Madison Metropolitan Sewerage District Better Serves Its Communities with ICONICS SCADA System

Serving Madison and the surrounding communities, the Madison Metropolitan Sewerage District (MMSD) is responsible for wastewater collection/treatment and resource recovery, processing approximately 43 million gallons of wastewater per day. However, the MMSD faces unique challenges. First, pumping costs are high. Its location and terrain and its inability to rely on gravity makes it necessary to pump wastewater both to and from the plant. Second, Wisconsin has stringent phosphorus limits requiring more infrastructure to treat the water. Lastly, the MMSD manages around 40 pumping stations owned by other municipalities/sanitary districts throughout the greater Madison area with no cellular or Internet connection. The district must therefore rely on radio communication to get live data/information from those stations to monitor operations and when issues arise, must send crews out to resolve the problem.

Finding the Best Fit SCADA for MMSD's Operations & Needs Led to ICONICS

The MMSD recognized the need to replace its obsolete SCADA system so started looking for a new system with advanced capabilities that included operator access no matter the location. The new SCADA system also needed to integrate the old system and be the best fit for the district's operations and needs. The MMSD chose the ICONICS platform and for several reasons. First, through an excellent demonstration, the ICONICS team showed the platform's easy and quick set up. Second, the platform possessed the required advanced capabilities along with a modular and open architecture that would provide a high level of design flexibility. Third, the price point fit the district's budget.

Real-Time Operational Information & Advanced Capabilities

ICONICS provides critical real-time operational information and advanced capabilities, so operators can quickly resolve problems to keep the facility running at the highest level. Furthermore, operators can easily access information like events, alarms, and operation/maintenance records to run the facility more efficiently with a limited staff. Additionally, with its advanced level of customization, the ICONICS platform empowers the MMSD team to easily add and modify system features as needed. The MMSD also has increased operational efficiency by tying ICONICS to some external systems. For example, the SCADA system integrates with the MMSD's Computerized Maintenance Management System (CMMS) database that controls all work orders and histories, saving time and providing updated, complete system records.

Secure Remote Access

In addition, the MMSD has gained the convenience of secure remote access with the new system. The process control system is securely locked down with the combination of Citrix and the high security standards inherent within ICONICS. Operators can securely access the system

from tablets, phones, thin clients, and computers, while supervisors can securely access the system from their homes to deal with issues more easily and effectively. With the constant threat of cyber-attacks, tight cyber security is critical for the MMSD, especially as a public utility.

Substantial Realized Benefits

The Madison Metropolitan Sewerage District has realized substantial benefits using ICONICS agile software. Operators have real-time insight with easy access to operational information, so they can quickly act and resolve issues, effectively run the facility with a limited staff, and ensure a secure system along with secure remote access. Consequently, the MMSD can serve its communities at the greatest possible level.

Possible Call Out

"ICONICS GENESIS64 has been a successful replacement for our out-of-date SCADA system. With prior experience with other platforms, I found GENESIS64 intuitive and very powerful. Our move to GENESIS64 and Hyper Historian has improved our uptime, data reliability, and system accessibility. After almost ten years, we are still finding new ways to utilize the system to improve user experience."

Matt Erbs
MMSD Process Controls System Programmer

CTA

For more information, read about the [Madison Metropolitan Sewerage District use case](#).