



**EPA's Water\$ense for
Saving and Conservation:
Save Water to \$ave Energy**

Janice Whitney
WaterSense Liaison
US EPA Region 2
Clean Water Division

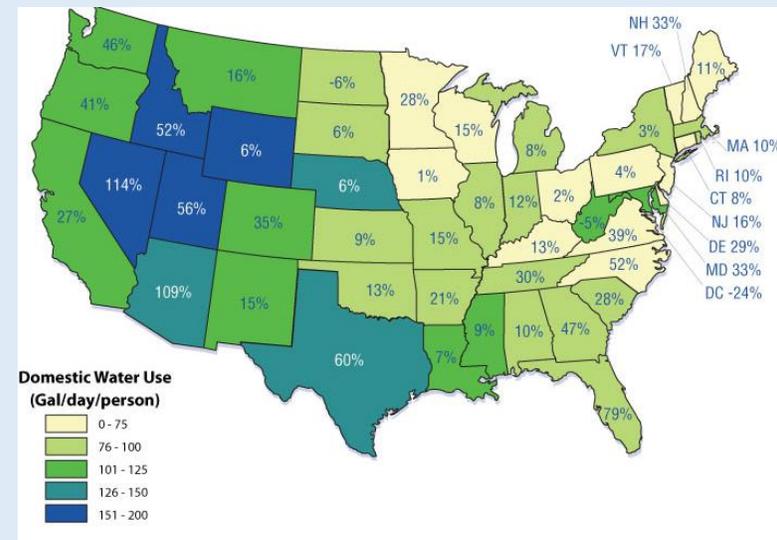


Bad news: A Thirsty Nation

Our national thirst for water is increasing!

- 1950-2000: U.S. population doubled; public supply system demand more than tripled
- 40 out of 50 states anticipating near-future water shortages
- Further stress by increasing demand coupled with the impacts of climate change

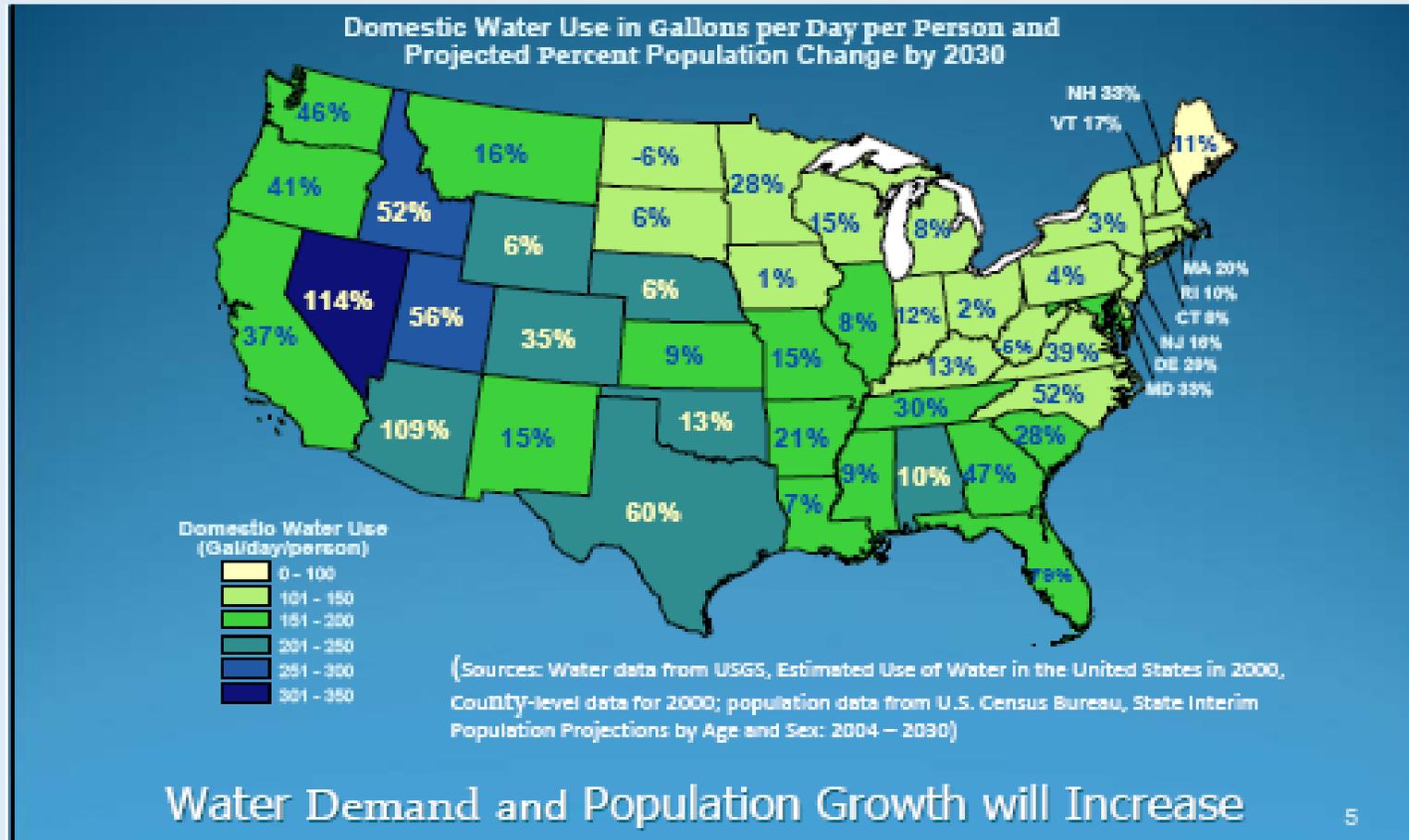
Domestic Water Use in Gallons per Day per Person and Projected Percent Population Change by 2030*



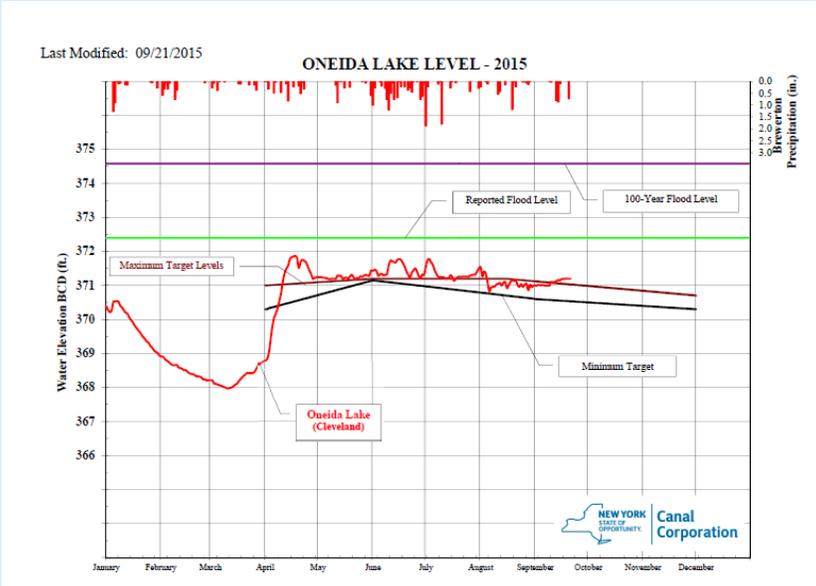
*Source: Water data from USGS, Estimated Use of Water in the United States in 2005. Table 6, Page 20; population data from U.S. Census Bureau, State Interim Population Projections by Age and Sex: 2004-2030.



Water Use and Population Increase



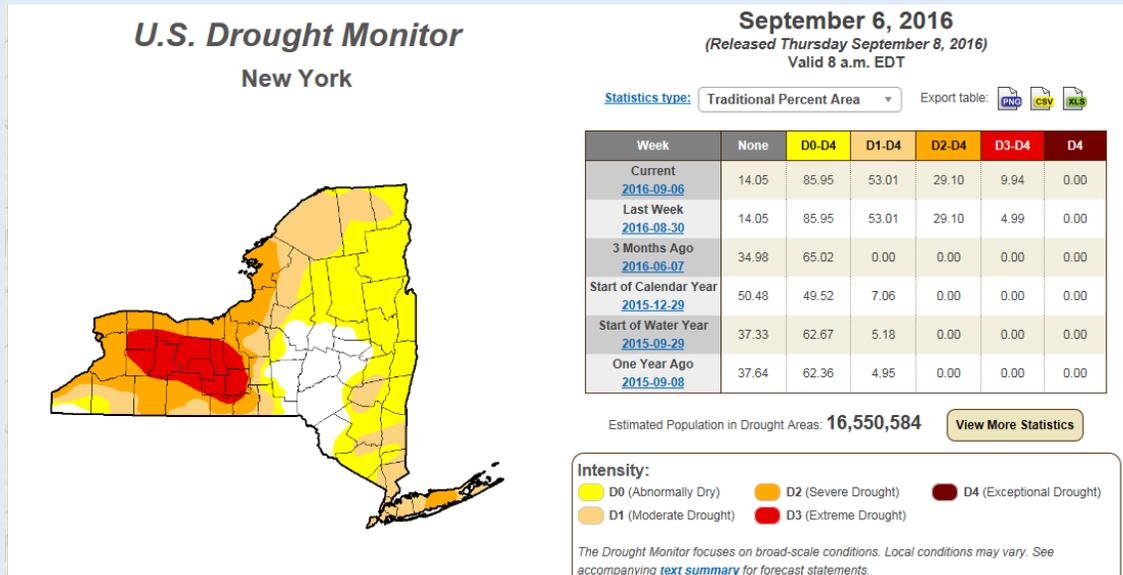
Flooding Likely to Worsen: Example- Oneida Lake flooded in 2011 and again in 2013



From Droughts to Floods

Well, it's now official...DEC July 15, 2016 Drought Watch Issued for New York

DEC Commissioner Basil Seggos today issued a drought watch for the entire state of New York following consultation with the State Drought Management Task Force and Federal partner agencies.



- Weather patterns change, but drought and heavy flooding is now happening in at least one part of the state each year.
- Climate change—with an additional number of “extreme” weather events—will only exacerbate the problem.





UPDATE: State Revolving Funds (SRF) and WaterSense

- \$2.5 Billion (National)
- \$307 Million (Region 2)
 - 20% goal for green

- Equipment or facility publicly owned
 - Installation of meters
 - Plumbing fixture retrofits or replacements
 - Efficient landscape irrigation equipment (public parks, golf courses)
 - Recycling gray water (municipal buildings)
 - Reuse of wastewater (public purposes)



During FY16 Region 2's State Revolving Fund (SRF) program awarded a total of \$257.8 million to New Jersey and New York as follows:

NJ-CWSRF:	\$54,598,000
NY-CWSRF:	\$147,479,000
NJ-DWSRF:	\$15,815,000
NT-DWSRF:	<u>\$39,900,000</u>
TOTAL:	<u>\$257,792,000</u>

Green Infrastructure Grant Program (GIGP)



GIGP Practices

Permeable Pavements

Bioretention

Green Roofs and Green Walls

Stormwater Street Trees/Urban Forestry Programs

Construction or Restoration of Wetlands, Floodplains, or Riparian Buffers

Stream Daylighting

Downspout Disconnection

Stormwater Harvesting & Reuse

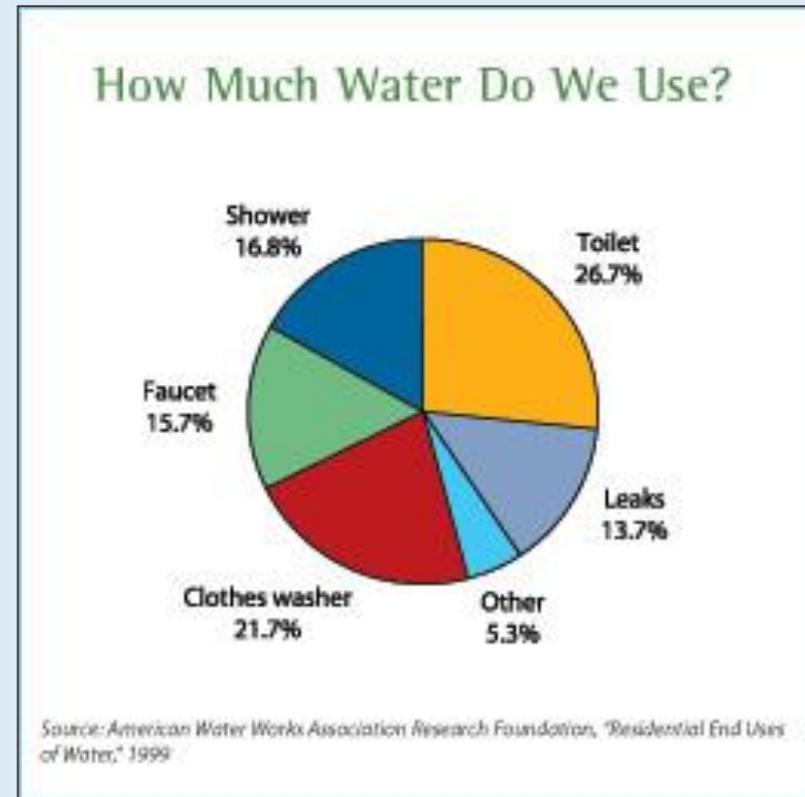


Strained Resources: The Business Case for Water Efficiency

- Water utilities might need to invest more than \$700 billion to update aging infrastructure in the next 20 years.
 - More than \$384 billion for drinking water
 - More than \$321 billion for wastewater
- Water efficiency can stretch our limited water supplies further, delaying the need to construct additional infrastructure right away.

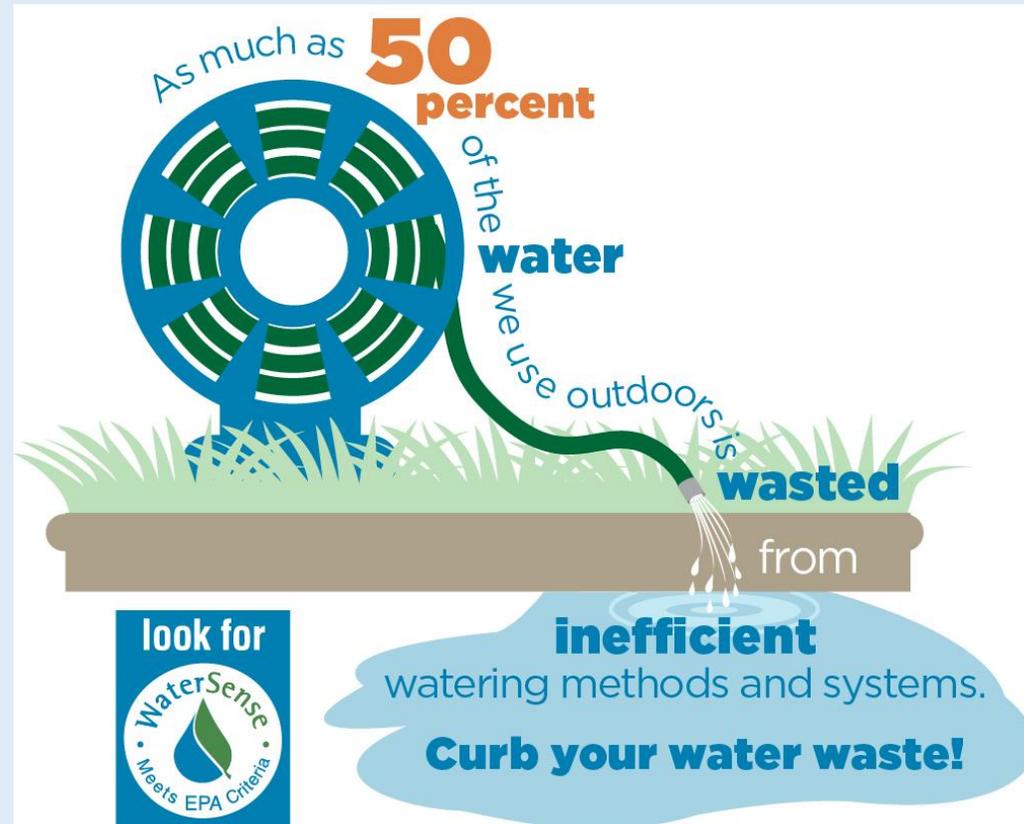
Inefficient Indoor Water Use

- Contributes to the strain on supplies
- Average family: 400 gallons of water per day
 - 70 percent residential water use
 - Older toilets (3.5 gallons per flush [gpf]) that are 60 percent less efficient than today's high-efficiency (1.28 gpf) models
 - 5 to 10 percent of American homes with water leaks that drip at a rate of 90 gallons a day or more



Inefficient Outdoor Water Use

- Residential outdoor water use accounts for nearly 9 billion gallons of water daily.
- Outdoor water use is estimated to account for 30 percent of total residential water use.
 - As much as 50 percent of the water applied to lawns and gardens is wasted.

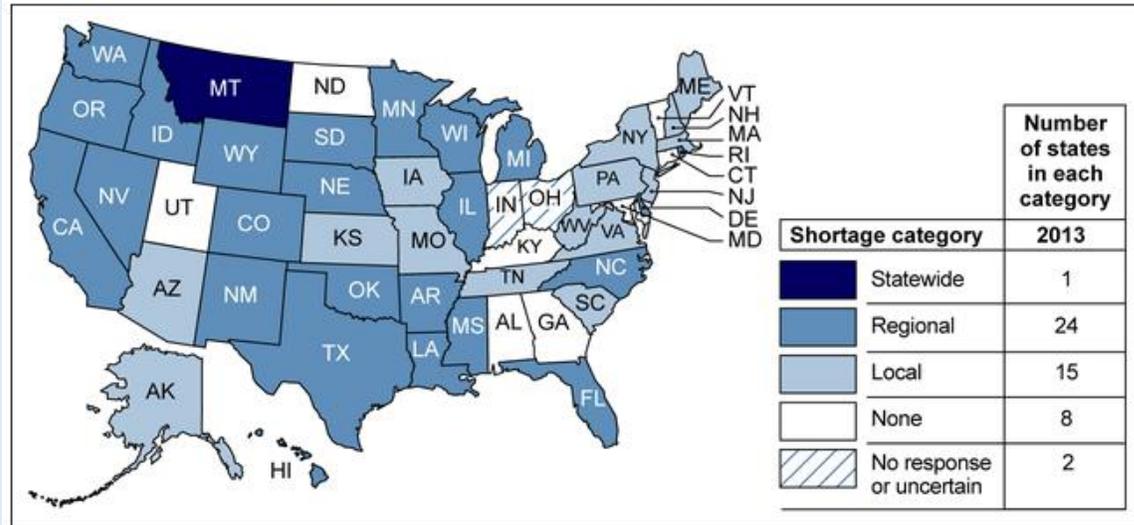




We need water efficiency

- Increased demands are stressing surface water and depleting aquifers
 - 2014 GAO report has at least 40 states predicting water shortages in the next 10 years, even under non-drought conditions
- EPA estimates water utilities need to invest more than \$600 billion to update aging infrastructure over the next 20 years

Extent of State Shortages Likely over the Next Decade under Average Water Conditions, 2013



Sources: GAO analysis of state water managers' responses to GAO survey; Map Resources (map).



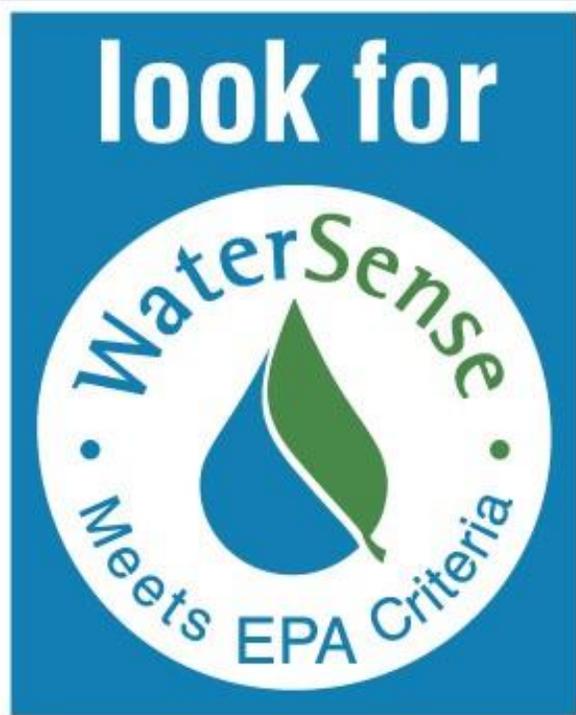
What Is WaterSense?

- **Voluntary** partnership and labeling program launched by EPA in 2006
- Label with integrity that is backed by the credibility of EPA
 - WaterSense labeled products and programs independently certified for water efficiency and performance
- Simple way for consumers to identify products, new homes, and programs that save water and perform well





EPA's WaterSense program can be part of the solution



There are several Business Benefits of implementing water-efficiency measures to significantly reduce water use through water-efficient fixtures, technologies and techniques:

- Reduce operating costs
- Create more sustainable practices
- Decrease in energy bills because of the significant amount of energy associated with heating water

The Water-Energy Nexus

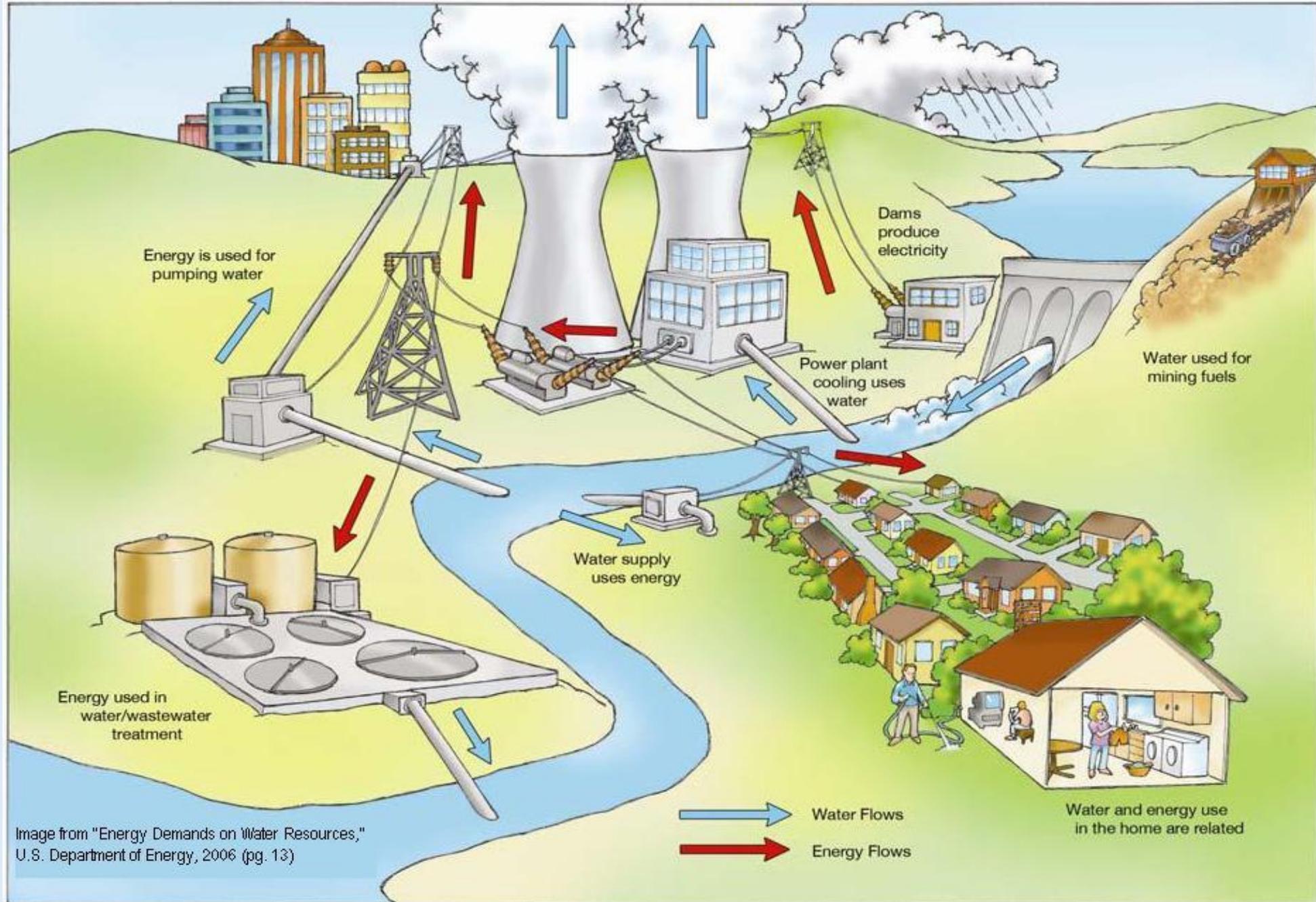
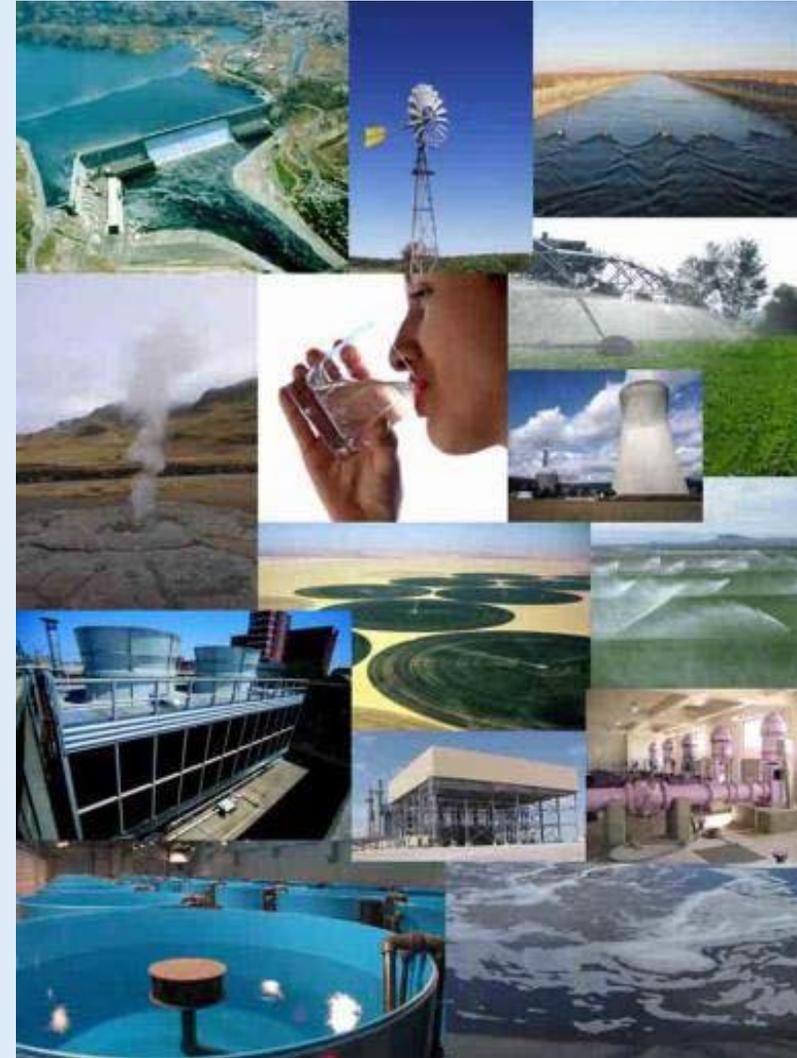


Image from "Energy Demands on Water Resources,"
U.S. Department of Energy, 2006 (pg. 13)

Water and Energy: Two Sides of the Same Coin

- Energy for Water
 - Pumping
 - Treating
 - Heating
- Water for Energy
 - Thermoelectric
 - Oil & Gas development
 - Biofuels
 - Concentrated solar
 - Etc.





How does energy come into the picture for the water sector?

- Moving, treating and heating water uses energy
 - Every gallon of water has an energy “footprint”
- Water sector energy use
 - Nationally – ~3-4%
 - California - ~20%
 - Municipal level – can be > 40%
 - Utility level – one of the highest costs
- Doesn't include energy footprint associated with end uses (hot water)
 - Pacific Institute-Argosy Institute WECalc calculator allows estimates of water-related energy use in a household - <http://www.wecalc.org/>





Water Services and Energy Demand

- Drinking water and wastewater services use 3-5% of US energy-56 billion kWh
- Equates to adding ~ 45 million tons of greenhouse gas to the atmosphere.
- Each 1000 gallons of cold water treated and delivered to your tap uses ~ 3,300Wh of electricity
- Energy costs and drinking water shortages continue to escalate, adding further strain for water utilities.



Saving Water Saves Energy

Shower Better With WaterSense

A perfect example of how saving water saves energy, WaterSense labeled showerheads allow consumers to enjoy a satisfying shower while saving water, energy, and money. By replacing an older, inefficient showerhead with a WaterSense labeled model, the average family can save the amount of water that it takes to wash 70 loads of laundry and conserve enough energy to power a home for 13 days every year!

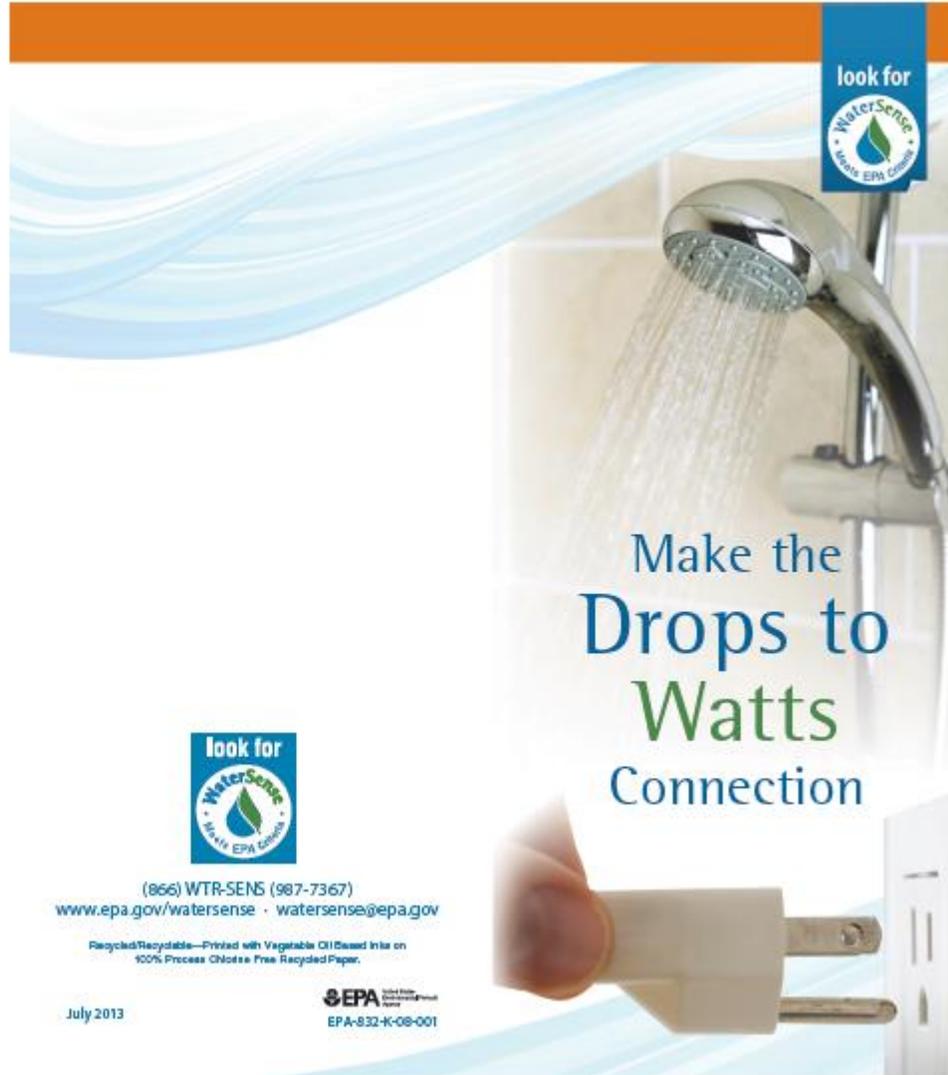
Why waste...

2,900
GALLONS
of water 

13 DAYS
of energy to
power your home 

\$70
per YEAR 

Shower**Better** 



look for


Make the
**Drops to
Watts
Connection**

look for


(866) WTR-SENS (987-7367)
www.epa.gov/watersense · watersense@epa.gov

Recycled/Recyclable—Printed with Vegetable Oil Based Inks on 100% Process Chlorine Free Recycled Paper.

July 2013

EPA U.S. Environmental Protection Agency
EPA-832-K-08-001



Saving Water Saves Energy

Drops to Watts: Saving Water Saves Energy and Money

With climate change concerns, pervasive droughts, and high energy prices across the country, nearly everyone is looking for ways to conserve resources and cut costs. By looking for the U.S. Environmental Protection Agency's (EPA's) WaterSense® label, your family can use less water, energy, and money while ensuring product performance.

Many Americans know about the importance of saving energy and water. But few know about the drops to watts connection—that it takes energy to pump, heat, treat, and deliver the water we use every day. We turn on the bathroom lights and the shower without realizing how closely related water and energy are to each other.



Did You Know?

If every home in the United States replaced existing showerheads with WaterSense labeled models, we could save nearly \$5.1 billion in water and energy costs across the country annually!

On average, the annual energy used to deliver and treat water for only 10 households could power a refrigerator for more than two years. In some areas of the country, that estimate is very low. Heating water for showering, bathing, shaving, cooking, and cleaning also requires a considerable amount of energy. Homes with electric water heaters, for example, spend one-fourth of their total electric bills just to heat water.

How Can We Start Saving?

One of the simplest ways to save both water and energy is to install water-efficient products. WaterSense labeled products not only save water, but can help reduce your energy bills. Installing WaterSense labeled faucet aerators in your bathrooms, for example, costs just a few dollars but could save you enough electricity to dry your hair every day for a year!

You can choose from thousands of models of WaterSense labeled plumbing products. What's more, you can be sure the products will not only save resources, but will perform well. All WaterSense labeled products are tested and independently certified to ensure they meet EPA's criteria for both efficiency and performance.

Did You Know?

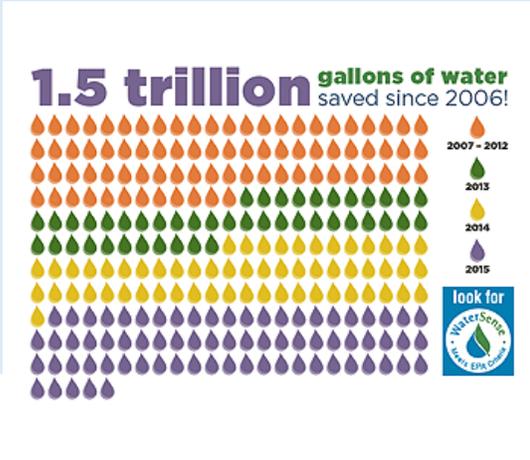
It also takes water to create energy. Vast amounts of water are used to cool the power plants that generate electricity. In fact, it takes 3,000 to 6,000 gallons of water to power a 60-watt incandescent bulb for 12 hours per day over the course of a year!

Start saving both water and energy! Look for WaterSense labeled products and ENERGY STAR® qualified appliances that use water. For more information, visit www.epa.gov/watersense.





Energy Bill Savings



WaterSense has helped reduce the amount of **energy needed** to heat, pump, and treat water by **212 billion kilowatt hours**, enough to supply a year's worth of power to more than



...eliminating **78 million metric tons** of greenhouse gas emissions...



...and **saving consumers \$32.6 billion** in water and energy bills



epa.gov/watersense



epa.gov/watersense



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



Co-benefits of Saving Water

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



Save energy and costs associated with pumping and treating water

Reduce peak demands

Reduce physical size of surface water alternative facilities

Reduce volume of ground water pumping

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

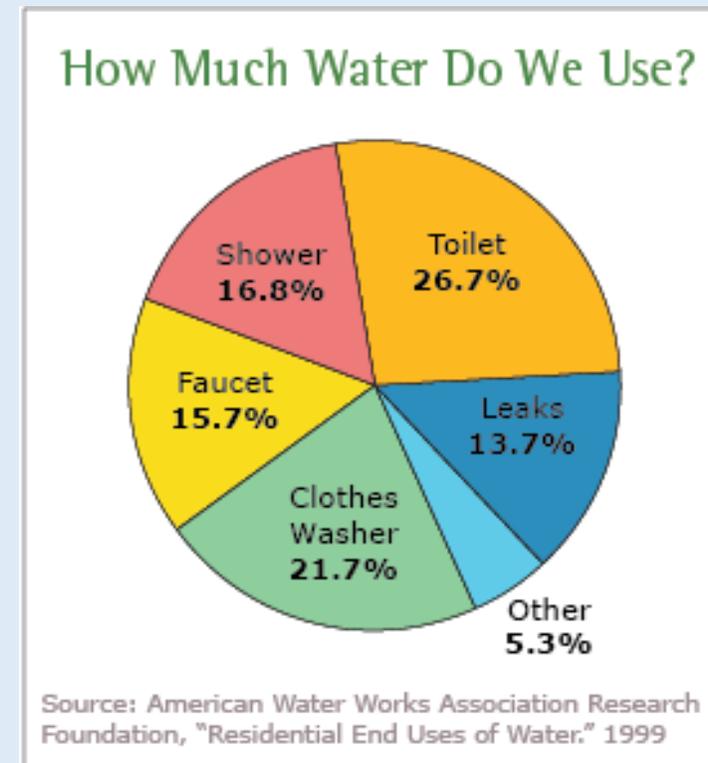
- You can't manage what you don't measure
 - Water Accounting
 - Universal Metering
- Minimize losses and line breaks
 - Water Loss Control
 - Pressure Management
- Cheap water is easy to waste
 - Smart Costing and Pricing can send price signals to save





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
- Many of these uses also use energy - focusing on water efficiency can reduce energy consumption
 - Homes with electric water heaters, for example, can spend 1/4 of their total electric bill just to heat water





WaterSense Promotional Partners

Nonprofit Organizations: e.g. environmental organizations, nonprofit certifying organizations, consumer advocacy groups.

Professional and Trade Associations/Home Builders: Associations whose members are eligible to join as a WaterSense partner can also join as promotional partners. For example, because water utilities are eligible for partnership, the American Water Works Association, whose membership includes several thousand utilities, is also eligible. Home builder associations and trade associations that promote water-efficient products and practices to commercial and institutional facilities, such as green hotel or restaurant networks, are also eligible to partner with WaterSense.

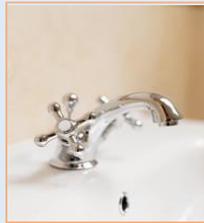
Utilities/Water Districts/Government Agencies: Environmental departments, municipal programs, water agencies, water districts, wholesalers, public utilities, private utilities, wastewater treatment facilities, water boards, and public utility commissions of federal, state, provincial, and local agencies.



Good News: EPA has \$\$ Saving WaterSense Labelled Products



Flushing Urinals



Lavatory Faucets



Irrigation Controllers

More than 18,000 product models have earned the label



New! Flushometer-Valve Toilets



Tank-Type Toilets



Showerheads



Pre-Rinse Spray Valves



Water factors are also included in many ENERGY STAR qualified products

EPA's WaterSense label is generally reserved for products that use at least 20% less water and perform as well or better than standard models.



WaterSense Labeled Product Criteria

- Save water on national basis
- Perform as well or better
- Products easy to find and use
- No consumer sacrifice; convenience, comfort, hygiene, health, safety, availability
- Generally, 20% more water efficient
- Provide measurable results in water saved
- Savings for both consumers and utilities
- Require Third party certification



NY GIANTS/NY JETS GREEN MOU SIGNING CEREMONY



**Join us as the
New York Football Giants
and the
New York Jets**
team up with the
U.S. Environmental Protection Agency
to announce the new stadium's sustainability programs
and document their "go green" partnership.

**Monday, June 1, 2009
11:00 a.m.**
New Meadowlands Stadium, Southwest Plaza
NEW MEADOWLANDS

RSVP to Lauren Jacobi by clicking here: ljacobi@nmstadco.com.
Please see the attached map for directions and parking.

*Please note: The event will take place outdoors on a construction site, rain or shine.
Please dress appropriately. Boots or sturdy shoes are highly recommended.*

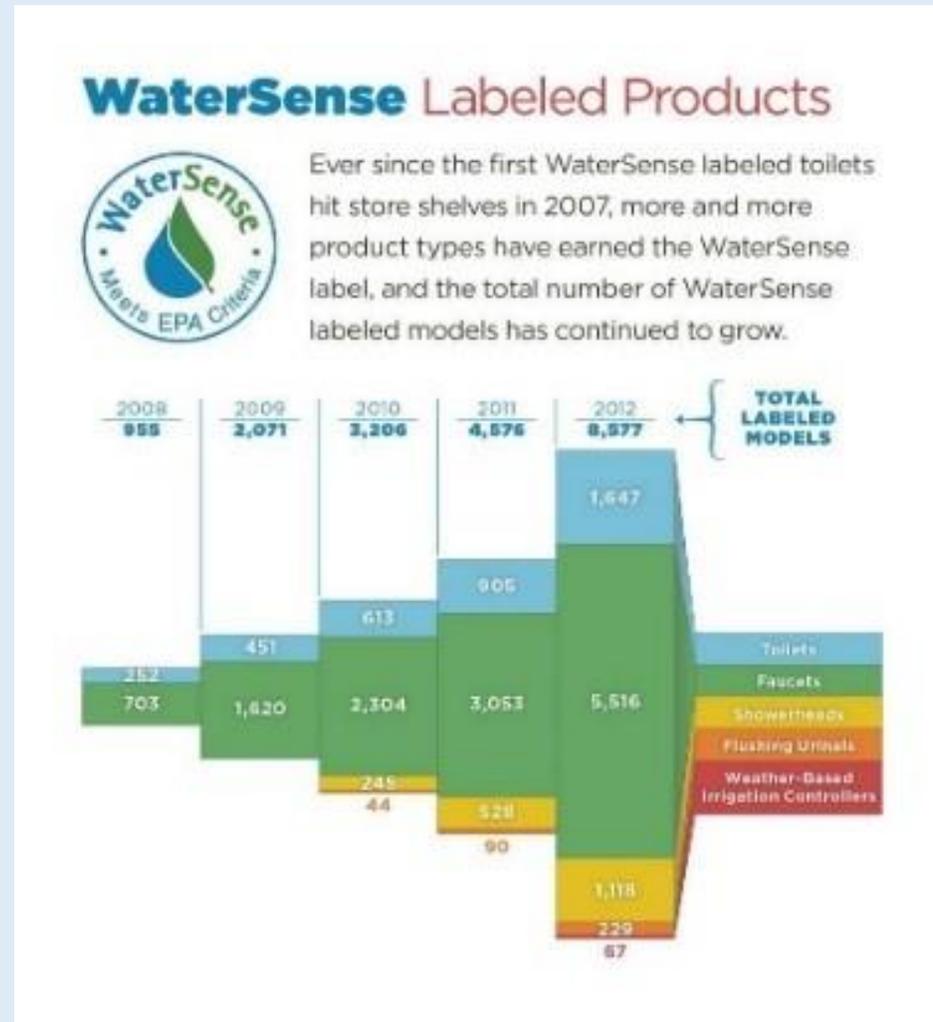
**NEW
MEADOWLANDS
STADIUM**





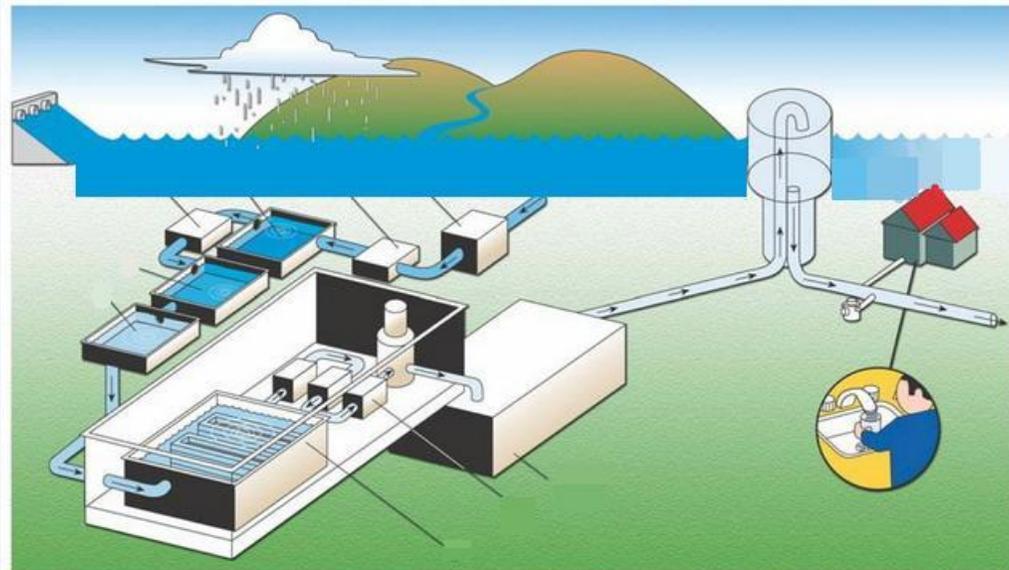
The WaterSense Program continues to grow

As of 2016, WaterSense had more than 1,500 partners, more than 18,000 labeled products, and more than 325 labeled new homes. The program continues to grow each year.





WaterSense Labeled Products Savings



- 125 billion gallons water saved
- \$2 billion saved in water and energy bills
- 16.7 billion Kwh electricity saved
- 6 million metric tons of CO₂ equivalent eliminated



WaterSense New Homes Program

- Criteria for indoor, outdoor, and homeowner education
- Works with other green building programs - homes can receive multiple certifications
 - ENERGY STAR®, LEED, NAHB, EarthCraft, etc.
- Inspected & certified by independent third parties
- Recoup initial investment in as little as six years

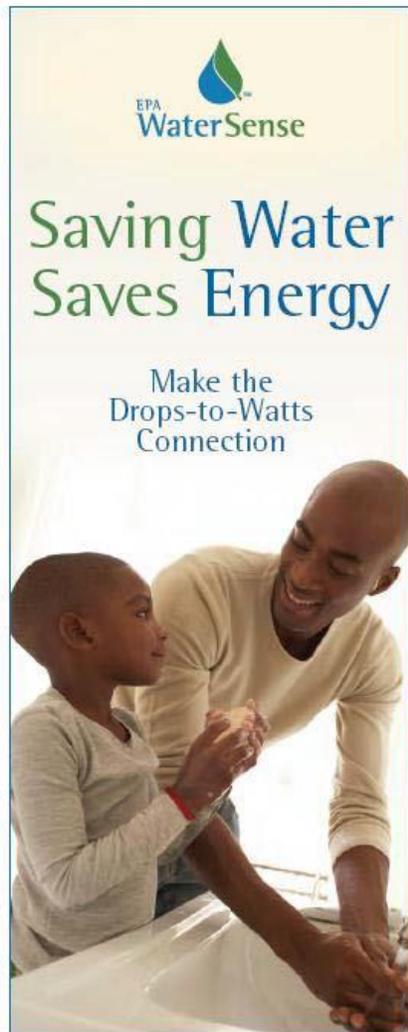


New Homes Specification: Indoors

- **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



Savings Associated with WaterSense Labeled New Homes



- WaterSense labeled homes are at least 20% more efficient than a traditional home for a family of 4
 - 50,000 gallons of water - equal to 1,200 loads of laundry
 - 1,200 kilowatt hours of electricity (*if electric hot water*)—enough to power a television for nine years
 - At least \$500 per year on water, sewer, and energy bills



Why Partner With WaterSense?

Rising
Costs

Climate
Changes

Aging
Infrastructure

Population
Changes

Regulatory
Requirements



Collaborating for Water Efficiency

- The success of programs hinge on collaboration between utilities, retailers/distributors, and manufacturers
 - Utilities help create demand; manufacturers, retailers, and distributors help utilities meet that demand
- Many utility partners are working with manufacturer and retail/distributor partners
 - Promoting WaterSense and tips on water efficiency
 - Offering incentives to customers that replace older, inefficient toilets with WaterSense labeled toilets



WaterSense Accomplishments

- Reductions of 212 billion kwh of electricity and 78 million metric tons of carbon dioxide through the use of WaterSense labeled products
- Consumers saved more than \$32.6 billion on water and sewer bills
- More than 1,600 models of showerheads, 1,900 models of tank-type toilets, 6,800 models of faucet or faucet accessory models, and 150 models of weather-based irrigation controllers that are independently certified to meet EPA's criteria for both water efficiency and performance.
- Participation jumped to more than 1,700 partners



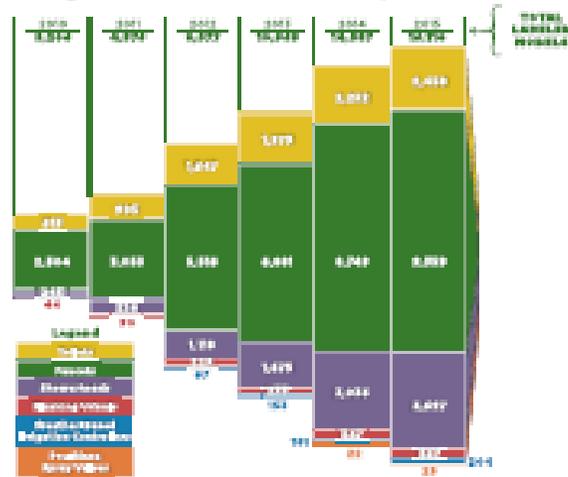
Saving Water for Future Generations

WaterSense, a partnership program sponsored by the U.S. Environmental Protection Agency (EPA), works collaboratively with companies, organizations, and communities to encourage innovation in manufacturing and support sustainable jobs for American workers. Since 2006, the WaterSense label has made it easy for consumers to find high-performing, water-efficient products. Across the country, millions of Americans are saving water, energy, and money by installing WaterSense labeled products in their homes and businesses.

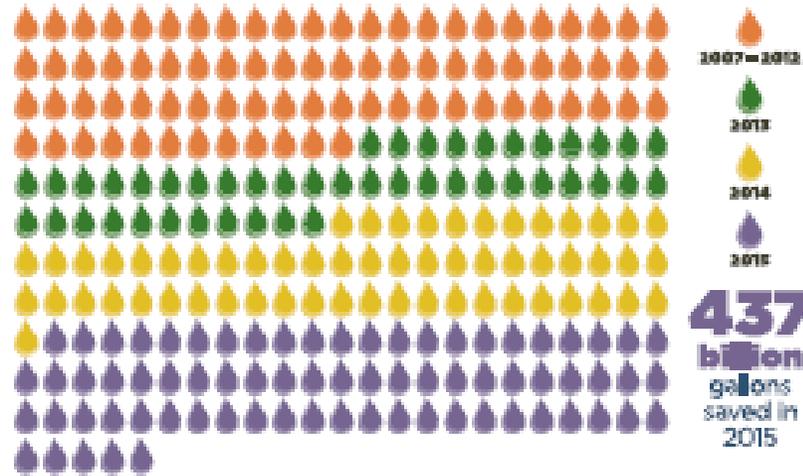
WaterSense Labeled Products



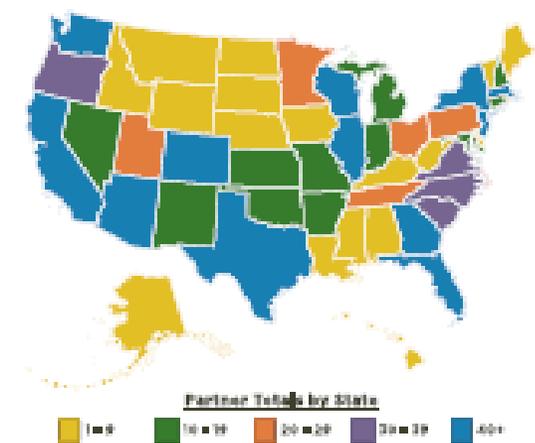
Ever since the first WaterSense labeled toilet hit store shelves in 2007, more and more product types have earned the WaterSense label and the total number of WaterSense labeled models continues to grow.



1.5 trillion gallons of water saved since 2006!



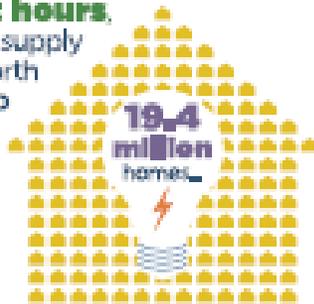
WaterSense has more than **1,738** organizational partners.



That's **more than** the amount of water used by all of the households in **California** for a year!

...and more than **2,200** irrigation pros certified by WaterSense labeled programs

WaterSense has helped **reduce** the amount of **energy** needed to heat, pump, and treat water by **212 billion kilowatt hours**, enough to supply a year's worth of power to more than



...eliminating **78 million metric tons** of greenhouse gas emissions.



...and **saving consumers \$32.6 billion** in water and energy bills



Why Partner With WaterSense?

- Water conservation is one of many competing priorities for utilities.
- Water efficiency is a key component of conservation planning and implementation.
- WaterSense fits into your mission and makes it easy to for you to enhance your water conservation program by providing you with tools and resources.



How can you become a Promotional Partner or collaborate with a WaterSense partner?



- (1) Complete online Promotional Partnership Agreement
- (2) Take the pledge to educate about the value of water
- (3) Undertake water efficiency activities and events
- (4) Encourage constituent participation in WaterSense
- (5) Promote WaterSense labeled products and/or programs and
- (6) Send us an update about your water efficiency promotional activities once a year

 **Partnership Agreement:
Promotional Partners** Approval Expires 06/30/2013

Section I: EPA WaterSense® Program Goals

EPA's WaterSense program aims to use water resources more efficiently to preserve them for future generations and to reduce water and wastewater infrastructure costs by reducing unnecessary water consumption. Through this program, EPA provides reliable information on high-performing, water-efficient products and practices, raises awareness about the importance of water efficiency, ensures water-efficient product performance, helps consumers identify products and services that use less water, promotes innovation in product development, and supports state and local water-efficiency efforts.

Section II: Partnership Pledge

As an EPA WaterSense promotional partner, _____ (name of organization), shares EPA's goals as outlined above and is proud to commit to the following activities to further these goals:

1. Educate consumers, residents, businesses, and institutions located in the United States and Canada on the value of water efficiency, the importance of saving water, and the meaning of the WaterSense label. Where feasible, undertake activities and events to achieve mutual WaterSense goals.
2. As appropriate, encourage eligible constituents, members, or affiliates to participate as partners in EPA's WaterSense program.
3. **For utilities and governments:** On an annual basis, provide data to EPA on promotional activities and incentive programs to assist in determining the impact of the program in promoting labeled products.
4. **For applicable trade associations:** If asked, provide aggregate data to EPA on market share of WaterSense labeled products and programs in relevant industry. Compile data submitted by members who are also WaterSense partners into a summary report to assist EPA in evaluating market trends and the success of the WaterSense program, without disclosing any proprietary information from members.
5. Adhere to all policies and procedures contained in the Program Guidelines.
6. Feature the WaterSense promotional label and partner logo on website and in other promotional materials.
7. Adhere to WaterSense program mark guidelines and ensure that authorized representatives, such as advertising agencies, distributors, and subcontractors, also comply. Help EPA maintain program integrity by alerting EPA to possible misuse(s) of the WaterSense program marks.
8. Grant EPA's WaterSense program permission to include partner's name on a list of participating partners on the WaterSense website, program materials, and announcements. Partners understand that from time to time, EPA will be interested in profiling partner accomplishments in case studies and articles. If selected for such promotion, partners will have the opportunity to provide input and review the final print or Web document before EPA releases it to the public. Further, the partner understands that EPA might refer media contacts interested in publicizing water efficiency to partners for information about products and accomplishments.

Section III: EPA WaterSense Program's Commitments to Partners

1. Develop national specifications for water-efficient new homes, products, and programs through an open, public process.
2. Increase awareness of the WaterSense brand by distributing key messages on the benefits of labeled products and programs, and the importance of water efficiency.
3. Provide current EPA WaterSense program news, information, and reference documents (via the program website, WaterSense Helpline, email, or other means), including a listing of labeled products and programs on the website.
4. Provide WaterSense partners with public recognition for their involvement in the program and role in protecting the environment through online listing of partners, special awards, publications, and other efforts.
5. Respond swiftly to partner requests for information or clarification on EPA WaterSense program policies.
6. Provide materials, templates, and program marks for promotional use, consistent with the WaterSense Program Guidelines.
7. Review pre-press promotional items, draft websites, packaging, or other materials that use the WaterSense marks upon request.

EPA Form Number 6100-06

Section IV: General Terms and Disclaimers

1. The partner will not construe, claim, or imply that its participation in the EPA WaterSense program constitutes federal government (EPA) approval, acceptance, or endorsement of anything other than the partner's commitment to the program.
2. Nothing in this agreement, in and of itself, obligates the EPA to expend appropriations or to enter into any contract, assistance agreement, interagency agreement, or incur other financial obligations that would be inconsistent with Agency budget priorities. The partner agrees not to submit a claim for compensation for services rendered to EPA or any federal agency in connection with any activities it carries out in furtherance of this agreement.
3. The partner and the EPA WaterSense program will assume good faith as a general principle for resolving conflict and will seek to resolve all matters informally, so as to preserve maximum public confidence in the program.
4. No building, facility, or structure will be WaterSense labeled as a result of this agreement. If additional WaterSense partner categories become available, affected organizations will be asked to reapply for partnership in the new category.
5. Failure to comply with any of the terms of this partnership agreement can result in its termination and cessation of access to the benefits of the program, including use of the program marks.
6. The EPA WaterSense program will actively pursue resolution of noncompliance related to the use of the program marks.
7. Both parties concur that this agreement is wholly voluntary and may be terminated by either party at any time, and for any reason, with no penalty. Termination will begin effective immediately upon written notice to or from the EPA WaterSense program. Upon termination of this agreement, partners agree to remove program marks in a timely manner, consistent with the WaterSense program mark guidelines.

To be completed by partner
Authorized Partner Representative¹ (printed name): _____

Title: _____ Email: _____

Signature: _____ Date: _____

Organization Name: _____ Number of employees: _____

Organization Type (choose one): Nongovernmental Organization Utility Local Government
 State Government Trade Association Home Builders Association

Industry/SIC/NAICS code: _____ Population served²: _____

Water District, if applicable: _____

Primary Contact: Dr./Mr./Mrs./Ms. _____

Title: _____ Dept: _____

Email: _____

Address: _____ City/State/ZIP: _____

Website: _____

Telephone: _____ Alternate Telephone: _____

How did you find out about this program? Website Referral, Name: _____

Periodical: _____ Workshop, Sponsor: _____

Mailing: _____ EPA Region: _____ Other: _____

To be completed by EPA
Authorized EPA Representative (printed name): **Shelsa E. Place**

Title: **Director, Municipal Support Division** Email: **watersense@epa.gov**

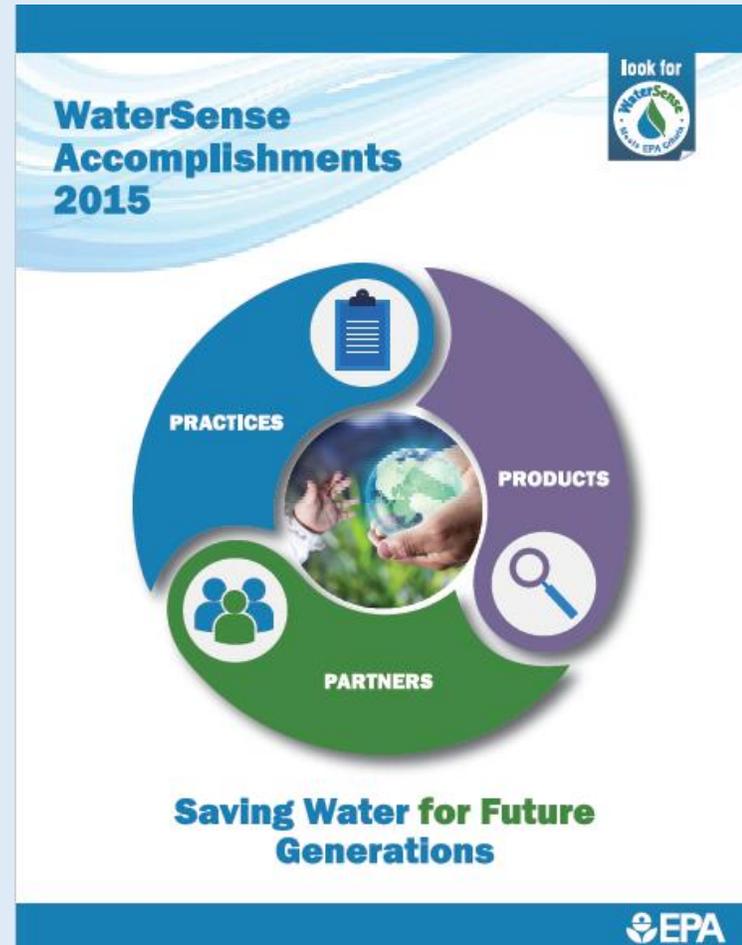
Signature: _____ Date: _____

¹ The authorized partner representative should be a person in the organization with signing authority (e.g., vice president).
² Please indicate the total residential population served rather than the number of households.

EPA Form Number 6100-06



Help Yourself \$ave and Help us continue expanding our WaterSense Accomplishments





Join our Voluntary Promotional Partnership to Promote WaterSense and Water Efficiency

Municipalities/ Districts/Government Agencies/Utilities and Water:

Include environmental departments, municipal programs, local governments, water agencies, water districts, wholesalers, public utilities, private utilities, wastewater treatment facilities, water boards, and public utility commissions of federal, state, provincial, and local agencies.

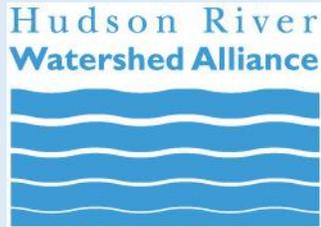
Professional and Trade Associations

Nonprofit Organizations

Builders



WaterSense Partners in NYS



Onondaga County Water Authority



Orange County Water Authority



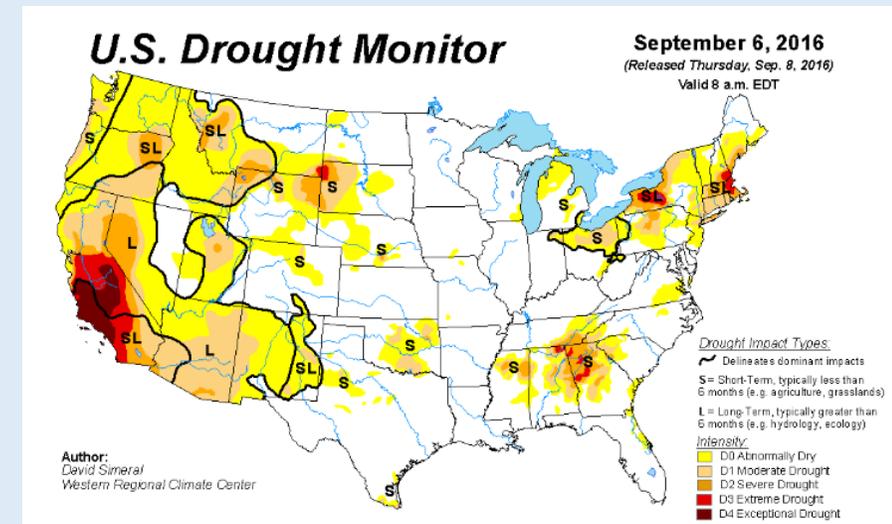
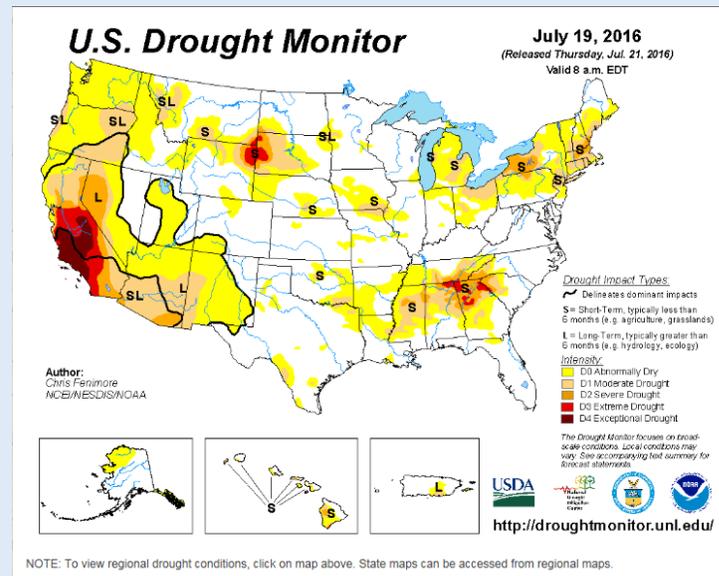
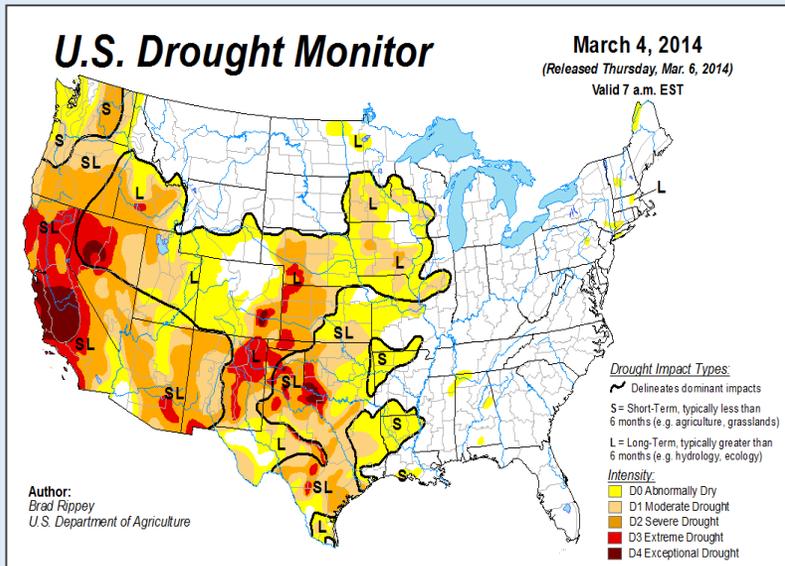
Suffolk County Water Authority





Ensuring a reliable supply of water can and will be a challenge with increasingly changing weather patterns

- Water scarcity is a reality
- Weather patterns change every year, but drought happens somewhere in the country every year
- Climate change only exacerbates problems



NYS Accomplishments to Date: NYS Climate Smart Communities



**6.6 MILLION
NEW YORKERS**

live in 170 communities
that have taken the
**Climate Smart
Communities Pledge**

 New York State
Department of
Environmental
Conservation

www.dec.ny.gov  facebook.com/NYSDEC  twitter.com/NYSDEC



NYS Climate Smart Communities adds Water to its Certification Program

- The Climate Smart Communities Certification Program Certification Manual refers to the WaterSense program:
- PLEDGE ELEMENT 3: DECREASE COMMUNITY ENERGY USE
- 3.4 INSTALL WATER-EFFICIENT FIXTURES
- A way to implement this action includes mention of the WaterSense program water-efficient fixtures.
- PLEDGE ELEMENT 7: PLAN FOR ADAPTATION TO UNAVOIDABLE CLIMATE CHANGE-
- 7.23 IMPLEMENT A WATER CONSERVATION AND REUSE PROGRAM
- Local governments are advised they can implement this action by following the steps to join EPA's WaterSense program as a promotional partner.



NYS Accomplishments to Date: East End of Long Island

Suffolk LONG ISLAND

Billionsaire, East End water users urged to curb consumption

Updated August 16, 2016 10:32 PM

By Jean-Paul Salamanca jeanpaul.salamanca@newsday.com [Reprints](#) [+](#)

 **HIGHLIGHTS**

- Suffolk Water Authority worried about strain on underground aquifer
- Heaviest users in Southampton, East Hampton, Southold
- Residents can get credits on water bills as part of voluntary program





NYS Accomplishments to Date: Rockland County

11 E 2

Introduced by:

Hon. Harriet D. Cornell, Sponsor
Hon. Jay Hood, Jr., Co-Sponsor
Hon. Nancy Low-Hogan, Co-Sponsor
Hon. Lon M. Hofstein, Co-Sponsor
Hon. Richard C. Diaz, Co-Sponsor
Hon. Toney L. Earl, Co-Sponsor
Hon. Douglas J. Jobson, Co-Sponsor
Hon. Philip Soskin, Co-Sponsor
Hon. Alden H. Wolfe, Co-Sponsor

Referral No. 4374
September 1, 2015

RESOLUTION NO. 449 OF 2015

APPROVING ROCKLAND COUNTY'S FREE MEMBERSHIP IN THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S WATERSENSE PROGRAM AS A PROMOTIONAL PARTNER, TO HELP REDUCE MUNICIPAL WATER USE THROUGH THE PROMOTION OF WATER-EFFICIENT PRODUCTS AND NEW HOME CONSTRUCTIONS, AND AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE A WATERSENSE PARTNERSHIP AGREEMENT ON BEHALF OF THE COUNTY



What Can You Do?

- Become a WaterSense partner
- Recruit new WaterSense partners
 - Irrigation professionals
 - Promotional partners, retailers, manufacturers, builders
- Promote WaterSense labeled products
- Adopt irrigation certification programs
- Educate your friends, families, and constituents about importance of water efficiency and WaterSense



Promotional Partners Role

- Promote WaterSense labeled products and water-efficient practices to consumers
- Educate consumers on the concept of water efficiency and value of water
- Encourage eligible constituents to participate in WaterSense
- Offer incentives (e.g., rebates) to consumers for buying and installing WaterSense labeled products
- Provide a brief annual update about promotional activities involving water efficiency



Partner Benefits of Participation

- WaterSense is FREE to join!
- National specifications for water-efficient products and services
- Access to free materials, templates, and logo or label
- Recognition from EPA as a water efficiency leader
- Membership in a network of water efficiency experts
 - Learn new strategies
 - Collaborate with other types of partners



WaterSense®

Water Use and Opportunities in the Commercial and Institutional Sector





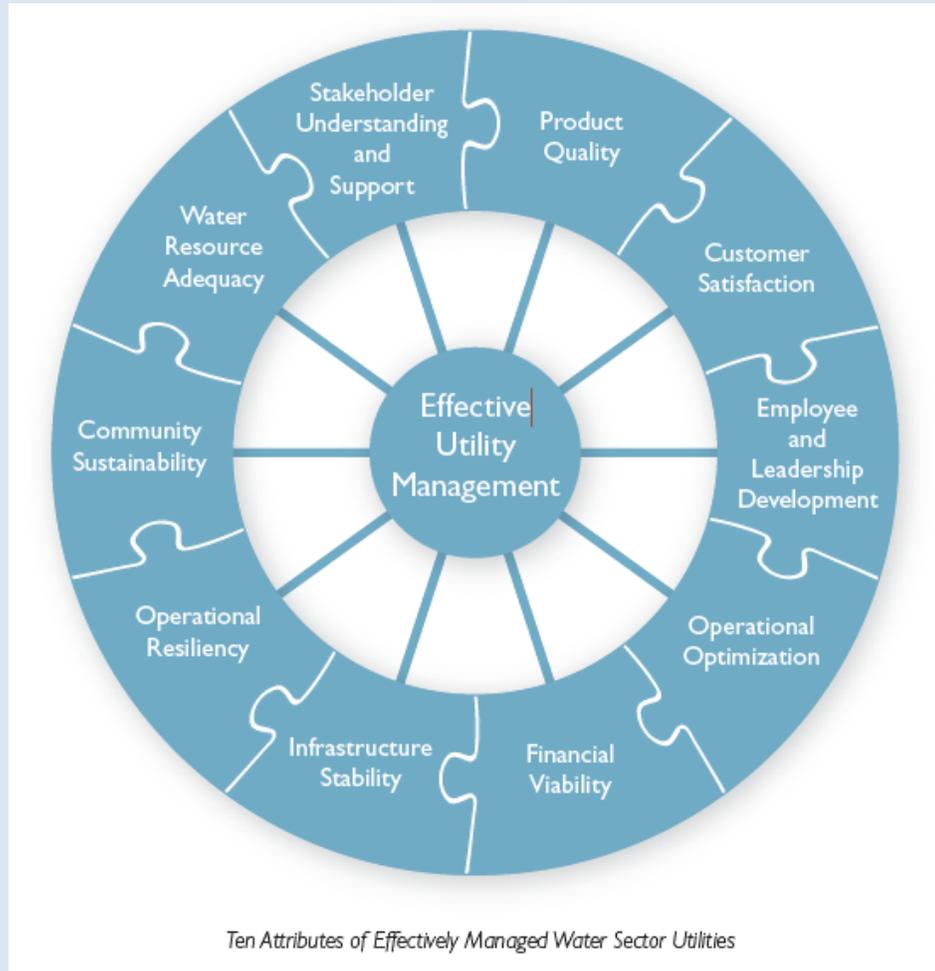
WATERSENSE Commercial & Industrial Efforts Since 2009



- Since 2009 WaterSense has been working to address several of the recommendations, including:
 - Developing specifications for products used in the C&I sector
 - Compiling comprehensive water-efficiency best management practices
 - Working with ENERGY STAR to support tracking of C&I water use and develop benchmarks
 - Working with ENERGY STAR to initiate an awards/challenge program for C&I buildings that save the most water



Ten Attributes of Effectively Managed Water Sector Utilities



Ten Attributes of Effectively Managed Water Sector Utilities

Water use efficiency - reducing water footprint requires action in every part of an organization



Set goals, prioritize actions, and provide resources to measure, manage and track water use

Corporate-level

Facility-level

Assess operations and implement efficiency measures

When purchasing, consider product choices – explicit and embedded water use

Products/Supply Chain

Staff

Build awareness & promote behavior change to use water efficiently – internal and customer messaging



WATERSENSE Commercial & Industrial Efforts Since 2009



Managing Water Use

- Overview
- Making the Business Case
- Planning
- Metering
- Leaks

Overview

Business is increasingly aware of the need to use water more efficiently to reduce their risk to water shortages and increasing costs. There is a strong **business case** to be made for water efficiency.

Planning is the foundation of effective water management. Facilities should consider forming water management teams to review water use and develop implementation plans in the context of achieving the established water management goals. This review allows the organization to evaluate progress, set new goals, and continually improve.

Metering allows a facility to monitor water use and quickly find and fix leaks or other unnecessary water use. It also has the added benefit of enabling the facility to identify cost-effective water use reduction opportunities and to track project savings.

Leaks are water wasted with no intended use or purpose; once identified, leaks should be the first area to target from a water management perspective. With a few simple steps, a facility can establish a comprehensive leak detection and repair program, which can save water, money, time, and expenses that would otherwise be associated with unmanaged leaks.



Monitoring and Education



Best Management Practices

[Overview](#)

[Monitoring](#)

[Sanitation](#)

[Kitchen](#)

[Outdoors](#)

[Mechanical](#)

[Labs & Medical](#)

[Alt. Water Sources](#)

Monitoring and Education

Actively monitoring water use and effectively educating facility staff, building occupants, employees, and visitors about facility water use and water management planning goals are key components of properly managing and reducing facility water use. Monitoring and education set the stage for the relative success of a facility's water management program. They provide the ability to track and measure progress to increase awareness and build support for specific projects or user behavior changes.



In this section, learn more about:

- [Metering and submetering](#)
- [Leak detection and repair](#)
- [User education and facility outreach](#)
- [Codes, standards and voluntary programs for water efficiency](#)

Energy *and* Water Efficiency Measures



Energy- and water-efficiency measures should be implemented together throughout the facility to decrease the heating and cooling load of the entire system. Increasing the efficiency of the overall systems results in significant reductions in energy and water usage while creating cost savings.

To reduce mechanical system water use, facilities should first eliminate single-pass cooling or reuse that water, then evaluate cooling towers, chilled water systems, and other heating systems to maximize efficiency. In some cases, single-pass cooling can be the single largest water user at a facility, using approximately 40 times more water to remove the same heat load than a cooling tower operating at five cycles of concentration. Ensuring that cooling towers and chilled water systems are properly maintained will minimize the amount of cold water needed to remove heat from equipment. Water use can also be optimized in boiler and steam systems by returning steam condensate back into the system.



Section 6: Mechanical Systems of *WaterSense at Work* provides an overview of and guidance for effectively reducing the water use of:

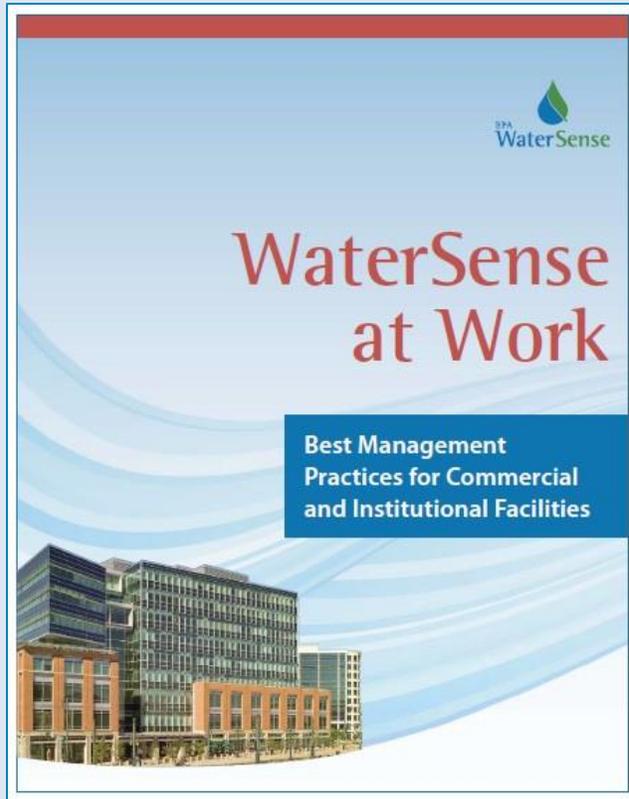
- [Single-pass cooling](#)
- [Cooling towers](#)
- [Chilled water systems](#)
- [Boiler and steam systems](#)

[Learn more](#) about how the U.S. Environmental Protection Agency's Mid-Continent Ecology Division Laboratory in Duluth, Minnesota, eliminated single-pass cooling and reduced its potable water use by 90 percent .



Water Efficiency Best Management Practices

November 2012



- Water management planning
- Water use monitoring and education
- Sanitary fixtures and equipment
- Commercial kitchen equipment
- Outdoor water use
- Mechanical systems
- Laboratory and medical equipment
- Onsite alternative sources of water

<http://www.epa.gov/watersense/commercial>

Water Efficiency Best Management Practices

- BMPs designed to help C&I facility owners and managers understand and better manage their water use
- Each of 36 BMPs provide:
 - An overview of the technology
 - Operation, maintenance, and user education tips
 - Retrofit and replacement options
 - Information to help facilities calculate savings and payback
- 7 case studies outline success stories in major BMP areas



6.3 Cooling Towers

Overview

Cooling towers are used in a variety of commercial and institutional applications to remove excess heat. They serve facilities of all sizes, such as office buildings, schools, supermarkets, and large facilities, such as hospitals, office complexes, and university campuses. Cooling towers dissipate heat from recirculating water that is used to cool chillers, air conditioning equipment, or other process equipment. By design, they use significant amounts of water.

Cooling towers often represent the largest use of water in industrial and commercial applications, comprising 20 to 50 percent or more of a facility's total water use. However, facilities can save significant amounts of water by optimizing the operation and maintenance of cooling tower systems.¹



Cooling towers work by circulating a stream of water through systems that generate heat as they function. To cool the system, heat is transferred from the system to the water stream. This warm water is then pumped to the top of the cooling tower, where it is sprayed or dripped through internal fill (i.e., a labyrinth-like packing with a large surface area). Fans pull or push air through the tower in a counterflow, crossflow, or parallel flow to the falling water. As some of the water is evaporated, the heat is removed.² The remaining cooled water is recirculated back through the systems to repeat the process.

The thermal efficiency and longevity of the cooling tower and its associated water loops depend upon the proper management of water recirculated through the tower. Water leaves a cooling tower system in four ways: evaporation, blowdown or bleed-off, drift, and leaks or overflows.

Evaporation

Evaporation is the primary function of the tower and is the method that transfers heat from the cooling tower system to the environment. The quantity of evaporation is not typically targeted for water-efficiency efforts, because it controls the cooling process (although improving the energy efficiency of the systems that use the cooling water will reduce the evaporative load on the tower). The rate of evaporation from a cooling tower is typically equal to approximately 1 percent of the rate of

¹ North Carolina Department of Environment and Natural Resources, et al. May 2009. *Water Efficiency Manual for Commercial, Industrial and Institutional Facilities*. Page 30. www.ncdems.org/~/media/ncdems/pdfs/20090501_wem.pdf.
² Ibid.



Where to Begin? Start with our Self-Assessment tool

A utility-tailored self assessment tool helps utility managers identify where to begin improvement efforts. By assessing how a utility performs relative to the Attributes, utility managers can gain a more balanced and comprehensive picture of their organization.





WaterUSE Tool and WaterSense Assessment Worksheets



The first step of managing facility water use is to conduct a water assessment to identify key water use areas and savings opportunities.



The Water Assessment Worksheets and WaterUSE Tool can be used to guide facility managers through the water assessment process and identify and prioritize water efficiency projects.



WaterSense Assessment Worksheets

- Each is a tab in WaterUSE Tool
- Guides through each part of facility assessment
- Writeable PDF can be used on tablet or printed
- Metering tab can be uploaded into Portfolio Manager for tracking use over time

1: Facility Information

- ✓ Required by all users
- ✓ Water and energy rates

2: Metering

- ✓ Water meter data

3: Guest Rooms

4: Public Restrooms

5: Guest Ice and Laundry

6: Linen Laundry

7: Commercial Kitchens

8: Dishwashing

9: HVAC and Mechanical Systems

10: Outdoor Water and Irrigation

11: Pools and Spas



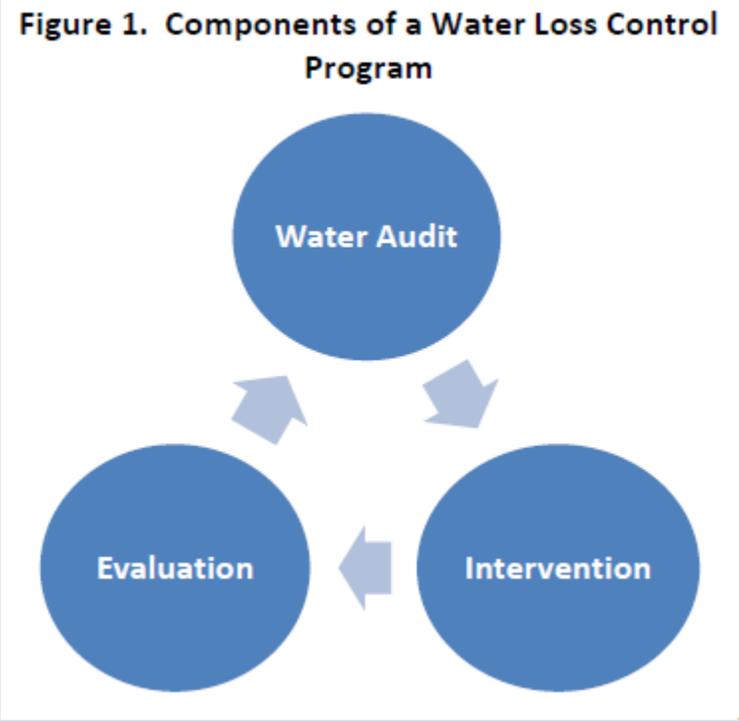
The WaterUSE Tool

The WaterUSE Tool takes the facility-specific information gathered during the water assessment and identifies:

- Estimated water use from each end use area
- Potential water-efficient fixture/equipment retrofit or replacement projects
- Estimated water, energy, and cost savings from the projects
- Estimated project payback period
- BMPs to reduce water and energy use



What does a Water Loss Control Program look like?





Step 1- How to Complete a Water Audit



Step 1 - Water Audit Data Needs

- Gathering information.
- Determining flows into and out of the distribution system based on estimates or metering.
- Calculating the performance indicators.
- Assessing where water losses appear to be| occurring based on available metering and estimates.
- Analyzing data gaps.
- Considering options and making economic and benefit comparisons of potential actions.
- Selecting the appropriate interventions.

Additional Data Collection:

Locating leaks and losses

Condition assessment tools

Hydraulic modeling



Step 2- The Intervention Phase

Step 2 - Intervention Action Items

- Gathering further information, if necessary.
 - Metering assessment, testing, or a metering replacement program.
 - Detecting and locating leaks.
 - Repairing or replacing pipe.
 - Operation and maintenance programs and changes.
 - Administrative processes or policy changes.
 - No further action is necessary.
- Preventive measures such as design standards and effective maintenance
 - Meter installation, testing and replacement
 - Leakage management
 - Pipe repair and replacement

Step 3- The Evaluation Phase

Step 3 - Evaluation Performance Indicators

- Were the goals of the intervention met? If not, why not?
- Where does the system need more information?
- How often should the system repeat the *audit, intervention and evaluation* process?
- Is there another performance indicator the system should consider?
- How does the system compare to the last *audit, intervention and evaluation* process?
- How can the system improve performance?





Features

•Bookmarked PDF for ease of navigation

•Diagrams simplifying complex equipment

•Equations for water use and savings calculations

•Case studies demonstrating BMPs real-life applicability

3.5 Showerheads

Overview

Showerheads come in a variety of shapes, sizes, and configurations, including fixed showerheads, which are affixed overhead and permanently attached to the wall; handheld showerheads, which have a flexible hose that can be detached from the wall and moved freely by the user; and body sprays (e.g., sprays, jets), which spray water onto the user from a direction other than overhead, usually from a vertical column on the shower wall. Each type is uniquely suited to perform a specific function. In order to reduce overall water use, the Energy Policy Act (EPA) of 1992 established the maximum allowable flow rate for all showerheads sold in the United States as 2.5 gallons per minute (gpm).

Since this standard was enacted, many showerheads have been designed to use even less water. While these fixtures save water with a lower flow rate, the duration of the shower sometimes increases, resulting in an overall increase in water usage. Recent consumer market research identified three key performance attributes that are necessary to ensure user satisfaction under a variety of household conditions: flow rate across a range of pressures, spray force, and spray coverage. Each of these criteria can be tested using a standardized test protocol to ensure accuracy and reliability. All three of these criteria are necessary to ensure a "satisfactory" shower without using more water than necessary.

To address efficiency and advances in showerhead technology, the U.S. Environmental Protection Agency (EPA) has published a specification to label all showerheads. WaterSense labeled showerheads are certified to use 2.0 gpm or less, while all other showerheads must use 2.5 gpm or less.

Operation, Maintenance, and User

For optimum showerhead efficiency, the system pressure should be between 20 and 80 pounds per square inch (psi). If the system pressure is higher than 80 psi, a pressure-reducing valve should be installed on the showerhead supply line.

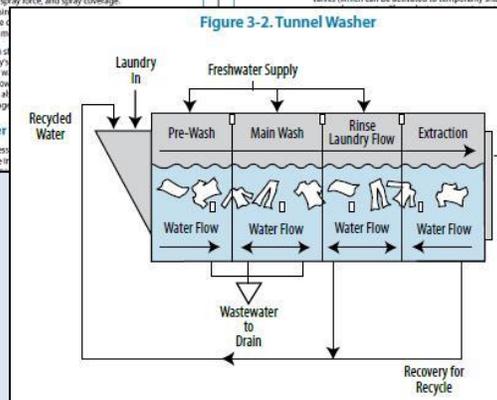
3.5 Showerheads

and temperature and can reduce risks of thermal shock and scalding. A plumber can check the compatibility of the showerhead and shower valve and, if necessary, install a valve that meets the recommended standards for the flow rate of the showerhead.

- Periodically inspect showerheads for scale buildup to ensure flow is not being restricted. Certain cleaning products are designed to dissolve scale from showerheads with buildup. Do not attempt to bore holes in the showerhead or manually remove scale buildup, as this can lead to increased water use or cause performance problems.
- Provide a way for users to track showering time and encourage users to take shorter showers by placing clocks or timers in or near the showers.
- Train users to report leaking or malfunctioning showerheads to the appropriate personnel.

Retrofit Options

Because showerheads are relatively inexpensive, replacement is often more economical and practical than a retrofit. In general, avoid retrofitting existing inefficient showerheads with flow control inserts (which restrict water flow) or flow control valves (which can be activated to temporarily shut off water flow) to reduce the flow rate in some cases, water that is not needed for the same task or less water is used.



Laboratory and Medical Equipment Case Study

To learn how Providence St. Peter Hospital in Olympia, Washington, saved 31 million gallons of water by installing water-efficient laboratory and medical equipment and implementing many additional best management practices described in *WaterSense at Work*, read the case study in Appendix A.

Table 3-1. Potential Water Savings From Commercial Laundry Retrofit Options

Retrofit Option	Water Savings Potential ^{1,2}
Retrofit With Simple Recycling System	10% to 35%
Retrofit With Complex Recycling System	85% to 90%
Retrofit With Ozone System	10% to 25%

Equation 3-10. Water Savings from Commercial Laundry Equipment Retrofit (gallons per year)

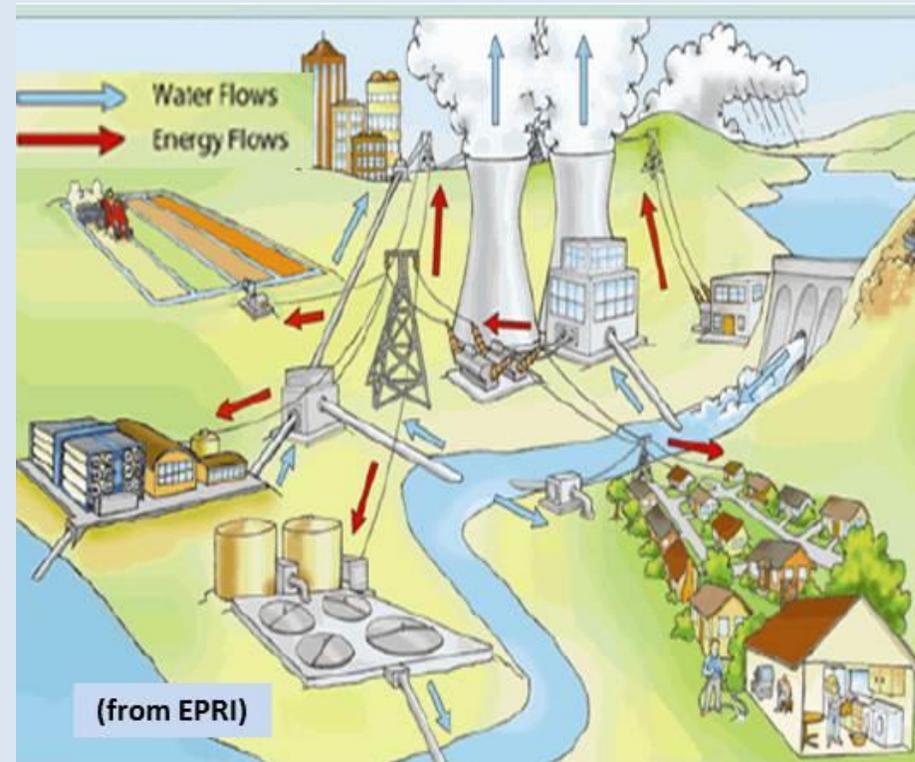
= Current Water Use of Laundry Equipment x Water Savings Potential

- Where:
- Current Water Use of Laundry Equipment (gallons per year)
 - Water Savings Potential (percent, from Table 3-1)

Risk, Resiliency and Managing Your Assets Main Message: Water Management and Planning



- Measure water use with properly installed meters and sub-meters
- Set efficiency goals
- Conduct a facility water audit
- Track usage in Portfolio Manager
- Incorporate water efficiency into procurement language and policies





Steps of Assessing Facility Water Use

SMWD UPCOMING EVENTS:

- SAT, March 12**
8:00 - 12:00
OC GARDEN FRIENDLY EVENT
@ Home Depot Mission Viejo
- SAT, March 19**
9:30 - 11:30
CA NATIVE FRONT YARD WORKSHOP WITH MY AVANT GARDEN
@ Santa Margarita Water District
- LATE APRIL**
* check website for confirmed date
WATER SAVING DEVICES EVENT
@ Home Depot Mission Viejo
- SAT, MAY 14**
10:00 - 2:00
SMWD WATER AWARENESS FESTIVAL
@ Santa Margarita Water District

* Please refer to our website at smwd.com/classes for all event details.

JOIN US WITH OUR PARTNERS HOME DEPOT AND NIAGARA CONSERVATION TO RECEIVE REBATES FOR:
STEALTH PREMIUM HIGH EFFICIENCY TOILETS
&
UP TO FOUR RAIN BARRELS (\$75 REBATE EACH)
Receive a FREE water savings kit with each toilet to maximize your water savings.

Gather information on water sources (metered and unmetered) and collect/review water bills

Establish a baseline using water use data from a typical year

Inventory major water-using fixtures, equipment, systems, and processes

Create a water balance for your facility

Identify projects and opportunities to save water, energy and money

Contact utilities to see if rebates and incentives are available



Collaboration with ENERGY STAR



- WaterSense working with ENERGY STAR on cross promotion of programs
 - Example: WaterSense will label pre-rise spray valves
 - ENERGY STAR will promote them to commercial kitchen managers
- ENERGY STAR added water as a factor for recognition in its National Building Competition Battle of the Buildings
 - First time ENERGY STAR highlighted and encouraged facilities to track energy AND water use
 - Tracks energy and water use in Portfolio Manager from January 1 – December 31, 2012
 - Winners announced April 2013



Collaboration with ENERGY STAR



- WaterSense is working with ENERGY STAR to improve Portfolio Manager's water use data tracking
 - Portfolio Manager could serve as a national platform for building energy and water use tracking and management
- WaterSense is working with ENERGY STAR to align the building water use data collected between ENERGY STAR and Energy Information Administration (EIA) to support future benchmarking opportunities
 - EIA water consumption survey provides the data against which building water use reported in Portfolio Manager can be benchmarked



Challenges for Benchmarking Water Use



- Accurately tracking water costs (water bills are confusing!)
 - Utilities typically meter incoming water use and charge for the corresponding amount of wastewater discharged
 - Sometimes not all water is not sent to the sewer (i.e., irrigation water or cooling tower evaporation) and utilities may offer a credit
 - Water bills usually include other charges besides water and wastewater (fire, storm water, etc)
 - There may be more than one water meter to account for
- An accurate understanding of water and wastewater costs is necessary to support cost effectiveness analysis from water reduction opportunities



Commercial Building Energy Consumption Survey



- Data collected from 2007 survey:
 - Total volume of domestic water used (consumption) in 2007
 - Cost of water (expenditures)
 - Whether the volume was metered or estimated
 - How much of the water was used outside the building
 - If the building used central chillers, what volume of water was used for cooling towers
 - Whether the sewer flow was metered
 - Whether the facility had sterilizers or autoclaves
 - Whether the building had a landscape irrigation system
 - The number of commercial ice makers present
 - Heard of WaterSense



Commercial Building Energy Consumption Survey



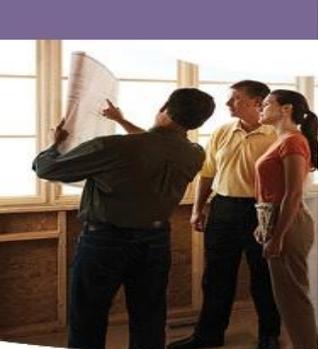
- Changes in 2012 survey
 - Clarifies that total water use should be for all sources combined and not just related to domestic water use (metered)
 - Identifies whether sewer flow is separately metered
 - Clarifies that outdoor water use is for a landscape irrigation system
 - Asks if this water use was metered separately
 - Clarifies reporting of cooling tower water use
 - Does not ask the respondent to provide water expenditure data, only asks for a copy of the water bill



Commercial Building Energy Consumption Survey and C&I Water Use & Benchmarking



- Energy Information Administration conducts the Commercial Building Energy Consumption Survey every 5 years
- In 2007 they began collecting building water use data
 - 56% of all responding sampled buildings were able to report water consumption or expenditures or both
 - Reporting success varied by building type, with inpatient healthcare buildings reporting at the highest rate, 69%
- The 2012 survey incorporates improvements based on lessons learned from 2007
 - Data collection began in early 2013, with results published in 2014



ENERGY STAR® PortfolioManager™



- Major upgrade was rolled out in spring 2013
 - New interface, streamlined functionality, and improved usability
 - All users can continue to benchmark during upgrade -- all data will be transferred
 - Status updated regularly on energystar.gov/PMUpgrade
 - Periodic webinars to keep stakeholders informed; thousands have already attended

Changes to Survey to Water Tracking as part of Portfolio Manager Update

Current meter tracking

- Indoor water
- Outdoor water
- Combined indoor/outdoor
- Wastewater/sewer
- Other



New meter tracking

- Municipally supplied potable water
- Municipally supplied reclaimed water
- Alternative water generated on-site
- Can specify “Indoor”, “Outdoor”, or “All” for each category



WaterSense and Energy Star Webinar Series



WaterSense and ENERGY STAR hosted a joint *Tackling WaterSense* webinar series throughout 2016



Sanitary Fixtures and Equipment **January 28th**

Outdoor Water Use **March 30th**

Mechanical Systems **May 10th**

Let's Go on an Energy and Water Treasure Hunt **July 12th**

Commercial Kitchens **September 20th**



Past recordings (including 2015 series with HUD)

and registration for upcoming webinars available at

www.epa.gov/watersense/commercial/webinars.html

Past Webinar Recordings

- 1) Assess, Track, and Realize Payback
- 2) Demonstrating WaterSense's WaterUSE Tool
- 3) A Plumbing and Laundry Efficiency Primer
- 4) Outdoor Water Savings
- 5) Minimizing Water Use in Mechanical/HVAC Systems
- 6) Commercial Kitchen Savings
- 7) Let's Talk About Education and Outreach.



Other Water Assessment Tools and Resources



City of Boulder Commercial, Industrial, and Institutional (CII) Water Assessment Tool and User's Guide

www.brendlegroup.com/water_conservation/cii-water-assessment-tool

South Florida Water Management District *Water Efficiency and Self-Conducted Water Audits at Commercial and Institutional Facilities Guide*

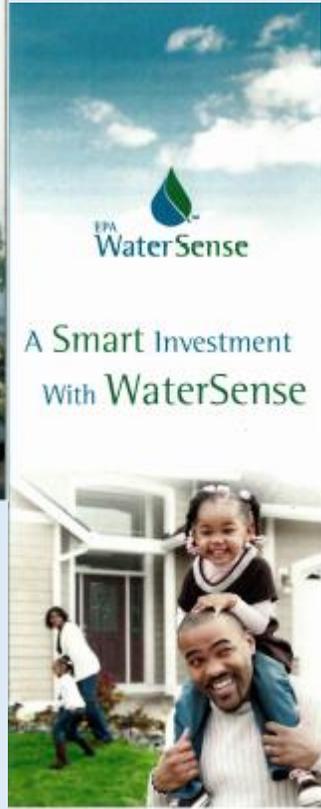
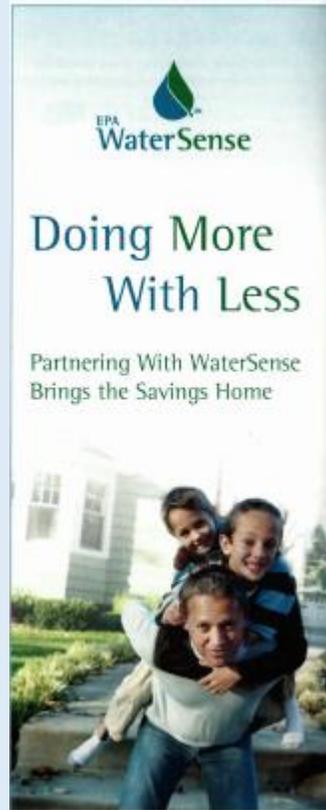
www.sfwmd.gov/portal/page/portal/xweb%20-%20release%203%20water%20conservation/water%20conservation%20business
[es](#)

Environmental Defense Fund, AT&T, & GEMI

Water Efficiency Toolkit with Scorecard and WaterMAPP Tool

<http://business.edf.org/projects/featured/water-efficiency-and-att/water-efficiency-toolkit-2/>

Consumer Outreach





We're for Water



- Umbrella campaign for WaterSense consumer outreach with an identifiable brand
- Theme: Individuals can make a difference
- Campaign components include:
 - A pledge for personal action
 - Print PSAs
 - National media outreach
 - Spokesgallon Flo
 - Local media events
 - Online and social media





WaterSense Marketing Plans

Access to WaterSense Monthly Campaigns

I'm for Water™

It's as easy as 1-2-3 to be for water:

- 1 Check toilets for silent leaks by putting a few drops of food coloring in the tank and seeing if the color appears in the bowl before you flush. Don't forget to check irrigation systems and spigots, too.
- 2 Twist and tighten pipe connections. To save even more water without a noticeable difference in flow, twist in a WaterSense labeled faucet aerator or showerhead.
- 3 Replace the fixture if necessary. Look for the WaterSense label when replacing plumbing fixtures, which signifies the product has been certified to save water and perform well.

*Name:
 *Email:
 *ZIP code:

Take the Pledge!

*Required field
 Note: EPA will not share your information with anyone, but you will be contacted periodically about receiving the WaterSense Catalog, a quarterly newsletter, water saving tips and more.

January
 Resolve to Save Water in 2015



February
 H₂Otel Challenge for 2015

In just **10 minutes** you could **save...**

- 10** percent on your water bill
- 10** thousand gallons of water
- 10** months of laundry water

Find and fix leaks!

March
 Fix a Leak Week (March 16-22, 2015)



April
 Water-Smart Landscaping

Spruce Up Your Sprinkler System

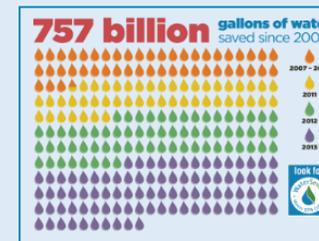
Inspect sprinker heads. A broken one can waste **25,000** gallons of water in six months!

Connect hoses and pipes well. A leak as small as the tip of a pen can waste **6,300** gallons of water per month!

Select a WaterSense® labeled irrigation controller and water smarter.

Direct spray on landscapes, not pavement!

May
 Sprinkler Spruce-Up



June
 2014 WaterSense Savings Numbers



WaterSense Marketing Plans

Access to WaterSense Monthly Campaigns



July
Using Water Wisely
Outdoors



August
WaterSense Labeled
New Homes



September
Saving Water in Schools



October
Shower Better/
2015 Partners of Year



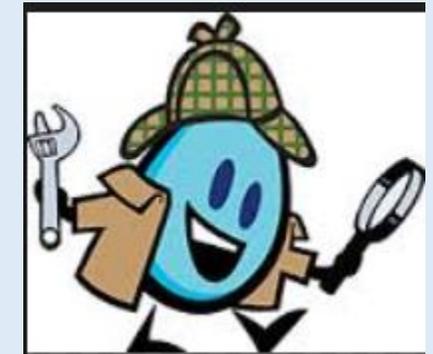
November
Remodeling to Save
Water: Products and
Plumbing Systems



December
Give the Gift of Savings:
WaterSense Labeled
Products



WaterSense for Kids



EPA WaterSense EPA 832-F-08-054 ■ May 2008

STUDENT AND FAMILY PLEDGE TO FILTER OUT BAD WATER HABITS

Sit down with your family and share what you have learned. Then, as a group, go through the tips below for helping you use water more efficiently, and check each one that you are willing to pledge to do. When you are finished, you and each family member who is participating must sign the pledge at the bottom and record the date. Congratulations and good luck!

- Take shorter showers/use less water in the bathtub.
- Turn the water off while you brush your teeth or wash your hands.

EPA WaterSense **KIDS**

THIRSTY FOR KNOWLEDGE? LET'S LEARN ABOUT WATER!

Do you know how much water a family of four uses every day in the United States? Not 50 gallons, not 100 gallons, but 400 gallons! You could take up to 10 baths with that much water—but who would want to do that? Fortunately, there are many things we can do to save.

- HOME
- WHY SAVE WATER
- SIMPLE WAYS TO SAVE WATER
- GAME
- FOR TEACHERS

Meet Flo. She's our WaterSense mascot and a big hit with adults and especially children. She is available to come to events along with the Region 2 liaison to support your WaterSense programs, initiatives, campaigns, etc.

EPA WaterSense EPA 832-F-08-054 ■ May 2008

Teachers' Guide to Using A DAY IN THE LIFE OF A DROP

Grade Level: 3-5

Key Concepts: Watershed, water uses, drinking water sources, water efficiency, wastewater

Goal: To help students understand the connections between the source of the water they use; the ways their water use habits affect the environment and human health and ways to reduce their impacts by pledging to take steps to use water more efficiently

Background Information



Reach Out in Communities: at Home, in Schools

We're for Water

Community-Based Social Marketing Workbook

A Guide to Using Social Marketing to Help Plan and Implement a Water Conservation Program in the Home Community

RAIN BARREL BUILDING WORKSHOP

FRIDAY JULY 24
1PM - 3PM AT THE SURF CITY FIREHOUSE

COME OUT AND DESIGN A RAIN BARREL FOR YOUR YARD!

\$35 FOR LBT & SC RESIDENTS & HOMEOWNERS

SPONSORED BY
LONG BEACH TOWNSHIP & BEACH HAVEN BOROUGH
IN PARTNERSHIP WITH
JETTY & NJDEP WATER RESOURCES PROGRAM

QUESTIONS & REGISTRATION
slevance@longbeachtownship.com • 609.361.6683

EPA WaterSense KIDS

THIRSTY FOR KNOWLEDGE?

LET'S LEARN ABOUT WATER!

Do you know how much water a family of four uses every day in the United States? Not 50 gallons, not 100 gallons, but 400 gallons! You could take up to 10 baths with that much water—but who would want to do that? Fortunately, there are many things we can do to save.

- HOME
- WHY SAVE WATER
- SIMPLE WAYS TO SAVE WATER
- GAME
- FOR TEACHERS

EPA WaterSense

EPA 832-F-08-054 ■ May 2008

STUDENT AND FAMILY PLEDGE TO FILTER OUT BAD WATER HABITS

Sit down with your family and share what you have learned. Then, as a group, go through the tips below for helping you use water more efficiently, and check each one that you are willing to pledge to do. When you are finished, you and each family member who is participating must sign the pledge at the bottom and record the date. Congratulations and good luck!

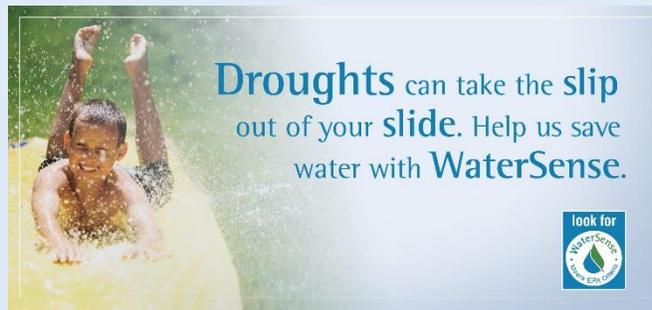
- Take shorter showers/use less water in the bathtub.
- Turn the water off while you brush your teeth or wash your hands.



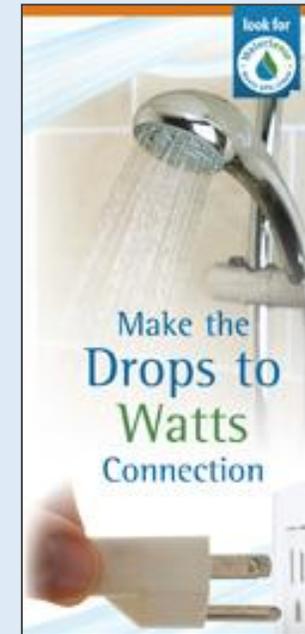
Water-Efficient Landscapes



Partners have access to tools to help reach the public



- Infographics
- Bill stuffers
- Messaging and Tips
- Sample social media posts
- Articles for placement
- Case studies





Partner Tools

- Increased reach through partners with new tools
 - PSAs
 - Bilingual billstuffers
 - “We’re for Water” artwork
 - Web banners
 - Widgets



How to feel good about yourself every time you open your water bill.

Saving water, energy, and money is as easy as 1-2-3.

1. **Check** your toilet for leaks.
2. **Twist** on a faucet aerator.
3. **Replace** an old showerhead with one that's WaterSense labeled.

We're for Water™

www.epa.gov/watersense



Many WaterSense Resources are available in Spanish

Cada gota cuenta

El valor de la eficiencia del agua

En los Estados Unidos, nuestra población es cada vez más diversa y hay más personas viviendo en áreas urbanas. Esto significa que cada vez más personas viven en áreas con poca agua disponible. Hoy en día, el agua es un recurso valioso y cada vez más difícil de encontrar. El agua es un recurso valioso y cada vez más difícil de encontrar. El agua es un recurso valioso y cada vez más difícil de encontrar.

Programa de sociedades

Además de desarrollar especificaciones de los productos, EPA promueve programas de certificación de productos que ayudan a los consumidores a elegir productos que ahorran agua. Estos programas incluyen:

- WaterSense:** un programa de certificación para productos que ahorran agua.
- Energy Star:** un programa de certificación para productos que ahorran energía.
- GreenSource:** un programa de certificación para productos que son sostenibles.

La marca WaterSense®

¿Qué es WaterSense?

WaterSense es un programa de certificación que ayuda a los consumidores a elegir productos que ahorran agua. Este programa incluye:

- WaterSense:** un programa de certificación para productos que ahorran agua.
- Energy Star:** un programa de certificación para productos que ahorran energía.
- GreenSource:** un programa de certificación para productos que son sostenibles.

¿Qué es WaterSense?

WaterSense es un programa de certificación que ayuda a los consumidores a elegir productos que ahorran agua. Este programa incluye:

- WaterSense:** un programa de certificación para productos que ahorran agua.
- Energy Star:** un programa de certificación para productos que ahorran energía.
- GreenSource:** un programa de certificación para productos que son sostenibles.

Hoja de Datos Familiar de la Semana de Prepare una Fuga

¿Qué es WaterSense?

WaterSense es un programa de certificación que ayuda a los consumidores a elegir productos que ahorran agua. Este programa incluye:

- WaterSense:** un programa de certificación para productos que ahorran agua.
- Energy Star:** un programa de certificación para productos que ahorran energía.
- GreenSource:** un programa de certificación para productos que son sostenibles.

Encuentra Fugas:

Hay muchas maneras de encontrar fugas en su hogar. Aquí hay algunas ideas:

- Revisa los grifos y llaves de agua.
- Revisa los inodoros.
- Revisa los sistemas de riego.

Usando el Agua Eficientemente: Ideas para las Residencias

El agua es un recurso valioso y cada vez más difícil de encontrar. El agua es un recurso valioso y cada vez más difícil de encontrar. El agua es un recurso valioso y cada vez más difícil de encontrar.

Consejos para ahorrar agua:

- Revisa los grifos y llaves de agua.
- Revisa los inodoros.
- Revisa los sistemas de riego.

Consejos para ahorrar agua:

- Revisa los grifos y llaves de agua.
- Revisa los inodoros.
- Revisa los sistemas de riego.

Programa de certificación para profesionales en irrigación

El uso de agua en los exteriores de las residencias o a nivel comercial en los Estados Unidos representa más de 4 mil millones de galones de agua cada día, principalmente en la irrigación de áreas verdes. La mitad de esta agua se desperdicia debido a la evaporación, viento, o un sistema de irrigación ineficiente (a causa de árboles, intemperie, o mantenimiento inadecuado).

WaterSense® es un programa autorizado por la Agencia de Protección Ambiental de los Estados Unidos (EPA) que ayuda a los profesionales en irrigación a elegir productos que ahorran agua. Este programa incluye:

- WaterSense:** un programa de certificación para productos que ahorran agua.
- Energy Star:** un programa de certificación para productos que ahorran energía.
- GreenSource:** un programa de certificación para productos que son sostenibles.

¿Qué es WaterSense?

WaterSense es un programa de certificación que ayuda a los consumidores a elegir productos que ahorran agua. Este programa incluye:

- WaterSense:** un programa de certificación para productos que ahorran agua.
- Energy Star:** un programa de certificación para productos que ahorran energía.
- GreenSource:** un programa de certificación para productos que son sostenibles.

Inodoros de marca WaterSense®

¿Qué hay acerca del precio?

Los inodoros de marca WaterSense® pueden ser más baratos que los inodoros de marca estándar. Esto se debe a que los inodoros de marca WaterSense® están hechos de materiales más duraderos y ahorran agua.

¿El rendimiento?

Los inodoros de marca WaterSense® tienen un rendimiento superior a los inodoros de marca estándar. Esto se debe a que los inodoros de marca WaterSense® están hechos de materiales más duraderos y ahorran agua.

¿Qué son inodoros de marca WaterSense?

Los inodoros de marca WaterSense® son inodoros que ahorran agua. Estos inodoros están hechos de materiales más duraderos y ahorran agua.

Grifos de marca WaterSense®

El ahorro de WaterSense

Los grifos de marca WaterSense® pueden ahorrar hasta 100 galones de agua al año. Esto se debe a que los grifos de marca WaterSense® están hechos de materiales más duraderos y ahorran agua.

¿Qué es WaterSense?

WaterSense es un programa de certificación que ayuda a los consumidores a elegir productos que ahorran agua. Este programa incluye:

- WaterSense:** un programa de certificación para productos que ahorran agua.
- Energy Star:** un programa de certificación para productos que ahorran energía.
- GreenSource:** un programa de certificación para productos que son sostenibles.

En tiempos de sequía, use WaterSense

La sequía puede afectar cualquier zona

La sequía puede afectar cualquier zona. Esto se debe a que la sequía es un fenómeno global que afecta a muchas partes del mundo. Esto se debe a que la sequía es un fenómeno global que afecta a muchas partes del mundo.

Consejos para ahorrar agua:

- Revisa los grifos y llaves de agua.
- Revisa los inodoros.
- Revisa los sistemas de riego.



WaterSense Website

how we reach consumers

The screenshot shows the WaterSense website homepage. At the top is the EPA logo and navigation links. Below is a main banner with a skier and text: "THIS WINTER SCORE BIG IN WATER EFFICIENCY" and "Get Olympic-sized savings with WaterSense". To the right is a sidebar with utility buttons like "TEST YOUR WaterSense" and "CALCULATE YOUR WATER SAVINGS". Below the banner is a tweet from @EPAwatersense and a "LOOKING FOR SOMETHING A BIT MORE TECHNICAL?" button. The footer contains contact information and social media icons.

EPA United States Environmental Protection Agency

ALL EPA THIS AREA Advanced Search

LEARN THE ISSUES | SCIENCE & TECHNOLOGY | LAWS & REGULATIONS | ABOUT EPA

About Us Products Outdoor New Homes Commercial Our Water Partners

WaterSense An EPA Partnership Program

Product Search | Meet Our Partners | Contact Us | FAQ | Partner Login

TEST YOUR WaterSense

CALCULATE YOUR WATER SAVINGS

SPREAD THE WORD WITH WaterSense

FIND REBATES NEAR YOU

START AT HOME

WaterSense FOR KIDS

@EPAwatersense

Marketplace @MarketplaceAPM 4h

Most people don't really think about water. And it could be costing us. Drought or not, how should we value water? mktplc.org/Msdr9t

Retweeted by EPA WaterSense

Show Summary

EPA WaterSense @EPAwatersense 14 Feb

Save water and protect the environment by choosing WaterSense labeled products in your home, yard, and business and taking simple steps to save water each day.

Learn more about WaterSense and what you can do to help make every drop count.

LOOKING FOR SOMETHING A BIT MORE TECHNICAL?

Click here if you are part of the media, an educator, manufacturer, professional or promotional partner.

Helpline: (866) WTR-SENS (987-7367) | Contact Us | Office of Water

WaterSense, U.S. Environmental Protection Agency, Office of Wastewater Management (4204M), 1200 Pennsylvania Avenue, N.W. Washington, D.C. 20460

Media Outreach



- National media
 - press releases
- Trade media
- Blogger outreach
- NAPS syndicated articles
- Earth Gauge – meteorologists
- PSAs



Publications

Becoming an EPA's WaterSense Partner Just Makes \$ense



JANICE WHITNEY

By Janice Whitney, U.S. Environmental Protection Agency, Region 2 WaterSense Liaison

The Water Supply Challenge

Preserving our water supply has become a national priority for several reasons. A recent government survey reports that 40 out of 50 states are anticipating local, regional, or statewide water shortages in the near future. In addition to these trends, statistics show just how far we are straining our resources. Between 1950 and 2000, while the U.S. population nearly doubled, the demand on public supply systems more than tripled, increasing demands on aquifers now depleting at rates exceeding their ability to naturally recharge. Further stressed by climate change impacts, water scarcity is not just occurring in regions where populations are growing or per capita water use is high.

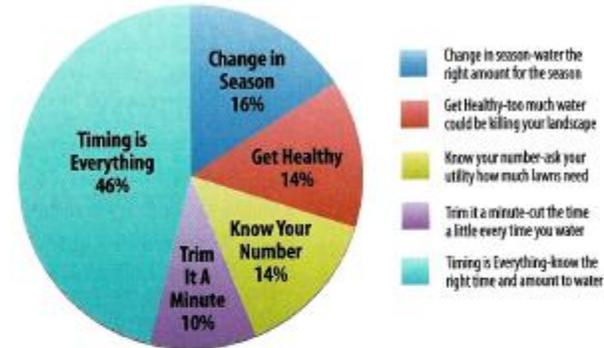
Climate changes may only make droughts worse and more frequent as weather patterns constantly change across the nation, making water scarcity a reality in every region.

Inefficient water use is also contributing to the strain on our water supplies, as many consumers are needlessly wasting water while more efficient products are becoming increasingly available. In fact, the average American family of four uses approximately 400 gallons of water per day.

Residential water use accounts for 70 percent of that total. Older toilets that use 3.5 gallons per flush use 60 percent more water than today's high-efficiency toilets that only use 1.28 gallons per flush. In addition, as much as 10 percent of U.S. homes have water leaks dripping at a rate of 90 gallons per day or more. The remaining 30 percent of total residential use for outdoor use, accounts for nearly 9 billion gallons of water daily. Do you know that as much as 50 percent of the water applied to lawns and gardens is wasted?

Water and wastewater utilities anticipate needing billions of dollars to maintain infrastructure just to keep up with ever-increasing

If WaterSense focused our promotion on just one outdoor tip to the public, it should be:



ing demand. The U.S. Environmental Protection Agency's (EPA's) 2011 national assessment of public water system infrastructure needs shows a total 20-year capital improvement need of \$384.2 billion for drinking water. Data from EPA's 2008 Clean Watersheds Needs Survey Report estimates a \$321 billion investment in wastewater, including storm-water and septic needs.



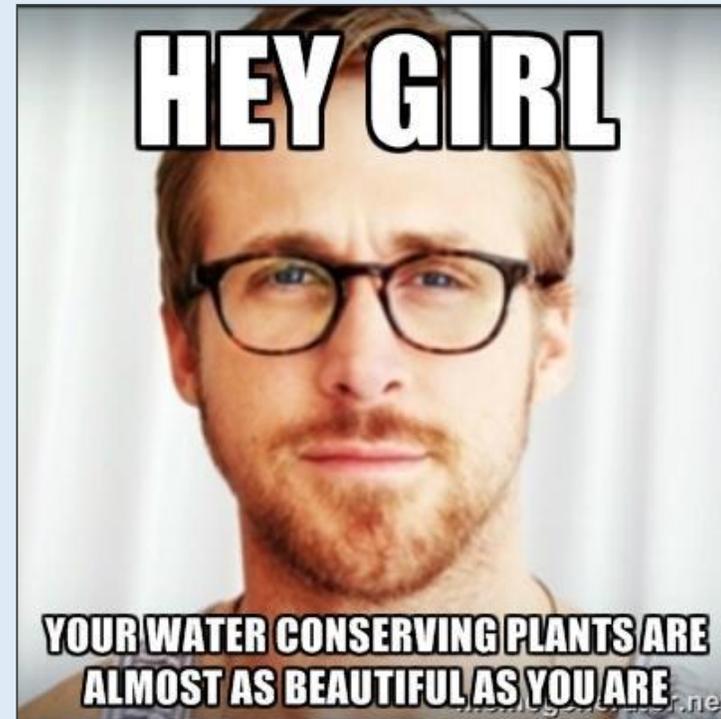
Everyone is encouraged to understand the importance of water efficiency and take positive actions to reduce their water use – in their homes, outdoors, and at work. How will we achieve this? By transforming the marketplace for products and services that use water and by promoting a nationwide ethic of water efficiency to conserve water resources for future generations and reduce water infrastructure costs.

WaterSense Partners

As of June 2014, WaterSense had more than 1,500 partners. WaterSense continues to grow its program with partners in the following categories:

Examples of Partner Outreach

- Rebated WaterSense labeled controllers
 - Citrus County, Florida, Utilities
 - Miami-Dade Water and Sewer Department
 - City of Allen, Texas
 - City of Plano, Texas
 - City of Greeley, Colorado, Water Department
 - City of Thornton, Colorado
 - Colorado Springs Utilities
 - Portland, Oregon, Water Bureau
- Promoted via social media
 - Denver Water
 - Arlington, Texas, Water Utilities
 - Ewing Irrigation Products



DENVER WATER “DRUNK FLOWERS” VIDEO





Learn from and share with other partners

EPA
United States
Environmental Protection
Agency

Cases in Water Conservation:

How Efficiency Programs Help Water Utilities Save Water and Avoid Costs

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP
www.nyc.gov/dep

CITY OF ASHLAND

Tampa Water Department

IRVING RANCH WATER DISTRICT

WATER RESOURCES AUTHORITY MASSACHUSETTS

Town of Gilbert water conservation

City of Santa Monica

WHAT WILL YOU SAVE TODAY?

WATER CONSERVATION



Other Activities to Support Utilities on Water/Energy Efficiency

- Water Loss Guidance document for drinking water utilities
- Developing “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
- Energy Management Guidebook
- Energy Star Portfolio Manager and Toolkit
http://www.energystar.gov/index.cfm?c=water.wastewater_drinking_water
- Utility energy self-assessment/audit tool (in development)
- State Revolving Fund – Green Project Reserve

Learn from and share with other partners

- WaterSense Partner Site includes a section where partners can share what they're doing
- Partner Forums and Marketing Webinars include partner presentations
- *Partner Pipeline* and *The WaterSense Current* newsletters
- Partner of the Year Awards recognizes outstanding partners



Share your experiences!
Learn from others!

Check out the WaterSense
in Action success stories





Program Updates WaterSense Awards

- Theme: Our partners build strong communities
 - WaterSense partners make it their priority to build strong, sustainable businesses, homes, and communities.
- **The 2016 WaterSense Partner of the Year application were open until April 2015.** Go to the [Apply for an Award](#) page to learn more about the WaterSense award application process.
- Review panels are in the final stages of selections
- Next Steps:
 - Civil & Criminal Compliance Screens
 - Winners Notified
- Awards Ceremony at WaterSense Innovations Conference in October.





2015 WaterSense Partners of the Year

In 2015, we recognized 9 Partners of the Year in 6 categories:

- **Promotional** Partner of the Year
- **Manufacturer** Partner of the Year
- **Retailer** Partner of the Year
- **Builder** Partner of the Year
- **Licensed Certification Provider** Partner of the Year
- **Professional Certifying Organization** Partners of the Year



2015 Partners of the Year

2015 Excellence Award Winners

2015 WaterSense Sustained Excellence Award Winners:

- [Kohler Co.](#)
- [Delta Faucet Company](#)
- [KB Home](#)
- [The Home Depot](#)

2015 WaterSense Partners of the Year:

- [The City of Charlottesville](#) (Virginia)
- [Cobb County Water System](#) (Georgia)
- [Murray City Corporation](#) (Utah)
- [Texas A&M Agrilife Research and Extension Center at Dallas](#)
- [The Toro Company](#)
- [Energy Inspectors Corporation](#)
- [The Sonoma-Marín Saving Water Partnership](#) (California)

2015 WaterSense Excellence Award Winners:

- [Metropolitan North Georgia Water Planning District](#)
- [New Hampshire Department of Environmental Services](#)
- [Colorado Springs Utilities](#) (Colorado)
- [Denver Water](#) (Colorado)
- [Municipal Water District of Orange County](#) (California)
- [Puget Sound Energy](#) (Washington)



*2015 Excellence Award
Winners*

2015 Promotional Partner of the Year



Nguyen (right) celebrates Fix a Leak Week at the Water Drop Dash 5K with the City of Gainesville, Georgia's Conservation Crusader mascot (left).



"When we train a professional, we have magnified our message. They then carry that information forward and find a way to embrace efficiency as a best business practice instead of a roadblock."

Kathy Nguyen
Senior Project Manager
Cobb County Water System



2015 Excellence in Strategic Collaboration



"We are so glad to utilize the WaterSense program. It contributes to the success of our conservation goals, helping everyone save water, energy, and money—a true example of win-win."

Frank Kinder, Senior Conservation Specialist
Colorado Springs Utilities (CSU)



2015 Promotional Partner of the Year





2017 Promotional Partner of the Year?

**YOUR
LOGO
HERE?**



For More Information

- Contact Information
 - E-mail: whitney.janice@epa.gov
- Visit us!
 - Web site: www.epa.gov/watersense
 - Facebook: www.facebook.com/epawatersense
 - Twitter: www.twitter.com/epawatersense
- Questions?
 - E-mail: watersense@epa.gov
 - Toll-free Helpline: (866) WTR-SENS

