



With two plants, two proprietary systems and multiple remote locations, Murfreesboro Water and Sewer Department needed a system integrator who was creative and flexible to get them in sync. Micro-Comm filled the bill.

Not long ago Brian & Mike weren't even speaking to each other. Now, thanks to Micro-Comm, they can read each other's mind.

Brian Pollock and Mike Papula both work for the Murfreesboro, TN, Water and Sewer Department. And they like each other, really.

It's just that before Micro-Comm came along, their control systems wouldn't let them share information. And, with one proprietary system in the water plant and another in the waste water plant three miles away, that was a real problem.

"We'd have to physically check on pumps, tanks and lift stations," explained Mike Papula, instrumentation technician at the water plant.

"And," added Brian Pollock, instrumentation supervisor at the waste water facility, "we had to be at the computer to see the alarms, acknowledge them and make the adjustments."

But Micro-Comm changed all that.

First, they installed Micro-Comm's radio telemetry to allow remote monitoring and control of the water tanks and sewage lift stations which serve Murfreesboro's 62,000 residents. Then, they integrated the two process control systems by installing a new data network and customizing software to link equipment compatibly and allow access via a high-speed wireless network.

"Now we can see what's happening from either plant and react immediately," said Mike. "Plus, the alarms are broadcast over the radio, so operators hear them and know where the

problem is, no matter where they are. Then they can respond with a command on a hand-held radio."

And, Micro-Comm really listened to their ideas at every step along the way.

"They were receptive to our suggestions. They even built in factory witness tests for us to check out the system and provide input before they ever installed it," Brian explained.

"And," Mike said, "they designed the system the way we were accustomed to seeing it, not 'their way,' like our previous integrators."

"What's even more impressive," Mike added "is they set up the system so we can 'tweak' things, on-site, rather than wait for a service technician. Our other suppliers would never have done that."

Brian and Mike use a lot of other nice words to describe their new, fully integrated Micro-Comm system—'flexible,' 'reliable,' well-documented,' even 'bullet-proof.' And they like Micro-Comm's 'phenomenal' five-year warranty. But, most of all, they like the way Micro-Comm understood their needs and knew just how to solve their problems.

So, give Micro-Comm a chance to solve your problems. Call us at **(913) 390-4500**. Or, better yet, call Brian, Mike or Billy at **(615) 848-3222**. They'll be glad to tell you how Micro-Comm got them talking to each other again.



"We haven't found anything the Micro-Comm system can't do. We're even positioned to integrate with the other water utilities in the county."

*—Billy Barrett,
Superintendent,
Murfreesboro Water
and Sewer Department.*

The Micro-Comm Solution for Murfreesboro

*How Micro-Comm
integrated process
control functions,
components and
software to deliver a
seamless, flexible system
with growth potential*

MICROCOMM

**“Where creativity and
technology converge”**

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Client

- Murfreesboro, TN, Water and Sewer Department
- Water and waste water treatment plants serving 62,000+ residents

Problem

- Outdated, incompatible equipment, hampering communication between plants

Special challenges

- Integrating equipment from multiple integrators and manufacturers, while maximizing information sharing, speed and capabilities.

Logistics

- 2 plants, 3 miles apart
- 10 lift stations; 5 water storage tanks; 2 raw water stations
- 8 PC workstations (WTP); 10+ PC workstations (WWTP)
- 2 NT servers (WTP); 2 NT servers (WWTP)

Solution

- **PHASE I.** Converted tanks and lift stations from telephone to radio controls.
- **PHASE II.** Waste water plant upgrade and new data network (performed by another integrator).
- **PHASE III.** Created new data network at water plant, and waste water plant, allowing viewing and control from both facilities via a high speed radio network.
- **PHASE IV.** Added three 5/05 fiber optic PLCs to the WTP and a 900Mhz Radio PLC at the auxiliary raw water intake.

Tactics

- Installed 16 Micro-Comm RTUs and radio telemetry for remote monitoring of tanks, lift stations and booster stations.
- Integrated those RTUs with the existing Allen Bradley PLC5 (which controls chemical feed processes) and a new SLC 5/05 (for local plant operations and for monitoring a new PLC 5/03 lift station using 900 MHz spread spectrum radios).
- Networked the PLCs at the water plant, primary and backup NT servers, two workstations, and linked the wastewater plant to the water plant using a spread spectrum wireless LAN bridge.
- Added a spread spectrum raw water intake station and three networked PLCs at the water plant for local control of high service pumps, transfer pumps and chemical feed processes.

Equipment

- Micro-Comm RTUs and Allen Bradley PLC controls
- 23 PLCs networked (16 Micro-Comm RTU PLCs)
- 120 analog loops
- 962 minimum inputs/outputs
- Fiber optic and Ethernet networks
- Intellution, Fix 7.0 software
- UHF radio communications
- Spread spectrum radio communications
- Endress Hauser and Rosemount instrumentation
- Level, DP, pressure, and ultrasonic level transmitters

Results

- Information about all functions and stations now accessible from either plant.
- They say their system is virtually “bomb-proof.”
- They also like the way they can tweak the system, without having to ask “Mother, may I?” (or pay for a service call).