Customer Background

Sweetwater Authority provides water treatment and distribution to 200,000 people in a service area that covers 32 square miles near San Diego, California. It is a publicly owned water agency governed by an elected Board of Directors. Since 1977 Sweetwater Authority has provided its customers their water services and, over that period of time, has sourced water from three primary sources: freshwater ground wells, the Sweetwater and Loveland Reservoirs, and San Diego Formation wells which provide brackish groundwater. Enterprise Automation has provided automation and integration services for Sweetwater Authority since 2005.

EA Solutions

Through consecutive professional service agreements beginning in 2005, this partnership has created one of the most standardized and robust automation platforms in the industry. Sweetwater Authority is setting the standard for water control system design and management.

Prior to EA's engagement, the Authority had no formal system to plan, validate or track modifications to their SCADA system. This organizational oversight led to major reliability concerns including a severe alarm condition that did not trigger an alarm in SCADA, yet posed a major public health risk.

EA was initially tasked with addressing several specific needs like SCADA alarming and data validation, but quickly progressed to comprehensive controls system design, long-term automation consulting, and development of a standards portfolio for the Authority.

The current standards portfolio includes capital project system I&C design standards and review, control panel design, SCADA equipment and components, networking, IT policy, virtualization, PLC code, HMI graphics, process control methodology, data storage, MES, water quality reporting, and operator training standards. EA maintains all of these resources in the Authority's source control system and supports the Authority in enforcing their standards in new capital improvement projects and interim system changes.

Key Insights

- SCADA Evolution
- Full distribution RTU replacement
- Master/Annual Planning
- Annual Support Contract

Key Technologies:

- Citect SCADA
- AVEVA Historian
- AVEVA Ampla
- Modicon PLCs (M340, M580)
- Magelis OIT
- MDS Radios
- Cisco Networking Equipment
- MOXA Industrial Firewalls

Project Metrics:

- EA's Services Value: $11M
- Contract Period: 2005 – Present