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By Craig Mandli | Case Study | December 2015 | Appeared in print as "Cleaning and Maintenance"

Modern tech used to cut I&I

Problem: Ten years ago, Taylors (South Carolina) Fire and Sewer District learned its intergovernmental agreement with Renewable Water Resources required it to eliminate inflow and infiltration into its 130-mile gravity wastewater collections system within 15 years. Taylors serves 10,000 customers in central Greenville County, divided into 10 mini-systems. One of those, Mill Hill, is "our main problem area," says Samantha Bartow, director of sewer services. With 1920s-era infrastructure, Mill Hill is a likely culprit in the tremendous rise in flows during heavy rain. "Until we do post-work monitoring, we won't know the total percentage of I&I there, but our nine flow monitors tell us it's substantial."

Solution: In 2008, they switched over to digital equipment, including a Ford F-450 outfitted with a CUES K2 Base Station saved from their old rig; a self-propelled pan-and-tilt lateral launch system for 6- to 30-inch mainlines and 3- to 8-inch laterals; and Pipelogix software. They also switched from Access database-generated paper work orders to CityWorks/ArcGIS CMMS digital utilities management software. Data is inputted from the field via iPhone and iPad.

Result: This modern technology allows Taylors to focus CCTV inspection and reporting efforts where it's most effective for I&I reduction. "We've exceeded our goal of inspecting at least 8 miles of line annually since 2005," Bartow says. 866/299-3150; www.pipelogix.com.

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Pathogen protection system designed for jet truck and CCTV operators

Problem: Colorado Springs Utilities (CSU) became aware of new and dangerous pathogens found in wastewater in a new study published in m-Bio magazine by the American Society of Microbiologists. Sewer maintenance crews also expressed concern over growing reports of antibiotic-resistant bacteria and viruses they may come in contact with and the potential health consequences to themselves, their families and citizens in the community.

Solution: Utility management decided to employ the Vanguard Pathogen Protection System, which is designed to substantially reduce contaminants in sewage from reaching equipment operators. An independent environmental company was contracted to field test the system with a CSU crew during standard sewer maintenance operations. Cultures taken from the field showed a reduction of bacteria colony counts by up to 98 percent. The system is simple and convenient to use right from the operator control panel. It comes with a hand-held antibacterial spray gun with 50 feet of retractable hose to clean boots, gloves, crawlers, tools, vacuum tubes and the work area. OEM and retrofit systems for jet, combo and CCTV units are available.

Result: By taking a proactive stance for the health and safety of its team, CSU saw increased worker confidence and morale while working in a known hazardous environment. Reduction in worker sick days and insurance costs are currently being assessed. 800/781-3164; www.hydro-products.com.

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