A New Approach to Flow Monitoring in Carmel, Indiana

A two-year inflow and infiltration (I&I) study to be performed at the **City of Carmel, Indiana** led Waste Water Department operations personnel on a search for a cost-effective approach to accurate flow data collection. The Operations Division is responsible for daily operations, distribution and field services. The City of Carmel owns and operates a wastewater treatment facility that processes and treats sanitary waste from Carmel, Clay Waste District, and Westfield Utilities. The plant has the capacity to treat 12 million gallons of wastewater a day.

According to Ed Wolfe, Operations Manager for Carmel's Waste Water Department, "We were looking for 'simplicity' for this project. In the past we had tried installing and maintaining flow meters with our own staff and we had some problems with data downloading and so forth. This time we thought it would be much simpler and more reliable to have an outside firm perform the work."

One alternative to meter ownership is the turn-key approach provided by some manufacturers and instrumentation service firms. In many cases this approach had the customer paying very high prices for their flow data. This high price was associated with regular maintenance and repairs that needed to be performed on the permanently installed sewer flow meters during the entire monitoring project as well as the high cost of confined space entry to gain access to the site a repeated number of times. Another reason for the downward trend of this turn-key practice is the fact that the flow data is received by the customer via a third party. In some cases this type of 'edited' or manipulated data made some customers skeptical of its authenticity. Additionally, flow meter rentals or lease/purchase fees can quickly add up and are not cost-effective in a long-term monitoring situation.

Wolfe adds, "There seemed to be some complexity to most pricing structures for a turn-key solution. In some instances if you rented the meters for so long they became yours or you could lease the meter and pay for the service." When discussing the City's equipment requirements for the project, Marsh-McBirney sales representative Malcolm Robertson of Chesley Associates felt that the **Marsh-McBirney Data Delivery Services (DDS)** offering would be ideal for this application.

DDS is a new approach to sewer flow metering with all the innovation you've come to expect from Marsh-McBirney without the capital expense of purchasing a flow meter. Customers receive accurate, reliable, unedited and repeatable data at the lowest cost possible through a 'hands-off' service. DDS is also an ideal approach for consulting engineering firms and flow service providers that want to provide their customers a 'better solution'. So whether you need data from one monitoring site or many more, DDS will change the way you think about sewer flow metering.

With DDS you only pay for sewer flow data and you don't have to leave your office to get it. DDS customers enjoy the added benefit of no unforeseen or hidden flow monitoring costs. For as little as $500/month, Marsh-McBirney furnishes a web-enabled Flo-Dar sewer flow meter and all of the following benefits:

Marsh-McBirney Data Delivery Services can deliver unedited flow data directly to your PC, or virtually any web browser.

- 24/7 access to your unedited sewer flow data via web browser anytime/anywhere
- Up to 95% data uptime guaranteed
- Event notification/Alarms directly to your PDA, cell phone, e-mail, etc...
- Secure password protected access
- Factory certified installation
- Unlimited secure data transfers
- Daily data back-ups
- Live customer support

The Flo-Dar 'above-the-flow' radar velocity/area flow meter received the Water Environment Federation's Innovative Technology Award, the first sewer flow meter to ever receive this prestigious award.

Hach Data Delivery Services provide a maintenance-free Flo-Dar flowmeter plus 24/7 web-based access to data.

According to Wolfe, "The (DDS) plan that Marsh-McBirney offered with a fixed price per meter per month was more attractive." The consulting firm of **Jones & Henry** was involved in the project and installation was performed by factory-certified installers from **Severn-Trent**. Five Flo-Dar meters have been installed at Carmel under their DDS contract. Wolfe adds, "Basically we're trying to use the information from the Flo-Dar meters to see where the limited amount of rehab money we have would be most effectively used. We have done some short-term studies in the past in various areas in the collection system. We had collected some basic information on these four to five critical areas and we thought it was a good idea for us to look at dry weather flows versus wet weather flows." Wolfe notes that the City's Engineering Group is responsible for analyzing the flow data from the meters. Carmel's flow data is easily accessed 24/7 via a web browser providing data direct to their desktop any where/any time. Additionally, DDS provides event notification via cell phone, pagers, PDA's, e-mail, mobile phone, etc. on any parameters that the Flo-Dar monitors.

Event Notification delivers alerts to cell phones, PDA's, etc...

Dave Baker, Business Development Manager for Data Delivery Services (DDS), considers himself a lucky guy to have been able to work with Ed Wolfe. He states, "Ed's forward thinking helped make our Data Delivery Services option a real success for the City of Carmel. It was a pleasure to work with Ed and his associates. The sites were perfect for Flo-Dar and the installations went very smoothly. One thing that always amuses me is the reaction that DDS customers have when they see their data on the web interface for the first time. I will never forget the smile on Ed's face when we met in his office and first looked at the flow data. It's the same reaction I get to see from all of our DDS customers. That's what makes these projects so enjoyable. Guys like Ed realize that his associates will no longer have to contend with the safety risks involved in entering manholes to clean sensors or contend with traffic control while trying to download flow data at a monitoring site. Instead, they can concentrate on other tasks, and everyone can feel good about the decision they made in purchasing this easy solution to gathering flow data."

Carmel’s Award-winning Wastewater Treatment Plant The wastewater facility's innovative strategies and high standards were recognized by the Environmental Protection Agency when it was named the "best municipal plant in its class."

4539 Metropolitan Court • Frederick, Maryland 21704-9452
(301) 874-5599 • (800) 368-2723 • FAX (301) 874-8459
www.hachflow.com