



The Plaza Resort & Spa Goes Green with FlowMark

September 2015

In effort to save water and reduce their environmental footprint, the Plaza Resort & Spa in Daytona Beach, Fl. has changed the way they treat their cooling tower water.

Waterhouse Corporation of Deltona, Fl. was contracted to replace the existing chemical water treatment program on 5 cooling towers with chemical free systems manufactured by Flow-Mark Water Treatment of Daytona Beach, Fl.

The FlowMark Pulsed Power Systems allow the cooling towers to operate at higher cycles of concentration which saves an enormous amount of water that was previously being wasted.

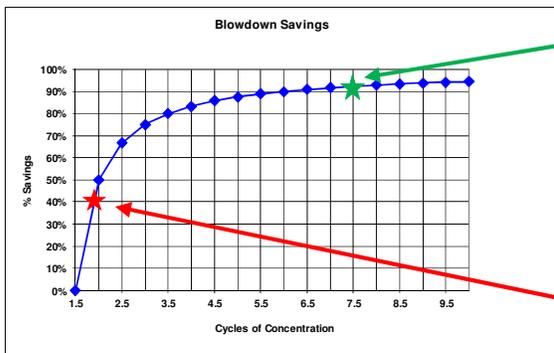
FlowMark's Advanced Oxidation Process provides the biological control, killing bacteria including Legionella, viruses, fungi and mold. The cooling tower water is now crystal clear and safe.





Flow-Mark Pulsed Power Systems generate complex modulating energy pulses that are applied to the cooling tower water via Web Induction Pads strapped to the outside of existing cooling tower piping. Pulsed Power forces calcium to precipitate in solution instead of scaling equipment. A portion of the calcium is removed allowing higher cycles of concentration which saves water. The system operates on less than 40 watts of electricity.

The Flow-Mark AOP system uses a special UV light to transform ambient oxygen into a powerful disinfecting gas. The gas is injected into the cooling tower water creating a measurable disinfection residual of Hydrogen Peroxide throughout the condenser water system. FlowMark provides continuous disinfection without the need for conventional chemicals. The system draws 30 watts of power.



New Cycles of Concentration

Previous Cycles of Concentration

Cooling Tower Water Consumption often goes unnoticed but actually accounts for a large portion of a resort water bill. Flow-Mark has allowed cycles to increase from 1.5 to 7.5 cycles. Water efficiency with regards to blowdown has increased from 40% to 93%. With water cost currently at \$12 per 1,000 gallons this improvement will add up to a substantial utility savings.

The water sample on the left was drawn prior to the FlowMark installation. Testing indicated the bacteria count to be much higher than acceptable by industry standards.



> 100,000 CFU/ml



The water sample right was drawn after 3 days of Flow-Mark treatment without draining the yellow water or cleaning the cooling tower. Bacteria testing indicated less than 100 CFU/ml, which is considered excellent by industry standards



< 100 CFU/ml

Plaza Chief Engineer Statements:

The towers are running great! The water is clear and our A/C systems seem to be running much better.

Your system has been the best thing that has happened for our towers.