

SOLUTIONS



The city of Lynnwood, WA had a new, multiple featured swimming complex for their citizens to enjoy. Though the features enjoyed by users of the pool exceeded expectations, the pool maintenance crew was having issues keeping the pool at required chlorine levels.

Getting a Hold on pH and Chlorine Level Control

In 2011, the award winning Lynnwood Recreation Center had just completed a \$17 million expansion and renovation. A major feature of the Recreation Center is a leisure pool with slide and spray features, a Lazy River, a wellness pool and enclosed competitive pool. Maintaining clean, safe pool water for the one thousand plus daily pool visitors is a top priority for Bill Haugen, Recreation Manager Aquatics at the City of Lynnwood.

Keeping Water Clean and In-Spec

Crystal-clear, sparkling water is the vision expected at a swimming pool, but what is more important and what you can't see is the absence of

dangerous microbes. The control and elimination of pathogen growth in the pool requires keeping a pH balance and a prescribed level of chlorine. Local Department of Health officials depend on that chlorine level to certify the pool as safe or not. When the new purification system was set up with the new renovations, Bill noticed that the probe based ORP control system lacked the accuracy to fine tune the chemical injection system that used gas chlorine to raise the chlorine levels and soda ash to modify the pH. "Overshooting" became an issue and the system would sometimes have excessive chlorine and pH levels requiring more soda ash and frequent manual checks to assure proper chlorine level. This automated

system had 3 issues that were a thorn in Bill's side –

- 1)** Because of the swings in pH level, the automated water quality system was using more than 6 pounds of gas chlorine per day.
- 2)** Personnel costs needed to be assigned to the system for time spent manually checking pH/chlorine levels.
- 3)** The ORP probes did not directly measure ppm chlorine, the measured value health officials needed to certify the pool.



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Searching for a Better Way

It was early 2014 and Bill had enough with the manpower and chemical wasting chlorinating system in place.

He had heard about chemical dosing equipment made especially for municipal pools and reached out to ProMinent Fluid Controls to investigate the feasibility of upgrading the Lynwood system. After reviewing the Lynwood Pools specific requirements, ProMinent proposed replacing the pH/chlorine control system with a DCM 5 Series controller monitoring and controlling water chemistry parameters and processes. The DCM 5 Series precision, flexibility and uncompromising quality represent a world-class solution to ensure a safe and healthy water experience for the recreation center patrons. What's more, the system measures chlorine ppm directly and provides wireless connection for data gathering and remote display and operation.

Tighter Control with Fewer Staff Interactions

In typical operation of a DCM 5, a sample is drawn from the circulation flow where it interacts with probes that read ORP, pH, and ppm chlorine. Chlorine readings from the probe are compared to a set point and if the level drops below the setpoint, chlorine is injected into the system. This real time control system helps minimize the amount of chemicals added, reducing waste. For rare larger excursions from the setpoint, an alarm notifies Haugen and his crew of an emergency that may

indicate equipment failure. An additional feature of the DCM 5 Series controller is built in data logging, graphing, and report generation software. Wi-Fi connectivity enables remote review of system activity and performance that can be viewed from another room, the other side of town or the other side of the country at ProMinent's headquarters to assist in any troubleshooting or operational upgrades and training.

Payoff in Just 5 Years

The number one benefit of the City of Lynnwood upgrading the system is the peace of mind that the new system, less susceptible to human error, provides children and adults using the pool top notch quality water. The estimated 5-year payback generated by reduced chemical use (\$6,000/yr) and fewer man-hours tied up with system monitoring (\$30,000/yr) made city council approval easy. An added bonus is that Bill can provide direct ppm chlorine readings to Department of Health officials when requested.

Bill Haugen could not be happier with the new water quality system. In September, 2014, just a few months after installation he wrote ProMinent: "Using free chlorine probe as our primary sensor for sanitation and oxidation, instead of ORP, has proven to be more accurate and reliable indication of our water conditions. When we were using ORP only, we could never be sure what our chlorine levels were at any given time. This lead us to do numerous calibrations every day and never really knowing what the health



inspector would find when they would stop by. Yesterday, we had an inspection and our health department was very impressed how close their readings were to the readings on the controllers."

"The ease and ability of the system to be read on our desktops and email any alarms is very user friendly. Although we have not received very many alarms, as our pools are now well balanced. The user friendly structure and training of the software has put my entire staff at ease and instilled confidence about daily operations.

Overall, we could not be happier (and) I would recommend these controllers to any fellow aquatic professional."

A brochure highlighting specifications and features of the DCM 5 Series Controller can be downloaded in pdf format here - http://prominent.us/promx/files/aquatics_market/DCM_5_LR.pdf

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