



# Cooling tower water use

Possible 2 points

## Intent

To conserve water used for cooling tower makeup while controlling microbes, corrosion, and scale in the condenser water system.

## Requirements

For cooling towers and evaporative condensers, conduct a one-time potable water analysis, in order to optimize cooling tower cycles. Measure at least the five control parameters listed in Table 1.

**Table 1. Maximum concentrations for parameters in condenser water**

Parameter	Maximum level
Ca (as CaCO <sub>3</sub> )	1000 ppm
Total alkalinity	1000 ppm
SiO <sub>2</sub>	100 ppm
Cl <sup>-</sup>	250 ppm
Conductivity	2000 μS/cm

ppm = parts per million

μS/cm = micro siemens per centimeter

Calculate the number of cooling tower cycles by dividing the maximum allowed concentration level of each parameter by the actual concentration level of each parameter found in the potable makeup water. Limit cooling tower cycles to avoid exceeding maximum values for any of these parameters.

**Table 2. Points for cooling tower cycles**

Cooling tower cycles	Points
Maximum number of cycles achieved without exceeding any filtration levels or affecting operation of condenser water system (up to maximum of 10 cycles)	1
Achieve a minimum 10 cycles by increasing the level of treatment in condenser or make-up water OR Achieve the number of cycles for 1 point and use a minimum 20% recycled nonpotable water	2

### Pilot Alternative Compliance Path available

A pilot alternative compliance path is available for this credit to certain project types without cooling towers. For more information, please visit the [Pilot Credit Library](#)

Pilot ACPs:

[No Cooling Tower - alternative compliance path \(BD+C\)](#)

[No Cooling Tower - alternative compliance path \(O+M\)](#)

[No Cooling Tower - alternative compliance path \(O+M: Data Centers\)](#)