

# Appliance and process water use reduction

WE6 | Possible point

## Intent

To minimize potable water use for medical equipment cooling.

To maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

To reduce or eliminate the use of potable water for non-potable process use in building system equipment.

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## Requirements

For ALL medical equipment in the project, demonstrate that potable water use will be minimized for equipment cooling. Potable water usage is ONLY acceptable in emergency backup systems or where local requirements mandate. The following is required:

- No potable water use for once through cooling for ALL medical equipment that rejects heat. (Note: This credit does not apply to potable water for cooling tower makeup or for other evaporative cooling systems. Refer to WE Credit 4: Process Water Use Reduction for more details.)
- Where local requirements mandate limiting the discharge temperature of fluids into the drainage system, a tempering device must be used that runs water only when the equipment discharges hot water. Alternatively, provide a thermal recovery heat exchanger that allows drained discharge water to be cooled below code-required maximum discharge temperatures while simultaneously preheating inlet makeup water or, if the fluid is steam condensate, return it to the boiler.
- An owner may elect to use potable water in an open-loop (once-through) configuration as the emergency back-up cooling system only, not as the primary cooling system. The primary cooling system in these critical applications MUST be a closed-loop system requiring no potable water usage. Such emergency back-up systems shall only be used in the event that the primary, closed-loop cooling equipment has failed, and such a failure is visually and audibly indicated at the point-of-use and alarmed at a continuously monitored location.

To receive this credit, buildings must have the following:

- No refrigeration equipment using once-through cooling with potable water
- No garbage disposals
- All appliances within at least 4 equipment types where water use is at or below the levels shown in the table below. Inclusion of any equipment not listed in the table below must be supported by documentation showing a 20% reduction in water use from a benchmark or industry standard.

Equipment Type	Maximum Water Use (Imperial units)	Maximum Water Use (Metric units)	Other Requirements
Clothes Washers*	7.5 gallons/ft <sup>3</sup> /cycle	12 liters/kg wash load	
Dishwashers with racks	1.0 gallons/rack	4.0 liters/rack	
Ice machines**	lbs/day>175 20 gallons/100lbs	kg/day>80 75 liters/45 kg	No water-cooled machines
	lbs/day<175 30 gallons/100/lbs	lbs/day<175 30 gallons/100/lbs	No water-cooled machines
Food steamers	2 gallons/hour	8 liters/hour	Boilerless steamers only
Prerinse spray valves	1.4 gallons per minute	5.3 liters per minute	

\* Commercial CEE Tier 3a—Residential CEE Tier 1

\*\* CEE Tier 3

- Install only dry vacuum pumps for central vacuum systems and all other systems except for vacuum systems for sterilizing, which may use oil-lubricated liquid ring pumps.
- Do not install venturi vacuum systems for sterilizers. For air compressors, install either air cooling or closed-loop cooling, such as a cooling tower or chilled water system.
- Large frame X-ray processors and/or developers of more than 150 mm (six inches) in length or width shall use film processor water recycling units. Smaller X-ray equipment, such as a dental X-ray film processor, is exempt from this requirement

When a food waste disposer system is used, the following requirements must be met:

- Use cold water. (This is a common code requirement.)
- Equip systems with a load sensing device that regulates the water use to 1 gpm in a no-load situation and 3 to 8 gpm in a full-load situation.
- Automatic time shutoff that shall have a ten-minute time-out system with a push button to reactivate.

When pulpers, extractors, scrap basket or strainer-type systems are used, the following requirements must be met:

- Mechanical pulpers/extractors and mechanical scrapper systems shall use no more than 2 gpm of potable water, excluding end-of-day, wash-down cycles.
- Non-mechanical strainer (scraper) baskets shall not be part of a flowing trough collection system connected to potable water at a rate greater than 2 gpm.
- Automatic time shutoff that shall have a ten-minute time-out system with a push button to reactivate.

To receive this credit, buildings must have:

- No refrigeration equipment using once-through cooling with potable water, AND
- No garbage disposals, AND
- At least 4 process items where water use is at or below the levels shown in the table below. For equipment not addressed by the table, additional equipment performance requirements may be proposed provided documentation supporting at least a 20% reduction over the proposed benchmark or industry standard is submitted.

[INSERT TABLE HERE]