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A smart sewer system— *Louisville MSD wins international award for its innovation*

LOUISVILLE — Throughout Louisville, there is an underground system where technology is in charge of keeping stormwater and sewage from entering the city’s waterways. Louisville MSD in partnership with Canadian engineering services firm Tetra Tech, pioneered the first major application of Csoft® Real-Time Control (RTC) for system-wide sewer optimization. Last night, in Austin, Texas, MSD and Tetra Tech received the 2019 INFORMS Franz Edelman Award.

The Award

The 2019 INFORMS Franz Edelman Award competition recognizes incredible ways that operations research and analytics are improving how people work and live around the world. MSD was one of six finalists for the 2019 honor. Other nominees were Boston Public Schools, IBM, Microsoft Corporation, Spanish National Aviation Authority (EASA) and Vattenfall.

A system with big benefits and global impact

During periods of heavy rain, Louisville’s sewer system can exceed capacity. When this happens, rainwater mixes with wastewater and can overflow into the Ohio River and area streams. MSD enlisted engineering services firm Tetra Tech to implement Csoft® as part of its Long-Term Control Plan seeking to greatly reduce these overflows, and the technology is an integral part of MSD’s Integrated Overflow Abatement Plan.

Csoft® is a Real-Time Control software solution developed by Tetra Tech to efficiently manage sewer networks in real-time based on rain forecasts and sensor readings. It has been successfully implemented in the U.S., Canada and France. MSD’s fully automated Real-Time Control system responds to rainfall and actual system conditions with the software in the ground determining how to maximize MSD systems that manage the excess water.

“Csoft® and real-time control has dramatically changed the way we operate our system,” Louisville MSD Chief Engineer Angela Akridge said. “At MSD we are letting science and innovation guide what we do, and

the benefits are unmatched. Real-Time Control has saved MSD more than \$200 million in infrastructure costs and has helped us provide safe, clean waterways for Louisville.”

MSD’s fully-automated Real-Time Control system is not only a part of the underground sewer system, but this technology is integral to all of its critical infrastructure. This includes MSD’s largest infrastructure project, the 4-mile long Waterway Protection Tunnel and more than 15 storage basins throughout the city.

The Franz Edelman Award

For more than 40 years, winners of the Edelman Award have been recognized for transforming how organizations approach some of the world’s most complex problems. First awarded in 1972, the prize is named in honor of Franz Edelman, who founded the Operations Research division within RCA, one of the first corporations to embed research as a business imperative.



About MSD

The Louisville/Jefferson County Metropolitan Sewer District (MSD) works to achieve and maintain clean, environmentally safe waterways for a healthy and vibrant community. The organization’s more than 650 employees provide wastewater management, drainage and flood protection services across the 376 square miles of Louisville Metro. In addition to operating and maintaining Louisville Metro’s sewer system, floodwall system, water quality treatment centers and flood pumping stations, MSD invests in hundreds of infrastructure improvement projects each year, plants more than 1,000 trees and other vegetation annually to enhance water filtration and reduce runoff, and provides numerous outreach programs to inform and educate the community about protecting our waterways.