

# Service Authority Customer's Corner

## This Month's Topic: Water Meters and Utility Bills

One of the primary responsibilities of the King George County Service Authority (hereinafter KGCSA) is to provide a consistently reliable supply of safe drinking water to all public system customers. This is accomplished through the operation of 12 well driven water systems that produce more than 750,000 gallons of fresh water each day. Customers are charged for water consumption on a bi-monthly basis in the form of a utility bill (which also includes sewer and debt service charges). A minimum bill is assessed for water usage up to and including 5,000 gallons. Usage above 5,000 gallons is calculated based on current approved rates (which are posted at: <http://www.king-george.va.us/county-offices/service-authority/service-authority.php>).

Water and sewer bills are based on water consumption as reflected by actual water meter readings, unless otherwise noted on the bill. Water meters are typically placed inside a chamber connected to the water main, and are usually located within an easement close to the boundary of your property. The meter will be protected by a small square or rectangular cover (Figure 1).

The actual water meter used can vary depending on when the house (or other type building) was constructed, and in some cases the original meter may have been replaced over the years or upgraded to a newer, more accurate model. However, most customers will have one of four principal types of meters: (1) direct read; (2) touch pad; (3) radio frequency; or (4) ultrasonic. Figure 2 illustrates each of these type meters. While they differ somewhat in how the data is read and captured, they all measure the cumulative amount of water in gallons (or fractions thereof) that passes through the meter and on to the customer.



Figure 1. Typical Water Meter Housing Cover

Direct read meters must be accessed individually by removing the water meter casing protective cover and read manually. Touch pad meters can be read by simply touching the circular pad on top of the meter box cover (shown in Figure 1) with a special sensing rod, which then transmits the reading to a hand-held data collection device. Radio frequency and ultrasonic meters offer a choice of reading options utilizing hand-held, walk-by, or drive-by automated meter reading systems. The more automated the data reading and collection system, the less chance there is for human error.



Figure 2. Typical Water Meters (top row l to r): direct read, touch pad, radio frequency, ultrasonic. Also shown below meters is an Itron MVRs hand-held data collection device.

## Service Authority Customer's Corner

Mr. Ron Bell, KGCSA staff maintenance technician (Figure 3), reads every meter in the county during a three week period, every other month. He typically reads about 300 meters per day,



*Figure 3. Mr. Ron Bell, KGCSA principal meter reader.*

primarily by direct read, touch pad, or radio frequency transmission. Only about 20 of the state-of-the-art ultrasonic meters have been installed to date, but all new installations will incorporate them, and they will gradually begin to replace older meters as they are taken out of service.

After all meter readings have been collected, they are downloaded directly into processing software maintained at the King George County Finance Department. The Utility Billing Specialist, Ms. Dalyn Pettit, processes the data and generates the bi-monthly utility bills. Sometimes these meter readings may indicate higher consumption which

may be a leak, bad read, or damaged/tampered meter. All of the meter reads are compared to the particular customer's historical average for determination of any anomalies. When these occur, a second independent reading is taken to double check results, and if necessary, the customer may be contacted to inform them of a leak and/or to determine the possible cause(s) of the unusual reading.

As a final point, please note that water meters are the property of the KGSCA, and removing or tampering with them can result in a tampering fee being assessed. In addition, homeowners and business owners should be aware that they are responsible for the water service line that runs from the water meter box to the building, as well as all water lines within the building. If you should see sunken, wet, or mushy areas at or near the incoming service line, it could indicate a leak or break in the line. If you suspect a problem with the service line, you should call Customer Service at 540-775-1657; Repairs & Maintenance at 540-775-2746; or for Emergencies after hours & on holidays at 540-775-2049.