



**ENTERPRISE
AUTOMATION**
A TETRA TECH COMPANY

PROJECT PROFILE

Groundwater desalination facility

Sweetwater Authority

Client background

Sweetwater Authority operates a 32-square-mile water system near San Diego, California, delivering treatment and distribution services to 200,000 residents. As a publicly owned agency governed by an elected Board of Directors, it has drawn its water since 1977 from three primary sources: fresh groundwater wells, the Sweetwater Reservoir, and brackish wells tapping the San Diego Formation. Since 2005, Enterprise Automation has supported Sweetwater Authority with comprehensive automation and system-integration services.

Project background

In 1999, Sweetwater Authority commissioned the Richard A. Reynolds Groundwater Desalination Facility to treat 4 MGD of brackish water. A subsequent upgrade doubled capacity to 10 MGD, and over the past decade the Authority pursued a further expansion to bolster its water portfolio. During the design phase, Enterprise Automation collaborated with Authority engineers to define and architect the facility's control systems. Sweetwater Authority completed the expansion and brought the plant online in late 2017.

EA solution

Enterprise Automation designed the entire control-system architecture and delivered turnkey panel solutions. EA manufactured and installed five local well control panels throughout the city, five plant panels for the new equipment, and 21 VFD panels to automate chemical-dosing pumps.

Engineers also conducted detailed site surveys, updated documentation for every existing panel, and partnered with the Authority and their design consultants to fully document the revised control strategy. Engineers programmed and rigorously tested all operational logic in-house, validated performance with Sweetwater Authority, and then deployed the solution on site.

Project Manager



**Matt
Avila**

Project Technical Lead



**Ben
Seidl**

Key Insights:

- Programmed 1000+ IO points
- Automated wells, RO system, chemical dosing, and FeMn removal
- Full documented design through programming, startup and training

Key Technologies:

- Modicon Quantum and M340 PLCs
- CitectSCADA HMI
- Vijeo Historian
- Moxa Ethernet switches and firewalls