EPA WaterSense

WaterSense: Saving Water and Energy

PNWS-AWWA 2010 Annual Conference

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Agenda

- Water supply, use, and efficiency
- Saving water saves energy – “drops to watts”
- What is WaterSense?
- WaterSense partners
- WaterSense new homes program overview

- Questions

Need for Water Efficiency

- Between 1950 and 2000, the U.S. population doubled. The demand on public water supply systems more than tripled!
- With populations continuing to rise, using water efficiently helps save water for future generations.
- EPA estimates that water and wastewater utilities could spend about $500 billion on infrastructure upgrades over the next 20 years.
- According to a U.S. Government Accountability Office report, at least 36 states said they anticipated local, regional, or statewide water shortages between 2003 and 2013.

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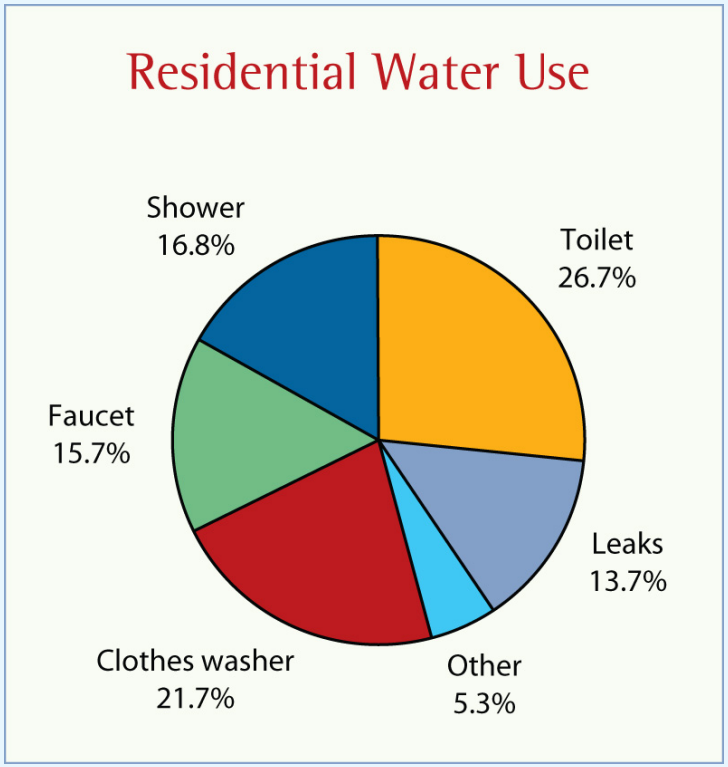
Water Use at Home

- About 1.27 million new homes constructed in the United States each year
- On average, 70% of water is used indoors, 30% outdoors
  - Outdoor use is higher in Southwest and other regions
- Toilets, faucets, showers, clothes washers, and leaks are biggest indoor users



Drops to Watts

- Nationwide, drinking water and wastewater systems use 56 billion kilowatt-hours per year—enough electricity to power more than 5 million homes for an entire year
- Water efficiency saves energy used to pump, heat, and treat water
- If only one out of every 100 American homes were retrofitted with water-efficient fixtures, we could avoid 80,000 tons of greenhouse gas emissions—equivalent to removing nearly 15,000 automobiles from the road for a year!

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What Is WaterSense?

What Is WaterSense?

- Voluntary partnership and labeling program launched by U.S. EPA in 2006
- Simple way for consumers to identify products, new homes, and services that use less water ***and*** perform well
- Promotes simple behavior changes
  - Instill an ethic of water efficiency
  - Help address current and future water challenges

The WaterSense Label

- A label with integrity
  - Third-party testing and certification
  - Backed by the credibility of EPA
- Smart use of resources
  - EPA provides national specifications and outreach for water efficiency
  - Manufacturers support product research, testing, and branding costs
  - Licensed certifying bodies certify the products and police the label's use
  - Licensed certification providers certify new homes

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Partners and Products

WaterSense Collaboration

- Strength in Partnerships
  - **Manufacturers** design and create products to meet specs
  - **Certification bodies** test and label products
  - **Retailers/Distributors** get products on shelves
  - **Builders** construct water-efficient homes using products
  - **Certification providers** inspect and label homes
  - **Irrigation partners** help homeowners water more efficiently
  - **Promotional partners** spread the word
    - Water utilities, state and local governments, nonprofit organizations, and trade and home builder associations

WaterSense Partners in EPA Region 10

- As of April 14, 2010, EPA Region 10 (ID, OR, WA, and AK) has:
- - 81 Promotional Partners (includes utilities, manufactureres, and retailer/distributors)
- - 45 Irrigation Partners

Schedule for Evaluating WaterSense Labeled Products

	Complete	2010/2011	2011 and Beyond
Irrigation	Professional Certification Programs	Irrigation Controllers Moisture Sensors Drip/Micro Technology	Irrigation Sprinklers
Residential Plumbing	Toilets Faucets Showerheads	Water Softening Systems	Water Treatment Systems
Commercial Plumbing	Urinals	Pre-Rinse Spray Valves	Flushometer Valve Toilets Food Disposals
Other	New Homes		Autoclaves Glassware Washers Additional Professional Certifications

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How Much Can WaterSense Labeled Products Save?

	Federal Standard	WaterSense
Toilets	1.6 gallons per flush	1.28 gallons per flush 20% more efficient
Faucets	2.2 gallons per minute	1.5 gallons per minute 30% more efficient
Urinals	1.0 gallons per flush	0.5 gallons per flush 50% more efficient
Showerheads	2.5 gallons per minute	2.0 gallons per minute 20% more efficient

WaterSense Benefits (cont.)

- If one in every 10 American homes upgrades its busiest bathroom with WaterSense labeled fixtures, we could save about 74 billion gallons of water, about $500 million in water bills, and another $1 billion dollars in energy bills nationwide per year.

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The WaterSense New Homes Program

WaterSense New Homes Program

- Voluntary program that promotes water-efficient single-family new homes

- WaterSense labeled new homes will:
  - Reduce water use in single-family new homes by 20%
  - Educate homeowners about continuing water-efficient behaviors
  - Encourage community infrastructure savings

WaterSense New Homes Program

- Backed by the credibility of the U.S. EPA
- First national new home labeling program for water efficiency
- Works with other green building programs—homes can receive multiple certifications
  - ENERGY STAR®, LEED®, National Green Building Standard™, EarthCraft, etc.
- Inspected and certified by independent third party
- Homeowners can recoup initial investment in as little as six years

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

New Homes Specification: Outdoors

Front yard and improved-upon areas

- Landscape
  - Performance-based OR prescriptive turfgrass allocation
  - Vegetated slopes
  - Mulching requirements
- Other features (if installed)
  - Pools/spas are covered
  - Ornamental water features have beneficial use
- Irrigation system (if installed)
  - Designed or installed by WaterSense irrigation partner
  - Audited by WaterSense irrigation partner
  - Schedules required for homeowner

WaterSense labeled new homes feature healthy, beautiful landscapes that allow homeowners to save water

Certification & Labeling Overview

- Once the home has been inspected and certified to meet EPA's specification:
  - Inspector signs certificate
  - Licensed certification provider signs certificate
  - Builder receives certificate
    - Gives to homeowner
    - Provides homeowner educational manual
    - Other documents as needed, i.e., irrigation system schedules

WaterSense
Meets EPA Criteria

This home is certified to meet the U.S. Environmental Protection Agency's criteria for water-efficient new homes and has earned the WaterSense® label.

[Address of labeled home]

This WaterSense labeled home was built by

[Name of builder]

[Name of Inspector]
[Date]
Home Inspector

[Name of Licensed Certification Provider]
[Title]
Licensed Certification Provider

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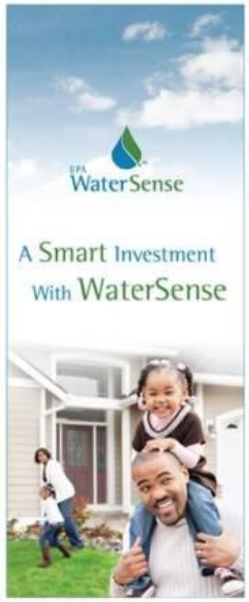
Complements Green Programs

- WaterSense new home specification works with other green building programs' rating systems
  - ENERGY STAR for new homes
    - If dishwashers or clothes washers are included in a WaterSense labeled home, they will be ENERGY STAR qualified
    - Qualified inspectors can serve both programs
  - By meeting the WaterSense new home specification, homes automatically earn points for
    - LEED for Homes
    - National Green Building Standard
- One-stop inspection
  - Designed to make inspection for multiple certifications faster, easier, and cost-effective

Why Purchase a WaterSense Labeled Home?

- Convenience, efficiency, and confidence
  - Hot water will be delivered to users faster and use less energy
  - Landscaping will be healthy and sustainable, using less water
  - WaterSense labeled products have been tested and certified for efficiency *and* performance
- Homeowners can feel good about themselves every time they turn the key, and pay their utility bills



Landscape Water Budget Calculator - Online

- Designed to aid builders of WaterSense labeled new homes, landscape professionals, or irrigation partners in developing a landscape water budget
- Excel spreadsheet format guides user through water budget calculation
- Calculates how much water the designed landscape requires
- Find it at:

  www.epa.gov/watersense/nhspecs/homes_final.html

Learn More

- To learn more about the WaterSense new homes specification, certification system, or program:
  - www.epa.gov/watersense
- For questions or more information:
  - E-mail: watersense@epa.gov
  - Toll-free Helpline: (866) WTR-SENS (987-7367)

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Doing more. With less.