

## Crystal Clear Water Supply Corporation

### Project Completed by Central Texas Water Maintenance

Serving an area from eastern San Marcos to northwest Seguin, Crystal Clear Water Supply Corporation (CCWSC) recently commissioned their integrator, Central Texas Water Maintenance (CTWM) to replace their Wonderware and WIN-911 systems with VTScada software from Trihedral.

CCWSC is a public water system in South Central Texas that serves approximately 15,000 residents and 4,500 retail connections over 165 square miles in portions of Comal, Guadalupe and Hays Counties. Communities served include Hunter, Kingsbury, Redwood and Zorn as well as portions of the extra territorial jurisdictions of the Cities of New Braunfels, San Marcos, Seguin and Staples. The current system capacity is 2.5 Million Gallons per Day (MGD). The storage capacity is 4.118 Million Gallons (MG) Ground and 1.15 MG Elevated.

Mike Fornier, Administrator at CCWSC describes some of the issues with the old system, “The Graphical User Interface we were using was Wonderware and, to be honest, it was very cumbersome. None of the operators really knew how to use it and surely none of them could program anything on it. There were a few trending displays that were programmed from the beginning and every time we wanted to add a trend we would have to call our [previous] integrator and pay him for that. The polling of our remote sites was very slow because we needed to go through a data concentrator and then to the sites to retrieve data. Every time we needed assistance with it we would call [Wonderware’s] tech support and they were not very friendly or helpful. If we didn’t know the proper way to ask the question they wouldn’t help us.”

“We really wanted to be able to display trends in a format that was easy to decipher and save without having to go into the software’s development package to build a new trend. Adding alarms was also a real pain. I’m not sure if the old system allowed you to add notes to the screen. If it did, nobody knew how.”

“The cost of Wonderware’s licensing, upgrading and support was too high for our budget especially considering the unfriendly attitude of their support. Ultimately, we were able to add a redundant system, that we did not have before, because of the savings that we incurred by switching to VTScada. Our [new] integrator, CTWM, was able to demonstrate a live version of the software and show us the ease-of-use features. Also, the graphics were much better.”

“Monitoring both our radio systems and making them redundant across the network was easy to configure using the VTScada MUX Driver. Our old system used a data concentrator to poll radios. Polling both systems would have required more equipment and more cost.”

Fornier describes some surprise benefits: “We added a secondary radio network to communicate with the sites at the same time as the Freewave radios. Configuring the MUX driver to poll both radio networks simultaneously and automatically switch from one to the other was relatively easy with help from VTScada tech support.



Communications Overview

That would have been a lot more difficult with our [previous] software or even impossible without more equipment. Thanks to the proficiency and security features of VTScada we now have more of our operators using the system than before.”

“We are very pleased with VTScada software and the service we received. The tech support team at Trihedral has been more than helpful. They don't make you feel uncomfortable about your experience when it comes to programming like other companies have. Doug and Jennifer have been a great help as have the other on call people that have helped me after hours.”



Screen Shot of Staples Overview

David McDaniel, SCADA Technician with CTWM explains, “The final system now has a redundant system with primary and secondary computers with two radio networks talking to 16 remote locations, 5 elevated towers and 11 remote ground storage tanks with booster pumps for distribution that monitor levels, pressures and status of all devices as well as control pumps, motors and valves.”

“The system uses a combination of Allen Bradley 1763 1100 PLCs and Foxboro PAC T2550 PLCs which has a proprietary communication language that converts to Modbus inside the PLC. There is a data concentrator that we have almost completely bypassed and we are now getting almost all our data by directly polling the PLC. As a result, the response time is much faster and the screens are easier to access. That has resulted in an efficiency boost.”

Installation started in April, 2014 and was completed in May, 2014.

Owner Ben Gray adds, “They use a company for historical data, H2O Analytics, which goes through SQL and VTScada serves up the data, and it is perfect because VTScada has its own drivers built in. No way in the world you would ever be able to do anything like this with Wonderware. You can't call them and ask their engineers for any help like you can with VTScada.”

Future plans include more operator training through VTScada Training Courses. Over the next five years, the system is projected to double in size and include more users via VTScada Thin Clients.

**About Central Texas Water Maintenance:** With over 30 years of systems expertise and solid industry experience, CTWM stands ready to provide fast, friendly and dependable service. CTWM is proud to be a high-tech SCADA solutions specialist, providing technical SCADA automation and integration services for the water and wastewater industries. CTWM has completed over 15 VTScada applications. Owner, Ben Gray, says “The power you have with VTScada, whether you are using Ethernet, Serial or whatever, it is no problem with VTScada. VTScada is just so flexible, works with so many manufacturers that it is no problem using it on any project”

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