

CASE STUDY:

Boca Raton Regional Hospital



3,300 TON COOLING TOWER WATER TREATMENT

Project:	Boca Raton Regional Hospital
Location:	Boca Raton, FL
Scope of Work:	3-Cell, 3,300 Ton Cooling Tower
EasyWater Equipment:	(3) CTF-150 Cooling Tower Treatment Systems

≈ PROBLEM

Boca Raton Regional Hospital contacted EasyWater in late November 2018 to discuss potential solutions for their on-going struggles with:

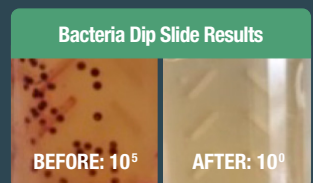
- ▶ Dangerously high Legionella counts
- ▶ Excessive algae, turbidity, and biofilm growth
- ▶ High bacteria counts
- ▶ Costly chemical treatment and semi-annual system shutdowns for pressure washing and heavy chemical dosing

Their cooling towers have no inlet louvers, allowing sunlight to compound the algae and biofilm problems due to photosynthesis. Additionally, HVAC condensate is used for a portion of the makeup water, potentially introducing additional bacteria.

Previously, the hospital had been using sand filters on each of the three cells, but the results were unacceptable. Bacteria counts as high as 100,000 (10⁵) CFU/ML were being recorded. Legionella was of particular concern—something they had been battling for more than four years.

Legionella counts above 100 require action. Counts above 1,000 require immediate shutdown and cleaning per the facility’s water safety plan. Boca Raton Regional Hospital’s monthly Legionella counts were as high as 1,790—the count immediately before installation of EasyWater equipment.

“After only 12 days the bacteria dip slides test went from 10⁵ down to 10⁰!”



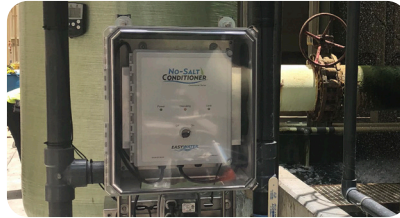
Boca Raton Regional Hospital



≈ SOLUTION

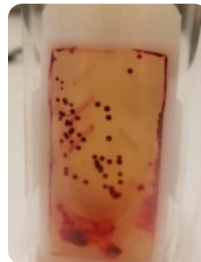
In March 2019, EasyWater received a purchase order for (3) CTF-150 Systems, a unique, three-part solution for cooling tower filtration and treatment:

- ▶ SedimentShield—a sub-micron, backwashing filter with a propriety media for the removal of sediment and bacteria
- ▶ Ultraviolet chamber for bacterial sanitization
- ▶ No-Salt Conditioners to prevent and remove hard water scale deposits, biofilm, and bacteria. Our No-Salt Conditioners have the added benefit of preventing the hot UV lamps from scaling.



≈ RESULTS

EasyWater's three CTF Systems went on-line June 6, 2019. The bacterial dip slides shown to the right show the results just before the CTF Systems were installed was 10^5 and less than two weeks later was 10^0 . Not only did overall bacterial counts dramatically drop, the Legionella counts dropped from 1,790 to non-detectable levels. As of September 25, 2019, the Legionella counts were still at non-detectable levels.



BEFORE - Bacterial dip slides results before the CTF Systems were installed was 10^5



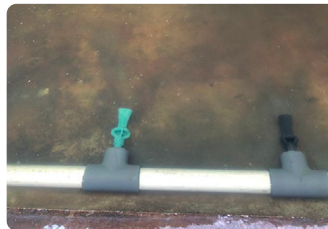
AFTER - 12 days later the bacterial count was down to 10^0



BEFORE EasyWater Treatment
– Excessive algae present and the water is turbid



AFTER EasyWater Treatment
– No algae present and the water is clear



BEFORE EasyWater Treatment
– Water is turbid



AFTER EasyWater Treatment
– Water is clear