

# “WaterSense” and the 3 R’s of Water Sustainability

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March 19, 2009

# Outline

- The 3 R's of Water Sustainability
- EPA WaterSense Program
- EPA Climate Strategy
- U.S.--Australia Water Partnership
- Predictions

# The 3 R's of Water Sustainability (Reduce, Reuse, Restore)

- Reduce waste/inefficiency
  - WaterSense, ENERGY STAR, AWE
- Reuse water
  - Wastewater
  - Marine/brine water
  - Stormwater
- Restore watersheds
  - Green infrastructure
  - Wetlands recovery and aquifer recharge

# Need for Water Efficiency

- Population Growth and Shifts
  - 36 of 50 States Expect Shortages by 2010
- Aging Water Infrastructure
- Climate Change



- Launched in June 2006 by U.S. EPA
- Voluntary Public/Private Partnership Program
  - To enhance the market for water efficient products and services
  - To increase public awareness of and support for water efficiency

[www.epa.gov/watersense](http://www.epa.gov/watersense)



- Labeling program to help consumers identify water efficient products and services
  - At least 20 percent more water efficient
  - Equivalent or superior performance
  - Independently certified



- Final Specifications
  - Certification Program for Irrigation Professionals (2006)
  - High-Efficiency Toilets (2007)
  - High-Efficiency Lavatory Faucets (2007)
- Draft Specifications
  - High-Efficiency Flushing Urinals (2008)
  - Water-Efficiency Single-Family Homes (2008)



- Specifications Under Development
  - High-Efficiency Showerheads
  - Weather- or Sensor-Based Irrigation Control Technologies
- Labeled Products and Services
  - Over 250 toilet models
  - Over 700 faucets and accessories
  - Over 650 irrigation professionals through 5 certification program

# “Fix a Leak Week”

## EPA WaterSense

- March 16 to 20, 2009
- To remind Americans to attack leaks in their household fixtures and irrigation systems
- U.S. households, on average, waste more than 11,000 gallons of water per year-- enough to fill a backyard swimming pool

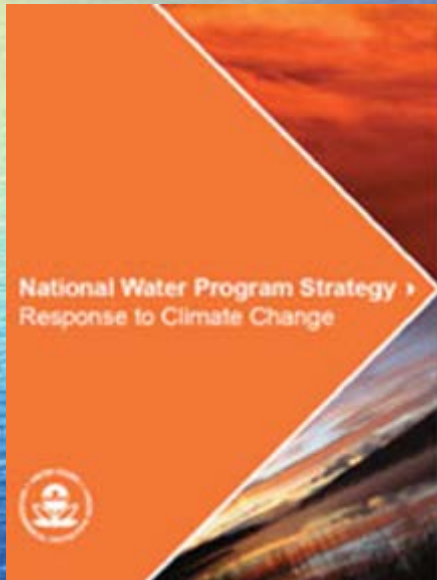
# Re-use of Water

- Wastewater re-use
  - Irrigation/landscaping
  - Indirect potable
- DeSalination
- Stormwater recycling
- EPA and National Academy of Sciences Work

# Restoring Watersheds

- Green infrastructure for wet weather flows (sewer overflows and stormwater)
- Wetlands reclamation (part of national goal of “no net loss” and “overall gain” of wetlands)
- Artificial recharge and aquifer storage

# U.S. EPA Water-Climate Strategy



- Released October 2008
- Background/Need
- Impacts on Water
- 44 Key Actions
  - 11 for Mitigation of Greenhouse Gas Emissions
  - 22 for Adaptation of Water-Related Programs
  - 11 for Research, Education, and Management

[www.epa.gov/water/climatechange](http://www.epa.gov/water/climatechange)

# Key Actions for Mitigation

- Improve Energy Efficiency at Wastewater and Water Treatment Utilities
- Implement the WaterSense Program
- Detect and Fix Leaks
- Conserve, Reuse, and Recycle Industrial and Municipal Water
- Promote Green Buildings and Green Infrastructure
- Develop Geologic Sequestration Regulations

# U.S./Australia Water Partnership



- Discussions begin in 2007
- Partnership agreement signed by EPA Administrator and Minister for Climate Change and Water on April 8, 2008
  - Commitment to work together on water efficiency, water pollution, watershed management, water-related research

# Conclusion: 3 R's Revisited

- Reduce waste/inefficiency
- Reuse water
- Restore watersheds....
  
- Revise water programs as part of adaptation strategies for climate change

# Predictions

- “Growing with the flow” (Smart growth and green building)
- “Pricing to slow the flow and recover the costs”
- “Connecting the drops and the watts” (water and energy nexus)
- Integrating the water sector (e.g. the newly-formed Clean Water America Alliance)
- Recognizing water as both the “oil of the 21st century” and a solution for the “Energy-Climate Era”\*

\*a term from Thomas Friedman’s “Hot, Flat, and Crowded” (2008)