What Is WaterSense?

A partnership program sponsored by the U.S. EPA

Promotes the value of water and helps Americans make smart decisions regarding water use and water-using products.

Aims to increase the adoption of water-efficient products and services by consumers and organizations.
Presentation Outline

- Review of revised draft specification criteria
  - Indoor
  - Outdoor
  - Homeowner education
- Review of certification & inspection process
- Questions
- Specification timeline
- Submittal of comments
Homebuilders must meet specific water efficiency criteria in order to qualify their homes for the WaterSense label:

- **Indoor**
  - Service pressure
  - Plumbing fixtures
  - Hot water distribution
  - Appliances (if installed)
  - Other equipment (if installed)

- **Outdoor**
  - Landscape design
  - Irrigation (if installed)

- **Homeowner Education**
  - Homeowner’s manual
Revised Specification Indoor Criteria - Leaks

- No visible leaks from any water-using fixtures, appliances, or equipment
Revised Specification Indoor Criteria - Service Pressure

- Service Pressure:
  - Use of a PRV/pressure tank downstream of the water meter to limit static service pressure to 60 psi
  - All fixture connections must be downstream of the pressure regulator
Reduce water wasted while drawing hot water:

- System shall store no more than 0.6 gallons of water in any piping/manifold between the hot water source and any hot water fixture

- Timer- and temperature-based recirculating systems shall not be used
Revised Specification Indoor Criteria - Plumbing Fixtures

WaterSense plumbing fixtures where applicable:

- **Toilets** – WaterSense labeled (1.3 gal/flush)
- **Bathroom Faucets** – WaterSense labeled (1.5/0.8 gpm)
- **Kitchen Faucets** – existing national standard (2.2 gpm @ 60 psi)
- **Showerheads** – total flow rate from all showerheads in one shower compartment (2600 in²) is limited to the existing national standard (2.5 gpm @ 80 psi); to be revised after the release of a WaterSense final specification
Appliances – ENERGY STAR® qualified

- If financed, installed, or sold as upgrades:
  - **Dishwasher** – Dishwashers shall be ENERGY STAR qualified
  - **Clothes washer** – Clothes washers shall be ENERGY STAR qualified with a water factor ≤ 6.0
If financed, installed, or sold as upgrades

- **Evaporative coolers**
  - Max 3.5 gallons of water per ton-hour of cooling
  - Blowdown $\leq$ 3 times/24 hours; mediated by conductivity or basin water temperature-based controllers
  - Visible reservoir discharge outlet

- **Water softeners**
  - NSF/ANSI Standard 44 with voluntary efficiency rating standards (Section 7)

- **Drinking water treatment systems**
  - Meet applicable NSF/ANSI Standards; efficiency $\geq$ 85%
Revised Specification Outdoor Criteria - Landscape

- Minimum: front yard must meet specification
- Entire yard must be landscaped to the specification if:
  - Landscaping of entire yard is financed, installed, or sold as an upgrade
  - Irrigation systems, pools, spas, and/or water features are financed, installed or sold as an upgrade
- Lots with landscapable area ≤ 1000 ft² are exempt
Landscape design: 2 options
  (1) Max turf: 40% of landscapable area
  (2) Water budget design (based on 70% ETAF)

Slope:
  • Plantings other than turfgrass shall be installed on slopes > 4:1

Mulching:
  • 2-3 inches of mulch on non-vegetated, softscape areas
This worksheet can be used to determine if the designed landscape meets the water budget.

If the Landscape Water Requirement is LESS than the Landscape Water Allowance, then the water budget criterion is met.

If Landscape Water Requirement is GREATER than the Landscape Water Allowance, then the landscape and/or irrigation system needs to be redesigned to use less water.

If LWR < LWA, then the water budget is met.

If LWR > LWA, then budget is not met and adjustments need to be made.

Where:
LWA = Landscape Water Allowance for the site (gallons/yr)
LWR = Landscape Water Requirement for the site (gallons/yr)

STEP 3A - ENTER THE TOTAL AREA OF TURFGRASS IN THE DESIGNED LANDSCAPE FROM STEP 2B

Area of turfgrass in designed landscape (square feet)

STEP 3B - REVIEW THE LWA AND LWR FROM PART 1 AND PART 2

LWA 124,914 (gallons/yr)  LWR 119,920 (gallons/yr)

OUTPUT - DOES THE DESIGNED LANDSCAPE MEET THE WATER BUDGET?

YES  If YES, then the water budget criterion is met.

NO, landscape and/or irrigation system adjustments need to be made and reflected in Step 2B - LWR.

The designed landscape is 40% turf
Revised Specification Outdoor Criteria - Water Features

- **Pools/Spas**
  - Include cover
  - Deducted from turf allowance in Option 1 or included as landscapable area in Option 2

- **Water Features**
  - Recirculate water
  - Serve beneficial use
  - Deducted from turf allowance in Option 1 or included as landscapable area in Option 2
If financed, installed or sold as an upgrade

- Audited by a WaterSense irrigation partner
- No leaks
- Keep flow and spray from leaving lot
- Minimum $DU_{LQ}$ of 70%
- Rainfall shut-off device
- List of controller capabilities (to be revised when EPA develops specification)
- Meet sprinkler head and microirrigation design and placement criteria
- Two seasonal schedules
Revised Specification - Homeowner Education

- **Operating Manual:**
  - Written homeowner’s O&M manual/chapter for all water-using equipment and controls, including record drawing (schematic) of irrigation system and copy of the schedules (if installed)
  - WaterSense materials on efficient water use
  - Include information about water-efficient appliances if clothes washers or dishwashers were not provided

- **WaterSense will provide template**
WaterSense New Homes
Inspection & Certification System

Program Administrators
RESNET

Providers
Southern Energy Management

Inspectors
Joe Smith

Builders
Vanguard Homes
General Inspection Elements

- Check for leaks
- Verification of PRV/pressure tank
- Performance test – hot water delivery system
- Verification of WaterSense labeled fixtures
- Flow rate test – faucets and showerheads
- Verification of optional appliances
- Verification of turf %age, mulch, slope plantings
- Verify water feature req’s
- Review of homeowner education manual
Irrigation Audit Elements

- Irrigation system audit
- Distribution uniformity (min. 70%)
- Verification of no runoff or overspray
- Appropriate system elements
  - Sprinkler heads on turf, microirrigation on beds & narrow areas
- Verification of controller features
- Verification that sprinkler head and microirrigation system requirements have been met
- Schedules posted at controller
- Schematics, information provided for homeowner
WaterSense Labeled New Home Certificate

- PDF
- Signed by inspector & provider

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.

123 Anywhere Street, City, State Zip

This water-efficient home was built by

Bob the Builder

March 17, 2009

Joe Inspector
Inspections R Us
Home Inspector

Sally Provider
Inspections R Us
Certification Provider
Specification Considerations

- Verifiable water savings
- Cost-effectiveness
- Ease of adoption
- Ability of an independent party to inspect/verify
- Broad stakeholder buy-in
- Marketability
- Label credibility
Questions

- Indoor: Leaks & Service Pressure
- Indoor: Hot Water Delivery System
- Indoor: Fixtures, Appliances, & Other Equipment
- Outdoor: Landscape Requirements
- Outdoor: Design Options 1 & 2
- Water Budget Tool
- Outdoor: Other Design Elements
- Outdoor: Irrigation System Requirements
- Homeowner Education
- Inspection & Irrigation Audit Guidelines
- Other
Specification Timeline

- Public comment meetings: June
- Finalize certification system: June
- Program administrators apply: July
- Deadline for 2nd draft comments: July
- Certification providers apply: Fall
- Training for certification providers: Sept/Oct
- Finalize specification: Nov
- Builders apply: Nov
Revised Specification Public Comment Period

May 8, 2009 – July 7, 2009

- Submit official comments to:
  watersense-newhomes@erg.com

  - Topic
  - Comment
  - Rationale
  - Suggested change/language
For More Information

- **WaterSense Labeled New Homes:**
  Web: [http://www.epa.gov/watersense/pp/new_homes.htm](http://www.epa.gov/watersense/pp/new_homes.htm)

- **General Questions:**
  Web: [www.epa.gov/watersense](http://www.epa.gov/watersense)
  E-mail: [watersense@epa.gov](mailto:watersense@epa.gov)
  Helpline: (866) WTR-SENS (987-7367)

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