

*Doing your part*

## Water conservation tips for industry

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*Water is essential to our health and to the health of our economy. As a major user of this precious resource, industry has an important responsibility to practise water conservation.*  
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Industries can realize many benefits from the practice of water conservation. By reducing their use of water, industries can protect the environment and gain a competitive edge by reducing their own cost of doing business.

The following tips are necessarily general because industries vary greatly and there can be major differences in the processes used by various companies within a single industry. Industrial and professional associations in your field may have information on water-wise operations. As well, the Ministry of the Environment has publications on saving water and energy for a number of types of industrial operation.

### Set up a water conservation program

Start by naming a coordinator to develop, implement and oversee a water conservation program. This coordinator should:

- raise employee awareness of the importance of water conservation
- stress individual action as an important way to meet common goals
- seek ideas from employees
- record results and reward good employees' contributions

### Survey your plant operations

#### Identify:

- areas in your plant where water is wasted or could be reused
- water lines and the quality, quantity and temperature of water carried by each
- all points where water is used – including hose connections – and the quantity of water used at each point

#### Determine:

- the capacity of each water-containing unit and frequency of emptying
- the capacity of continuous discharge not yet being reused
- flow rates in floor gutters and whether they are sufficient to prevent the accumulation of solids

- use the information you have gained to develop plans to increase water reuse
- study the feasibility of installing cooling towers
- evaluate the potential for screening and disinfecting reclaimed water to increase the number of times it can be reused

### Ways to increase efficiency

- install high-pressure, low-volume nozzles on spray washers
- use fogging nozzles to cool product
- install in-line strainers on all spray headers; inspect nozzles regularly for clogging
- adjust pump cooling and water flushing to the minimum required
- determine whether discharges from any one operation can be substituted for fresh water supplied to another operation
- choose conveying systems that use water efficiently
- handle waste materials in a dry mode if possible
- replace high-volume hoses with high-pressure, low-volume cleaning systems
- replace worn-out equipment with water-saving models
- equip all hoses with spring loaded shutoff nozzles – be sure these nozzles are not removed
- instruct employees to use hoses sparingly and only when necessary
- turn off all flows during shutdowns unless flows are essential for cleanup – use solenoid valves to stop the flow of water when production stops (the valves could be activated by tying them to drive motor controls)
- adjust flow in sprays and other lines to meet minimum requirements

#### Discharges that can potentially be reused:

- final rinses from tank cleaning, keg washers, fermenters
- bottle and can soak and rinse water
- cooler flush water, filter backwash
- pasteurizer and sterilizer water

## Practices where water may be reused:

- first rinses in wash cycles
- can shredder, bottle crusher
- filter backflush
- caustic dilution
- boiler makeup
- refrigeration equipment defrost
- equipment cleaning, floor and gutter wash

## Clean-up procedures

- don't hose down your floors – sweep and shovel instead
- provide enough receptacles to collect solids – empty the receptacles frequently to prevent odour and insect problems
- make an inventory of all cleaning equipment, such as hoses, in your plant – determine how often equipment is used and whether it is water-efficient

## Out-of-doors

- wash your car, truck and bus fleets less often
- don't use water to clean driveways, loading docks, parking areas or sidewalks – consider using sweepers and vacuums
- avoid landscape fertilizing and pruning that stimulates excessive growth
- remove weeds and unhealthy plants that take water away from valued plants
- favour drought-resistant plants
- avoid unnecessary landscaping additions and alterations
- design landscapes that require less water
- install soil moisture overrides or timers on sprinkler systems
- use a timer to ensure that, when possible, watering is done in the early morning or evening
- ensure that irrigation equipment applies water uniformly
- investigate the advantages of installing drip irrigation systems
- mulch around plants to reduce evaporation and discourage weeds
- avoid runoff and make sure sprinklers cover just the lawn or garden, not sidewalks, driveways, or gutters
- do not water on windy days

## Resource Conservation Sector Guides

The following resource conservation guides provide useful tips on saving water:

*Guide to Resource Conservation and Cost Savings Opportunities in the Adhesives, Paints and Coating Sectors Industries*

*Guide to Resource Conservation and Cost Savings Opportunities in the Plastics Reprocessing Sector*

*Guide to Resource Conservation and Cost Savings Opportunities in the Soaps, Detergents and Related Products Sector*

*Guide to Resource Conservation and Cost Savings Opportunities in the Plastics Processing Sector*

*Guide to Resource Conservation and Cost Savings Opportunities in the Municipal Water and Wastewater Sector*

*Guide to Resource Conservation and Cost Savings Opportunities in the Meat & Poultry Sector*

*Guide to Resource Conservation and Cost Savings Opportunities in the Dairy Processing Sector*

*Guide to Resource Conservation and Cost Savings Opportunities in the Food Services Sector*

*Guide to Resource Conservation and Cost Savings Opportunities in the Automotive Parts Manufacturing Sector*

*Guide to Resource Conservation and Cost Savings Opportunities for Office Buildings*

The information in these guides may be obtained by contacting the Environmental Partnerships Branch of the Ministry of the Environment at (416) 327-1455, Fax (416) 314-7930

For more information on water conservation, please contact:

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