

TOWN OF EAST WINDSOR WATER POLLUTION CONTROL AUTHORITY

2008 – 2009 PUMP STATION CONTROL UPGRADE



Submitted October 2009 by:

**Town of East Windsor Water Pollution Control Authority
East Windsor, CT**

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EAST WINDSOR WATER POLLUTION CONTROL AUTHORITY 2008 – 2009 PUMP STATION CONTROL UPGRADE

The Town of East Windsor WPCA is finalizing the Pump Station Control Upgrade Project that was begun in 2008. This project was paid through the Town of East Windsor Capital Improvement Plan.

Originally, the WPCA had asked for \$25,000 over 2-years to have a pump station study done on the five oldest pump stations. CDM estimated a cost of \$5,000 per station for the study; any work needed would be additional.



Old Air Compressor for bubbler system (replaced).



Old Pump Control Panel located in can (replaced).



WPCA Operators Steve Bednarz and Marc Brennan installing brackets and wiring for new level indicators.

There were two pressing needs that encouraged us to initiate the study:

- The age of the Pump Stations involved ranged from 24 to 40 years old. The controls to run the pumps within the station were Bubbler Systems that had become unreliable due to their age.
- The controls to operate the two pumps were below ground, inside the pump station structure / can. This had become a serious safety issue, as our operators had to make entries twice per week to each station just to check the status of the pumps and air compressor units.

PUMP STATION CONTROL UPGRADE



Randy and Scott Robbins of EIS, Inc finalize the wiring to the pump controls for the Industrial Park Pump Station.



Internal view of the new control unit installed at five current East Windsor WPCA Pump Stations.

Over the last several years, we had grown reliant upon Randy Robbins of Environmental Instrument Services, Inc (EIS), to repair many of our level and flow control systems at the East Windsor Wastewater Facility. We learned from Randy that **we could change out the controls and the level sensor at each pump station for about the same price as doing the study**, providing we could handle all the preparation work ourselves.

Opposite – Scott Robbins, EIS, working on Control Panel.

Randy suggested we utilize the following units:

- KEP digital indicators – one located above ground, one in the pump station can.
- New Control Panel with Hand-Off-Automatic switches for remote control of pumps. Panel will have digital indicator / controller for pump start / stop. Red indicator lights will show when pump is running.
- Drexelbrook Model 750P level transducer to replace bubbler pipe / tube.
- Float switch to be mounted in wet well. This switch should be wired such that it will call out an alarm and run the pumps should the level system fail.



PUMP STATION CONTROL UPGRADE

Our maintenance staff at the East Windsor Wastewater Treatment Plant performed the preparatory conversion work flawlessly: trenching, laying conduit, running new wire and control cables, mounting hardware such as brackets and boxes for control units, all the while still maintaining the old system in running order. The savings our department received due to our in-house work was estimated by Randy Robbins at \$3000 per Pump Station, \$15,000 total savings. Our three maintenance operators, Marc Brennan, Steve Spellman and Steven Bednarz Jr deserve mention for performing an outstanding service to the Town of East Windsor WPCA.



Randy Robbins, EIS, setting up control unit.



WPCA Operator Steve Spellman running new cable wire.

As it stands, five of our pump stations within our collection system are now upgraded with new controls and level indicators. We are tackling the next step in our collection system rehabilitation project by upgrading our alarm call out system at each of ten stations. We hope that in the near future we will be able to receive pump station data as well as alarms at our SCADA system located at our Wastewater Treatment Plant.



WPCA Operator Marc Brennan, prep work at station.

Edward Alibozek, WPCA Chief Operator
October 27, 2009