MY WATER METER IS WRONG

By Carrie Bolton

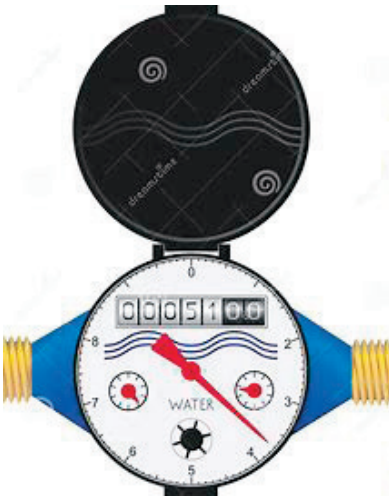
For many years I used to hear this from customers over and over again after they received their quarterly water bill and would call the Clerk to complain about the high costs. Nine times out of ten it was a leak on the customer's side and there was nothing wrong with their meter.

Problems with water meter readings will always be an ongoing issue in the water industry. Educating the customer on how the water meter actually works is the best way to avoid future incidents. A good solution could be to come up with a Checklist and ask your Clerk to hand it out or include it in the water bill. The user should also make sure that the meter is easily accessible for you to read.

How Do Water Meters Work?

There are 3 types of water meters: mechanical, electromagnetic & ultrasonic *(Mechanical are typically the most commonly used in households)* and they measure in gallons or cubic feet.

- **Mechanical meters** are highly accurate and are calibrated to measure the flow rate by the rotating impeller inside the chamber which can wear down over time due to the impurities in the water.
- **Electromagnetic meters** require a power supply and send a sound wave through the water to measure the flow rate.
- **Ultrasonic water meters** require power but have no moving parts very much like a computer hard drive and calculate velocity.



Do you have a Leak?

There could be several culprits that are causing the high usage, first thing to do is start isolating. Write down the number displayed on your water meter gauge then shut off your valve coming into the house, wait at least 20 minutes before checking your water meter gauge again. If the number changes, then you have a leak, start checking the list below. If your meter reads in cubic feet, you can multiply the meter reading by 7.48 to convert to gallons.

- **Toilet** – put some food coloring in the tank to see if it shows up in the bowl (Did you know a leaking toilet can use up to 300 gallons in 24 hours?)
- **Sinks** – check under the cabinet for wetness, or rotting wood (A dripping faucet 1 drip per second wastes 2,700 gallons per year)
- **Bathtubs / Showers** – check the caulk or grout - is it missing or are there any soft areas?
- **Dishwasher** – check the hose connection
- **Washing Machine** – a pin hole leak in the hose can waste up to 170 gallons per day
- **Refrigerator** – check the water supply to the icemaker
- **Garden Hose** – make sure the hose is disconnected
- **Water Softener** – is it stuck in regeneration mode?
- **Hot Water Heater** – check for corrosion and rust some may only last for 10-15 years

In just 3 months a continuous leak can waste a substantial amount of water.

- **1/4"** – 1,181,000 gals.
- **3/16"** – 652,000 gals.
- **1/8"** – 296,000 gals.
- **1/16"** – 74,000 gals.

If the customer still isn't convinced you can offer to send the meter out to the manufacturer (at their expense) to be tested and/or calibrated. It's a never-ending battle, but hopefully these are a few helpful solutions to finding the leak and conserving water. 💧💧💧

Resource: www.niagaraconservation.com

Carrie Bolton
Training Specialist
bolton@nyruralwater.org