

ELAN

Technologies

Inc.



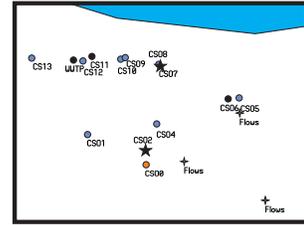
Gary Sanitary CSO Project

Completed 9/98

CASE STUDY



The Gary Sanitary District (GSD) has fifteen (15) Combined Sewer Overflow (CSO) points discharging to the Grand Calumet and Little Calumet rivers from the collection system. An Aquatrol SCADA system using leased phone line communication was installed years ago to monitor the discharge chambers and allow remote gate control. In 1998 GSD bid a project to upgrade and expand CSO monitoring. Items included new meters, repairs and improvements to CSO structures and adding the remaining eight (8) sites to the SCADA system. The additional sites were also to be placed on leased phone line.



At bid time ELAN Technologies proposed a unique alternative: remove the existing phone line based equipment and proprietary SCADA and replace it all with spread spectrum radios and open architecture SCADA. Specifically, ELAN proposed spread spectrum radios, Allen Bradley DF1 Full Duplex protocol devices and Intellusion MMI software, an intelligent SCADA offering designed to reduce operational costs for GSD and eliminate proprietary equipment. As integration with the existing proprietary system would be difficult, the proposal included all fifteen (15) remote sites with antennas plus an entirely new master location PLC, computer and GUI software.

Savings = \$130,000

The 15-site offering was over \$100,000 less than adding 8 sites to the Aquatrol system and we eliminated over \$30,000 in annual phone charges. The contractor presented the alternative; ELAN provided radio analysis confirming the solution was viable and the engineer and owner approved. Though ELAN designed a network radio solution with full-duplex protocol and a "report by exception" scenario ideal for CSO monitoring, implementation of a half-duplex polling scenario was implemented using the radios. The system can be modified to full duplex as needed in the future.

The result was a less expensive system with no phone charges, more advanced graphics and reporting and the elimination of expensive proprietary equipment. A side benefit is ELAN's spread spectrum radios created a communication "backbone" other devices can utilize. As GSD considers monitoring lift stations, industry or even automated meter reading they can use the same, paid for, communications infrastructure. ELAN Technologies also provided the monitors used at each of the CSO sites, ultrasonic level meters with 4-20mA outputs and sampler outputs for periodic CSO sampling by the GSD Pretreatment Group.

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