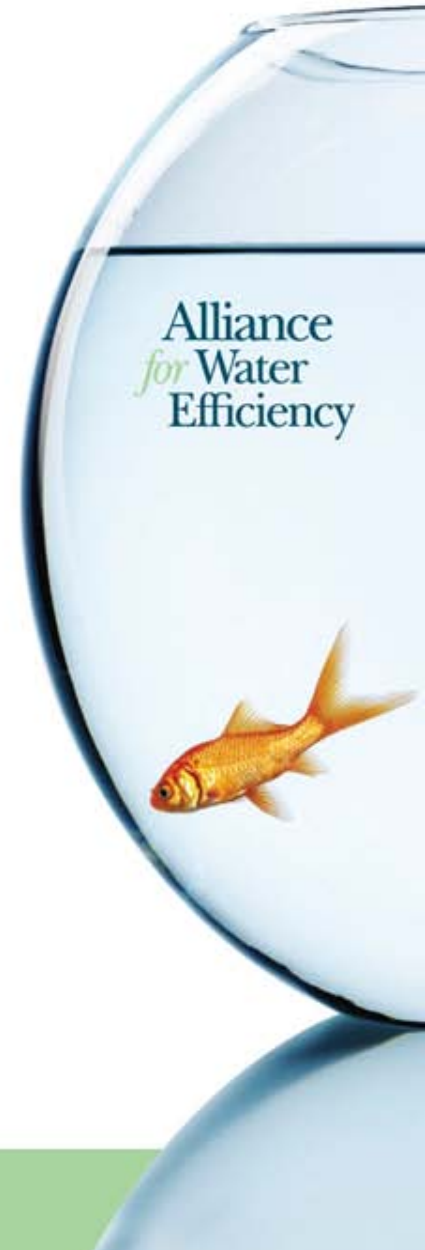
A VOICE AND
A PLATFORM
PROMOTING THE
EFFICIENT AND
SUSTAINABLE
USE OF WATER



Alliance *for* Water Efficiency

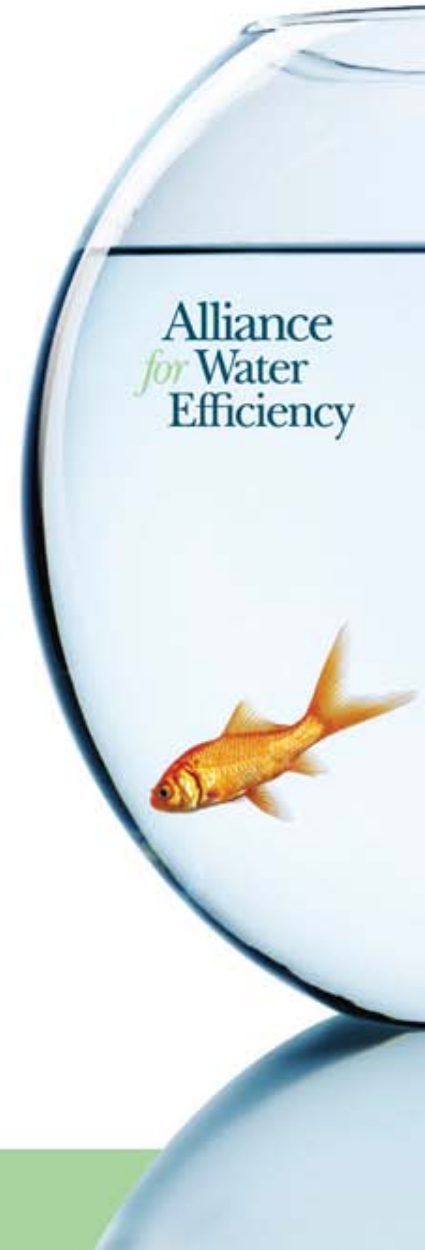
Answers to These Questions

1. What are Georgia's Water Conservation requirements?
2. What conservation programs make economic sense for your utility?
3. Who is AWE and how will AWE's Tracking Tool help?
4. What causes the problem of utility revenue loss?



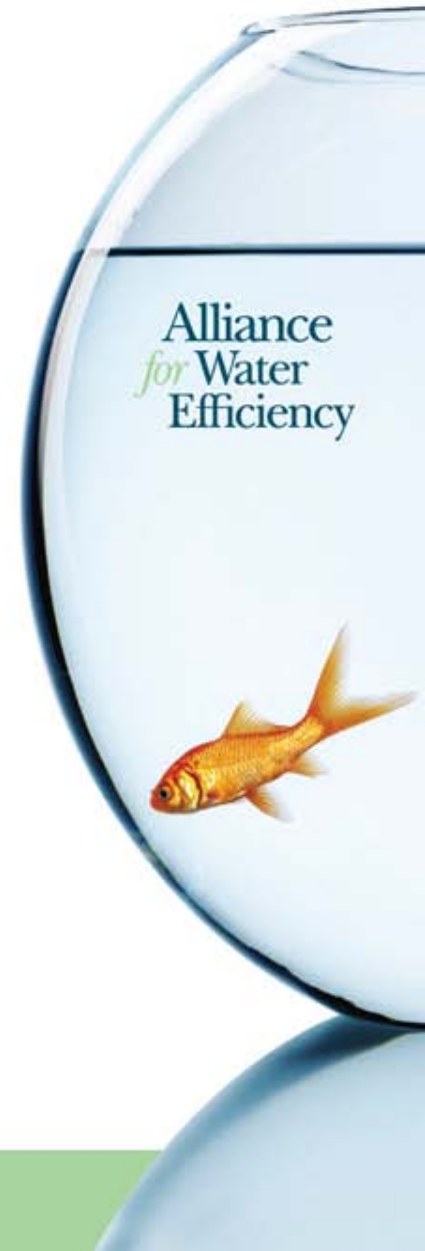
Water Issues Common to All

- Drought and water supply shortages
- Expensive infrastructure solutions
- Environmental impacts of freshwater withdrawals
- Lack of adequate pricing signal
- Disturbing growth trends
- Proliferation of automatic irrigation systems
- High energy costs
- Uninformed consumers



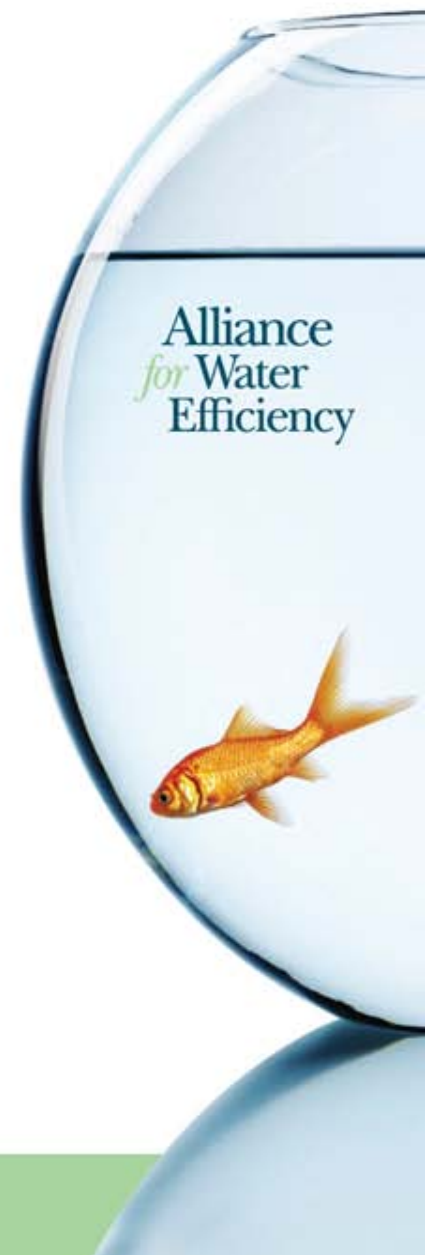
Solutions We Need

- Policies requiring efficiency at all levels of government
- Requirements to integrate conservation into utility water supply planning
- More equitable pricing structures
- Better incentives for saving energy in water
- Non-potable water irrigation
- Heighted consumer awareness



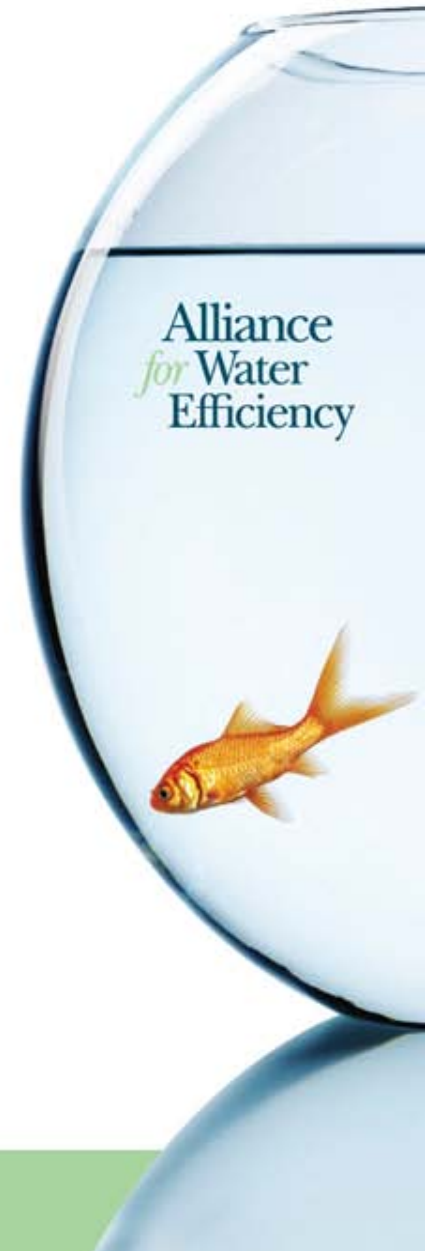
A New Coordinating Approach

- Partnerships needed among the public and private sectors
- More than just water utilities needed
- Stakeholder-created and defined
- 501(c)(3) Non-profit with diverse board
- Membership: 334 organizations as of March, 2011
- Office opened in September, 2007 in Chicago



Stakeholder Representation

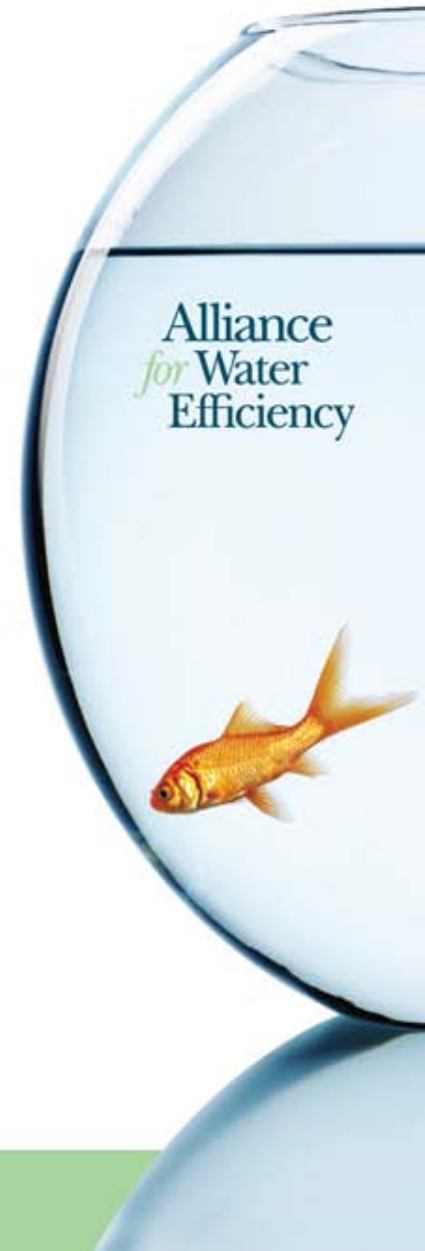
- Water suppliers (retail and wholesale)
- Water planning agencies
- Plumbing, appliance & irrigation manufacturers
- Retailers
- Efficiency service providers
- Environmental community
- Energy community
- Government (federal, state, municipal)
- Academic representatives





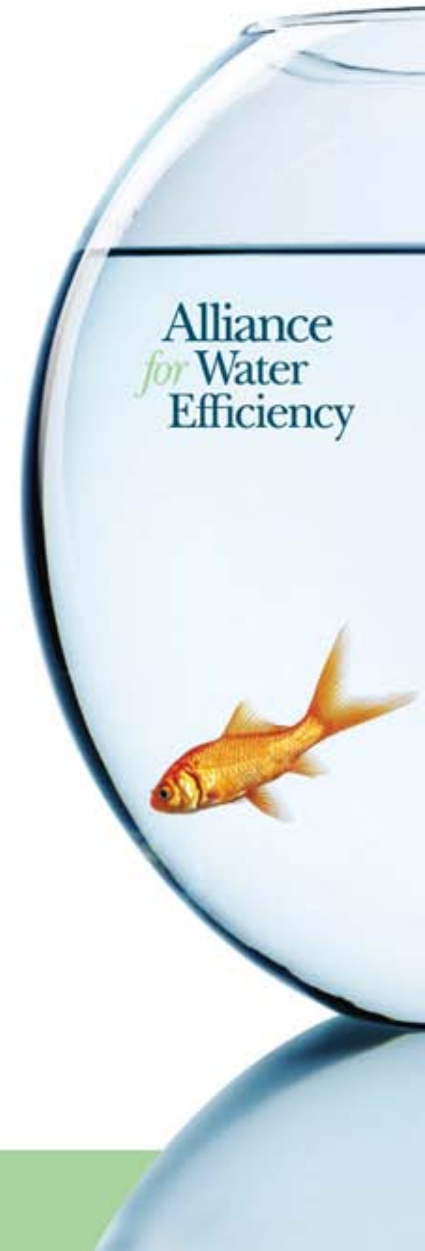
Alliance Goals

- **MISSION:** Promote the efficient and sustainable use of water
- Be a clear and authoritative national voice
- Provide comprehensive information on products, programs, and practices
- Represent the interest of efficiency in codes and standards process
- Transform the market for fixtures and appliances



Alliance Goals

- Coordinate with Green Building Programs on water efficiency
- Train water conservation professionals
- Educate water users to improve the consumers understanding of the need for efficiency
- Conduct needed research
- National Advocacy
- Detailed on line information





Great Lakes Rates Primer Released

AWE has released a report designed to provide water utilities and community stakeholders with an introduction to the key principles and concepts of sustainable ratemaking. [Learn more here.](#)



AWE Issues Media Campaign RFP

The Alliance for Water Efficiency is seeking qualified firms to design a consumer media campaign, to be used by member water utilities as well as the Alliance itself. Responses are due April 4, 2011 at 5:00 p.m. CDT. [Click here to download the RFP.](#)

PERC Welcomes a New Member

The Plumbing Efficiency Research Coalition welcomes the American Society of Plumbing Engineers as its sixth member. PERC was founded in 2009 to develop research projects that will support the development of water efficiency and sustainable plumbing products, systems and practices. [Learn more here.](#)

Calendar of Events



- | | |
|-----------|--|
| 3/16/2011 | AWWA Water Conservation Symposium |
| 3/17/2011 | WI Sedimentation and Erosion Control Inspector BMPs Class |
| 3/23/2011 | ILCA Natural Lawn Care Workshop |
| 3/29/2011 | 6th IWA Specialist Conference of Efficient Use & Management of Water |
| 4/7/2011 | Watershed Planning Class |

Latest Information



Water Efficiency Watch Newsletter
March 2011



AWE Water Conservation Tracking Tool
Released



USGS Report - Estimated Use of Water
in the U.S. in 2005



Executive Order Sets Water Efficiency



Resource Library

Welcome to the Alliance for Water Efficiency's Resource Library. AWE strives to provide the best on-line resources on water conservation and efficiency. Search through our collection and discover the wealth of useful, technical information assembled. Enter keyword(s) in the search box below or select an library section from the list on the right. Search instructions and tips are available [here](#).



Resource Library Search Tool

Use the tool below to search the Alliance for Water Efficiency library:

Basic Search | **Advanced Search**

Site



Search

Recent Library Updates



- 3/11/2011 Water and Water Efficiency Publications
- 3/9/2011 Water Efficiency Watch Listing
- 3/9/2011 Beecher (2011) Water Pricing Primer for the Great Lakes Region
- 3/9/2011 WRA (2010) Commonsense Solutions for Meeting Colorado Water Needs
- 3/9/2011 CEE (2010) Actual Savings and Performance of Tankless Water Heaters

AWE Library Sections



- Residential Water Use, Fixtures, and Appliances
- Landscape, Irrigation, and Outdoor Water Use
- Commercial, Institutional, and Industrial Water Users
- Non-Residential Fixtures, Appliances and Equipment



Great Lakes

AWE has released a... provide water utilities... stakeholders with an... principles and conce... ratemaking. Learn m...

AWE Issues M

The Alliance for Water... consumer media can... well as the Alliance it... p.m. CDT. Click here

PERC Welcom

The Plumbing Efficient... Society of Plumbing E... founded in 2009 to de... development of water... systems and practice

Resource Library Home

Alliance Water Conservation Tracking Tool

Alternate Supply

CII Water Efficiency

Codes and Standards

Conservation Programs

Drought

Green Building

Landscape and Irrigation

Metering

Planning

Province Info (CAN)

Residential Efficiency

State Info (US)

Toilet Testing - MaP & UNAR

Water Loss Control

Water Rates

Released



RFP

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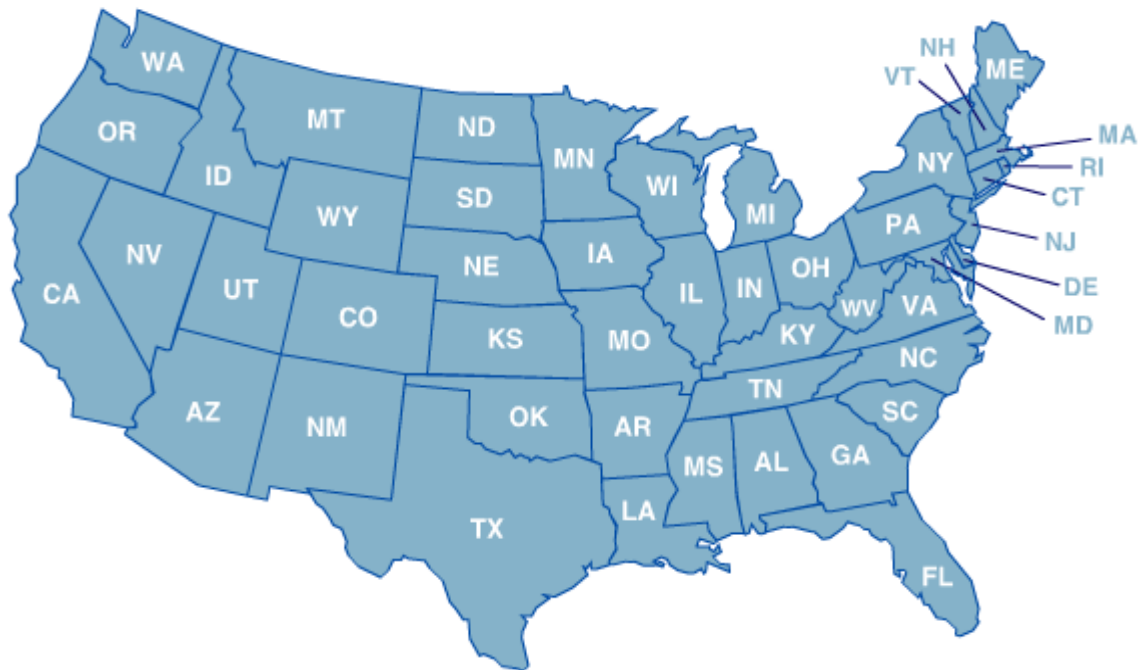
Latest Information



- Water Efficiency Watch Newsletter March 2011
- AWE Water Conservation Tracking Tool Released
- USGS Report - Estimated Use of Water in the U.S. in 2005
- Executive Order Sets Water Efficiency



States and Provinces Summaries





Alliance
for Water
Efficiency

Promoting the Efficient and
Sustainable Use of Water

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AWE Legislative Watch

The Alliance for Water Efficiency is pleased to monitor federal legislation and inform members of bills relating to water conservation and efficiency. Additionally, as it comes to our attention, we will include pertinent state-level legislation. Check back for updates.

[| Jump to U.S. Senate |](#)

U.S. House of Representatives

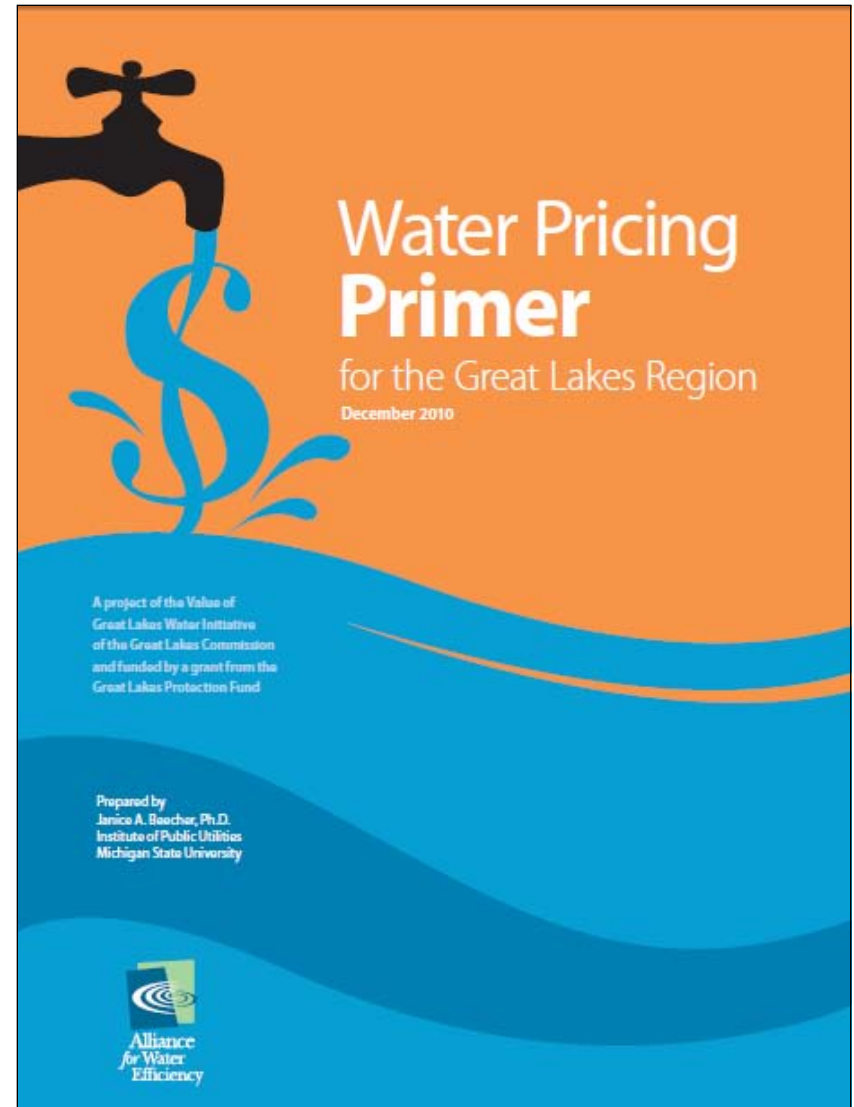
111th Congress

- [H.R. 135 - The Twenty-First Century Water Commission Act of 2009](#)
- [H.R. 146 - The Omnibus Public Land Management Act of 2009](#)
- [H.R. 469 - The Produced Water Utilization Act of 2009](#)
- [H.R. 631 - The Water Use Efficiency and Conservation Research Act of 2009](#)
- [H.R. 1145 - The National Water Research and Development Initiative Act of 2009](#)



Just Released!

- Alliance for Water Efficiency project on rates
- Done for the Great Lakes, but relevant everywhere, even in Georgia!
- www.a4we.org



Primer Contents

Introduction

The Rationale for Efficiency

Cost Knowledge

The Cost of Water

Cost-based Rates

Pricing and Efficiency

How Price Matters

Rate Design

Efficiency-oriented Rates

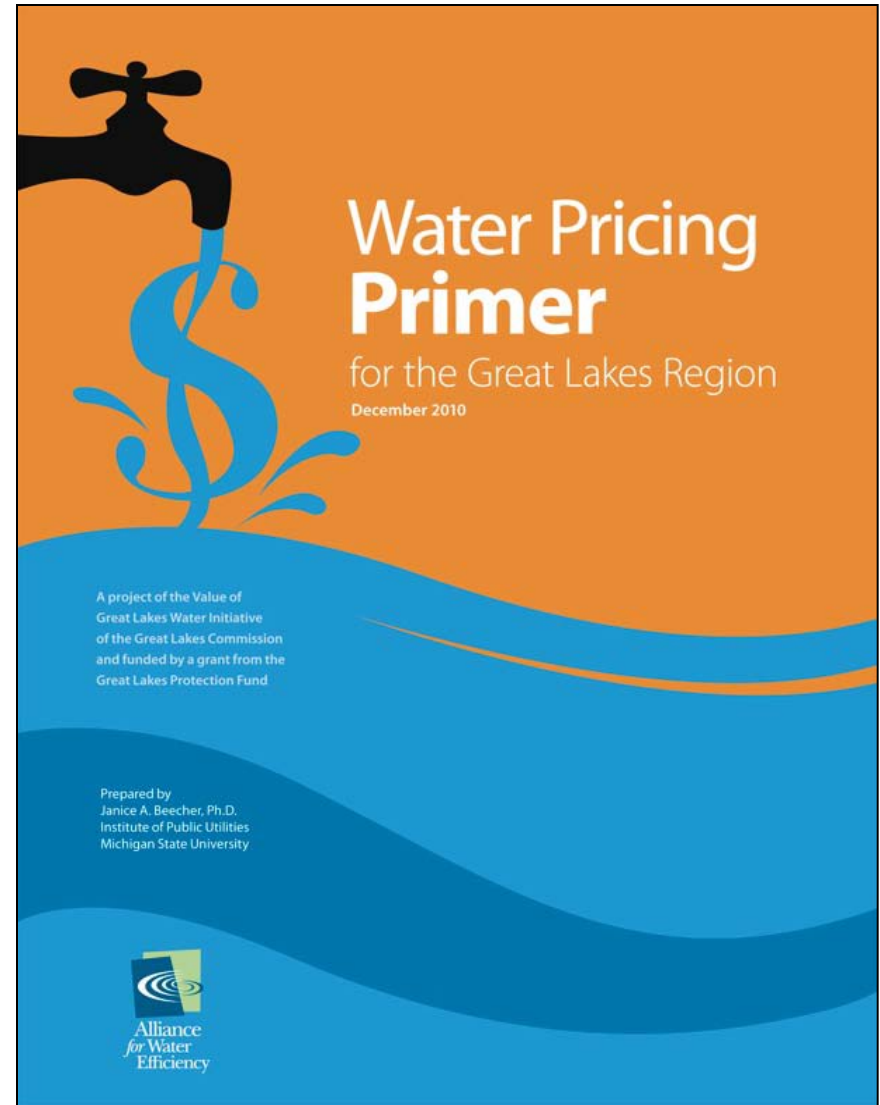
Conservation and Revenues

Implementing a Change in Rates

Communication is Key

Appendix

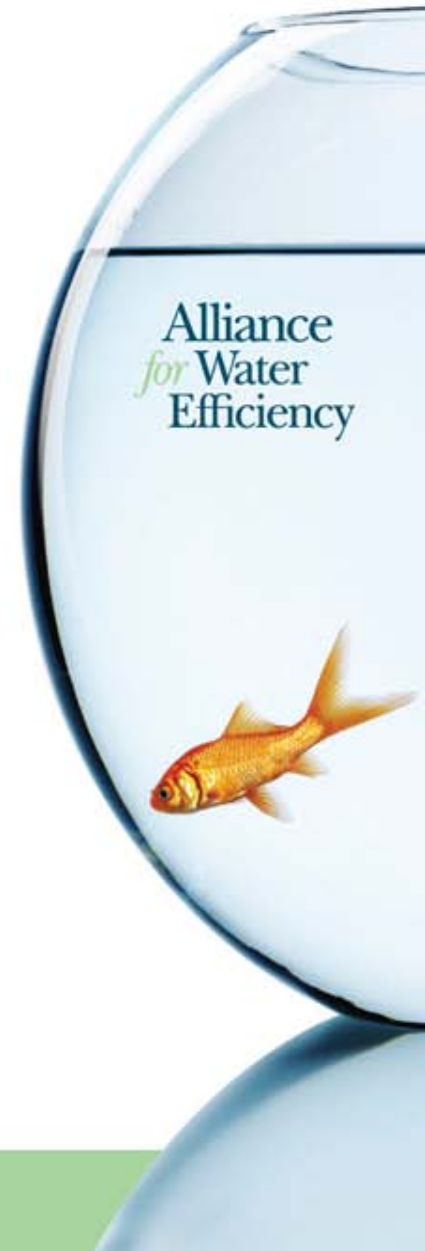
Resources



Our Reality

We don't like to revise our rates

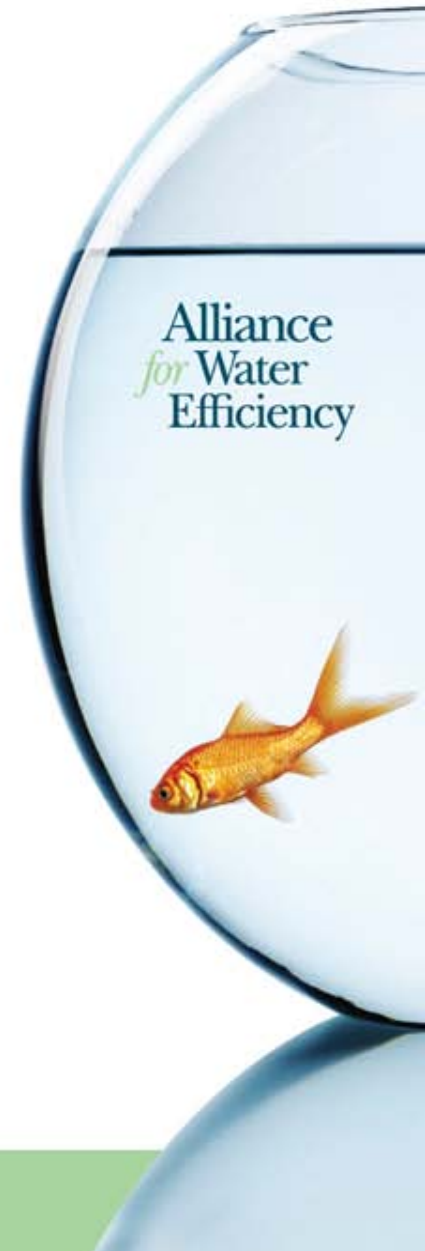
- It is politically unpopular, so rates are changed as little as possible
- The inevitable inflationary increase is postponed until it is a crisis



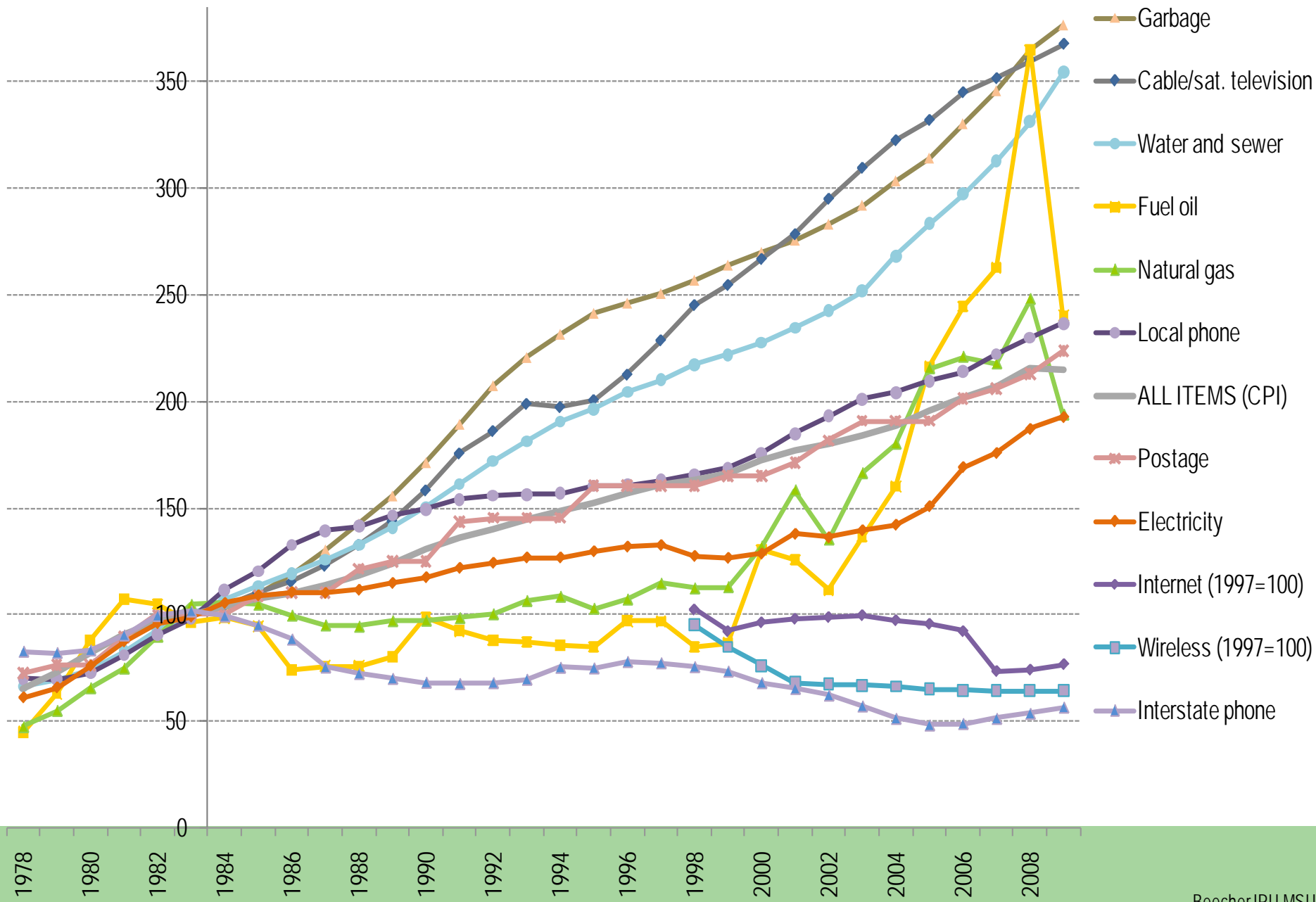
The Drivers

Water rates going up for many reasons

- Reduced demand from efficient fixture replacement under the plumbing codes
- Reduced demand from conservation programs
- Reduced demand from the recession: industrial shift layoffs, home foreclosures
- Unmaintained infrastructure
- **Inflation**
- **Rise in fixed costs**

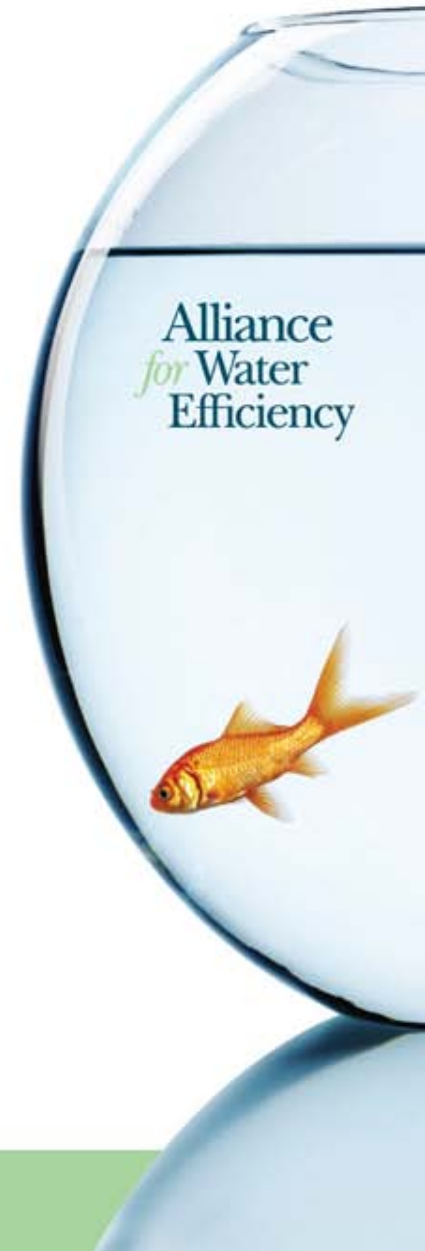


Trends in consumer prices (CPI) for utilities [1978 to 2009]



Yes, Water Rates Must Rise

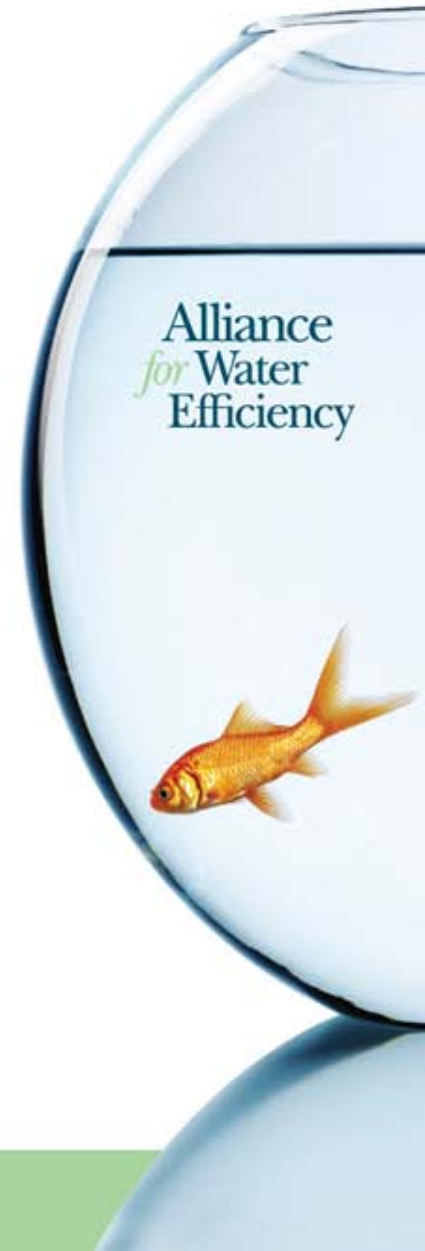
- **Water costs -- and thus water rates -- are going up for all utilities nationwide**
 - This is a universal trend
- **This is true even for utilities that:**
 - Do no active water conservation programs at all
 - Are in economically thriving economic areas



The Anomaly

Water is still a bargain for the consumer

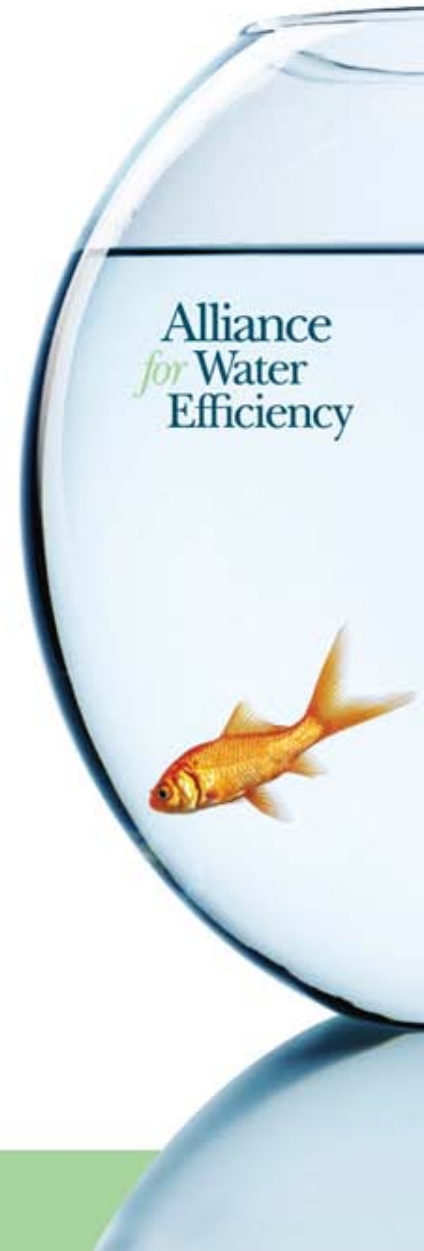
- A 30% rise in rates is often still no more than a \$4 per month increase in the average customer bill
- The same consumer -- angry about rising water rates -- buys a 16 ounce bottle of water sold for \$1.25, equivalent to \$10.00 a gallon. People are willing to pay 10,000 times more for it when it comes in a bottle
- This perception is our fault – we have too long wanted to be the “silent provider”



The Utility Perspective

Utilities are in a boom or bust cycle.

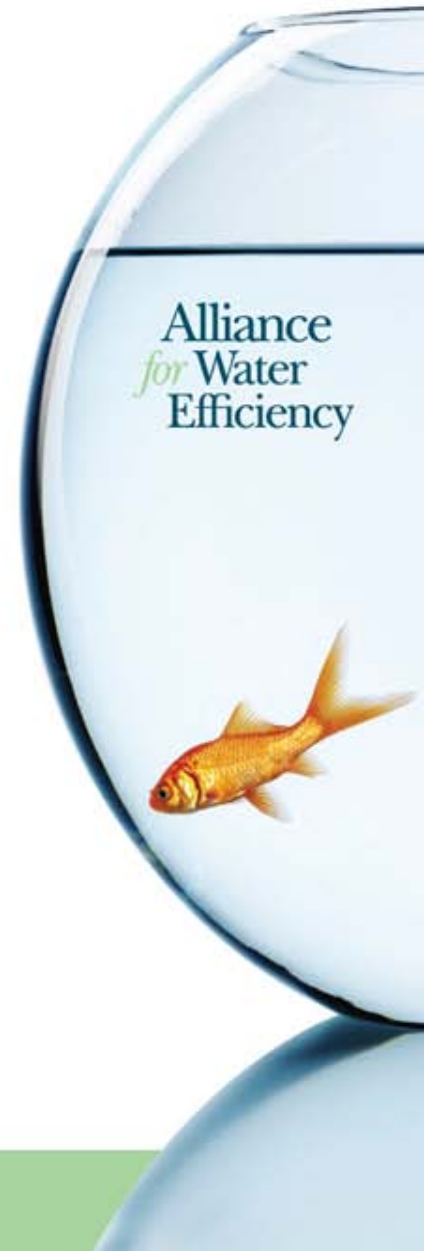
- When they have water, they want to sell every drop
- When a drought occurs, they need the consumers to cut back



The Answer?

Water conservation, when properly planned, is an overall cost reducer to the utility

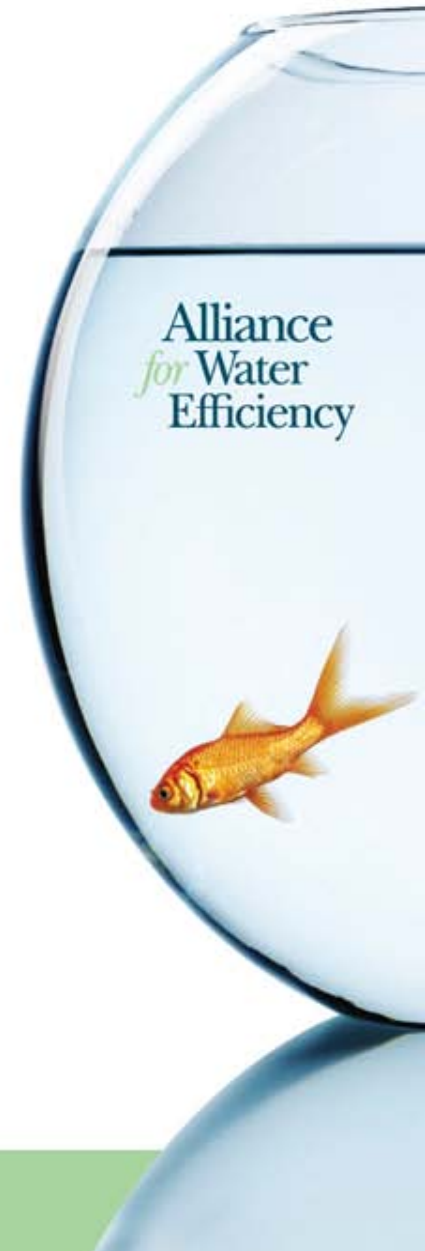
- Every gallon saved is water that does not have to be pumped and treated and delivered to the customer
- Reduced utility costs generally mean reduced rates for the customer on a long-term basis
- Have to run the numbers



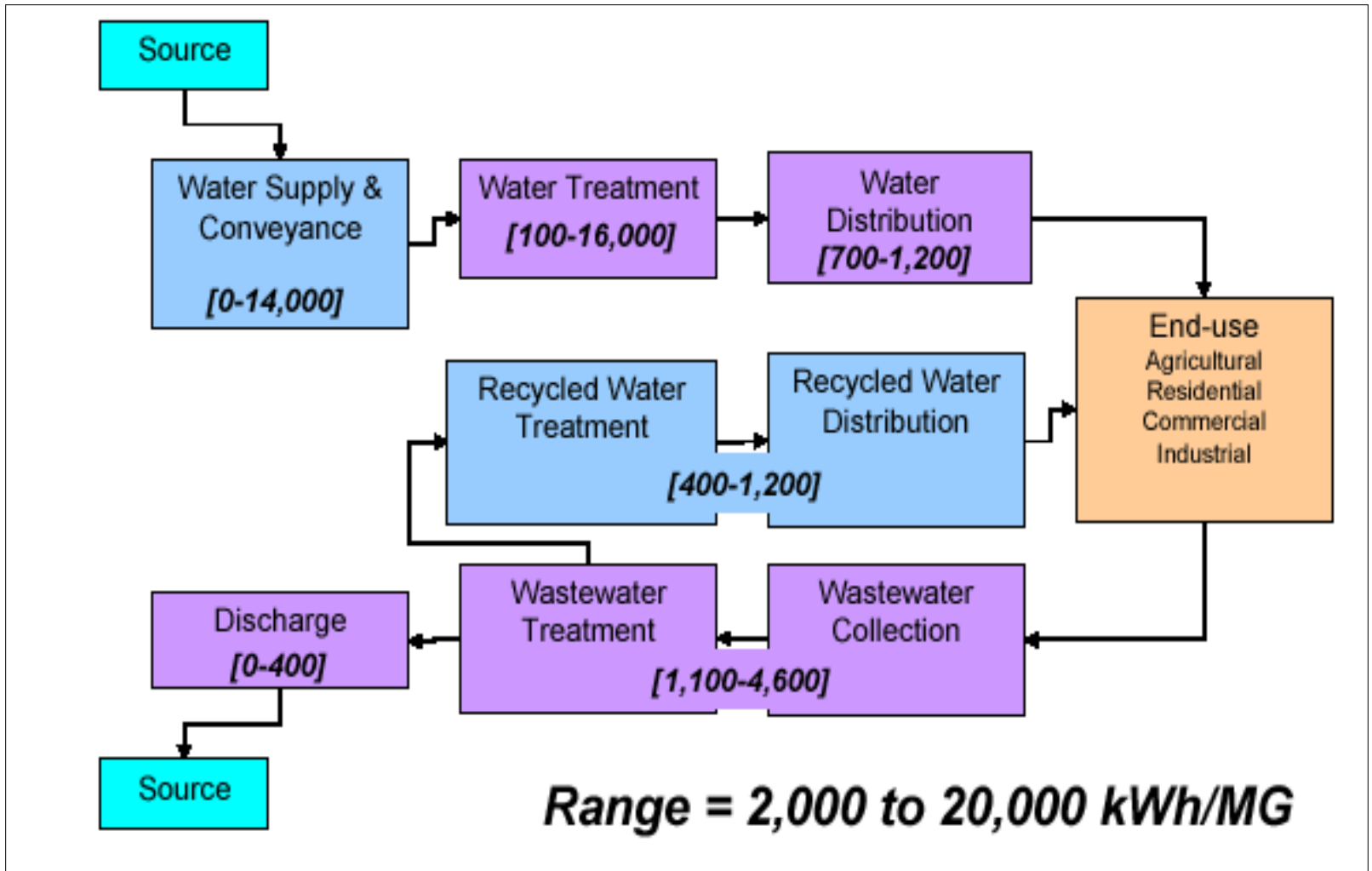
The Scapegoat

Conservation is commonly blamed for a utility's loss of revenue

- Often revenue is actually lost for other reasons
- Fixed costs are rising anyway
- Politically handy to blame conservation as the reason to a consumer who is angry about rising rates
- Need to determine true cost drivers
- One of those is energy



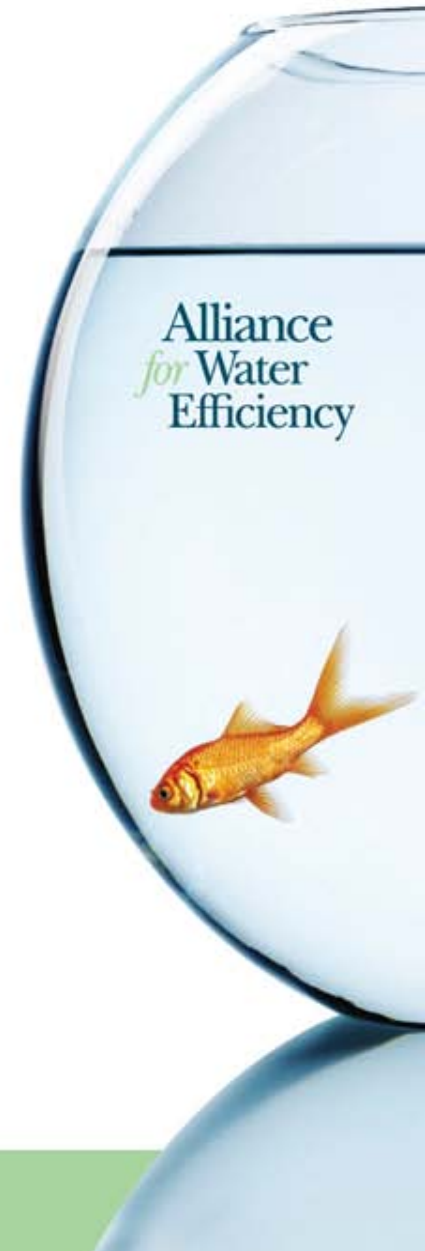
Energy Intensities of Water

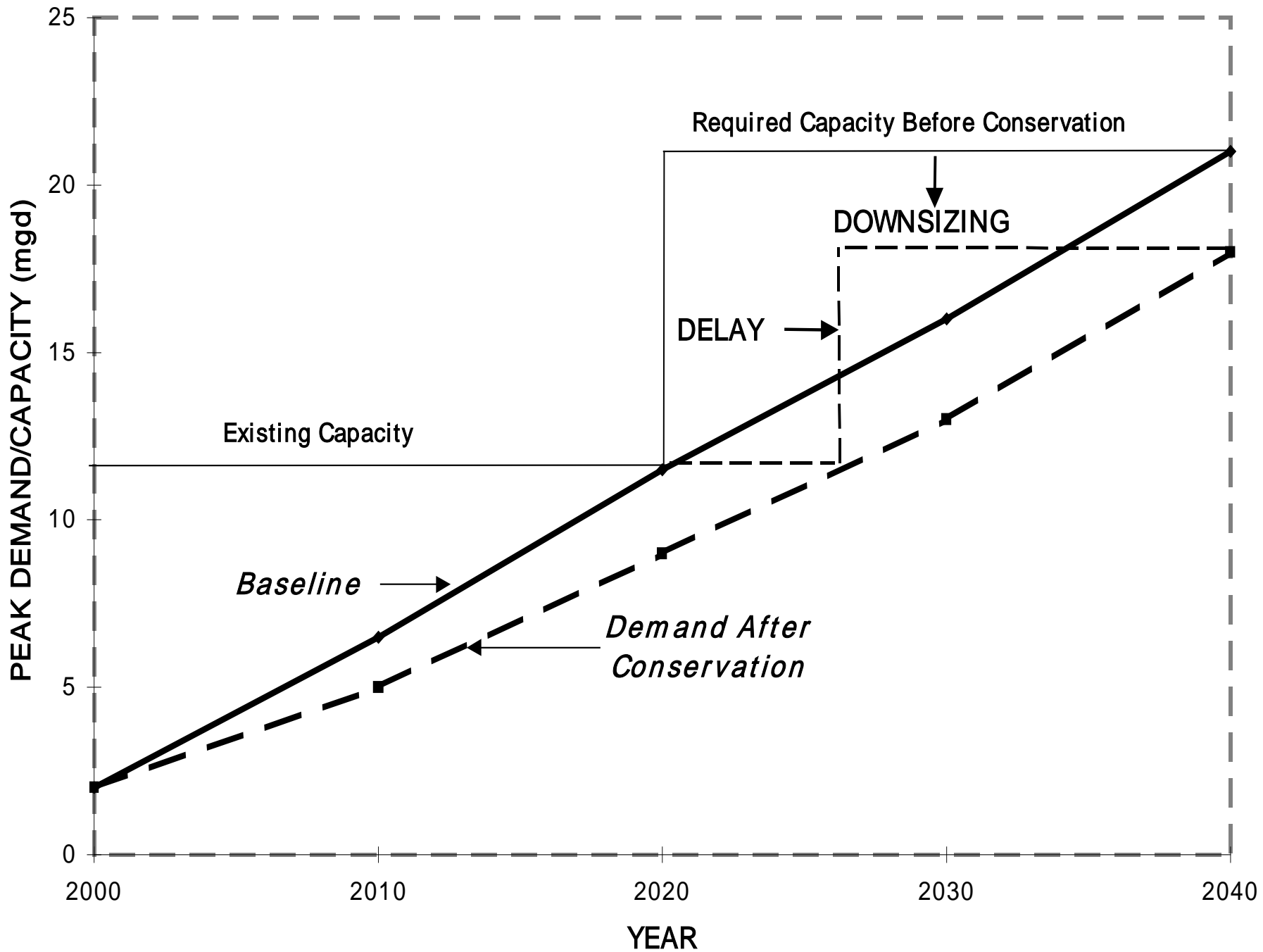


Water Conservation Programs

Water conservation still makes economic sense in this recessionary climate

- Helps stabilize increasing peak demands
- Lowers cost of providing baseline service
- Helps manage demand during shortage periods
- Helps manage demand to avoid the need for costly capital storage and treatment facilities
- Provides more equitable approach for the low-water using customer





Getting Started:

1. The model uses a simple worksheet tab color code:

Blue Tabs = User Data Entry

Green Tabs = Model Outputs/Results

Grey Tabs = Data Storage and Library

2. First provide information about your system, customers, and water demands. This is done on data entry worksheets 1 thru 3.

3. Next define or import conservation activities and set their annual activity levels. This is done on data entry worksheets 4 and 5.

4. You can save conservation activity scenarios at any time. You access the scenario manager on the Common Assumptions worksheet.

6. You can navigate to model worksheets by clicking on the model schematic below or by clicking on the worksheet tabs at the bottom of the screen.

7. Data entry cells on input worksheets look like this: Only enter data in cells with this color coding.

Data Entry Worksheets:

Model Input:
1. Common Assumptions

Model Input:
2. Specify Demands

Model Input:
3. Utility Avoided Costs

Model Library:
Predefined Conservation Activities

Model Input:
4. Define Conservation Activities

Model Input:
5. Enter Annual Activity

Model Results Worksheets:

Model Output:
Activity Savings Profiles

Model Output:
Utility Costs and Benefits

Model Output:
Customer Costs and Benefits

Model Output:
Water Savings Summary

Model Output:
Utility Revenues and Rates

Model Output:
Society Costs and Benefits

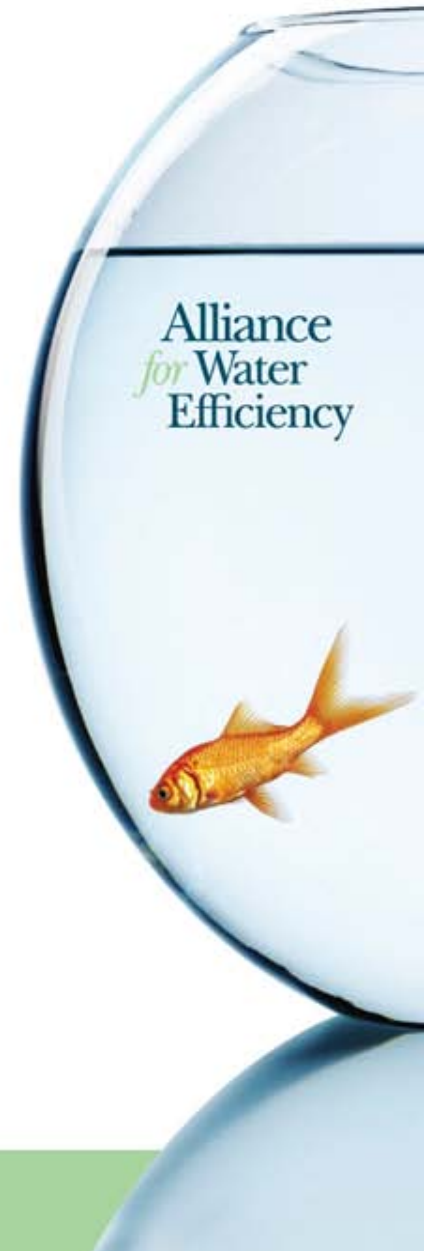
Data Storage:
Saved Scenarios

Data Storage:
User Lists and State Variables

In Summary

Wasting water should not make economic sense

- Water is a commodity with a lot of embedded treatment and energy cost in it
- If conserving water makes rates rise, it is more a failure to plan rather than a failure of economics
- It is also a failure of how we are structuring our rates





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