

PROJECT:

Assumption Parish Intelligent Water Technology Project

LOCATION:

Assumption Parish, LA

PRODUCTS:

Hydro-Guard HG-6
Hydrant-Mounted Automated
Flushing System

Remote Pressure
Monitoring System

Louisiana Parish Leverages Intelligent Water Technology™ to Meet State Requirements



SCOPE

Located just east of the central coastal region of South Louisiana, Assumption Parish is bordered by the Mississippi River's industrial corridor to the north and the Gulf's oil and gas industry to the south. It is home to about 23,000 people who rely on Assumption Parish Waterworks District No. 1 to provide a dependable supply of high quality drinking water to the nearly 10,000 service connections and to a neighbor utility, Ascension Consolidated Utilities District No. 1. In November 2013, the State of Louisiana Department of Health & Hospitals issued an Emergency Rule requiring drinking water systems raise the minimum disinfectant residual level to 0.5 mg/L and increase monitoring by 25 percent.

PROBLEM

Initially, Assumption Parish increased traditional flushing which required crews to manually open hydrants near the ends of their water distribution system. In an effort to reduce cost and improve the productivity of their crews, the utility started installing the Hydro-Guard® HG-6 hydrant-mounted automatic flushing system from Mueller Co. The HG-6 allowed the Parish to take automatic and programmable flushing capabilities anywhere in the water distribution system where a fire hydrant is available. It's lightweight, portable and adjustable so it can be connected to the hose nozzle of any brand of hydrant. To date, the Parish has installed approximately ten (10) of these devices.

However, the Parish started having issues with persons removing the HG-6s from the hydrants or turning off the hydrants being flushed by the units. If allowed to continue, unauthorized activity might have prevented the utility from maintaining the required disinfectant residual levels at critical points in the distribution network. Therefore, more visibility of these automatic flushing devices was needed.

SOLUTION

Mueller Co. then introduced Assumption Parish Waterworks District No. 1 General Manager BJ Francis to technology that remotely monitors pressure continuously at any point within a potable water distribution system. The technology involves adding a sensor to transmit pressure readings. The pressure sensor, typically installed two (2) per District Metering Area (DMA), reports at user-defined intervals via cellular service and a Mueller-hosted secure web server and provides event warnings via text messages and email when pressures exceed a utility's defined warning levels.

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Mueller's remote pressure monitoring and Hydro-Guard automated flushing systems are part of the company's Intelligent Water Technology (IWT) portfolio, a full-line of innovative solutions, products and services that actively diagnose, monitor and control the delivery of safe, clean drinking water to consumers and businesses. IWT delivers information that enables water systems to make smart decisions concerning their existing water infrastructure and plan for the future. Data-driven decisions help water systems reduce non-revenue water and optimize infrastructure investments, from main to meter.

CONCLUSION

Initially, Assumption Parish installed a pressure sensor on a HG-6 attached to a hydrant located on the property of a resident who had been complaining of low water pressure. By documenting steady water pressure on the hydrant for a couple of weeks, the utility was able to prove that low water pressure was in the resident's system and not the utility's.

Assumption Parish then moved the pressure sensor to a second location to monitor pressure on and operation of the Hydro-Guard® HG-6 flushing system. Drops in pressure were visible at approximately 1:00am each day, which is when the HG-6 is programmed to flush. The utility is currently flushing this location for six (6) hours daily in order to maintain the state mandated disinfectant residual levels.

According to Mr. Francis, "The application of pressure monitoring has given the utility "eyes" on the remote automated flushing system. We also see where remote pressure monitoring can help determine where leaks may be occurring. Since many of our distribution lines go through swampy areas, leaks are not only invisible to us but they are very tough to repair."

REFERENCES

Francis, BJ, General Manager, Assumption Parish Waterworks District No 1; phone interview by D. Austin, Chattanooga, Tennessee, June 18, 2015.

"DHH Issues Emergency Rule Requiring Drinking Water Systems in Louisiana to Raise the Level of Disinfectant in their Water, Increase Monitoring by 25 Percent", State of Louisiana Department of Health & Hospitals, Thursday, November 7, 2013,
<http://dhh.louisiana.gov/index.cfm/newsroom/detail/2906#.VYRDrBcT7FI.email>



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