



# Water-Efficiency Opportunities for Restaurants

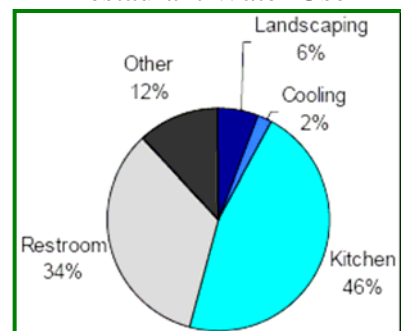
Water efficiency is great for the environment and for your business's bottom line. Using water-efficiency measures in your restaurants can lower your water and energy bills, as well as improve operations. Low-cost and investment opportunities abound for using water efficiently in the food service sector. Demonstrating your commitment to water efficiency will make a positive impression on your staff and customers. Some of the measures listed below can likely be applied to your restaurant. We can all do our part to use water more effectively, thereby improving water quality, aquatic ecosystems, and preserving our drinking water resources.

				
<b>High-Temp Dishwasher</b>	<b>Strainer System</b>	<b>Air-Cooled Icemaker</b>	<b>Low-Flow Prerinse Valve</b>	<b>Boilerless Steamer</b>
				
<b>Front-Loading Clothes Washer</b>	<b>Low-Flow Aerator</b>	<b>Self-Closing Faucet</b>	<b>High-Efficiency Toilet</b>	<b>Waterless Urinal</b>

## Water Use Restaurants

The first pie chart shows water consumption for different operations in a restaurant. Restrooms and kitchens are the two areas with the most potential for water-efficiency measures and corresponding water savings.

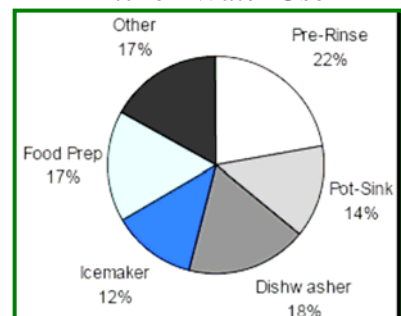
Restaurant Water Use <sup>a</sup>



## Water Use Kitchens

There is tremendous opportunity in a restaurant kitchen to reduce water use by implementing water-efficient technologies. Beyond conserving water, energy, and reducing utility costs, these technologies:

Kitchen Water Use <sup>a</sup>



- Increase performance.
- Increase employee and equipment productivity.
- Reduce maintenance and equipment downtime.
- Reduce chemical use and human health impacts from cleaners.
- Promote more sanitary conditions.

The table below illustrates the associated water savings and cost benefits by measure.

### Water-Efficient Equipment Table

Retrofit Measures	Avg. Water Savings (%)	Avg. Annual Cost Savings <sup>b</sup>	Return on Investment	Additional Benefits
High-Temp Dishwasher	50%			Reduces operating costs by saving chemicals, time, energy, water, and labor. Shorter cycle and drying times, half the detergent, no sanitizers or chlorine odor, and cuts grease & lipstick quickly.
Strainer System	100%		< 1 year	Minimal investment, no electricity connection, will not breakdown.
Air-Cooled Ice maker <sup>a</sup>	58%	\$976		Air-cooled ice makers require less maintenance and no need for water softener or descaling.
Low-Flow Spray Valve	45%	\$521	1.1 months	High-pressure spray can reduce rinse time. Inefficient spray valves no longer produced.
Boilerless Steamer <sup>c</sup>	90%	\$4680	1 year	Excellent water and energy savings. No water, sewer, or vent hookup needed. No descaling.
Clothes Washer	33%	\$100		Reduces wear and tear on fabrics, as well as saves energy, water, and detergent use.
Low-Flow Aerator <sup>d</sup>	75%	\$130	< 1 month	Low-cost and easy to install.
Touchless Faucet <sup>d</sup>	85%	\$140	3 years	Are more sanitary and have water-saving aerators pre-installed.
High-Eff. Toilet <sup>d</sup>	60%	\$540	< 1 year	Increased flush performance and longer life.
Waterless Urinal <sup>d</sup>	100%	\$225	2 years	No utility cost, low-maintenance, improved hygiene, odor control, no major breakdowns.

<sup>a</sup>Based on EBMUD, titled "Water Efficiency in Commercial Food Service"

<sup>b</sup>Cost savings includes additional energy savings associated

<sup>c</sup>Based on Fisher Nickel, Inc. report on food steamers

<sup>d</sup>Bathroom retrofit measures based on PACE "Water Efficiency: Commercial Bathrooms" resource sheet

### Life Cycle Cost – The True Picture



**Start-Up Costs**

**Operating Costs**

Consider the life-cycle cost.

Operating costs can be 2 to 20 times greater than start-up costs!

<sup>e</sup>Based on Fisher Nickel Inc. presentation titled "Energy & Water Savings Potential in Commercial Food Service"

*The contents of this resource sheet are to the best knowledge of PACE staff. All references to products above by name, trademark, or manufacturer are for informational purposes only and do not represent an endorsement by the PACE Program of any particular product or entity.*