



**ENTERPRISE  
AUTOMATION**  
A TETRA TECH COMPANY

## PROJECT PROFILE

### SCADA architecture design

### *Water Replenishment District of Southern California*

#### Client background

The Water Replenishment District of Southern California (WRD) is the largest groundwater agency in California, managing and protecting groundwater resources for 4 million residents in the US's most populated county. WRD owns and operates several assets including a 5MGD capacity desalter, an 8MGD advanced water treatment facility (AWTF), and was in the process of constructing a second AWTF with expansion capacity of up to 29.6MGD.

#### Project background

Upon being awarded a multi-year Professional Services Agreement to be the District's on-call systems integrator and automation consultant, EA's first task was to develop a SCADA architecture design that would allow centralized monitoring and control of their five separate facilities. Each facility ran its own Wonderware InTouch or App Server platform.

The facilities were spread across approximately 350 square miles and, although owned by WRD, each was operated by a separate entity.

#### EA solution

EA's developed the new architecture focused on meeting four key goals: leveraging Wonderware's full capabilities, importing the existing sites quickly, providing a platform that would be easy to maintain while each site was remediated, and incorporating the District's SCADA standards across all their assets.

The team developed a single galaxy and tiered historian Wonderware AppServer platform which resided on redundant servers at WRD's headquarters. The solution leveraged existing network infrastructure and implemented the District's standardized SCADA template without requiring full reprogramming of the sites.

#### Project Manager



**Josh  
Riley**

#### Project Technical Lead



**Alex  
Coker**

#### Key Insights:

- Standardized SCADA across all assets
- Avoided fully reprogramming all sites

#### Key Technologies:

- Allen Bradley PLCs
- Wonderware System Platform
- InTouch HMI
- Wonderware Historian
- VMWare virtualization