

San Jose Water Company Optimizes Distribution Water Quality and Reduces Operator Intervention with Innovative and Economical Chemlocker® Water Quality Management System

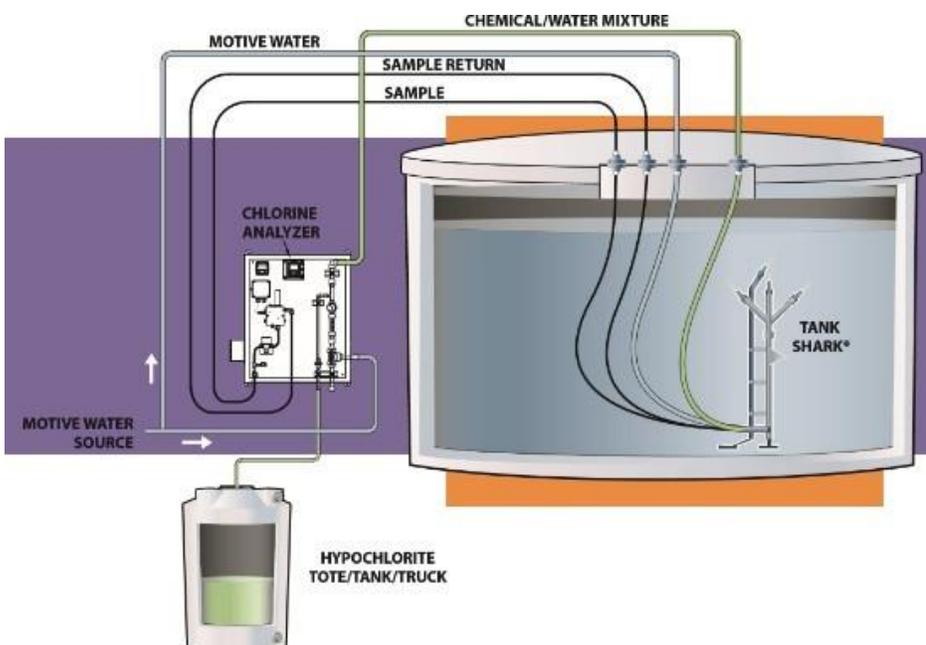
The San Jose Water Company (SJWC) of northern California provides drinking water for over one million people in the greater San Jose region. As evidenced by their active participation in AWWA's Partnership for Safe Water, SJWC is on the leading edge of distribution system water quality improvement.



SJWC recognized that regardless of the excellent water quality generated by treatment plants or wholesale partners, a substantial amount of water quality degradation occurred in the distribution system itself. Furthermore, an ideal point for intervention is the water storage tanks themselves. After an extensive study of their distribution network, SJWC embarked on a plan to strategically boost residual levels in various tanks that their study showed could positively influence residual levels in problematic distribution zones. Some very influential tanks would receive fully automated residual management systems such as UGSI's Monoclor® system which can dynamically manage chloramine residuals by adding and mixing the right amount of chlorine and ammonia based on the tank's position on the break-point curve.

However, other tanks would only need continuous monitoring and periodic chlorine boosting to remedy an intermittent low residual. SJWC and UGSI worked together to create a solution that would provide continuous mixing, remote residual monitoring, and the ability to boost chloramine quickly and safely; the result of this collaboration was the Chemlocker® tank boosting system.

The Chemlocker® system consists of a Tank Shark® reservoir mixing system coupled with a chemical-feed cabinet and residual analyzer. The Chemlocker® utilizes an eductor delivery system to introduce the hypochlorite and/or ammonia to the Tank Shark™ mixer where the reagents are dispersed into a high energy mixing zone. The Tank Shark™ platform



also serves to support the sampling of internal reservoir water for analysis by the integral residual analyzer. Additionally, all relevant data is made available for monitoring by plant SCADA.

The Chemlocker® is built with the ability to quickly connect to a Monoclor® chloramine residual trailer for a more sustained boosting campaign that can be seasonal or periodic to deal with a slug of aged water. From an operations



Red Hill Tank 1 with Chemlocker® installation at San Jose Water Company

standpoint, tank boosting with a Chemlocker® system is safer with no ladder climbing or constant residual testing.

With direction from SJWC, UGSI provided a complete design set and turn-key installation for Chemlocker® systems at Red Hill Tanks 1, 2. Many more tanks are planned as SJWC implements their overall distribution water quality plan over the next four years. The combination of the Chemlocker® boosting system and the automated Monoclor® residual control system provides a utility with a set of tools to holistically manage their distribution system water quality safely, effectively and economically.



San Jose Water Company water quality managers inspect a Chemlocker® cabinet at UGSI's Campbell, CA facility