

Overflow a no-no in Ohio



In order to prevent millions of gallons of overflows occurring every year, a utility from Cleveland, Ohio, has taken trenchless action to keep their waterways clean. As part of this issue's focus on trenchless in North America *Trenchless International* delves deeper into this ongoing project.

85 MILLION GALLONS of sewerage overflow sounds like an intimidating figure.

So it wasn't surprising that the Northeast Ohio Regional Sewer District (NEORS), the public utility company for the management of stormwater and wastewater infrastructure in the Greater Cleveland Metropolitan Area, needed to reduce the figure quickly in order to preserve the surrounding environment for the future of the Northeast Ohio region.

Enter the Dugway West Interceptor Relief Sewer (DWIRS) project. As part of the utility's long-term project to reduce the combined sewer overflow volume figure from the staggering 85 million gallons per year down to 21 million gallons – the Easterly Combined Sewer Overflow (CSO) Long Term Control Plan – the utility decided to construct a wide network of sewers and tunnels to achieve this ambitious goal.

On 3 October 2013 the Northeast Ohio Regional Sewer District awarded the \$US57 million DWIRS project contract (one of several sewer construction projects around the region to combat the CSO problem) to joint venture Walsh Construction Co. of Detroit, Michigan and Super Excavators, Inc. of Menomonee Falls, Wisconsin.

The purpose of the DWIRS project for NEORS is to construct a conveyance tunnel measuring approximately 4 km in length.

The sewer was designed by international firm AECOM to hold combined wastewater and stormwater during heavy rains and essentially reducing overflows that were contributing to flooding the Western area's waterways.

The Akkerman SL60 microtunnelling tunnel boring machine (MTBM) was launched by Super Excavators' MTBM Team on the first of 21 drives on 14 August 2014, from a 13 m deep secant pile shaft.

To date, the MTBM has completed the tunnelling of approximately 1,219 m of the total approximate 3,200 m sewer length required for the DWIRS project.

The Akkerman MTBM is constructing sewers ranging in depths from approximately 180–1,000 m deep in both rock and soft ground matter.

The area which surrounds the location of the DWIRS is mainly residential, interspersed with commercial properties and parks.

The Dugway West relief sewer and the new Dugway Storage Tunnel will direct the wastewater flow north to release into the



The launch pit for the microtunnelling application during the Dugway West Interceptor Relief Sewer project.

existing Dugway East Interceptor Relief Sewer (DEIRS) once the project is complete.

While Super Excavators is predominantly focused on the microtunnelling aspect of works for this project, Walsh Construction, is working to complete all structural concrete and open-cut sewers to ensure the tie-in connections to the existing Dugway Culverts are fully operational.

The project also includes modifications to 39 existing combined sewer flow regulating structures, as well as the demolition of eight surrounding buildings.

The Dugway West Interceptor Relief Sewer project is scheduled to be completed by December 2016. [f](#)



The DWIRS project involves ongoing works with an above ground contractor.



An aerial view of the MTBM launch pit.