

GOSHEN IRRIGATION DIST. WASTEWATER MONITORING



7/07/2006

SCADA-RF SYSTEM TO MONITOR WATER LEVEL POINTS SPANNING THE ENTIRE 85 MILE CANAL LENGTH NEAR TORRINGTON, WYOMING

Sutron has automated 85 miles of canal for the Goshen Irrigation District near Torrington, Wyoming. The Goshen canal distributes water from the North Platte River to several hundred thousand acres of farm land used for sugar beet and wheat production.

Phase 1 of the project involved providing canal level monitoring equipment and spillway gate control at five sites. This radio based system monitors points spanning the entire length of the canal. The system managers are able to monitor water level along the canal using Sutron PCBASE2 software running on PC's located at the district office. The software automatically sets off alarms when water levels become too high and endanger the canal system. The system also uses voice message phone calls to inform personnel of alarms if the alarms are not acknowledged at the base station PC.

Operators can initiate flow changes at secondary flow control structures using a "point and click" interface at the master station.

This project showcases Sutron's ability to integrate old manually operated equipment with modern SCADA technology. Sutron had to design the necessary electro-mechanical interface to allow the 9000 RTU's to operate the rising stem gate valves at the diversion structures.

Sutron's Model 8200, 9000, and 8210 RTUs can act as "automated light switches" for almost any type of electrical equipment. The built-in programming ability allows the user to turn on and off system functions based on conditions at the field site. For example, it is straightforward to program a site to hold a given water level or to release a specific amount of flow. It is also quite easy to use such information as water pH or dissolved oxygen to control some other function. For example, the DO level can be used to trigger air injection or a spray fountain. The pH level can be used to automate the injection of dilution water or acid/base to keep the pH within a specified range.



OWNER: US Army Corps of Engineers, Omaha, NE
PURPOSE: Wastewater Monitoring System
SCADA-RF System to monitor water level points spanning the entire 85 mile length near Torrington, Wyoming
EQUIPMENT: 46 Stations with Radio Telemetry
COMPLETED: 2001
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