MSD Breaks Ground on Innovative Waterway Protection Tunnel

LOUISVILLE, KY — During the next two years, a construction project that will largely occur 18 stories underground, will improve the quality of Louisville’s waterways by keeping millions of gallons of sewage out of Beargrass Creek and the Ohio River.

Today, Louisville MSD and city leaders broke ground on the Waterway Protection Tunnel, at the tunnel entrance site, which is at 12th and Rowan streets.

The Waterway Protection Tunnel will capture 22 combined sewer overflow points that discharge 351 million gallons of mixtures of sewage and rainwater in a typical rainfall year that flow into the South Fork of Beargrass Creek and the Ohio River. The tunnel will allow capture of 98 percent of these overflows and store the mixtures till the rain subsides and sewer system capacity is available. The mixture will then be pumped back into the sewer system and conveyed to Morris Forman Water Quality Treatment Center resulting in a safer, cleaner environment and waterways for our community.

An Innovative Solution

The Waterway Protection Tunnel is part of MSD’s Consent Decree that includes building storage basins across the community to help reduce sewer overflows.

The Waterway Protection Tunnel is an innovated solution that replaces three storage basins originally planned 10 years ago to be located near Lexington Road and Payne Street; Story Avenue and Main Street; and, 13th and Rowan streets. Now, advances in technology and reductions in the cost to build the tunnel make it feasible to use a tunnel instead of three basins. The tunnel will have more storage capacity than the three basins for approximately the same cost, but construction will be less disruptive to Louisville’s Main Street arts and business district, Butchertown’s business district, Irish Hills’s residential community, and area traffic during the two-year construction period.

This design change also gives MSD the benefit of operational redundancy to one of its pumping stations that protect residents and businesses from flooding and sewer backups.

Building the Waterway Protection Tunnel

The tunnel project is $200 million and is part of MSD’s Consent Decree budget. It begins at 12th and Rowan streets and continues east, southeast for 2.5 miles and ends near The Home of the Innocents on East Main Street. The tunnel will be 20-feet in diameter and approximately 200 feet below the surface, which is more than 18 stories below ground. It can store up to 37 million gallons of combined rainwater and sewage.

The tunnel and its interceptor sewer lines will be substantially completed by December 31, 2020, meeting all requirements for certification with the U.S. Environmental Protection Agency for MSD’s Consent Decree.

For more information visit: LouisvilleMSD.org/Tunnel
MSD's Additional Work in the Community
Underground storage basins and the Ohio River Tunnel are part of MSD’s larger endeavor to prevent sewage from overflowing into Louisville’s waterways. The basins and tunnel are designed to capture rainwater and sewage from overflowing into Louisville’s waterways. The basins and tunnel are designed to capture rainwater and sewage, which otherwise can overwhelm the sewer system during rain events and flow untreated into our waterways. These underground storage areas retain the mixture of rainwater and sewage until the rain subsides and system capacity is available, then it is gradually released back into the sewer system. At that point, the water is conveyed to one of MSD’s Water Quality Treatment Centers, treated and returned to our local streams or the Ohio River.

By 2020, MSD will capture and treat 98 percent of the combined sewer overflow volume in a typical year of rain. Combined sewer overflows would total 343 million gallons in a typical year. That is substantially less than the two- to nearly six-billion gallons of combined sewer overflows per year that MSD has reported in recent years.

Basin Update
Currently, four storage basins in the combined sewer system — Clifton Heights, I-64 & Grinstead, Portland and Shawnee Park basins—are in the construction phase.

Bells Lane, Logan Street, and Nightingale basins are in-use in the combined sewer system. Muddy Fork and Bancroft basins — in the separate sewer system — are complete.

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 600 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.