

Water Conservation

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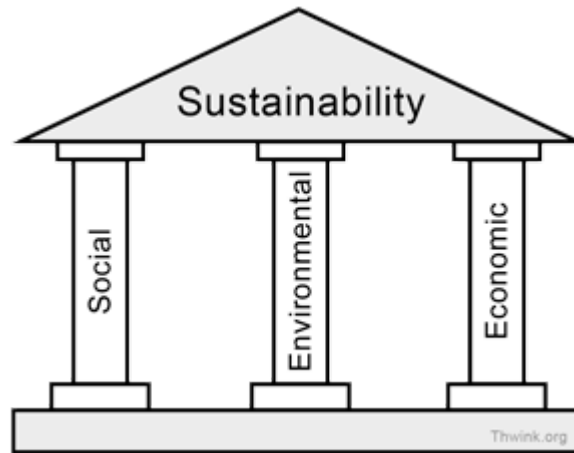
What is water conservation?

- Preservation
- Control
- Development
- Prevention of pollution
- Both surface and groundwater



What is sustainability?

- **Ability to continue a defined behavior indefinitely**
- Environmental
- Economic
- Social
- Food Service- thrives in economies and livelihoods, protects the welfare of plants and animals, avoids wasting or damaging natural resources, and provides social benefits



Sustainable Water Systems

- maximize water conservation or efficiency
- optimize water resource management
- protect resources (in the local watershed)
- enhance economic, social and environmental sustainability while meeting operational objectives



Current Strategies Being Used in the Food Industry

- Using only the dishes needed- trying not to use too many
- Recycled water for dishwashing
- Filling the dishwasher completely up before running- less loads
- Replacing dishwashers when they are getting old
- Switching from combi ovens which use steam to a connectionless combination oven which uses less water
- Replacing faucets so they do not leak
- Replacing other machinery that uses water to more conventional/eco-friendly ones

Strategies - Fixtures

- Add aerators to faucets
 - Pros: saves a lot of water
 - Cons: employees get impatient with low water pressure
- Use dish sink pre-rinse spray valves
 - Pros: cost effective, knocks food particles off dirty dishes
 - Cons: have to keep pressure on handle for water on
- Use high efficiency toilets (pressure assist tanks)
 - Pros: save water
 - Cons: people don't utilize the selection button

Strategies - Kitchen Equipment

Use of **Energy Star** equipment, especially:

- Steam cookers (uses 90% less water than standard machines)
 - Pros: uses 3x less water than the standard ovens
 - Cons: more expensive
- Dish machines
 - Pros: 25% more water efficient, spare more staff
 - Cons: more expensive
- Ice machines (uses air-cooling mechanism)
 - Pros: uses 10% less water than water cooling systems
 - Cons: uses slightly more electricity than water cooling systems

Practices

- Integrate water efficiency into employee training/company policies
- Defrost meats in refrigerators rather than under running water
- Keep lids on boiling water during slow times
- Use dry cleaning methods
 - broom/mop instead of spraying water/hose to clean floors
 - scrape grease off pots/pans before pre-rinsing
- Eliminate use of running water to melt ice
- Serve water to guests only on request

Strategies for conserving water while cooking

- Steam cookers- turn the steam down low during slow times
- Ice machines- keep lid down to ensure water isn't lost
- Dishwashers- run a full load/use the correct amount of soap for only appropriate # of rinses

Opportunities and Challenges

Challenges:

- finding best option of dish machine:
commercial dishwasher vs. three
compartment sink
- hard to practice water saving tips when
the kitchen is busy

Opportunities:

- save money on water
- save drinking water

UC Sustainability Policy

- UC Sustainable Practice Policy, *“establishes goals in nine areas of sustainable practices: green building, clean energy, transportation, climate protection, sustainable operations, waste reduction and recycling, environmentally preferable purchasing, sustainable foodservice and sustainable water systems.”*

UC Sustainable Water Systems Policy/Goals

- reduce potable water consumption by 20% by year 2020
- reduce potable water used for irrigation by
 - converting to recycled water
 - implementing efficient irrigation systems
 - drought tolerant planting selections, and/or by removing turf

UC Davis Strategies

- Dining commons currently use food from student run gardens and local farms
- Water efficient aerators, low flow nozzles, high efficiency toilets, recirculating water troughs in dishrooms, force thaw/water bath thawing only in emergencies
- Solid waste reduction through the implementation of a zero-waste program highlighting composting, recycling, reducing and reusing.
 - By composting food- we don't have to run it down the sinks= less water used

Other UC Campus Efforts

- Each UC is on track to their goals in sustainability
- UC BERKELEY GOAL: Reduce potable water use to 10% below 2008 levels by 2020.
- UCSB GOAL: Reduce potable water consumption 12% by March 2016.
- UCSC GOAL: To research, develop, and implement programs and strategies that minimize potable water use on the UCSC campus.

Other examples- non UC related

- **Commercial Restaurants-** implementing water-efficient practices can decrease operating costs by ~11% and energy and water use by 10 and 15%
- The kitchen is where most water is used: ~50%
- Replace existing food service equipment: upgrading equipment with water-efficient models (ENERGY STAR)
- Educate workers on proper dishwashing
- Turning equipment off when not in use

Other examples- non UC related

Austin Restaurant Water Saving Tips:

- Do not use running water to:
 - Melt ice
 - Thaw food
 - Wash vegetables
- Use customers' glass for refill
- Find and fix leaks
- Recycle water from steam table to wash down cooking area
- Soak pots and pans and pre-soak utensils in a basin first rather than rinsing under running water