



PROJECT PROFILE

SCADA Architecture Design

Encina Wastewater Authority

Client background

The Encina Wastewater Authority (EWA) is a public agency located in Carlsbad, California. EWA provides wastewater treatment services to more than 400,000 residents in northwestern San Diego County. EWA's facilities and services protect the local ocean environment, preserve public health, and provide recycled water resources for the region. Enterprise Automation has provided sole-sourced automation and integration services to EWA since 2017 as part of a five-year professional services agreement.

Project background

Following the SCADA evaluation and selection project, where EA helped the Authority select their new SCADA platform, the next step was to develop new SCADA architecture and implementation plan to replace four aging HMI platforms and 45+ PLCs.

EA solution

The new architecture needed to accommodate a phased upgrade program which could last up to a decade and run concurrently with the existing RSView and FactoryTalk View HMIs.

EA developed a new Schneider Electric EcoStruxure Hybrid DCS system that maximized redundancy through virtualized infrastructure, redundant SCADA, Historian, and IO servers, and a plant-wide fiber ring.

The plant was divided into four key process groups, each of which would be controlled by a redundant pair of M580 PLCs via X80 remote I/O. The network design maximized security and optimized bandwidth by using seven separate LANs to segregate PLC, IO, SCADA, and business data.

Project Manager



**Matt
Avila**

Project Technical Lead



**Alex
Coker**

Key Insights:

- Four redundant PLC pairs
- Virtualized HMI platform
- Redundant fiber ring

Key Technologies:

- Ecostruxure Hybrid DCS
- Citect SCADA
- Modicon M580
- TopView alarm notification
- SSRS Reporting
- Wonderware Historian