

DDS Flow Monitoring in the City of Hilliard, Ohio with URS



Similar to other satellite communities in the Columbus, Ohio area, the City of Hilliard, Ohio's sewage is transported and treated at wastewater treatment plants owned and operated by the City of Columbus. As part of an ongoing CMOM (Capacity Management and Operations Maintenance) program, Hilliard had recently signed an Ohio EPA (OEPA) Director's Final Findings and Orders, that required them to monitor wastewater flows at five points in their collection system that were either at or very close to the where they meet up with the City of Columbus' collection system.

In an effort to reduce both the frequency and severity of sanitary sewer overflows (SSOs), which puts public health at risk, the EPA introduced the Capacity, Management, Operation, and Maintenance (CMOM) approach. CMOM is an information-based approach to making wastewater facilities more proactive and less reactive. The CMOM regulation requires that wastewater facilities develop a plan that encompasses the potential issues that could lead to a SSO. This plan includes using an information-based priority setting, evaluating the capacity for all parts of the collection system, developing a plan for preventative maintenance, and conducting periodic audits to identify deficiencies and potential problems.

Prior to this order, Columbus had also been under similar orders for the past several years and was now expanding their vision further to assess the needs of the satellite communities whose sewage they were processing. The consulting engineering firm, URS, currently has the CMOM contract for Hilliard which also includes these five capital improvement monitoring projects.



**DDS Meter Install Hilliard Ohio
(Intersection Scioto & Darby Creek Rd)**

According to Clark Rausch, PE, Deputy City Engineer with the City of Hilliard, "The sites within the collection system that needed to be monitored have basically been visually monitored on a weekly basis and after heavy rainfall events. The city had a very primitive kind of system. We would pop the manhole lids and look to see if there had been any surcharges at the site." Jeff Kerr with URS adds, "The metering project was required by the City of Columbus for two purposes: 1) to eliminate one SSO in Hilliard and 2) to look at total flow at each point of connection to the Columbus sewer system to see if there are any excessive flows at any of those locations

where the permanent meters would be located. We will have a meter at each point of connection to the Columbus sewer system. There hasn't really been any flow metering in Hilliard for years."

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**Clark Rausch, PE,
Deputy City Engineer,
Hilliard, Ohio**

To determine the metering requirements for the sites, URS performed a cost analysis for the City that included the comparison of flow meter purchase, flow meter rental, and Hach Company’s Data Delivery Services (DDS), where *no* meter purchase would be required. Rausch adds, “It just was more cost efficient to do DDS.” With DDS, there is no need to purchase flow meters or visit monitoring sites again. Hach installs their award winning web-enabled flow meters and handles any maintenance. Users have 24/7 access to their complete and unedited data via any web browser.

Heavily involved in the selection process, Jeff Kerr with URS adds, “We looked at the city purchasing their own meters for the permanent installations and then coming back and collecting and downloading the data every couple of weeks manually. It was more cost effective to go with DDS.” Local Hach flow meter sales rep, Joe DePetro of Chesley Associates, recommended DDS to URS personnel while Dave Baker, Hach DDS Business



24" Sewer Line (Dublin Rd) Monitored by DDS Flo-Dar

Development Manager, worked closely with both City and URS personnel on the details of their 2-year DDS contract that included an additional 1-year of DDS monitoring, if deemed necessary. The five Flo-Dar meters were installed in January 2009. Flow data from the DDS meters will be put input into a SWMM (Storm Water Management Model) model that is nearing completion. SWMM was first developed in 1971, and has been revised several times through the years. It continues to be widely used throughout the world for planning, analysis and design related to stormwater runoff, combined sewers, sanitary sewers, and other drainage systems in urban areas, with many applications in non-urban areas as well.

Rausch states that there were numerous reasons for choosing DDS including recommendations from other DDS customers and the ability to monitor everything online. He adds, “On a personal note, I have been *very impressed* with both Ian

Morrison (Hach Field Service Technician) who installed the meters and Dave Baker with their support and everything they have done. We appreciate the way you guys handle things.”