

Regional Municipality of Chatham-Kent

The Regional Municipality of Chatham-Kent has experienced significant growth in recent years. It has embarked upon a number of upgrades to existing facilities along with the implementation of new water and wastewater treatment plants for various communities within the municipality.

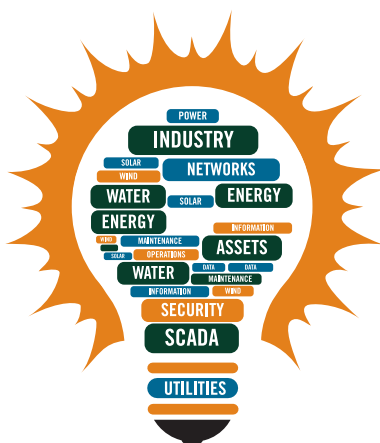
Eramosa was retained by Dillon Consulting to work on two significant upgrades within the Region – the Chatham Water Treatment Plant and the Tilbury Wastewater Treatment Facility. The Chatham Water Treatment Plant upgrades were completed in 2005. Our team was responsible for the preliminary and detailed design of the electrical, instrumentation and control, and SCADA system, as well as construction administration services and software engineering. Under the upgrade project, the PUC implemented Allen-Bradley SLC 5/05 field controllers over a high speed plant-wide Ethernet network complete with Rockwell RSView32 as the Human Machine Interface (HMI) in the central control room. iHistorian for historical real-time data collection and storage

was also added. The plant upgrades incorporated a new electrical distribution system including incoming 27.6 kV service and switchgear, 1.5 MW standby diesel generator (stand-alone enclosure), distribution cabling, and Motor Control Centers (MCCs) to accommodate the upgrades. Process areas affected included the new high-lift and low-lift pumps, pretreatment facility (Actiflo system) and residue management, new reservoir, and chemical systems. The control system employed new strategies including the integration of SLC 5/05 field controllers, MicroLogix PLCs, and Bristol Remote Processing Units (RPUs) into a single network to provide plant-wide and remote area control of the water facilities.

The Tilbury Wastewater Treatment Plant upgrade was completed in early 2005 with the implementation of improvements to the lagoon system currently on the site. New treatment processes were implemented at the facility including a raw sewage pumping station, headworks and grit removal system, oxidation ditch pro-

cess, final clarifiers with return activated sludge (RAS) and waste activated sludge (WAS) system, chemical systems, tertiary filtration, and UV disinfection of the plant effluent. Eramosa was responsible for instrumentation and control system engineering, and construction administration on this project. We strived to provide a design that would be in keeping with the network developed for the Chatham Water Treatment Plant.

As integrators of Wonderware, GE (iFIX and FIX32), and Bristol Babcock, along with our extensive knowledge of Allen-Bradley and GE PLCs, our team also has delivered support services to the Wallaceburg Water Pollution Control Plant in transitioning to a wireless network, adding historical data collection and reporting, and providing assistance to update existing software at the plant. We have also helped the Chatham-Kent PUC at the Tilbury Water Treatment Plant to implement a turbidity reporting system, develop a rechlorination site, and with the SCADA for the Bothwell water system.



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