EMR
integrated solutions

South Dublin County Council
Web-access SCADA and reporting software that's operationally transformative

About South Dublin County Council

South Dublin County Council (SDCC) is one of the three local authorities covering the greater Dublin area. With a population of 250,000 living within its 225 km^2 area, a major area of activity for SDCC is the provision of waste water collection services.

Project Benefits

- Delivers more visibility and manageability of the network with real-time control

- Staff can remotely change pumping plans, adjust set-points and monitor performance

- Combined storm overflow monitors indicate early warning of inundation and flooding

- Comprehensive electronic reporting with full audit trail on incidents

- Enhanced operational efficiencies and control

"From the initial installation, EMR have demonstrated a great knowledge and understanding of our requirements. The web access SCADA and reporting software are transformative."
Tom Ryan, South Dublin County Council.

Leading SCADA and instrumentation provider, EMR Integrated Solutions recently announced a major contract to provide a SCADA system to monitor the operation of the six largest pumping stations within the South Dublin County Council (SDCC) network.

The project delivers a far greater level of control to the council's staff in relation to the monitoring and management of the water and wastewater network.

Business Challenge

While wastewater treatment is provided by the Ringsend Wastewater Treatment Plant, SDCC operates and maintains an extensive network of pumping stations, interceptors and sewers, which need to be kept running 24/7 together with a capped landfill site which requires continuous environmental monitoring. With ever increasing demands being placed on the network, reliability and equipment performance became critical issues for SDCC.

The Solution

EMR was awarded a major contract to provide a SCADA system to monitor the operation of the six largest pumping stations within the SDCC network. EMR opted to deploy Motorola Moscad RTUs communicating with the SCADA server via high power radio. The initial success of the system lead quickly to the addition of a further 18 outstations and the upgrading of existing Moscad RTUs to provide full control of the pumping stations.

The addition of local HMI screens with real-time process mimics and historical trending allowed field staff change pumping plans, adjust set-points and look at station performance without having to leave the pumping station.

The addition of rainfall monitoring and Combined Storm Overflow (CSO) monitors integrated with the data from the Motorola RTUs provides information on infiltration. The rainfall monitoring provides early warning of significant inundation and allows management to deploy staff in advance of serious flooding incidents.

The Solution

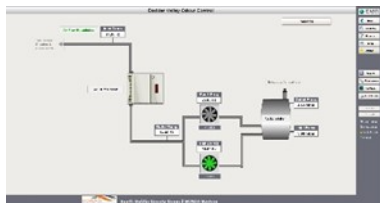- Ignition Redundant SCADA Server
- Motorola Moscad ACE RTUs
- Motorola High Power Radio Network
- Radcom CSO and Rainfall Monitoring
- FloDar Open Channel Flow Meters
- Ignition Water and Wastewater Treatment Plant On-Site SCADA

Following the implementation of remote pump control, EMR configured the RTUs to perform anti-fouling, pump run-time equalisation and energy monitoring. The recent implementation of redundant Ignition SCADA servers running Inductive Automation's Ignition provides opportunities for further optimisation and ongoing system development ensures that SDCC will continue to achieve operational efficiencies and improved performance for years to come.

Benefits

The upgrading of the control centre to include a Web Access server proved to be a significant enhancement with out-of-hours alarms being investigated by staff from home, to assess the most appropriate response. Maintenance contractors, management and regulatory bodies were given secure remote access further expanding the use of the system without incurring significant additional cost.

A comprehensive reporting package was installed to eliminate the requirement for caretakers to keep paper records on plant performance. This resulted in the timely generation of reports for management, maintenance and planning teams and provides an audit trail in the event of an incident. With the advent of mandatory reporting EU requirements, this element of the system came into its own.

"From the initial installation EMR have proved to have a great knowledge and understanding of our requirements and have provided excellent advice and support throughout. The Motorola RTUs have been extremely reliable and the web access SCADA and reporting software are fantastic," said Tom Ryan of SDCC.

SDCC also has responsibility for maintaining and monitoring a now closed landfill site in Friarstown. When the on-site environmental monitoring system ceased to be reliable, SDCC sought to expand EMR's SCADA system to cover this area. The accessibility of the information available on the SCADA system has facilitated a higher level of monitoring of gas discharges, leachate levels and flow rates and it has enhanced SDCC EPA reporting capability.