Large Meter Accuracy

In the last addition of the Good Water News I wrote about water loss through your large meters. I gave you some pointers on how to conduct a water audit and how to test a large meter for accuracy.

While working in the southwestern portion of the State recently, I just happened to stop into Hayes Center to visit Chuck Pierce, the system's water operator. The first thing he said to me was he really liked my article in the Good Water News. It really took me by surprise. I didn't know anybody actually read my articles. After he refreshed my mind on what the article was about, he said he had checked one of his large meters and it wasn't registering low flows. This meter was located in the school. He conducted a simple test of flushing the urinal to see if it would move the meter. It didn't. He said he had no idea how long it had been that way. I would have to imagine, most, older large meters are in the same shape. Chuck informed me he had already ordered a new meter.

Just in case anyone else read this article and are thinking of replacing an old meter, it might be a good time to insure they are installed correctly.

It is imperative to follow the manufacturer's installation instructions when installing large meters. I got on the web sites of a couple of manufacturers just to get an idea. Both manufacturers highly recommend using a strainer before the meter. This will reduce the amount of straight pipe required before the meter. The strainer actually straightens out the flow before the water enters the meter. It also filters out debris that may enter the meter and interfere with the accuracy. Without the strainer, 10 to 25 times the pipe diameter of straight pipe is recommended before the meter. This means a 2 inch meter would need a minimum of 20 inches of straight pipe before the meter. With the strainer, 4 to 5 times the pipe diameter of straight pipe is recommended before the meter. This means a 2 inch meter would need a minimum of 8 inches of straight pipe before the meter. 2 to 4 times the pipe diameter of straight pipe is recommended downstream of the meter.

Here are some other items that you may want to consider. One is a bypass. Some installations, such as a hospital, may require a bypass. This will allow you to test and repair the meter without interrupting their service. Full open shut off valves should be installed for future maintenance and repair. An expansion joint will make it much easier to install and maintain the meter in the future.

The best advice I can give is to read and follow the manufacturer's recommendations concerning installation for the most accurate meter possible.