

Also, the Healy-Ruff staff was very helpful. “They explained what everything did and how it worked. They really made us feel comfortable with the system,” said Sabin.

There were many additional benefits beyond the basic system reliability and use. For example, the chemical feed at the well head used to just turn on automatically with the pumps. Now there is much more accurate dosing and control.

Another benefit is automatic alternation of the wells. “Before, I would have to force alternation of the wells by going out to the tank once a month and manually change the lead/lag settings. And to be honest, there may have been a month or two I didn’t get to that. By automatically alternating the pumps, we will put much less stress on them and extend the life of the pumps. Not to mention the time it saves me.”

The high service pumps feeding the tower now also have much greater control. “Both high service pumps used to run together all the time – about 4 hours a day. Now, we can not only alternate, but lead/lag as needed. In addition to the reduced wear and tear, there are huge energy savings. We still fill the tank in 4 hours a day, but the controls only call for one pump to do so,” said Sabin. “We’ve cut our energy use in half.”

Another monthly utility bill saving came with the elimination of a dedicated phone line. By using spread spectrum radios, they not only linked the plant and the tower, but they added monitoring and alarm notification for both of the lift stations in city.

“The biggest benefit is that we can all sleep a whole lot better at night,” said Sabin. “Yeah, and we can even be comfortable going out of town every once and a while on the weekends,” adds Armstrong with a smile.



1975 West County Road B2 • Suite 5 • Saint Paul, MN 55113  
 Phone: 651-633-7522 Fax: 651-633-2671  
 www.healyruff.com

## HEALY-RUFF SUCCESS STORY

# Buffalo Center, Iowa

## Healy-Ruff Improves Efficiency and Reduces Operating Expenses at Aging Iowa Water System

### Job Information

#### End User:

Town of Buffalo Center, Iowa

#### Local Sales and Service:

Allied Systems, Inc. – Des Moines, IA

#### Existing Water Distribution System:

Water Plant  
 2 Well Pumps  
 2 High Service Pumps  
 1 Elevated Tank  
 2 Lift Stations (wastewater)

#### Healy-Ruff Controls Provided:

- 1 Master V-PAC (CTU) at water plant controlling well and high service pumps and providing color touch-screen HMI and system overview, including elevated tank and 2 sewage lift stations
- 3 Micro V-PAC (RTUs) providing control and monitoring at the elevated tank and each lift station
- System communication via spread spectrum radio

### Benefits Summary

#### Improved System Performance and Integrity

- Replaced obsolete control system, eliminating 2-3 major failures per year
- Added monitoring and alarming to 2 sewage lift stations
- Improved accuracy of chemical feed
- Reduced “wear and tear” and extended equipment life of well and high service pumps

#### Reduced Operating Expenses

- Reduced energy consumption and run-time of high service pumps by 50%
- Eliminated \$30 monthly telephone line charges
- Saved 2-3 hours per week of labor



Buffalo Center is a community of about 1,500 people in northern Iowa. The city’s water and wastewater needs are served by a system that includes a water plant with two well heads, chemical feed, filtration and two high service pumps; one elevated tank; and two wastewater lift stations.

They had installed a control system in the mid-1980s that provided basic on/off pump control with limited communications via a dedicated phone line to the elevated tank.

### Nowhere to Turn

Kelly Sabin, the city’s water supervisor was struggling to maintain his aging control system. “We have the best water in the area,” said Paul Armstrong,





maintenance supervisor, “but we were always worried about it being there.”

Failures were becoming more common as the system aged and servicing the system had become virtually impossible. The original system’s manufacturer had gone out of business so factory support and replacement parts were no longer available.

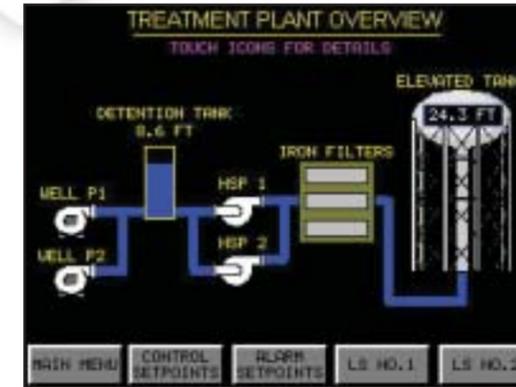
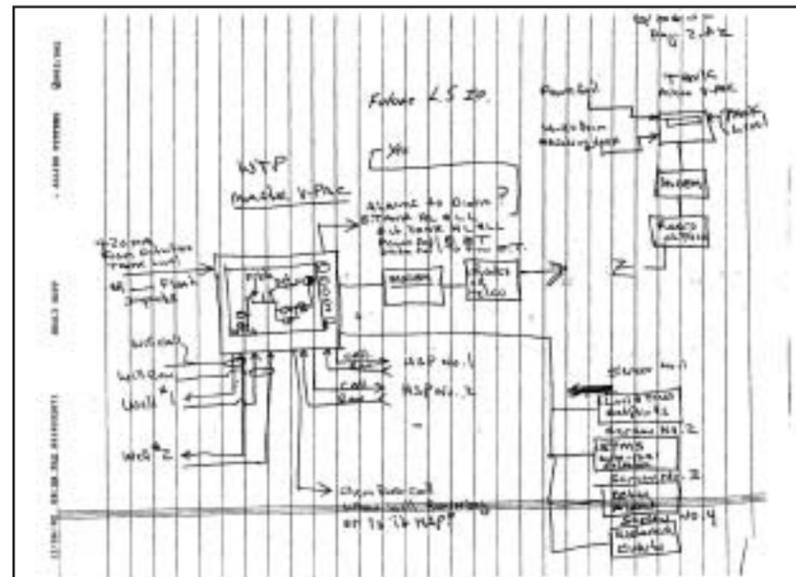
Additionally, there were no electrical

contractors willing to provide service to an old, poorly documented and maintained system. “Over the years, there had been a lot of changes and ‘fixes’ made to the system. In the end, we had such a mess of wires that nobody wanted to touch it,” said Sabin.

**Healy-Ruff Meets the Challenge**

Allied Systems, Inc. of Des Moines called on the city of Buffalo Center and suggested that Healy-Ruff may be able to help their situation. According to Sabin, “We had an old system that we couldn’t get parts for and nobody was willing to service. Healy-Ruff was not afraid to dig into a problem nobody else wanted to touch.”

Because of Healy-Ruff’s experience in water and wastewater applications, they looked at it differently than a typical electrical contractor or system integrator. The ‘spaghetti bowl’ of wires didn’t intimidate them, because they understood the fundamentals of the process being controlled. After a brief tour of the city and facilities, Healy-Ruff and Allied Systems were able to sketch the solution on a notepad.



local control and operator interface at the elevated tank.

Once the plant/tank control was installed, it was decided to add Micro V-PAC RTUs at the two existing wastewater lift stations as well. The entire system communicates via spread spectrum radios, eliminating a dedicated telephone line and adding communications with the lift stations.

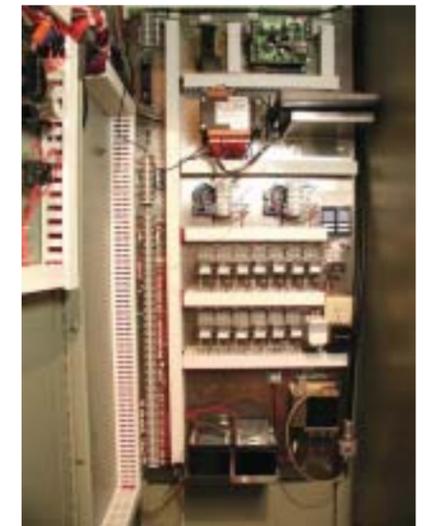
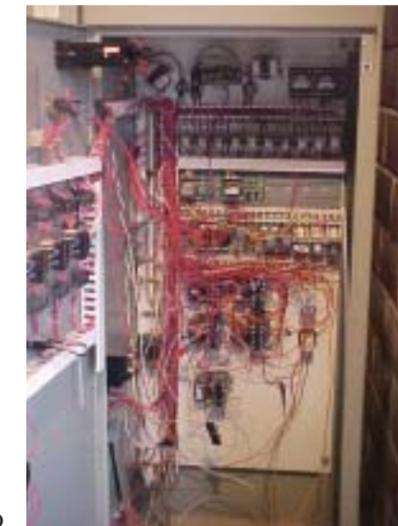
**Healy-Ruff’s Can-Do Attitude Gets Results**

The move to a modern, reliable system has eliminated several major failures and process upsets per year, it also frees up time. “I used to spend 2-3 hours a week, just ‘babysitting’ and adjusting the system to keep it running. I now use that time to do other things,” said Sabin.

The system overview and touch-screen interface and control are also appreciated. “The Master V-PAC is so convenient and easy to use. Because Healy-Ruff knew our process, they knew how to layout the touch screens and flow of information in a way that makes sense to the operator.

The project called for removal of most of the old control hardware and a complete rewiring of the panels. However, much of the existing infrastructure was re-used, including enclosures, motor starters, etc.

A Master V-PAC was installed in the plant as a CTU providing control of the wells, chemical feed equipment, high service pumps, supervisory control and monitoring of the entire system. A Micro V-PAC was installed as an RTU to provide



*Healy-Ruff wasn't intimidated by the 'spaghetti bowl' of wires in the old panels and rewired the system using much of the existing infrastructure.*