

Sarasota County, FL SCADA System

Client: Sarasota County Utilities Department

Location: Sarasota, FL



System Features

- DYNAC® Software
- 64-Bit RISC Servers
- High Bandwidth Ethernet
- 900 MHz Radio
- 1200 DYNAC® Points
- Frame Relay
- PLCs

DYNAC®

Sarasota County Utilities Department provides water and wastewater services to 51,000 retail water and 35,000 retail wastewater customers. The Carlton Water Treatment Plant is the world's largest Electrostatic Dialysis Removal (EDR) plant rated at twelve MGD with an 80% recovery rate.

Transdyn designed, built and installed a complete turnkey county-wide SCADA system for the Department, including a county wide radio system. A single DYNAC® server manages the county's distribution system located at the distribution operation facility. Each facility is configured for backup operations in the event of a failure. Eleven remote sites communicate via licensed MAS Radio.

Twenty distributed control units located throughout the plant are connected via twisted pair network to the servers. The system provides automatic process control for raw water, chemical pacing, dual media high pressure filters, the EDR process, reject pumping, finished water storage, and high service pumping. The raw water process control strategy includes a sophisticated well selection matrix and blend analysis that permits plant operations to optimally select production well combinations while maintaining water quality.

The SCADA system consists of a broad area radio communications network utilizing three types of radio subsystems which eliminates the need for leased phone lines. Two polling remote radios provide coverage from the master radio to fifteen outlying remote sites, two unlicensed master spread spectrum radios communicate with a total of twenty-eight remote sites, and one point-to-point high-bandwidth Ethernet microwave link provides LAN connectivity between the two master computer control systems. The system monitors and controls the water treatment plant and remote raw water wells, pump stations, elevated tanks, county interconnect sites and flow monitoring sites located throughout the service area.

A stand alone server with an operator workstation is located at the water distribution operations center. The system is designed to provide control of the distribution system from the water treatment plant and control of the plant and its associated remote facilities from operations. The system allows for continual operation in the event of emergencies or personnel constraints.