

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



look for



Taking the Plunge with the WaterSense®

H₂Otel Challenge



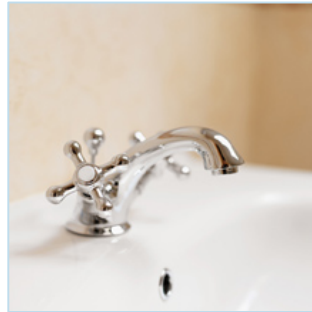
Veronica Blette
U.S. EPA WaterSense
2015 WSI



WaterSense Labeled Products



Flushing Urinals



Lavatory Faucets



Irrigation Controllers



Pre-rinse Sprayers

**More than
16,000
Labeled
Product
Models**



Tank-Type Toilets



Showerheads



New Homes



**COMING
SOON
Flushometer
valve toilets**



Water factors are also included in many ENERGY STAR qualified products

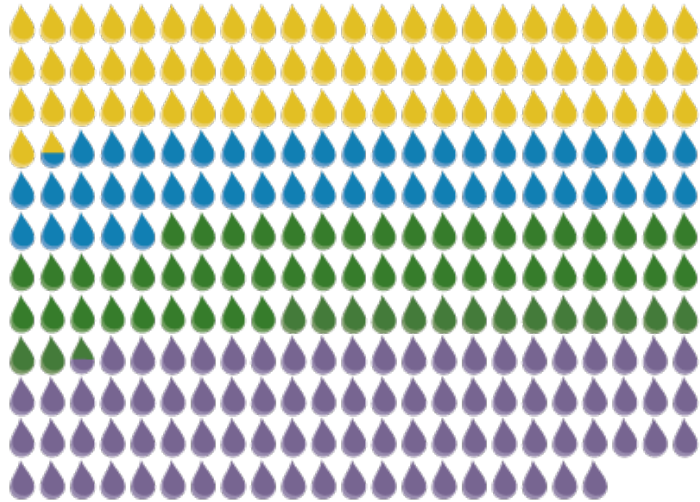


Savings Add Up! 2006-2014

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1.1 trillion gallons of water saved since 2006!



2007 - 2011
2012
2013
2014

346 billion gallons saved in 2014

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

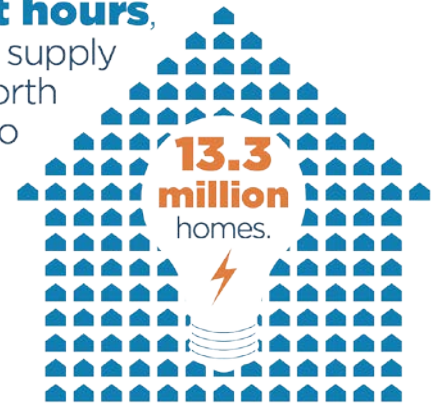


WaterSense has **saved consumers \$21.7 billion** in water and energy bills.

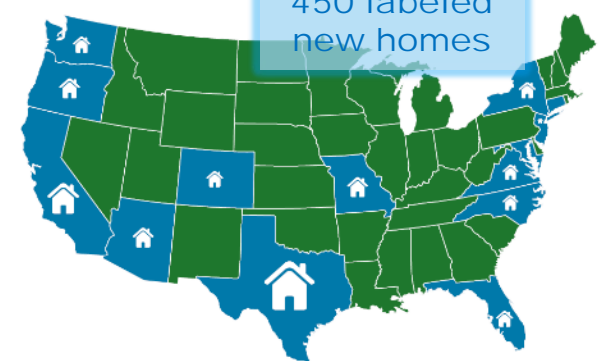
WaterSense has helped **reduce** the amount of **energy needed** to heat, pump, and treat water by

146 billion kilowatt hours,

enough to supply a year's worth of power to more than



450 labeled new homes





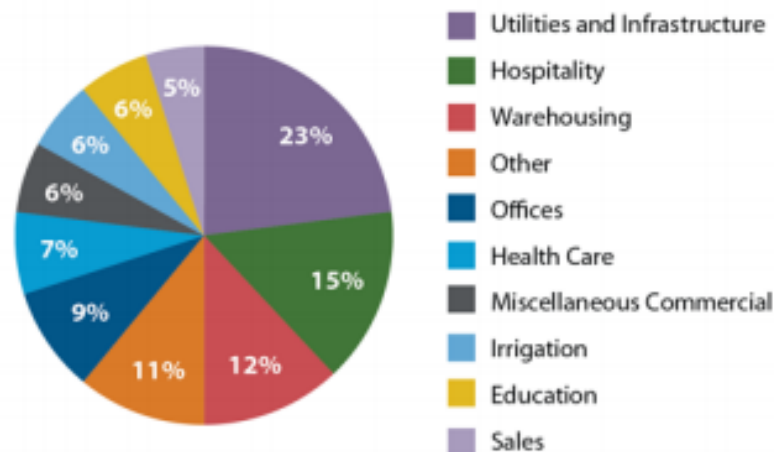
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WaterSense and CI

- Primary WaterSense focus is on influencing residential water demand
- Commercial and institutional water use also matters
 - Estimated to account for 17 percent of municipal water demand
 - Opportunities to save water and energy by making changes
- Challenged to replicate ENERGY STAR’s successful program
 - Limited data hinders benchmarking

Commercial and Institutional Water Use in the United States by Sector



Source: Dziegielewski, et al. 2000. *Commercial and Institutional End Uses of Water*. American Water Works Association Research Foundation.

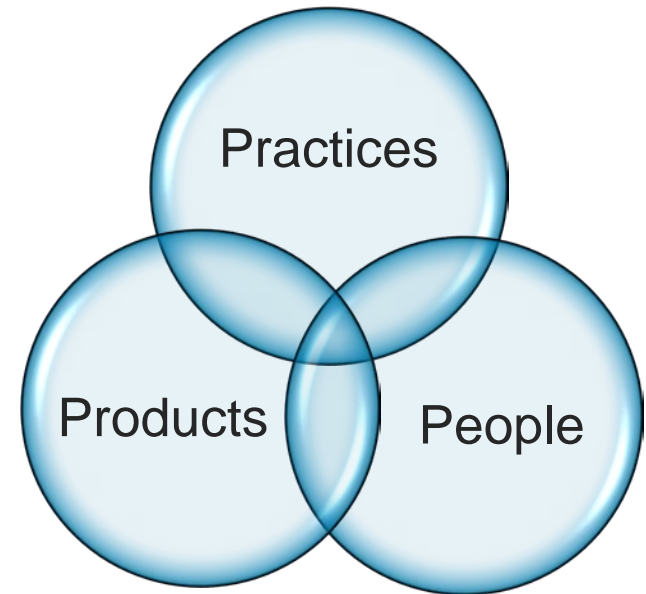




WaterSense CI Efforts

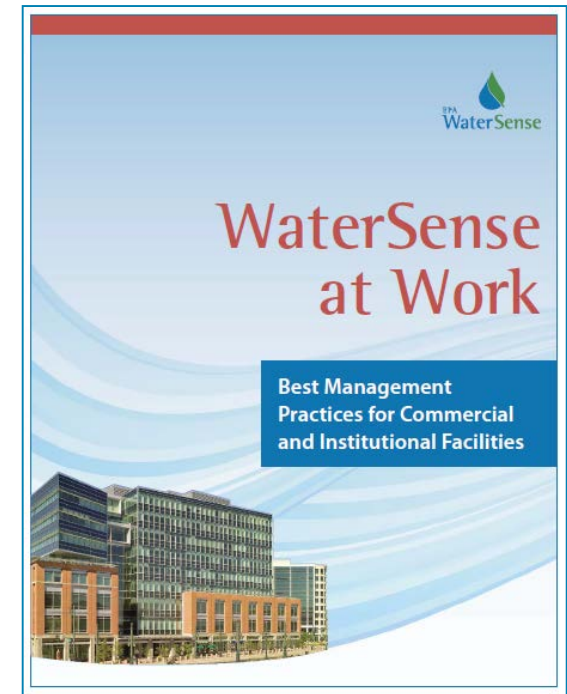
Build off the 3 P's

- Products
 - Continue to look at developing specifications for products used in the commercial sector
 - Commercial toilet spec by end of year
- Practices
 - **Identify and promote practices to improve water use efficiency**
 - Carry out work to support potential benchmarking in future
- People
 - Businesses are made of people – focus outreach on sectors to drive action
 - Leverage partner relationships



WaterSense at Work Best Management Practices

- Released in late 2012
- *WaterSense at Work* is an online guide facilities can use to manage water use:
 - 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
- A navigable “flip-book” is online at:
www.epa.gov/watersense/commercial/docs/watersense_at_work/index.html



2014-15 Commercial Outreach Focus

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About Us Products Outdoor New Homes Commercial Our Water Partners

WaterSense® An EPA Partnership Program

WaterSense / Commercial / H₂Otel Challenge

Facility Types
H₂Otel Challenge
Managing Water
Best Management Practices
Resources

WaterSense
H₂Otel Challenge

HOME TAKE THE PLEDGE RECRUIT HOTELS TOOLS & TRAINING

Take the Guest Work out of Saving Water!

Launching in January 2014, the WaterSense H₂Otel Challenge will encourage hotels to assess water use, learn about the best management practices for reducing water in hotels, and track their results.

WaterSense partners will challenge hotels to learn about *WaterSense at Work: Best Management Practices for Commercial and Institutional Facilities* (BMPs), a comprehensive guide to commercial water efficiency. EPA and its partners will provide hotels with the tools to "ACT":

- Raise awareness of WaterSense among hotel facility managers
 - Increase the use of WaterSense labeled products
 - Promote BMPs for water use reductions
 - Improve data quality by tracking progress
- Give WaterSense partners a framework to engage CI customers
- Provide training and tools to assist hotel facility managers in saving water, energy, and money
- Educate hotel facility managers, employees, and guests about water efficiency

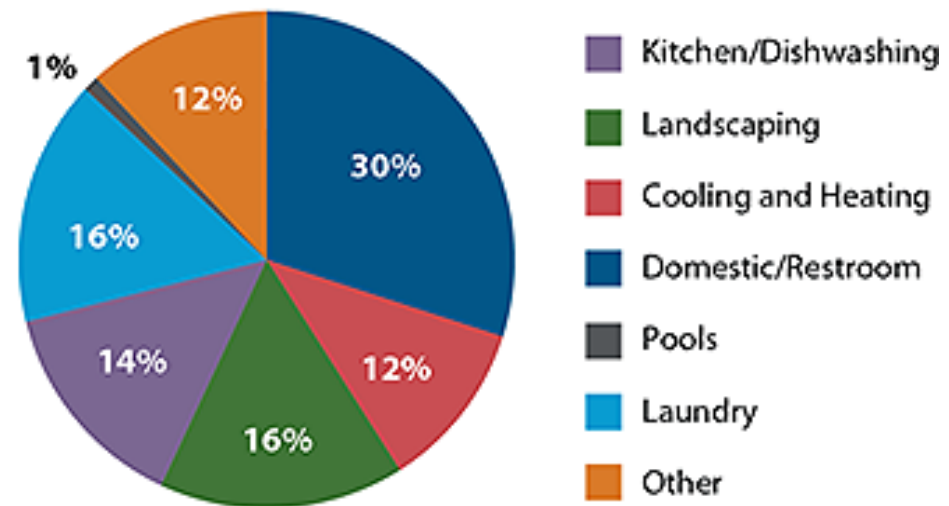
www.epa.gov/watersense/challenge



Water Use in Hotels

- Restrooms and guest bathrooms are highest users
- Laundries use large amounts of water and energy
- Landscaping can benefit from more water-smart plants and technologies
- More efficient kitchen fixtures and appliances are available
- Large volumes of water are needed to cool spaces

End Uses of Water in Hotels



Why Save Water in Hotels?

- Save operational costs
 - Water and sewer rates have risen well above inflation
 - Saving water saves energy costs for heating and treating water
 - Improving plumbing fixtures can reduce maintenance calls
- Build on successes of towel/linen reuse programs
 - Best management practices have even greater savings potential
- Save water while enhancing the guest experience
- Show sustainability leadership in the community
 - Hotels can demonstrate leadership by reducing their impact on local water supplies
 - Utilities and local governments can show commitment by assisting local hotels



Business Case for Going Green



- Competitive edge in the green travel marketplace
 - 77 percent of hotel owners consider reducing water use important
 - 55 percent of hotel buildings expected to be “green” in five years
 - Nearly two-thirds undertaking green building projects by 2015
 - Three-quarters of hotel owners plan to incorporate green operations and maintenance activities by 2015
- Customers increasingly demand it
 - TripAdvisor survey found 79 percent of travelers find eco-friendly accommodations important
- Green hotel owners are reporting results
 - More than half see reductions in energy use and operating costs
 - More than two-thirds of hotel owners reported increase customer satisfaction, 83 percent say it has a positive impact on workers



What Is the Challenge?

Challenge hotels to **take the pledge to ACT:**

Three Steps	Partners Would Ask Hotels	EPA Will Provide Tools to Assist
Assess	Conduct a simple water assessment to evaluate water use and identify savings opportunities.	<ul style="list-style-type: none">• Water assessment worksheets• Water Use and Savings Evaluation (WaterUSE) Tool
Change	Implement at least one of the <i>WaterSense at Work</i> BMPs to save water in the facility.	<ul style="list-style-type: none">• <i>WaterSense at Work</i> BMPs• Recorded and live webinars• Monthly tips emails
Track	Track facility's progress in water efficiency before/after implementing BMPs.	<ul style="list-style-type: none">• ENERGY STAR® Portfolio Manager• Connections to existing partner data collection methods

Important note: CI businesses and institutions are still not eligible for WaterSense partnership at this time. Organizations that work with them (e.g. trade associations can be promotional partners.

H₂Otel Challenge Scope

- Awareness campaign - not a labeling program
 - Challenge logo is NOT a facility label
 - Hotels are participants NOT WaterSense partners
 - WaterSense provides material to help them promote participation
- Scale of challenge is flexible so it can apply to:
 - Individual facilities and franchises – locally owned/operated
 - Portfolios of hotel facilities – company-wide or selective groups
 - Geographic locations - regional, state, or local focus
- Partners and organizers can customize challenge by:
 - Adding requirements – specific water reductions, reporting
 - Providing incentives – rebates, giveaways, on-site assistance
 - Giving recognition – awards, participant lists



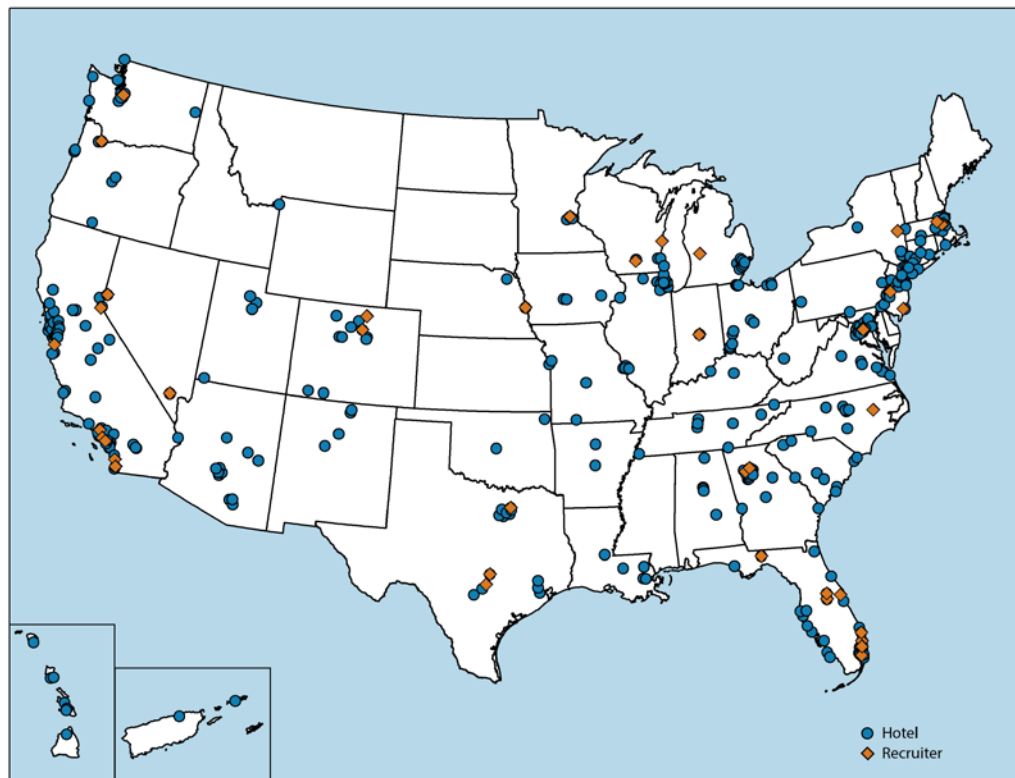
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Challenge Participation



- 850+ hotels from 41 states have signed up so far
- 88 organizations are recruiting and assisting hotels
- Complete list updated regularly





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Technical Support - *Tools and Webinars*

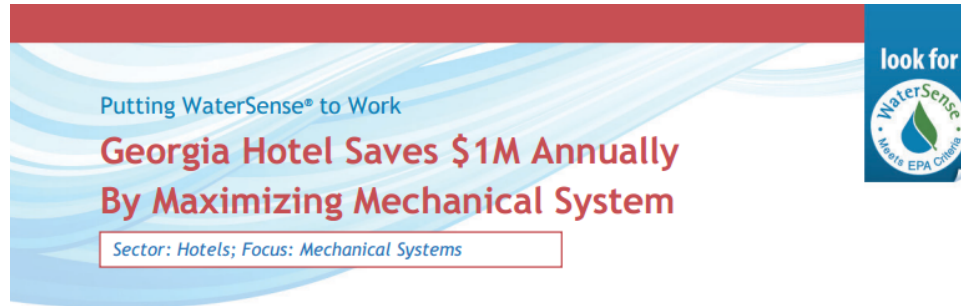
- Monthly tips, case studies, and resources
- Tools to help hotel facility managers and building operators **ACT**
 - Water Assessment Worksheets
 - Water Use & Savings Evaluation Tool (WaterUSE Tool)
- Technical webinars with case studies and guest speakers – all are recorded/posted on YouTube
 - 8 recorded in 2014 focused on where water is used
 - 4 for 2015 focus on the management steps
- Hotels (and other facilities) can use these tools to identify and prioritize cost-effective water efficiency projects and best management practices

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



Monthly Tips to Registrants

Case Studies on Website



Tip of the Month Plan for Water Savings Success

If you missed our most recent webinar, here are a few pro tips on water management planning to help your hotel meet its goals to save water, energy, and money:

- **Align standard operating procedures and performance metrics with water-saving goals.** Make sure standard operating procedures include water-saving changes that don't conflict with other efficiency goals. Staff will not change behavior if it slows them down or makes them less effective.
- **Expand your coverage.** Put signage at points of use to remind employees and guests to use water efficiently and report leaks and other problems with equipment.
- **Make accurate payback and savings estimates.** Cost savings are not limited to initial reductions in water and energy. Include cost savings from related processes like reduced use of chemicals, detergents, and other cleaning costs in laundry operations for more accurate estimates.



Caesars Entertainment Sets Goals That Save Water

To reduce resource use at its properties around the world, Caesars Entertainment developed CodeGreen, an organization-wide environmental strategy applied throughout Caesars' resorts and gaming properties. Through CodeGreen, Caesars sets water reduction goals in different areas (e.g., facilities, food and beverage) and emphasizes measuring, monitoring, and continuously improving how much water is used in a given facility.

Between 2008 and 2012, Caesars saved 399 million gallons of water nationwide. Caesars recently announced that it has surpassed its

Putting WaterSense® to Work

Georgia Hotel Saves \$1M Annually By Maximizing Mechanical System

Sector: Hotels; Focus: Mechanical Systems

Project Summary

With water and sewer costs in Atlanta, Georgia, increasing by more than \$20 per hundred cubic feet (CCF) of water between 2000 and 2013, Hyatt Regency Atlanta has made water conservation a priority, with a heavy emphasis on reducing water use in its cooling towers, water-cooled equipment, and chiller and boiler systems. As a result, the hotel used 35 percent less water in 2013 compared to 2000. Had Hyatt Regency Atlanta continued to use as much water as it did in 2000, the drastically increased water rates would have cost the hotel \$1 million more per year in water and sewer costs.

The hotel has also encouraged water savings by engaging staff and instituting a Green Team to help ensure that the systems put in place are effective. By making everyone in the facility a part of the process, Hyatt Regency Atlanta is able to promote water savings on every level. In addition to reducing water use through mechanical and heating, ventilating, and air conditioning (HVAC) best management practices, the hotel installed high-efficiency restroom fixtures in guest rooms; reduced exterior landscaping and supplemental irrigation; served water only on request in its restaurants; installed high-efficiency toilets and non-water urinals in public restrooms; and started a towel and linen reuse program. Through these efforts, Hyatt Regency Atlanta has managed to stay below the average utility cost per room among hotels in Atlanta and was awarded "Top Water Saver" by the Atlanta Better Buildings Challenge in July 2013.

Staying a Step Ahead Drives Savings

To stay at the forefront of water and energy efficiency improvements, Hyatt Regency Atlanta developed a long-term capital plan that keeps track of all future building system projects, such as chillers, HVAC, and boilers that might need to be replaced. When projecting equipment replacements, the hotel considers efficiency improvements into the life cycle of these projects so that the return on investment (ROI) can influence project timing. For example, if a chiller is nearing the end of its projected useful life, replacing it with a newer, more efficient model could translate to water and utility cost savings, influencing the timing

Case Study Highlights



- **Hotel:** Hyatt Regency Atlanta
- **Location:** Atlanta, Georgia
- **Property size:** 1.5 million square feet
- **Number of guest rooms:** 1,260
- **Water savings:** Reduced water consumption by 35 percent between 2000 and 2013, saving 36 million gallons of water in 2013 alone
- **Cost savings:** Approximately \$1 million annually in water and sewer costs

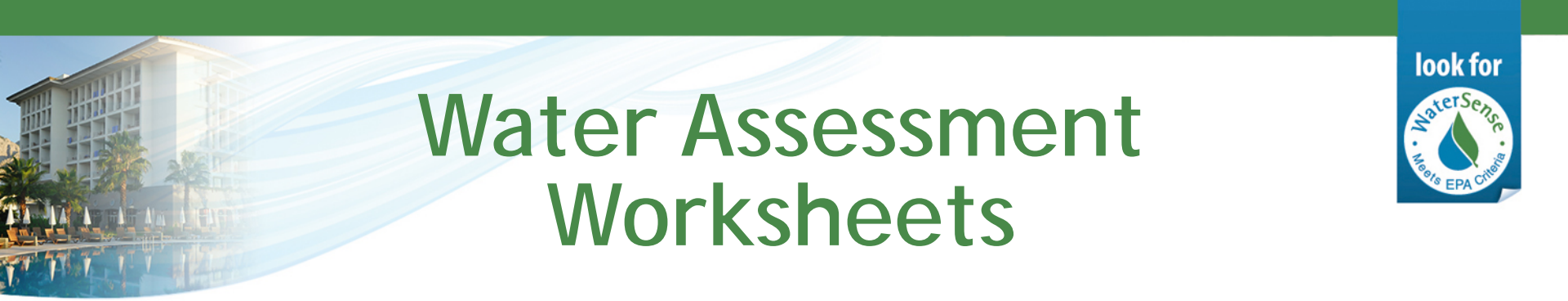


Water Assessment Worksheets



- The first step of managing facility water use is to conduct a water assessment.
- A water assessment will help hotels identify key water use areas and savings opportunities.
- The Water Assessment Worksheets can be used to guide hotel facility managers through the water assessment process.





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Water Assessment Worksheets

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

- 1: Facility Information
- 2: Metering
- 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 water-saving changes
 - Estimated water use from each end use area
 - Potential water-efficient fixture/equipment retrofit or replacement projects
 - Specific BMPs to reduce water and energy use
- Downloadable and Excel based (macros must be enabled). Links with *WaterSense at Work*.
- Calculates potential savings using customizable project costs
 - Estimated water, energy, and cost savings from the changes
 - Estimated project payback period





Tool calculates estimated water usage from the fixtures and potential water/energy/cost savings & payback period if fixtures are replaced



Current Water Use

Your existing water use for your overnight guest restrooms is approximately 2,467,000 gallons of water per year. The following table provides your estimated water use for each fixture type.

	Estimated Annual Water Use (gal)
Tank-Type Toilets	676,000
Flushometer-Valve Toilets	0
Faucets	833,000
Showerheads	958,000
TOTAL	2,467,000

Potential Water Savings and Payback Period

» By retrofitting your existing, inefficient fixtures in your guest rooms with WaterSense labeled and/or high-efficiency models, you can save approximately 831,000 gallons of water and \$9,560 in water and energy costs annually. The following table provides estimated water, energy, and cost savings, and an estimated simple payback for each potential replacement project.

	Estimated Project Cost (\$)	Potential Annual Water Savings (gal)	Potential Annual Water Cost Savings (\$)	Potential Annual Energy Savings (Mcf)	Potential Annual Energy Cost Savings (\$)	Total Annual Cost Savings (\$)	Potential Payback Period (years)
Tank-Type Toilets	\$45,000	374,000	\$3,240	—	—	\$3,240	13.9
Flushometer-Valve Toilets	N/A	N/A	N/A	—	—	N/A	N/A
Faucets	\$1,500	265,000	\$2,300	170	\$1,380	\$3,680	0.4
Showerheads	\$3,000	192,000	\$1,660	120	\$980	\$2,640	1.1
Complete Project	\$49,500	831,000	\$7,200	290	\$2,360	\$9,560	5.2

» Check with your local water and energy utilities to determine if a rebate program is available for implementing water-saving projects.

» For additional information on how to reduce water use in your guest rooms, see:

[WaterSense at Work Section 3: Sanitary Fixtures and Equipment](#)



BMP Webinar Series



- 2014 webinar series on water-efficient practices in hotels:
 - Assess, Track, and Realize Payback
 - Demonstrating WaterSense’s WaterUSE Tool
 - Washing 101: A Plumbing and Laundry Efficiency Primer
 - Make a Splash With Outdoor Water Savings
 - Minimize Water Use in Mechanical/HVAC Systems
 - What’s Cooking: Commercial Kitchen Savings
 - Let’s Talk About Education and Outreach
- All webinars are recorded/posted on the WaterSense website:
www.epa.gov/watersense/commercial/webinars.html



A for Assess Webinars



- Part 1 - June - Water Assessments and WaterUSE Tool Training
 - Included steps for conducting a water assessment and a demonstration of the WaterUSE Tool that can help hotels identify opportunities for improvement
 - Case Study: Bucuti and Tara Beach Resorts, Aruba
- Part 2 – August - Goal Setting and Water Management Planning
 - Included calculating potential savings and prioritizing projects
 - Case Study: New York City Department of Environmental Protection Water Challenge Program





2015 H₂Otel Challenge Webinar Series

Change and Track

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- October - C for Change: Implementing Best Management Practices
 - Overview of WaterSense at Work with a focus on areas of high hotel water use
 - Case Study from the Sheraton Seattle Hotel
- December - T for Track: Tracking Your Water Use, Progress, and Results
 - Overview of tracking tools including ENERGY STAR's Portfolio Manager and ways to recognize success like the National Building Competition
- Register online at: epa.gov/watersense/commercial/webinars.html







2015 Recruiting Rally

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- Challenged promotional partners to recruit hotels to the campaign
- Why? To give utilities a “hook” to engage their customers
- Provided tools to help them recruit and offered reward to those that signed up the most
- Successful?
 - Not as much as we had hoped



H₂Otel Challenge Recruiting Rally



The WaterSense® H₂Otel Challenge is hosting a Recruiting Rally from February 1 to June 1, 2015. The WaterSense promotional partner (i.e., utility, state/local government, trade association, or nonprofit) that signs up the most hotels for the Challenge during this time period will earn free technical assistance for its local hotels. We hope our partners will meet our challenge to recruit hotels to assess, change, and track their water use.

The H₂Otel Challenge

- Through the WaterSense H₂Otel Challenge, the U.S. Environmental Protection Agency (EPA) encourages hotels to assess water use, change water-wasting products or processes, and track their water-saving progress and achievements.
- WaterSense provides hotels that sign up for the H₂Otel Challenge with a number of technical webinars, tools, case studies, and tips. EPA also recognizes participating hotels on a list at www.epa.gov/watersense/docs/H2Otel-Challenge-Participating-Hotels-508.pdf.
- WaterSense is asking its partners to help recruit hotels to sign up for the H₂Otel Challenge. Recruitment and recognition tools are available at www2.epa.gov/asspartner/promote/challenge.html.

Recruiting Rally Basics

- The Recruiting Rally for promotional partners will last from February 1 to June 1, 2015, but any partners can encourage hotels to sign up for the H₂Otel Challenge all year long.
- Participating partners have access to WaterSense recruitment and recognition tools to encourage their hotel customers to sign up for the Challenge and reduce their water use.
- Interested hotels will sign up for the H₂Otel Challenge on the WaterSense website and should include the partner organization that recruited them on the registration form.



H₂Otel Challenge Sample Recruitment Email

WaterSense® has developed this sample email language for recruiting organizations to use when encouraging hotels to join the WaterSense H₂Otel Challenge.

Subject: Save Water, Energy, and Money: Take the WaterSense H₂Otel Challenge

Dear [Hotel Contact],

Given your interest in sustainability [and/or green lodging, reducing local impacts of drought, participation in other programs/campaigns, etc.], I want to tell you about the WaterSense® H₂Otel Challenge, an initiative from the U.S. Environmental Protection Agency (EPA) designed to help hotels find opportunities to save water, energy, and operating costs by providing free tools, tips, and training.





What we Found

- Partners had difficulty recruiting hotels directly
 - Relationship-building is very resource-intensive
 - Partners with CI programs were focused on drought and partners without CI programs were still learning themselves
 - Interested hotels needed more assistance than expected – regular contact needed to maintain momentum and guide process even with skilled facility managers
- Webinars were well attended with very positive feedback, but audience was different than expected
 - More partners attended webinars than hotels
 - Most attendees answered poll questions during webinars
 - Hotels with corporate water reduction goals or green certifications were more active (ex. TripAdvisor GreenLeaders, LEED, etc.)





What we Found



- Working through existing organizations and programs seems to be more effective than trying to reach facilities directly (ex. lodging associations and non-profits)
- Some attendees had never seen BMPs or WaterSense tools, so general outreach is still needed
- Partners liked tools, but wanted more for all CI facilities instead of just hotels
- There are benefits of communicating the value of water to commercial market
 - Increasing awareness of WaterSense even if hotels don't share water and energy savings numbers
 - Educating facility managers and encouraging them to enter data into ENERGY STAR's Portfolio Manager to use in the future





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Challenges of Working with Hotels

- Getting feedback is difficult
 - Online surveys and follow-up phone calls didn't work
 - Hotel employee schedules are variable during peak occupancy
 - Most didn't share savings numbers and aren't ready to present their stories or case studies
- Ownership and franchise models complicate decision-making
 - Fragmented hospitality market makes it hard to reach decision-makers
 - Other hotels are owned by one company, but managed by another so decisions must go through many channels
 - Many brands have national/international specs for fixtures and SOPs so facility managers can't easily make changes
 - Cost structures may split authority (ex. kitchen equipment may be included in Food and Beverage, not with rest of operating budget)





Advice for Working with Hotels

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- Encourage them to incorporate water-saving changes into standard operating procedures
 - Water-saving behaviors must be included in daily activities, trainings, and regular quality checks
 - Staff must be assured that new procedures are supported by management and that changes won't be counted against their performance – ex. if water-saving behavior increases cleaning time when they are paid by number of rooms cleaned in a given time
 - Savings and improvements should be rewarded or recognized regularly to maintain staff momentum



Remind Hotels That Savings Can Be Anywhere



- Savings aren't limited to major renovations or equipment retrofits
- Many savings can be gained from changes in usage such as efficient operation and maintenance standard operating procedures or behavior changes
- Build on successes of towel/linen reuse programs to start
- Phased approaches can make it easier to tackle larger issues
- Remind them that local contacts and programs are there to help!
 - WaterSense partners
 - Water and energy utilities
 - Local government programs



The Bottom Line

- The H2Otel Challenge gives utilities a framework with which to work with hotels
- The Challenge gives hotels an opportunity to learn how to save water and get recognized for their work
- Increasing water efficiency can help hotels save operating costs and meet corporate sustainability goals and customer expectations simultaneously
- Incentives and technical assistance programs may be available from local water and energy utilities to help make the changes
- Hotels can sign up today to get started on water savings!





Beyond Hotels



- May-October 2015 - monthly webinar series in cooperation with HUD focused on HUD-assisted housing
 - To register or watch recorded webinars – www.epa.gov/watersense/hudwebinars
- Working to advance water efficiency in federal facilities – new Executive Order 13693 requires additional savings
- Working with ENERGY STAR to leverage outreach with their partners/sectors
- Collaborating with ENERGY STAR on National Building Competition
- Changing our website to consolidate CI tools into a “Solutions Center”



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More Information

Visit WaterSense online!

www.epa.gov/watersense/challenge

www.epa.gov/watersense/commercial

facebook.com/epawatersense

twitter.com/epawatersense

Portfolio Manager

www.energystar.gov/benchmark

Questions?

Email: watersense@epa.gov

Helpline: (866) WTR-SENS (987-7367)

