Vaughn & Melton and Persia Utility District
Find That Multi-Mag is Perfect Fit

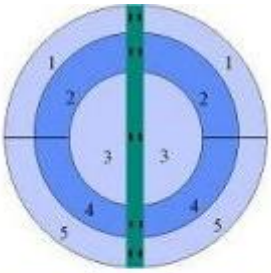
When a requirement to monitor the flow of finished water from the Persia Utility District's (Rogersville, TN) water treatment plant arose, the engineering firm of Vaughn & Melton (V&M) had the responsibility for flowmeter selection. V&M, an award winning engineering and architectural services firm was established in 1967 when a need arose for engineering services not available in their local community of Middlesboro, KY. Today, V&M has over 200 employees at six locations throughout Kentucky, North Carolina and Tennessee providing engineering services in the disciplines of infrastructure, industrial, and architectural design as well as facilities operations and management in numerous fields including environmental management.

From the onset of the Persia Utility project it was clear that the application posed numerous challenges. Short pipe runs, restrictive piping configurations as well as valves located nearby to the proposed monitoring site would prove difficult for most flowmeters to accurately monitor. Since most flowmeters require multiple straight pipe diameters away from the monitoring location as well as reasonable distances from valve disturbances to accurately monitor flow, a luxury not available at this site, the flowmeter choices were quickly narrowed.

The Persia Utility District Water Treatment Plants is a 500 gallon per minute (gpm) water treatment plant that services approximately 1,500 customers. The facility, constructed in 1998, has undergone upgrades in recent years including an intake structure, raw water transmission lines, laboratory equipment and controls, and approximately two miles of distribution lines.

V&M Project Engineer, Marios Georgiou, states, "The monitoring site was located on the discharge side of the water treatment plant. We were having a hard time finding a flowmeter that would work. The site was close to valves and we did not have any additional pipe diameters." Chris Paris, President/Owner of Southeastern Automation Group, the local Marsh-McBirney sales

representative, contacted Georgiou and felt he had the solution for the Persia flow monitoring application—the Multi-Mag Magmeter. Unlike expensive spool-piece magmeters, Venturi meters, and other insertable meters that only provide a single point measurement, the Multi-Mag Insertable Magmeter utilizes multiple measuring points that are precisely positioned according to the exacting pipe size. The electrodes constantly profile the flow to provide exceptionally high accuracy - even near bends and elbows. This patented technique provides the end user with unprecedented accuracies (published specification of 1%) even under the most demanding flow conditions including installation near bends or elbows as seen at the Persia facility as well as low flow conditions or wide flow ranges. The Multi-Mag is easily installed through a “hot tap” installation without the need to shut down or bypass flows thereby saving thousands of dollars in installation costs. Additionally, the Multi-Mag costs significantly less than most flowmeters whose costs increase substantially as pipe size increases. The use of the Multi-Mag in the Persia Utility District application would actually save the utility money on the instruments cost for the 10-inch line as well as additional savings reaped from significantly reduced installation costs.



Each Multi-Mag sensor is custom-built to the exact specifications supplied by the customer. Building sensors to exact inside pipe diameter ensures the highest possible accuracy.

Independent laboratory test data from the National Institute of Standards and Technology (NIST) and the Water Research Center (WRc), as well as hundreds of installation worldwide, confirm Multi-Mag’s accuracy. The Multi-Mag has become one of the most popular and effective products ever produced by Marsh-McBirney. Its ability to accurately measure flow in “less than ideal” conditions has earned Multi-Mag distinguished acclaim in the water industry.

Pleased to find a proven flow monitoring solution, V&M placed an order for a 10-inch Multi-Mag. Georgiou adds, “The meter has been installed for about three years now. Due to the on-site constraints, the Multi-Mag was a “perfect” solution for this application and the best sensor to use.” When discussing other desirable features of the meter he adds, “The meter was easy to install.”

The selection of the highly accurate Multi-Mag Magmeter for this once problematic flow application is a testament to V&M’s commitment to base their future success on strict adherence to high standards.

For additional information contact McCrometer, Inc.
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