



**ENTERPRISE
AUTOMATION**
A TETRA TECH COMPANY

PROJECT PROFILE

Master services agreement *Sweetwater Authority*

Client 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. 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.

Project background

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.

EA solution

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 standards portfolio included 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 maintained these resources in the Authority's source control system and supported the Authority in enforcing their standards through new capital improvement projects and interim system changes. EA updated the Authority's plant master PLC program using Unity Pro programming. The Modicon PLC communicated with all the distributed processes through a fiber network. Updates also included operations graphics (CitectSCADA), Historian, and water operations reports. EA's standard turnover package included operator training manual, O&M manuals, and a complete suite of as-built documentation for all automation components.

Project Manager



**Matt
Avila**

Project Technical Lead



**Ben
Seidl**

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