



**ENTERPRISE
AUTOMATION**
A TETRA TECH COMPANY

PROJECT PROFILE

Central operation center

Water Replenishment District of Southern California

Client background

The Water Replenishment District (WRD) of Southern California 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 5 MGD capacity desalter, an 8 MGD advanced water treatment facility, and a second advanced water treatment facility with expansion capacity up to 29.6 MGD.

Project background

Prior to contracting EA, each of WRD's five facilities had their own Wonderware SCADA system. The desalter and two turnout facilities used System Platform while the existing advanced water treatment facility used InTouch. These isolated systems could not be managed, viewed, or operated from their main headquarters in Lakewood, CA. As part of a five-year professional services agreement with WRD, one of EA's first projects was to integrate each of these separate systems into a single, centralized Wonderware application.

EA solution

EA developed a new SCADA architecture including network and server infrastructure design. This new system would be capable of handling the existing systems in a single Wonderware Galaxy and expandable to accommodate planning for the new advanced water treatment facility.

At each site, EA deployed two Dell PowerEdge R730 servers running VMware ESXi to host more than 70 virtual machines which managed everything from domain controllers to Windows updates. Engineers also implemented a centralized Wonderware Galaxy Repository and integrated each site into that single repository. The project's biggest challenge was ensuring every application adhered to WRD's SCADA standards and delivered a consistent look and feel, despite being developed by different integrators with various practices for standardization.

Project Manager



**Josh
Riley**

Project Technical Lead



**Alex
Coker**

Key Insights:

- Designed a unified SCADA network and server infrastructure.
- Enabled remote monitoring and control from headquarters.

Key Technologies:

- Wonderware System Platform
- Modicon M340 & M580 PLCs
- Wonderware Historian
- VMWare