Making WaterSense: Linking Utilities to Communities

Maura Browning
Office of Ground Water and Drinking Water
US EPA
Water Utilities Face Challenges on Many Fronts

- **Ongoing**
  - Infrastructure investment needs of $338 billion
  - Increasing threats to watersheds and aquifers
  - Changing compliance and public-health standards
  - Population growth
  - “Rising cost” industry
  - Higher customer expectations

- **New**
  - Emerging contaminants (pharms)
  - Increasing competition for raw water sources
  - Climate change
Among these is ensuring a reliable supply of water.

- Water scarcity is a reality.
- Weather patterns change every year, but drought happens somewhere in the country every year.
Domestic Water Use is Projected to Rise
How does energy come into the picture?

- Moving, treating and heating water uses energy
  - Every gallon of water has an energy “footprint”

- Water sector energy use:
  - National – ~4%
  - Municipality – 40%
  - Utility – one of the highest costs

- Doesn’t include energy footprint associated with energy uses (hot water)
  - River Network – 13%
  - California – 19%
Co-benefits of Saving Water

The cheapest gallon of water may be the one you never have to provide

- Save energy and reduce operational costs
- Reduce peak demands
- Less pressure on our freshwater resources and our current energy grid
- Delay capacity expansion projects
- Savings to individual homeowners in both water and energy bills
- Less greenhouse gas emissions
Strategies to Save Water on the Supply Side

- You can’t manage what you don’t measure
  - Water Accounting
  - Universal Metering

- Minimize losses and line breaks
  - Water Loss Control
  - Pressure Management

- Cheap water is easy to waste
  - Smart Costing and Pricing can send price signals to save
Opportunities to Save Water on the Demand Side

- Approx. 70% of water used indoors, 30% outdoors
  - Outdoor use is higher in Southwest and other regions
- Toilets, faucets, showers, clothes washers, and leaks are biggest indoor users
- Many of these uses also use energy - focusing on water efficiency and conservation can reduce energy consumption
WaterSense as a Tool to Save Water and Energy

WaterSense is voluntary partnership and labeling program launched by EPA in 2006

- **Our vision**
  - All Americans will understand the importance of water efficiency and take positive actions to reduce their water use – in their homes, outdoors, and at work.

- **How will we achieve it?**
  - By transforming the marketplace for products and services that use water
  - By promoting a nationwide ethic of water efficiency to conserve water resources for future generations and reduce water and wastewater infrastructure costs
Where Is the WaterSense Label?

- **Tank-Type Toilets**
  - More than 600 labeled models

- **Faucets/Faucet Accessories**
  - More than 1,900 labeled models

- **Flushing Urinals**
  - 29 labeled valves, 12 labeled fixtures

- **Showerheads**
  - More than 190 labeled models

- **Professional Certification Programs**
  - Irrigation designers, auditors, and installation/maintenance professionals who pass the certification can become partners

- **Single-Family New Homes**
  - WaterSense labeled new homes are designed to use 20% less water than traditional homes, both indoors and out

Labeled products are listed at [www.epa.gov/watersense/products/index.html](http://www.epa.gov/watersense/products/index.html)
New Homes Specification: Indoors

- **Required items:**
  - Water service pressure maximum 60 psi
  - Leak prevention measures
  - WaterSense labeled plumbing fixtures
  - Other water-efficient plumbing fixtures
  - Efficient hot water distribution system

- **Optional items must meet efficiency criteria, if installed:**
  - ENERGY STAR qualified dishwasher or clothes washer (if appliances installed)
  - Evaporative air conditioners
  - Water softeners
  - Drinking water treatment systems
Savings Associated with WaterSense Labeled New Homes

- WaterSense labeled homes will be 20% more efficient than a traditional new home
  - 10,000 gallons of water - equal to 400 loads of laundry
  - 500 kilowatt hours of electricity—enough to power a television for four years
  - At least $100 per year on water, sewer, and energy bills
WaterSense
Accomplishments in 2009

- Total water savings from all WaterSense labeled products shipped was more than 36 billion gallons.
- Reductions of 4.9 billion kwh of electricity and 1.75 million metric tons of carbon dioxide through the use of WaterSense labeled products.
- Consumers saved more than $267 million on water and sewer bills.
- More than 2,000 labeled plumbing fixture models.
- Participation jumped to more than 1,500 partners.
Other Activities to Support Utilities on Water/Energy Efficiency

- Water Loss Guidance document (end of CY2010)
- “Factsheets” on water & energy efficiency for utilities
- New sustainability web pages
  - http://water.epa.gov/infrastructure/sustain/energyefficiency.cfm
  - http://water.epa.gov/infrastructure/sustain/main_wp.cfm
- Voluntary water & energy efficiency criteria for sanitary surveys
- Green Project Reserve
- Consumer Confidence Report
  - Annual water quality reports (July 1)
  - Link utility efficiency to consumer
  - Build trust
  - Be an environmental steward
Other Activities to Support Utilities on Water/Energy Efficiency

- Energy Management Guidebook for Wastewater and Water Utilities
- EnergyStar Portfolio Manager
- Energy Audit Tool (in development)
**More Information**

**Contact Information**
- E-mail: browning.maura@epa.gov

**WaterSense Contact Information**
- Web site: [www.epa.gov/watersense](http://www.epa.gov/watersense)
- E-mail: watersense@epa.gov
- Toll-free Helpline: (866) WTR-SENS