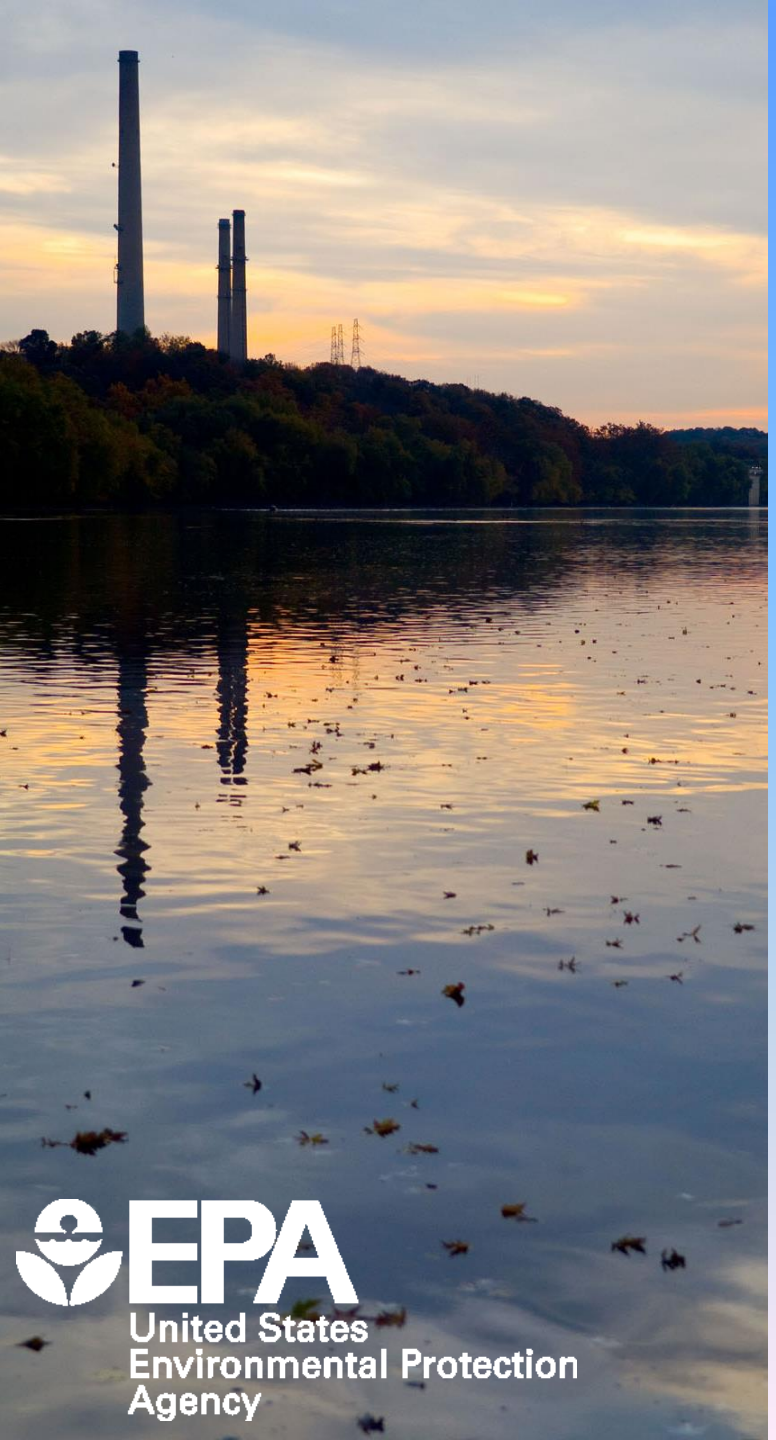


EPA Office of Water

Municipal Program Update

Activities & Initiatives

Deborah G. Nagle
Director
Water Permits Division

February 2015

2013 Office of Wastewater Management Focus Areas & Objectives

Plan

Green Infrastructure Practices
Integrated Wet Weather Planning

Identify pathways to strengthen sustainable practices

Program

Water Finance Center
Stormwater Management
Multi-Sector General Permit

Protect vital resources
Enhance energy relationships

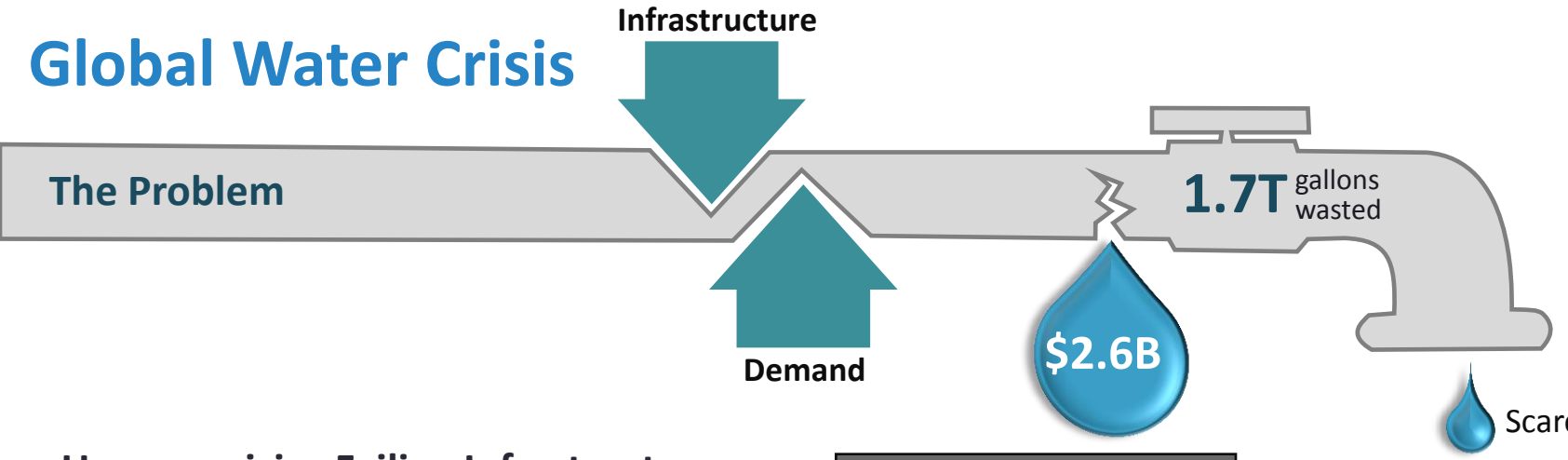
Produce

Campus Rainworks
Technology Innovation
Partnerships

Innovate for smart, sustainable growth

Integrated efforts resulting in effective collaboration with government and private industry

Global Water Crisis



Unseen crisis: Failing Infrastructure

Efficient water use depends on working, modern infrastructure, but leaking water collection and distribution systems and inadequate wastewater treatment continue to plague municipalities. Modern, efficient water infrastructure is crucial to meet the needs of expanding populations.

100 YEARS
THE AGE OF SOME
U.S. WATER INFRASTRUCTURE

Scarcity

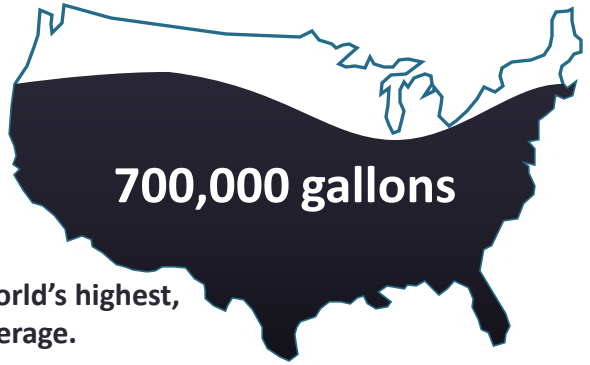
Suitability

Sustainability

Growing Problem: Water Scarcity

Safe drinking water is a precious asset. Although 70% of the world's surface is covered by water, only one percent of the total water resource on earth are available for human use. Today, that one percent is under threat as a result of population growth, urbanization, and crumbling infrastructure.

$2.6 BILLION
AND 1.7TRILLION GALLONS
LOST EVERY YEAR FROM
BROKEN AND LEAKING PIPES



U.S. water footprint is among the world's highest, and more than double the global average.

EPA Launches
Water Infrastructure & Resiliency Finance Center

- The center was created to help communities
- The center is part of the Build America Investment Initiative
- Increasing investments to improve water systems
- Center of Financial Expertise & Excellence

The Water Infrastructure Finance Challenge

Community Financial Gap

Some communities lack financial capacity and resources, face multiple demands and are experiencing affordability concerns.

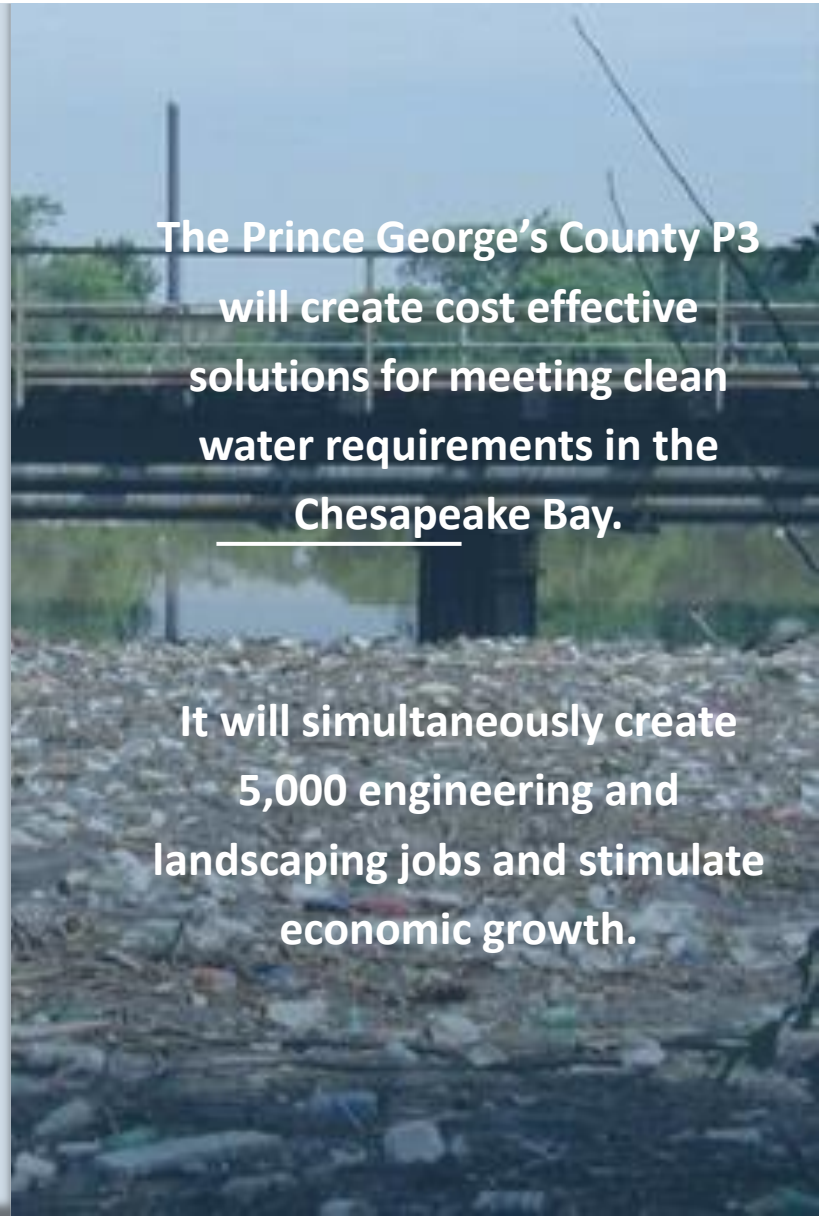
Infrastructure financing and resiliency are key components to help communities address economic and environmental needs.

Innovative Financing Program

Build upon the highly successful State Revolving Fund and other programs of EPA and its federal partners (examples, DOT, USDA, Treasury). Share successes and deploy financial alternatives.

The Center will support communities and explore alternative financing and financial analyses - in support of drinking water and clean water obligations, including innovative financial tools, public-private partnerships (P3), and non-traditional financial concepts such as loan guarantees.

Share examples of innovative deals such as the EPA, Maryland Department of Environment and Prince George's County Public-Private Partnership for stormwater infrastructure.



Drilling Down – Financial Focus Areas

Financing Resilient Water Infrastructure

Integration of water efficiency, energy efficiency, green infrastructure and water reuse

Financing Stormwater & Green Infrastructure

Support communities in development of sustainable funding

Financial Capacity Building for Small & Medium Communities

Build upon existing collaboration with the U.S. Department of Agriculture's Rural Utility Service and other federal agencies to increase the financial capacity of community water systems

Alternative Financial Delivery Systems

Build upon existing work within the Environmental Finance Centers to support targeted communities explore financial options to address clean water and drinking water obligations

Focus Areas (cont)

- Create opportunities for public and private entities to work together to leverage available financing
- Create a community model for financial expertise and excellence through training, clearing house, advising, sharing successes
- Create an objective Center of Excellence that highlights and educates communities around financial partnerships, financial leadership, alternatives, risks and risk management, and successes
- Explore targeted financial practices to improve efficiency and savings, for example, procurement

Partnerships

- Communities & Municipal Utilities
- Private Sector
- Environmental Finance Centers
- States
- Associations /Advocacy Groups
- Other Federal Agencies
- Environmental Finance Advisory Board

http://water.epa.gov/infrastructure/waterfinancecenter

WaterFinanceCenter@epa.gov

Integrated Wet Weather Planning

- October 27, 2011 memo expresses EPA commitment/support for integrated approaches to municipal stormwater and wastewater management
- Integrated planning approaches help municipalities meet their CWA obligations by fostering:
  - Sequencing of projects in a way that starts highest priority projects first; and
  - innovative solutions, (e.g., green infrastructure)
- EPA is providing $335,000 in technical assistance to five communities to develop components of Integrated Plans.

Integrated planning framework

- June 5, 2012 Memorandum releases the Integrated Planning Framework which identifies principles and elements of an integrated plan

Overarching Principles

- Maintain existing regulatory standards that protect public health and water quality
- Allow a municipality to balance various CWA requirements in a manner that addresses the most pressing public health and environmental protection issues first
- The responsibility to develop an integrated plan rests with municipality

Financial Capability Assessment FRAMEWORK

- November 24, 2014 Framework discussing ways to improve financial capability assessment used in schedule development.

Framework identifies Elements

- 1997 Guidance assessment provides a common basis.
- 2% MHI is not a rigid threshold.
- EPA will consider all CWA costs, including stormwater costs, in the residential indicator.
- EPA will consider SDWA obligations as part of financial capability indicators.
- Communities should assure that CWA obligations that are addressed as costs will be implemented.

Encourages additional Information

- Income distributions
- Rate structures with differential rates for low income customers
- Rate or revenue models

Green Infrastructure

Green Infrastructure: Initiatives & Partnerships

EPA has several initiatives to help municipalities implement green infrastructure approaches

- Over $2.2 million in technical assistance provided to 39 communities since 2012 to help implement green infrastructure projects and develop national case studies
- Last fall, launched the Green Infrastructure Collaborative, comprised of 7 federal agencies and 30 external stakeholders, to cooperatively work to support local green initiatives

Partnerships

- Recently, EPA, DC Water and the District signed green infrastructure partnership agreement
  - Joint commitment to green infrastructure and path forward to consider possible green infrastructure amendments to their consent decreeS
- Philadelphia requested federal partnership in their state negotiated, green infrastructure approach
  - EPA signed partnership agreement and administrative order with Philadelphia to bring all parties into united effort for the most ambitious green infrastructure effort in the country
  - ORD awarded $5 million in grants to support city efforts

Green Infrastructure: Campus Rainworks challenge

- Student design competition in the midst of its third year
- College and university students submit green infrastructure designs for their campus
- WEF, ASCE & ASLA work with EPA to judge entries and rate the best submittals
- Awards given to student teams and faculty advisor

Municipal Stormwater

Focusing on a suite of actions to help communities effectively address their stormwater challenges

- Federal Partnerships (1)
- Education, Technical Assistance & Engagement with Key Partners (2)
- Recognition/ Incentive Programs (3)
- Strengthening the MS4 Program (4)

Copper-free brake initiative

Purpose

To reduce the use of copper, mercury, lead, cadmium, asbestiform fibers, and chromium-VI salts in motor vehicle brake pads to decrease runoff of these materials from roads into our waterways.

Details

- EPA signed an agreement with eight automotive industry groups and the Environmental Council of the States
- Includes reductions of copper and other materials as well as marking of brake friction materials and packaging

Website

http://water.epa.gov/polwaste/npdes/stormwater/copperfreebrakes.cfm

Memo on Stormwater & TMDLs

Background

- Joint Memo from Office of Wastewater Management (OWM)-Office of Wetlands, Oceans, and Watersheds (OWOW)
- Updates 2012 Stormwater-TMDL memo
- Replaces 2010 Stormwater-TMDL memo

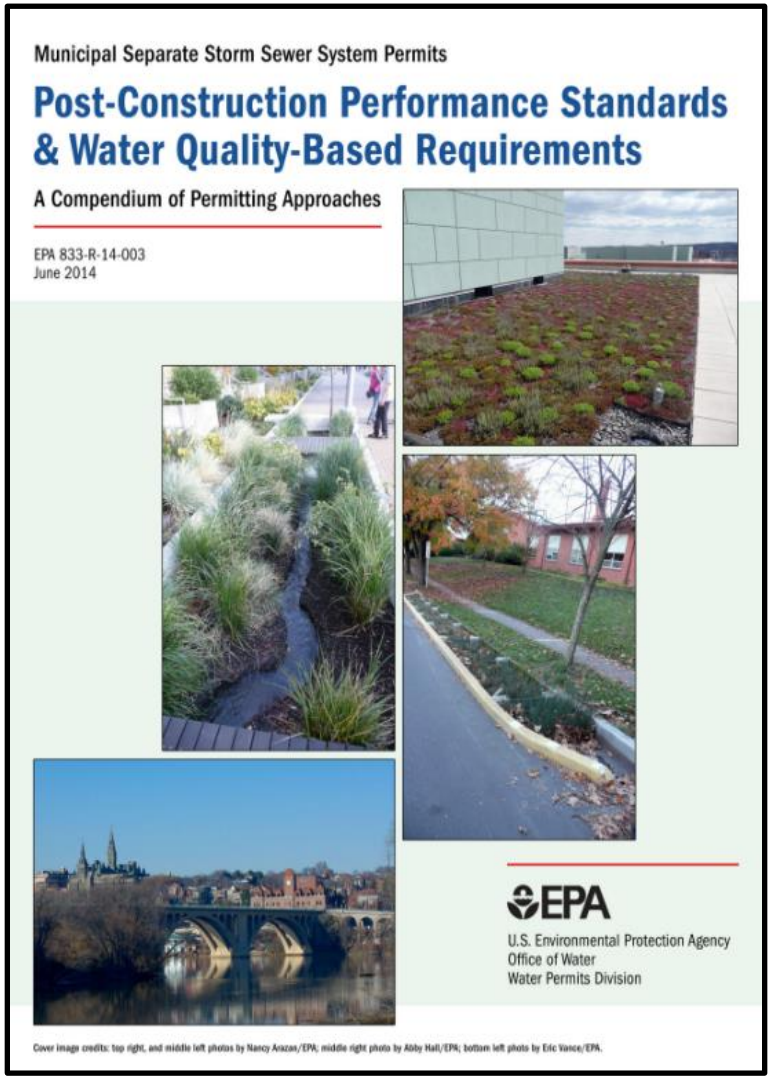
Key recommendations

- Where MS4 discharges have the reasonable potential to cause or contribute to a WQS exceedances, NPDES permitting authorities exercise their discretion to include **clear, specific, and measurable permit requirements and, where feasible, numeric effluent limitations** as necessary to meet WQS
  - Applies also to construction and industrial stormwater permits
- Where the TMDL includes WLAs for stormwater sources, the permit should include effective, measurable WQBELs to achieve the WLA – these requirements can take the form of:
  - Numeric effluent limitations, or BMP-type limits with clear, specific, and measurable elements

Recommendations largely based on the examples found in state permits – published in the *MS4 Compendium* (next slide)

- Demonstrates how permitting authorities are establishing requirements that are tied to a measurable water quality target, including permit examples expressed in both numeric and non-numeric form
- These examples share the attribute of being expressed in a clear, specific, and measurable way

POST-CONSTRUCTION PERFORMANCE STANDARDS & WATER QUALITY-BASED REQUIREMENTS



Available at:
www.epa.gov/npdes/pubs/sw_ms4_compendium.pdf

Retention standards

- An increasing number of states and communities are relying on retention standards to reduce impacts of stormwater from impervious cover
- Retaining stormwater near where it falls reduces:
  - Pollutants
  - Volume and velocity
  - Flooding
- Retention standards are cost-effective
  - It is more cost-effective to incorporate sustainable controls as development occurs and prevent the need for costly retrofits or restoration
  - For new development, these standards can save money because smaller detention ponds and less gray infrastructure would be used

18 states and DC have standards based on retention of a certain volume of stormwater

(as of 2011)

Additional requirements to address impaired waters

MS4 permits include requirements to address impaired waters such as:

- Listing applicable total maximum daily loads (TMDLs), wasteload allocations (WLAs), and/or the affected MS4s
- Including numeric effluent limits and other quantifiable approaches for the specific pollutants of concern
- Requiring implementation of specific stormwater controls or management measures
- Including other types of water quality-based requirements like:
  - Permitting authority review and approval of TMDL plans
  - Monitoring/modeling requirements
  - TMDL-related annual reporting requirements
- Requiring actions for discharges to impaired waters where there is no TMDL

Multi-Sector General Permit (MSGP) for Industrial Stormwater Activities

- Covers 29 sectors of industrial activity in areas not without an approved state NPDES program
- Requires industrial facilities to develop stormwater pollution prevention plans (SWPPP) and to implement and maintain site-specific stormwater control measures
- Current 2008 MSGP expired in September 2013 and has been administratively continued for existing permittees
- EPA proposed a new MSGP for public comment in September 2013 and is working to finalize it this Spring
- Notable proposed changes include:
  - Additional specificity for several of the technology-based effluent limits
  - Electronic submittal of information
  - Making permittees' SWPPP information publicly available
  - Incorporating new aircraft deicing requirements

EPA and WaterSense – the why and what

Water shortages expected in 40 states

Communities face major infrastructure investments

Consumers challenged by rising utility bills

Much of water used outdoors is wasted

No ENERGY STAR-like program for water

2006

Identify high-performing technology

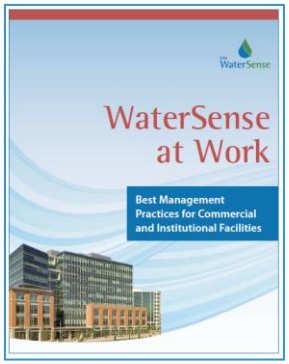
Promote water efficient behavior/action

Help consumers save money

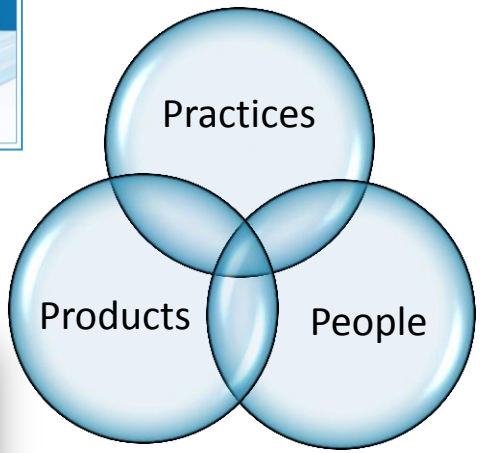
Reduce need to expand infrastructure capacity

Save water for critical needs

WaterSense Focus – 3 P's



Actions that can be taken to reduce water use -- at home, outdoors and at work



look for WaterSense Meets EPA Criteria

Fixtures and technologies save water

Partners reach users to change behavior

look for WaterSense Meets EPA Criteria

What's Special About WaterSense?

A label with integrity

- Third-parties independently certify that products and homes meet EPA criteria
- Backed by the credibility of EPA

Smart use of resources

- EPA provides national standardization and outreach for water-efficiency
- Manufacturers and builders absorb product research, testing, and branding costs
- Licensed certifying bodies certify the products and police the label's use
- EPA, manufacturers, builders, retailers, utilities, and other partners help market/incentivize purchase of labeled products and homes

WaterSense Labeled Products

Flushing Urinals

Lavatory Faucets

Irrigation Controllers

Pre-rinse Sprayers

New Homes

Tank-Type Toilets

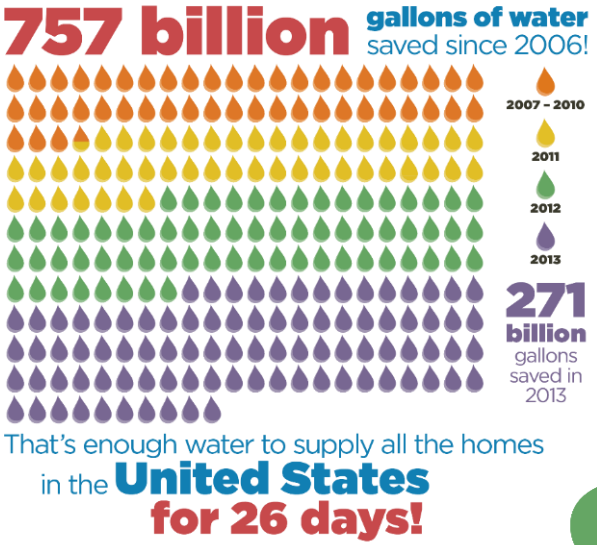
Showerheads

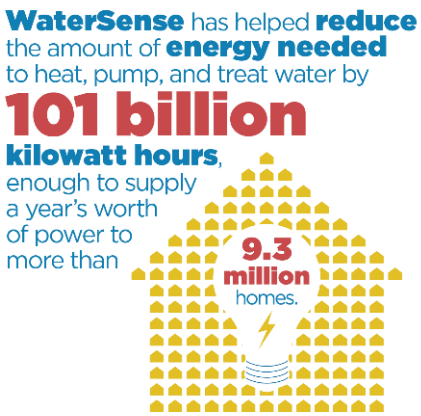
More than 14,000 Labeled Product Models

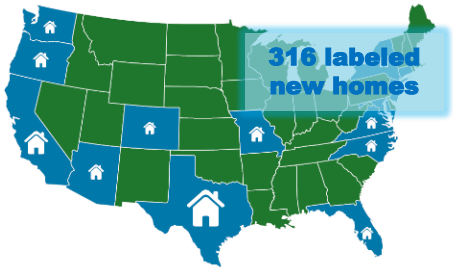
ENERGY STAR

Water factors are also included in many ENERGY STAR qualified products

Savings Add Up!
2006-2013







Partner with WaterSense!

- Wastewater utilities are eligible to be WaterSense partners – and it's free!
- Reducing water demand can reduce need for infrastructure to provide additional capacity
- EPA offers free materials and templates to help utilities promote water efficiency and WaterSense
- Participate in EPA campaigns with our 1,600 partners
- Visit epa.gov/watersense/partners to learn more

Questions