



**ENTERPRISE  
AUTOMATION**  
A TETRA TECH COMPANY

## PROJECT PROFILE

### Programming master services agreement

*City of Santa Ana*

#### Client background

The City of Santa Ana sits in the heart of Orange County, California, and covers about 27 square miles. The City supplies potable water to roughly 334,000 residents and businesses. Its water production system includes 22 wells, 4 pressure control stations, 7 Metropolitan Water District connections, 7 pumping stations, and 8 reservoirs. The City also operates and maintains 4 sewer lift stations. The City coordinates control and monitoring of its water and sewer facilities through a centralized SCADA control room that receives telemetry from remote sites via radio.

#### Project background

The City contracted EA in May 2016 to support a full mechanical and electrical rehabilitation of one of its most critical pumping stations. EA's original scope required documenting the site's existing control system, designing the new site control system, developing programming and configuration standards, and preparing test documentation.

#### EA solution

When the original programmer could not complete the work, the City engaged EA to execute the PLC, OIT, and network designs produced during the design phase. EA implemented those designs, assisted the City SCADA programmer in configuring new screens in the Dynac central SCADA system, developed PLC and OIT programs to meet City specifications and standards, deployed configurations on site, and led startup and commissioning activities to verify proper operation.

#### Project Manager



**Matt  
Avila**

#### Project Technical Lead



**Kyle  
Pickrell**

#### Key Insights:

- Full SCADA and PLC upgrade
- SCADA Standards implementation
- Conversion from single point of failure PLC to distributed and segregated controls

#### Key Technologies:

- Unity Pro
- Modicon M340
- Magelis OIT
- Hirschmann network switches
- GE Ethernet radios