Large Meter Testing

By Russ Topp, Circuit Rider

Have you ever conducted a water audit of your water system, and found out you have an unusually high percentage of unaccounted for water? The first thing you think is I must have a water leak. You drive and walk the entire distribution system and find nothing. Where is that water going?

Maybe this would be a good time to explain just what a water audit is and how to conduct one. Simply divide the amount of water you sold by the amount of water you pumped. If you do not meter water that is used for watering ball fields or the park it might be best to use the winter months. Let's say you use the months of January, February and March. The total amount of water you pumped for these three months is 7,500,000 gallons. During these months you sold 5,000,000 gallons. Simply divide 5,000,000 by 7,500,000 you should get 66%. This means you are selling 66% of the water you pump, or losing 34%. Typically the industry standard is anything under a 15% loss is acceptable. Remember to compare your well meters with the annual well efficiency records as to how accurate your well meter is and to figure the water lost through the pre-lube lines.

If you were able to attend the Fall Conference in Gering or the Rural Water Expo in Fremont, Dave Dunning with HD Supply may have the answer to some of this water loss. Dave demonstrated how to test large water meters. Almost every water system will have at least a couple or maybe several large water meters in their system. Some places you may find a large meter could be at the school, nursing home, hospital, an apartment building, possibly a factory or processing plant.

Turbo meters where installed in a lot of services with 2" or larger service lines. At the time these type of meters where fairly inexpensive to install. Dave used an old turbo meter in his demonstration. This meter had over 10 million gallons through it and it was still around 97% accurate at the high and medium flows. Low flow was a different story. A flow of 2.7 gallons per minute wouldn't even turn the meter. At this rate a system could lose almost 4,000 gallons of water per day. During a one-

month billing cycle this would add up to be 120,000 gallons and over a year over 1.4 million gallons. At $1.50 per thousand this would cost your system over $2,000 per year. This is for just one meter. If your system has several of these meters the dollars could really add up. I realize these meters are not cheap to replace, but when you add up the possible lost revenue, you may want to at least check them for accuracy.

Dave has a large meter tester that is available for loan. He announced that he would be willing to test a meter for you or if you have several to test, he would train you how to use it and you could test them at your convenience. Not all large meters need to be replaced, depending on water quality they may just need to be cleaned up or possibly some new parts installed.

If you have some of these large meters it may be time to test them for accuracy.