

Every Drop Counts

# Smart Water Use

[www.nysefc.org/smartwateruse](http://www.nysefc.org/smartwateruse)



## Tips for Food Processing Facilities

**Please note that these suggested measures are not intended to supersede more stringent federal, state, Tribal, or local health and safety regulations.**

### General

- Appoint a water conservation coordinator with the responsibility and authority for the water conservation program.
- Explain the importance of individual actions to the success of the program.
- Increase employee awareness of water conservation.
- Make the plant manager and other employees aware of the water conservation coordinator's function.
- Read water meter daily to monitor and report the success of water conservation efforts. Seek employee ideas for water conservation using contests, rewards, and suggestion boxes.

### Survey the Facility

- A plant survey helps to establish facility water savings potential by identifying areas where water is wasted or where water could be reused.
- Determine flow rates in floor gutters and whether the flows are adequate to prevent solids accumulation.
- Determine the capacity of each continuous discharge not yet being reused.
- Determine the capacity of each water-containing unit and frequency of emptying.
- Identify all points where water is used, including hose connections. Determine the quantity of water used at each point.
- Identify the major water lines. Determine the quality, quantity, and temperature of water carried by each.

### Evaluate Survey

- Review the information developed during the survey to identify the major water-using operations.
- Review the water re-use practices currently employed.

### Equipment

- Evaluate the feasibility of installing cooling towers.
- Study the potential for screening and disinfecting reclaimed water to increase the number of times it can be re-used.
- Develop plans to improve re-use.
- Adjust pump cooling and flushing water to the minimum required.

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- As equipment wears out, replace with water-saving models.
- Determine whether discharges from any operation can be substituted for fresh water supplied to another operation.
- Divide the spray wash units into two or more sections and establish a counter flow re-use system.
- Establish optimum depth of product on conveyors to maximize wash water efficiency.
- Handle waste materials in a dry state when possible.
- Install high-pressure low-volume nozzles on spray washers.
- Install in-line strainers on all spray headers; inspect nozzles regularly for clogging.
- Replace high-volume hoses with high pressure, low-volume cleaning systems.
- Replace water-intensive units with alternatives, i.e., rubber-disk units for raw product cleaning and peeling; steam for water blanchers; or evaporative coolers for hydrocooling systems.
- Use conveying systems that use water efficiently.
- Use conveyor belts for product transport; preference should be given to "rabbit-ear" or "V" shaped roller supports because these are much easier to clean.
- Use flumes with parabolic cross sections rather than flat-bottom troughs.
- Use fogging nozzles to cool product.
- Use pneumatic conveying systems wherever possible.
- Use reclaimed water for flushing floor gutters.
- Adjust flows from recirculation systems (washers, flumes) by controlling the rate of makeup water:
  - Adjust flows in sprays and other lines to meet the minimum requirements.
  - Close filling line during operation.
  - Equip all hoses with spring loaded shutoff nozzles. Be sure these nozzles are not removed.
  - Install float-controlled valve on the makeup line.
  - Instruct employees to use hoses sparingly and only when necessary.
  - Provide surge tanks for each system to avoid overflow.
- Turn off all flows during shutdowns (unless flows are essential for clean-up). Use solenoid valves to stop the flow of water when production stops. The valves could be activated by tying them to drive motor controls.

### Evaluate Clean-Up Procedures

- Are clean-up procedures being used correctly?
- Are clean-up procedures water use efficient?

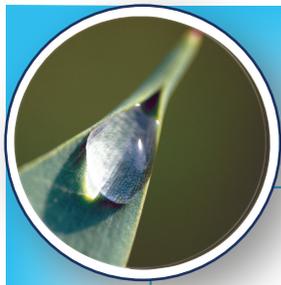
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- Control belt sprays with a timer to allow for the intermittent application for chlorinated water.
- Determine the number and types of units provided.
- Provide an adequate number of receptacles for collecting waste and empty them frequently to prevent odor and insect problems.
- Inventory all cleaning chemicals used in the facility.
- Inventory all cleaning equipment (such as hoses) provided in the plant.
- Sweep and shovel solid materials from the floor. Do not use hoses for this purpose.
- Use more water-efficient equipment where possible.

**Outdoor Maintenance (including landscaping, pools and spas, turf management, and other outdoor water management issues)**

- See the [Tips for Outdoor Maintenance](#) page for more information.