Success Story

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Racine Water Utility

RACINE ON THE LAKE

City of Racine, Wisconsin

Industry: Water and Wastewater Processing

Customer: Racine Water and Wastewater Utility, Racine, WI

Racine Water & Wastewater Utilities serves 100,000 customers in the communities around Racine, Wisconsin. They have two facilities located on the shores of Lake Michigan in Southeastern Wisconsin. Their water utility processes on average of 35 million gallons of potable water per day for their residential, commercial and industrial customers. Their wastewater utility treats approximately 35 million gallons of wastewater per day before returning it to Lake Michigan.

Operations Control Room

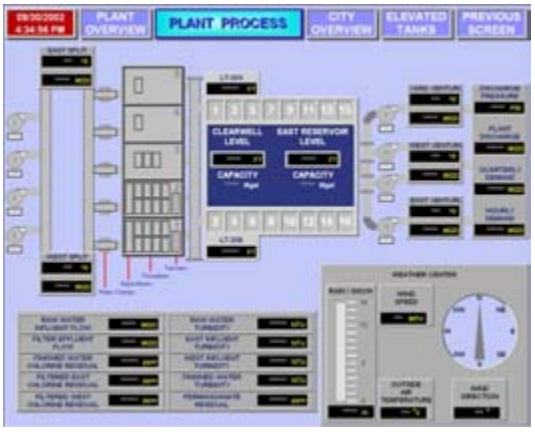
Plant Overview Screen

ICONICS Software Deployed

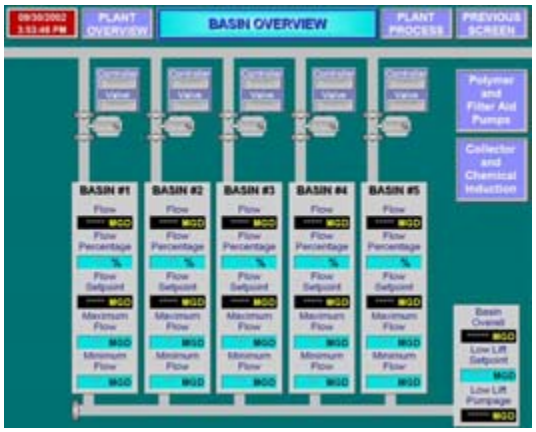
ICONICS' GENESIS32™ Software suite (GraphWorX32™, TrendWorX32™, AlarmWorX32™ and ScriptWorX32™) is being utilized for the main visualization, data storage and alarming functions. DataWorX32™ is also being used for system-wide redundancy. Another option being deployed is advanced data-logging to Microsoft® MSDE database through the ICONICS MSDE data-logging option.

Key Features

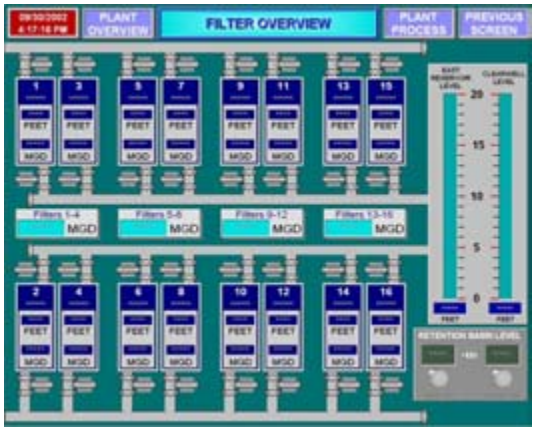
Racine Water initially chose GENESIS for DOS in 1991 as the HMI operator interface software for their plant wide SCADA system at their water utility. This system controlled the entire water plant and distribution system operation of 3 remote tanks and 1 remote pumping station, from a central control room. There were seven PC's installed in the control room and around the plant to monitor the water filtration process. A year later a citywide SCADA radio telemetry system was installed at the wastewater utility to monitor 11 lift stations, 4 metering sites and 10 safety sites. In 1996 the system was upgraded to GENESIS for Windows and in 2001 the wastewater plant was modernized using GENESIS32™ to increase capacity and to automate and centralize the control to one room. An extensive evaluation was made of the leading SCADA vendors of Wonderware, Intellution, RS View, Honeywell and Citect. GENESIS32™ was selected because of the speed and redundancy of data collection systems as well as the superior OPC based data engine allowing live changes to the system without the need to restart.



Plant Process HMI Screen



Basin Overview Screen



Filter Overview Screen

Tip From the Customer

"While there are so many new tools and capabilities in the GENESIS32™ product, the one outstanding feature is the ability to add, delete and change data tags while the system is on-line and functioning." states Bob Gilbreath, Computer, Control and Instrumentation Supervisor.

Project Summary

At the water filtration plant, 5 workstations are used for process visualization, control, alarming and historical trending. Three operator workstations at other remote locations in the plant provide remote viewing, control and alarm acknowledgement. Two data servers are also being used for data collection and historical data logging. At the wastewater plant a central control room is utilized with five workstations as well as another ten operator workstations located around the facility. At the largest lift station a single system is installed to monitor and control 15 pumps, as well as the logging of process and alarm data.

Reporting and System Benefits

Since both the water and wastewater operations are running 24/7, system stability, reliability, redundancy and the ability to update the data engine live are critical to the proper operations at each location. The SCADA system was installed by in-house personnel and managed by Bob Gilbreath. The GENESIS32™ system provides for the monitoring and control of all aspects of the water filtration and citywide distribution processes of the water utility. At the wastewater plants' field operations office, the system is used for monitoring and alarming the status of the remote sites. At the Lift Station #1 the GENESIS32™ system is used for monitoring and control of the station operation. There are over 1500 total data tags at the water filtration plant and 1300 tags at the wastewater plant which will be expanded to over 2000 tags after final improvements are completed. Particle counter data is also collected using a Hach (another ICONICS OEM) GENESIS32™ based software system.

Conclusion

ICONICS has worked closely with Racine Water to make this project successful in every aspect. Racine participates in the ICONICS SupportWorX maintenance program to keep its software updated and for access to ICONCIS technical support personnel as needed. Together, Racine Water & Wastewater Utilities and ICONICS have produced clean and pure water for over eleven years to the good people of Racine, Wisconsin.