

New Flow Meter Coexists With Fish & Turtles in Wichita Falls, Texas



When the City of Wichita Falls, Texas needed to monitor the raw water flow leaving a 24" pipeline at the bottom of the Lake Arrowhead dam they knew it would not be an easy task. Lake Arrowhead has approximately 106 miles of shoreline and is heavily used by local residents for swimming, fishing and boating activities.

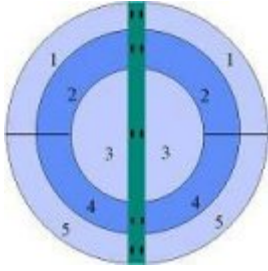
The city's Water Purification Division was responsible for flowmeter selection for this project. Additionally their group is responsible for producing bacteria-safe drinking water for its 104,000 citizens and other surrounding communities by meeting all state and federal water quality requirements. The Water Purification Division's primary goal is to protect and enhance the health of the citizens of Wichita Falls, protect the environment, and promote economic development by providing an excellent product for industries to use in their processes. Wichita Falls, whose slogan is "The City that Faith Built", is home to many internationally renowned businesses including Howmet Casting and Refurbishment, Vetrotex CertainTeed, PPG Industries, Cryovac, Stanley Tools, and the A.C. Rochester Division of General Motors. These businesses allow the city to remain on the cutting edge of the global economy.

The city's flow monitoring site was located 5 feet away from an elbow as well as 10 feet from a pipe tee making this a challenge application for most commercially available flowmeters. Robert Phillips, Electronics Technician with the City of Wichita's Water Purification Division, states, "We needed a meter to monitor the raw water leaving the lake that then goes to a channel that feeds another city." Phillips adds, "The flow monitoring site is located at the bottom of the dam at Lake Arrowhead. At the bottom of the dam there is sediment, fish, etc. Due to the combination of bends that we had in the pipe and the fact that the pipe was vertical, we knew it would be difficult to find any meter that would accurately work under those conditions. The sensor location would be within 3 feet of the end of the pipe at the discharge line."

When an advertisement for a Marsh-McBirney flowmeter caught the eye of city personnel, further internet research was conducted. Macaulay Controls, Marsh-McBirney's local sales representative, met with city personnel and an order was placed for a 24" Multi-Mag Magmeter. Phillips adds, "The Multi-Mag was the only one that would fit and that would work with this application. It's too close to pipe bends and other problems we had for the other (flowmeters) to work. Ultrasonic wouldn't work either. There's no room to put the ultrasonic sensor because it would take two sensors and we're too close to the discharge line. However the Multi-Mat would work."



The Marsh-McBirney Multi-Mag utilizes proven electromagnetic technology. Prior to the introduction of the Multi-Mag, expensive spool-piece magmeters, turbine meters, and other insertable flowmeters that only provided a single point measurement were utilized. After years of extensive testing and thousands of installations worldwide, the patented Multi-Mag flowmeter provides you with multiple measuring points precisely positioned



according to your pipe size to making this the most accurate flowmeter available. The sensor has multiple electrodes that are precisely positioned according to pipe size. The electrodes constantly profile the flow to provide exceptionally high accuracy - even near bends and elbows. The Multi-Mag is easily installed through a “hot tap” without the need for additional piping or flow shut down. Independent laboratory test data from the National Institute of Standards and Technology (NIST) and the Water Research Center (WRc), as well as hundreds of installations 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.

Regarding additional reasons for the Multi-Mag selection, Phillips adds, “We liked the cost of the meter as well as the fact that we didn’t have to do something that would involve changing the piping was a plus.” Since Multi-Mag is quickly and easily installed via a standard pipe tap assembly without the need for bypasses or additional piping the meter turned out to be a perfect match for Wichita. The meter has been installed and accurately monitoring flow for over 4 years now. Phillips has been pleased with the accuracy of the meter through the years. Other than an issue with turtles trying to chew through the meters sensor cable all is well at the Lake Arrowhead flow monitoring site! Phillips looks forward to continued years of accurate, cost-effective flow monitoring with Multi-Mag.

For additional information contact McCrometer, Inc.
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