



“It’s the difference between night and day. At the old plant, if you wanted to turn on a pump, you walked over and turned it on manually.”

— Toby Ross,
superintendent,
City of Iola Public Utilities

Before they hired Micro-Comm, Toby and Chris were often running blind when it came to system information. Now, they’ve got a bird’s eye view.

When the City of Iola decided to replace its 75-year-old water treatment plant to better comply with EPA standards, they selected Micro-Comm to design and install the sophisticated control system. Now, instead of wondering if things are functioning smoothly... and running from place to place to check them... Iola Water’s staff can see everything they need, right on the computer screen.



To say that Iola transformed its water treatment plant is an understatement. In mid-2005, they traded a 75-year-old system with a single line pressure gauge and telemetry on three water towers for a state-of-the-art operation which makes their entire system transparent.

“At the old plant the only information we had was a gauge to measure line pressure and three towers that we could get levels on,” explained Chris Baker, assistant water superintendent, City of Iola, KS. “Every hour we had to go around and check every piece of equipment; until it quit working you didn’t know it. Now we see what is going on in the entire plant from the main screen. And, we can adjust 90-95 percent of the equipment from right there.”

But the transformation in the system, which maintains a supply of 2 1/2 million gallons of water for Iola’s 6,300 residents, didn’t happen overnight. Months of planning went into the design and installation of the new system. And during that process, Micro-Comm was right there with them, creating a leading edge system, adding and tweaking capabilities to suit their preferences while making the system flexible and user-friendly.

Chris described the Micro-Comm project manager as “pivotal” in the

system installation, assessing situations and solving problems, even diagnosing malfunctions on equipment from other manufacturers. He said their Micro-Comm project manager also added things the engineers didn’t think of that made the system easier to operate—things like a security system and reprogrammable set points for high and low feed alarms.

“Bert adjusted things so we could run the system the way we are used to,” Chris said. “If you don’t feel comfortable running the system, no matter how advanced the technology, it’s not going to work as well for you. That was especially true for us, going from everything manual to everything automatic.”

Once the system was installed, Micro-Comm provided training and service, including extra instruction for several employees who initially were less comfortable with a computerized system.

The upshot of all this was a smooth transition from old plant to new, and a system which provides not only expanded information, but also enhanced economies and flexibility.

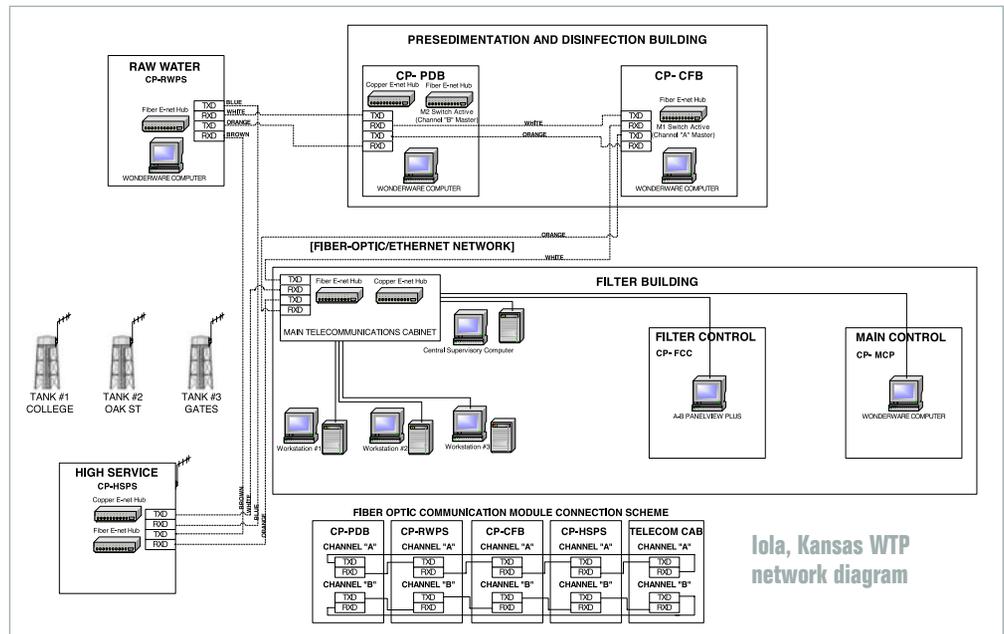
“We’re still running 24/7, but with the new system capabilities, we’ve been able to eliminate our night shift,” said Toby Ross, Iola Water superintendent. “And, it’s freed people up so it’s easier to cover vacations and sick leave.”

If you’d like to find out how Micro-Comm can give you a new perspective on your water control system, call us at **913) 390-4500**. One of our sales staff will be happy to talk with you.

How Micro-Comm brought Iola Water's system information into plain view.

City of Iola Public Utilities decided to undergo a drastic change in their water treatment plant, moving from a 75-year-old plant with minimal automation, to one of the most technically advanced operations in the state.

Micro-Comm used its extensive experience, keen insights and dedication to deliver a sophisticated end product that is flexible, user friendly and, above all, satisfies the client.



Iola, Kansas WTP network diagram

Client

- City of Iola Public Utilities, Iola, KS

Problem

- Transfer control to a new, state-of-the-art facility with a system that is user-friendly for staff accustomed to manual controls

Special challenges

- Changing over from old plant to new, with no fall-back
- Providing adequate training for users at all levels of expertise
- Troubleshooting other manufacturer equipment, on site

Solution

- Assure comprehensive—and continual—communication with client in the process of designing, programming and installing totally transparent system
- Utilize Micro-Comm's open architecture system to integrate Allen Bradley and other manufacturer components with Micro-Comm PLC/RTUs

Logistics

- Water treatment plant capable of controlling 4 million gallons a day
- 2 1/2-million gallon stand pipes
- 1 elevated tower, 1/2 million gallon capacity
- 2 clear wells with combined capacity of 1.5 million gallons

Tactics/key elements

- Designed and installed a 17-node PLC network, integrated with existing 11-node system
- Created an 8-node computer network running Wonderware HMI.
- Established a 32-node total Ethernet network
- Developed redundant ring, fiber optic network with Ethernet media converters

Equipment

- 6 Allen-Bradley SLC 500 5/05 PLC's w/fiber optic communication backbone
- 11 Allen-Bradley SLC 500 5/05 PLC's integrated into Micro-Comm SCADA system via Ethernet
- 4 desktop computer systems
- 4 panel-mount industrial computer systems located in select control panels
- 3 remote terminal units integrated into SCADA utilizing MDS iNET 900MHz transceivers
- 111 analog loops to Micro-Comm-6 PLCs
- 616 discrete inputs/outputs to Micro-Comm-6 PLCs
- 1792 Wonderware HMI tags
- Intouch Wonderware with Activefactory
- Ashcroft, PRC, Hach, and ABB instrumentation
- Level, differential pressure, loss of head, pressure and flow transmitters
- Turbidity, chlorine, suspended solids and PH analyzers

Results

- Equipment operation easily accessible—and changeable—from a single computer screen
- Smooth transition from manual to totally automated monitoring and controlling
- Employees comfortable with new, automated system
- Information about line pressure, water levels and feed rates readily available
- Accessible, responsive customer service
- Staff efficiencies. Night shift eliminated; vacation and holidays easier to cover