Water Efficiency in Food Service

Laurie D'Audney, Fort Collins Utilities October 5, 2010

Why Conserve Water?

- Lower water and wastewater bills.
- Less hot water use trims down the energy bill.
- Saves energy at the water and wastewater treatment facilities, as they use electricity in their processes.
- Good for your bottom line; good for the environment!



Where the Water Goes

- Kitchen 47%
- Restrooms/Domestic 33%
- Irrigation 5%
- Cooling & Heating 2%
- Other, including leaks 13%



Kitchen Faucets

- Check for leaks and worn gaskets.
- Install 2.2 gpm faucet aerators; .5 gpm can be used for washing hands. When higher flows are needed, install a fingertip control valve.
- Install hands-free or foot activated valves and faucets.
- Install sensors that activate water flow only in the presence of hands or an object.
- Do not leave faucets on to thaw frozen foods.



Pre-rinse Sprayers

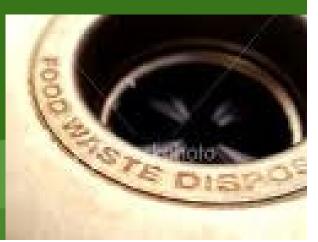
 Install pre-rinse spray valves that use 1.6 gpm or less.





Garbage Disposers

- Benefits of eliminating a disposer:
 - Lower water use: a disposer uses 3-14 gpm
 - Pump grease trap less often
- Use strainer (scrapper) basket instead of a disposer. Compost food waste.
- Use the minimum flow necessary.
- For models with preset controls, adjust the runtime and amount of water used.



Dishwashers

- Water use: 2.5 8 gpm
- Replace older dishwashers with new water & energy efficient equipment.
- Install sensors to allow water flow only when dishes are present.
- Install low-temperature machines that rely on chemical sanitizing over high water temperature.



Dishwashing Tips

- Pre-soak utensils, dishes and cooking vessels in water instead of running water to rinse them.
- Only run rack machines if they are full.
- Educate staff to quickly report leaks.



Icemakers

- Water use per 100 pounds of ice:
 - Cube machines: 30+ gallons
 - Flake/nugget machines: 20 gallons
 - Water-cooled: 72-240 gallons
- Choose air-cooled models with rejected heat sent outside.
- Adjust icemaker to only produce ice when needed.



Refrigerators & Freezers

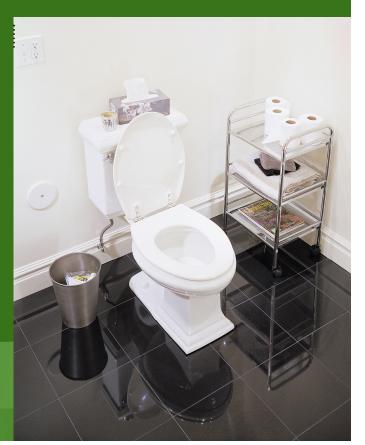
- Provide adequate refrigerator space for thawing food.
 - Water savings: 200,000 gallons a year
- Choose air-cooled instead of once-through cooling.

- Water savings: 5,000 gallons per day



Toilets & Urinals

- Replace older toilets and urinals with WaterSense models.
 - Toilets: 1.28 gpf
 - Urinals: .5 gpf
- Check for and repair leaks.



Sprinkler System Tips

- Review and change schedule monthly.
- Regularly check system for broken or misaligned heads.
- Find and repair leaks.
- Install new technology:
 - Weather-based controller
 - Soil moisture sensor
 - Rain shutoff device





Xeriscape

Not one particular style or look, but the thoughtful process of creating a healthy, attractive landscape that conserves water.



Submeters

- Install submeters to:
 - Track outdoor water use separate from indoor.
 - Monitor water use when the tap is shared with other businesses.



Efficient Restaurants

Per Meal: 6-9 gallons

Average: 11 gallons

Per Employee: 86–122 gallons per day

Average: 88–175 gallons

Per Seat: 20-31 gallons per day

Average: 30–35 gallons

From Commercial and Institutional End Uses of Water



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