Save Water Three Ways

Increase Cycles of Concentration + Eliminate Discharge to Sewer + Reuse Discharge

Drivers For a New Paradigm For Water Efficiency



Environmental Drivers

Pollution impacts surface water and waterways and decreases potable water supply

Water & Chemical Scarcity

Tightened supply and increased demand raises prices and prolongs delivery of chemicals.

Operating Costs

Operating a cooling system is resource intensive. Water and sewer costs are 25% of total operating budget

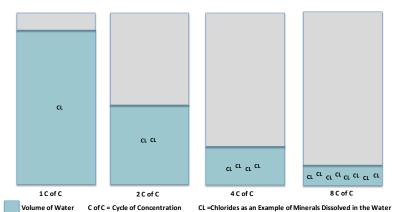


Measuring Water Efficiency: Cycles of Concentration (C of C)

C of C is the term used to indicate the number of times minerals dissolved in a particular volume of water are concentrated. Cooling Towers evaporate water and leave the dissolved minerals behind, in a still-dissolved but more concentrated state. We will use Chlorides (Cl⁻) for our example.

Total Condenser Water in a Cooling System at a Moment in Time

Wave 2.0[™] water treatment allows the tower to cool the same cooling load at 8 C of C, as at 1 C of C, while using <u>significantly less water.</u>



 IntegraClean 2.0[™] Water Treatment achieves higher C of C, which saves water and means less discharge water and lower overall water use.

• Chemical Water Treatment achieves lower C of C, which wastes water (and requires more chemicals to treat) and means more discharge water and greater overall water use.



Cooling Tower Water Treatment Reality* NON-CHEMICAL IntegraClean 2.0TM

MAKE-UP

- 15 Million Gallons of Make-up Water
- 12 Million Gallons Evaporated
- 3 Million Gallons Chemical-Free Discharge
- 3 Million Gallons Saved by Efficiency (C of C)

5 Cycles of Concentration

More than 25% can be conserved NO CHEMICALS avoid rising chemical-delivery cost

Discharge to Ground – No Sewer Fees

Re-use saves additional 3 Million Gallons of water

DANGER

TOXIC CHEMICALS MAKE-UP



- 12 Million Gallons Evaporated
- 6 Million Gallons Discharged to Sewer
- Discharge Laden With Toxic Chemicals

3 Cycles of Concentration

135 Gallons of Chlorine-Oxidizing Biocide

225 Gallons of Corrosion Inhibitor/Scale Preventer Mix

80 Gallons of Non-Oxidizing Biocide

Annual cost savings between these two identical 1000 ton cooling towers, operated at 75% of load, 24/7, and treated as above: \$183,000 without reuse of discharge water. Discharge water used for other potable water uses increases water savings to \$323,000.

VS.



IntegraClean 2.0TM is the only product that guarantees maximum water savings along with reliable, sustainable water treatment.

Contact Griswold Water Systems or visit our website to find your local representation.

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