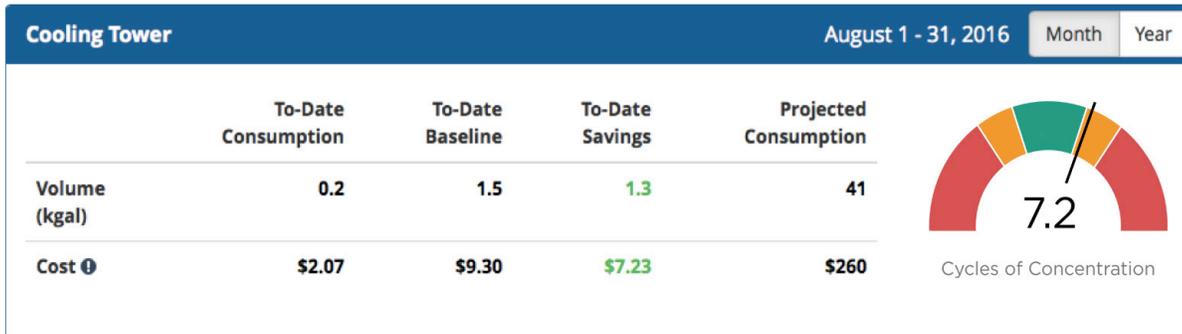


BANYAN WATER'S COOLING TOWER MONITORING



Cooling towers are an important part of the air conditioning system for many large buildings but they use tremendous amounts of water. Banyan Water helps customers to monitor and maximize the efficiency of their cooling towers.

Meter your Cooling Tower - Increased consumption often indicates system issues. Banyan Water's Cooling Tower Monitoring Solution proactively identifies system issues by metering water consumption (makeup - blowdown).

Real-Time Monitoring Means Real Control

- Immediate alerts when your system shows signs of over filling
- Constant tracking of cycles of concentration
- Easy access to performance data

You may already have metering in place and Banyan Water may be able to monitor your system by gathering and analyzing data from those meters.

Avoid Leaks and Over Fill - Cooling towers refill with fresh water when a float valve indicates that the water level is low. When that float valve malfunctions, the system refills constantly. Banyan's cooling tower monitoring solution allows you to catch this quickly.

Maximize Cooling Tower Water Efficiency

Cooling towers are an important part of an efficient commercial AC system, but they use a lot of water. Here are a few ways to minimize your water use.

Maximize the Cycles of Concentration - different systems can tolerate different cycles of concentration. Banyan Water's Cooling Tower Monitoring



Solution monitors your cycles of concentration and notifies you when your cycles of concentration appear to be too low. This helps to optimize your water use.

Evaporative Credits Mean Lower Water Bills

Many water utilities offer cooling tower credits to reduce sewage charges. You shouldn't pay sewage charges for evaporated water. Banyan Water works with you to select approved meters and provide the data that you need to apply for your evaporative credit each month.

NOTE: Every utility is different and may have different requirements for the types of meters that can be used or the way in which they are read for

evaporative credits. Talk to Banyan Water about your utility's policies for evaporative credits.

Summary

Banyan Water's comprehensive Cooling Tower Monitoring Solution helps you achieve your efficiency and operations goals. It provides real-time metering of your system, water consumption, and cycles of concentration, all in an easy-to-access portal. That combined with coordination with your local utility gives you maximum efficiency and lowest operational costs.

[Contact Banyan Water to demo](#) the platform and see the savings that are available.

How Cooling Towers Use Water

Cooling towers are common on commercial properties as part of large air conditioning systems. Cooling towers use evaporation to cool hot liquids generated by the system. Then the recovered liquids are re-circulated through the AC system. This is an effective way to cool fluids for air conditioners and make an AC system more energy efficient. However, there are several ways water is lost through a cooling tower system:

- Evaporation: **Lost** water due to evaporation when water hits hot pipes
- Drift - **Lost** water splashing or being blown out of the system by wind (When you walk by a cooling tower, you will often notice a little mist in the air as a result of drift.)

- Blowdown - After water evaporates out of the system, the remaining water contains increasingly high levels of minerals. Eventually, mineral-heavy water has to be removed via the blowdown line to avoid damage to the system.

Glossary of Cooling Tower Terms, courtesy of the [U.S. Department of Energy](#)

Blowdown - Water discharged to remove high mineral content system water, impurities, and sediment.

Cycles of Concentration - This is an oversimplification, but think of this as the number of times water can be added to the system

before needing to remove water through the blowdown. Higher cycles of concentration means a more efficient system.

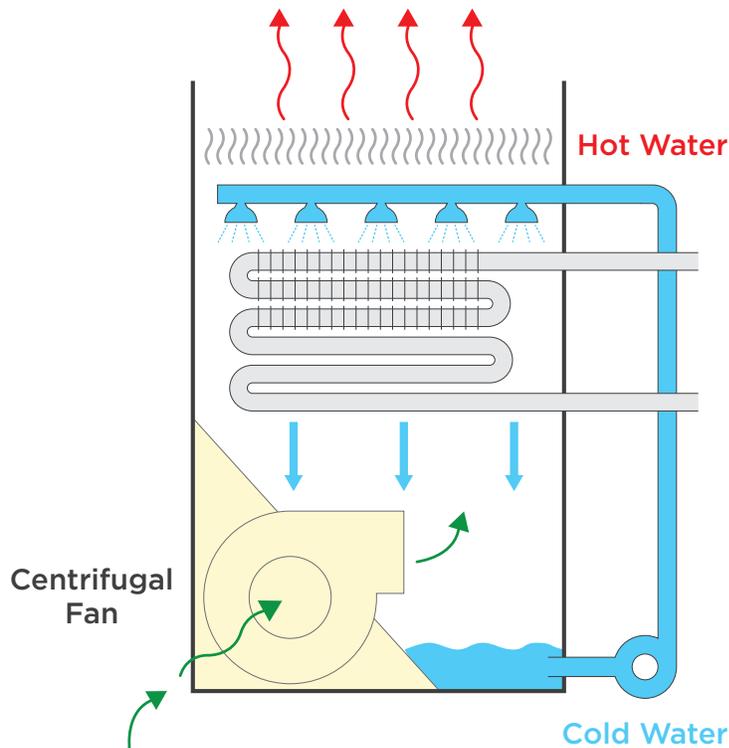
Alternate, technical, and more accurate definition: Technical term used to describe the mass flow relationship between the amount of system feed water and the amount of blowdown sent down the drain. Also referred to as concentration ratio, cycles of concentration correlates to the effective use of water in your system to provide heating or cooling needs. High cycles of concentration

are directly related to low levels of water loss from your system.

Dissolved Solids - The amount of dissolved minerals present in the water.

Drift - Droplets of water entrained in the air leaving the top of the tower, or blown from the side of the tower by crosswinds.

Make-up - Water supply needed to replace all losses due to evaporation, leaks, or discharge in cooling systems.



Closed circuit cooling tower system.

Find more water-related news and information at www.banyanwater.com

