



**ENTERPRISE
AUTOMATION**
A TETRA TECH COMPANY

PROJECT PROFILE

Potable water distribution system

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. It is a publicly owned water agency governed by an elected Board of Directors. Since 1977 Sweetwater Authority has provided water services from three primary sources: freshwater ground wells, Sweetwater reservoir, and the San Diego Formation wells which provide brackish groundwater. Enterprise Automation has provided automation and integration services for Sweetwater Authority since 2005.

Project background

Sweetwater has a system of nearly 30 tank, booster, and hydropneumatic sites to distribute potable water to its customers. Tanks are grouped into zones based on their elevation. Water from their three treatment plants enters the main gravity zone where it is then pumped to higher zones by the boosters. The sites communicate to the SCADA system and to each other through microwave and Ethernet radios. There are several “submaster” sites on the microwave radio ring which then communicate to the “remote” sites over Ethernet radios. SWA also has several other remote sites related to raw water sources and wastewater monitoring.

EA solution

EA supported a phased approach to upgrading various aspects of the SWA distribution system and remote sites. This included designing and replacing electrical panels, replacing the HMI, upgrading the communication, and replacing obsolete PLCs at over 40 locations. During these improvements, EA implemented PLC code and HMI graphic standards across all sites and brought needed functionality from other plants to the distribution system.

Project Manager



**Matt
Avila**

Project Technical Lead



**Ben
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Key Insights:

- Obsolete PLC replacement and standardization

Key Technologies:

- Citect SCADA
- Modicon PLCs