



Municipal Pool Solves Water Chemistry Issues, Achieves Clarity!

Background

When parents of young swimmers look out over the city's municipal pool, Rick Kramer knows they want to see clear, sparkling water. Maintaining clean pool water at all times is important for Kramer, who serves as Parks & Recreation Director for New Hampton, Iowa. When water chemistry is not properly balanced it can cause numerous problems to pool facilities. Since this is a top priority for Kramer, he was concerned when chlorine levels in the municipal pool began to fluctuate and decrease over consecutive pool seasons.

Challenge

Challenge "After years of not having any problems maintaining balanced water chemistry, we started having difficulties in 2015," Kramer says. "We always used liquid chlorine (sodium hypochlorite/commercial bleach) but for the final two years it was used we had a very hard time maintaining steady chlorine ppm. We always met our required chlorine levels in our pool but had to make continuous adjustments and our water during that time was often very cloudy."

Although the exact reason for the problem was not precisely determined, symptoms pointed to degrading sodium hypochlorite. Commercial bleach can lose much of its strength over time. In addition, liquid chlorine bleach contains sodium hydroxide (caustic soda), which is added by manufacturers to help stabilize the solution. High sodium hydroxide levels in pool water can produce high total dissolved solids (TDS) levels, which can adversely affect water clarity, feel and balance. In New Hampton the bleach was breaking down over time, losing its strength and adding high levels of TDS to the pool water.

Solution

New Hampton had been planning to refurbish and update its 480,000-gallon (1,816,998 liters) pool, which was scheduled for completion in 2018. The new plan would also include adding a 20' x 60' (609.6 cm x 1828.8 cm) splash pad and a 10,000-gallon (37,854 liters) plunge pool and slide. Kramer determined it would be an opportune time for the Parks & Rec Department to also change the way the pool water was chlorinated.



Kramer spoke with a number of chlorination specialists to determine the best alternative to the municipal pool's current liquid chlorine system. After thorough review, the City of New Hampton elected to switch to the **Pulsar®** 500 Chlorinating System for their newly refurbished pool and new splash pad.

For the site's new plunge pool, they installed a Pulsar® Infinity Feeder System. It was determined that separating the pool and new splash pad's chlorine feed from the much smaller plunge pool's chlorine feed would provide optimum water chemistry for all three water features.

The facility decided it was best to switch completely away from liquid chlorine. These systems use dry calcium hypochlorite briquettes and tablets which provide a solution for water disinfection without all the difficulties and mess when compared to liquid bleach. The **Pulsar®** systems work by preparing and automatically delivering a consistently accurate dose of available chlorine (AvCl) to New Hampton's pool, splash pad and plunge pool at all times so little to no adjustments are required.

Kramer says that during those times when the main pool was experiencing problems maintaining balanced water chemistry, Cryptosporidium control was never far from his mind. To further ensure against Crypto, a filtration enhancement, the **Pulsar CRS™** System was also installed. The technology has been proven to provide 99% Crypto removal rate in a single pass.

In late May 2018, the renovated New Hampton municipal pool reopened to the public and residents now enjoy the pool and new water features!

Outstanding and Consistent Results

"I'm very happy with both feeder systems. This was the first year using the **Pulsar®** Systems, so it was somewhat of a learning experience for us," Kramer says, "but we now know the systems and everything works quite well. Our **Pulsar®** units have had no problem keeping up with demand. Our water chemistry now stays balanced, plus we have noticed a 100% turnaround in our water clarity - and that's pretty awesome."



The pool staff typically refills the Pulsar® 500 chlorinator's hopper with new briquettes once every three days, and sometimes every other day during a busy week in the summer but the feed systems require very little attention. Kramer says, "we're no longer constantly adjusting our feed rate to maintain adequate chlorination levels in our pool."

"In addition to providing consistently balanced pool water chemistry and clear, sparkling water, New Hampton's new **Pulsar®** Systems provide a number of other advantages. The pool facility's original 350-gallon (1325 liters) bulk sodium hypochlorite storage tank and feed system has been replaced with systems requiring a significantly smaller footprint, freeing up valuable space. The **Pulsar®** dry calcium hypochlorite briquettes and tablets provide a longer storage shelf life than bleach, thereby avoiding the rapid and wasteful degradation of chemical strength that can severely impede chlorination consistency and cloud the water, a common problem with bleach use.

Peace of Mind

A major upgrade to the New Hampton municipal pool has brought new, exciting amenities – a splash pad, slide and plunge pool. While swimmers there are having fun, the city has taken important steps to ensure optimum water chemistry is protecting them! Kramer says "with the switch from liquid chlorine to calcium hypochlorite we're finally running clearer pool water. For us, the peace of mind it brings is worth it."



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