“My Water Meter is Lying” or . . .
No Way I could have Used That Much Water”
(Can a Water Meter be Defective and Run Fast or Slow)

There are a number of factors that can result in you using more water during a billing quarter than you expected. The first inclination of many water customers is to ask if their water meter might be defective. “It must be running too fast”, or conversely “is it running slow.” This is a common question the Water Department gets and it’s a sensitive subject for most.

First, let me talk a bit about the about the process. The Village automatically flags any meter readings that look high or low and investigates by re-reading the meter to ensure a number didn’t get transposed or read wrong.

Assuming there was no error in reading the number of units used on the meter, a customer can ask for the meter to be tested for accuracy by the DPW. This is at the customer’s expense. The current cost for the DPW to remove, test, and reinstall the meter is $60. If a customer does not trust the DPW to read the meter, it can be sent out to an independent tested to check the meter. This will cost more but that option is available to the customer who may not trust the DPW’s process. While this process may give customers additional hope that it’s an inaccurate meter giving them the reading they got, historically, we very rarely find meter issues.

Now let me talk about the probable reasons for high readings. The hard reality is that the source of the reading can almost always be attributed to something going on in the household or the business. There are a number of possible reasons.

With a few exceptions in the Village, the water meter is almost always connected just inside the house to the plumbing. The meter records any flow of water into the house whether it's a sink being used, a toilet being flushed, the garden hose on, or a leaking appliance.

The Village has no idea what the water has been used for, just that the meter shows a change in the use from the last reading. Of course, the Water/Sewer Bill is based on the water meter reading and the amount of water used generates the sewer bill.

The water customer is responsible to know and understand what's going on in their own house to include tracking down potential leaks, kids filling up the pool while the parents are away, and visiting relatives taking 20-minute showers. Unfortunately, Village policy is that unless the customer can show an error in the meter, the use rate will stand. The Village routinely works with responsible customers to spread the cost of high bills over an agreed to period of time to make payment easier. The Village is far more reluctant to work with customers that act in bad faith and don't honor the agreement they make for payment.

So, let's talk about some of the reasons for unexpected high-water usage. Before we do, there are other factors for a large water/sewer bill that don't relate to usage such as yearly water and sewer rates increases and the number of customers paying into the system. Higher use coupled with higher rates will definitely get someone's attention. Rate issues and customers in the system are beyond the scope of this discussion but will be covered in separate public service announcements.

The predominant reason for a high meter reading is simply an unknown change in water use. The household has used more water than in the past but has not paid attention to the reason. Unless the family or business is watching the meter on a regular basis and analyzing how the

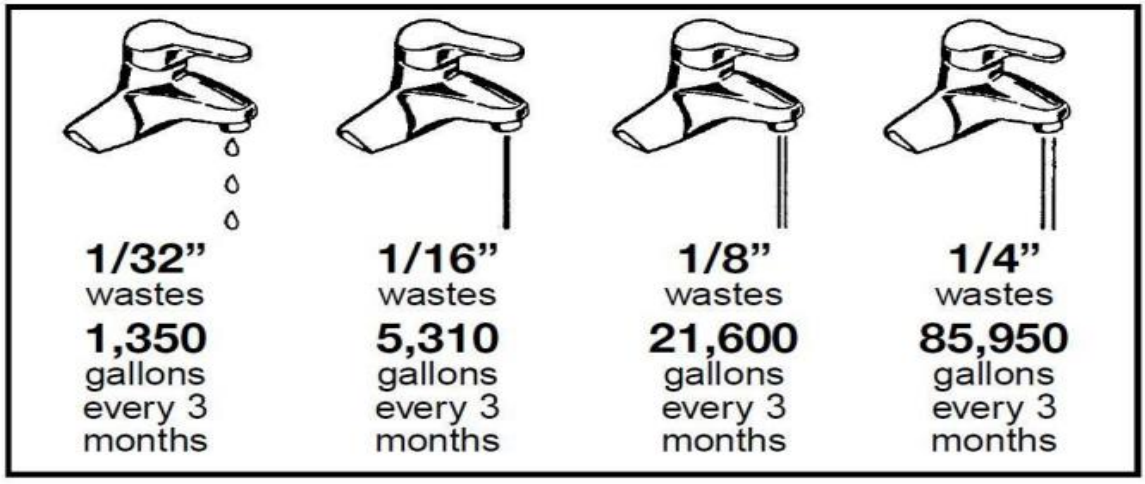
water is being used, it's easy to see a high meter reading but then claim there has been no change to the water used month after month.

The COVID Pandemic is a perfect example of a change in the amount of use without families focusing on the reason. Many families over the last couple of years have worked from home and the kids attended school remotely. Instead of the business place or school using more water, it is the household that sees higher water use. That translates directly to a higher water meter reading.

Another point to consider is water use typically is higher in the summer and lower in the winter with families running sprinklers, filling kiddie pools, washing cars, and so on. All families typically use more water in the spring, summer, and early fall months. Are you tracking the increase in usage? The Village sees the increase in more water pumped from the wells but it does not track your specific uses. Only you can do that.

Another major reason for increased water use is . . . water leaks. An unusually high water can easily be caused by a leak. Some common leaks include a dripping kitchen, laundry, or bath sink, dripping tub or shower head, or a dripping outdoor faucet. A dripping faucet can waster 20 gallons or more of water a day. A leaking toilet, or a toilet that continues to run after being flushed is another common cause of excess water use. A continuously running toilet can waste up to 200 gallons a day. The issue here is that most people don't realize it they have a problem.

A Faucet Drip Can Add Gallons to Your Water Use



A last thought. Plumbing leaks are not constrained to faucets and toilets. Depending on your houses or businesses age and structure, high water use can be incurred by underground plumbing leaks that you can't readily see. If you are seeing your meter ticking over with all the faucets in the house turned off, you may have this type of leak. A plumber may be the best person to help you locate the leak and fix it for you.

Finally, let's talk about meters and potential errors. As mentioned earlier, meters are typically located right where the water line comes into the house. The force of the water coming into the building at the meter, turns a dial that keeps count of the usage. If you get a water bill that seems too high, more than likely it is not a faulty water meter.

<u>What does a water meter measure</u>?

A water meter measures the quantity (volume) of water that passes through a pipe or other outlet. Typically, meters use a standard unit of measure for volume, such as cubic feet or gallons. Your meter works like a car odometer, recording the cumulative amount of water that has passed through the meter.

Meter Accuracy

All meters are calibrated and tested in the factory before they are shipped. The American Water Works Association (AWWA) requires meters to be within 98.5 and 101.5% accuracy to be usable. This means an error rate of 1.5% low or high. All of your water bills are charged per 1,000 gallons, which is the industry standard. This means if your perfectly accurate usage was 1,000 gallons, the registered consumption could actually be 15 gallons high or low per 1,000 each month and be within AWWA guidelines. To put this into perspective, these 15 gallons amounts to only a few dollars high or low a year for each customer. In reality, rarely does a meter test high enough to exceed 100% of flow. Also, the mechanical design of water meters does not allow for adjustments of the dials or accuracy calibration of the meter.

Can a meter run fast and overcharge me?

This is a common concern with water consumers when they get a high-water bill. The simple truth is that water meters never read inaccurately high.

The meter will not arbitrarily run faster than it was designed to run or run backwards. The mechanical parts are not capable of "speeding up" or registering a significantly higher reading than actual usage. Having a meter register 20,000 gallons of consumption when the usage was actually 4,000 gallons would be like a vehicle with a maximum speed of 100 mph suddenly being able to intermittently run at speeds of 500 mph. It isn't mechanically possible. Similar to automobiles, odometers, or other mechanical devices, the meter actually slows down with age, under-registers, and eventually stops registering completely.

Can the meter run slow?

Again, as mechanical meters wear out, they sometimes read low, and undercharge you; but they simply don't read high.

Is it possible for a meter to be read incorrectly?

Meters are typically not wrong, but every once in a while, they can be misread. Although it is very uncommon, the meter reader can incorrectly read the meter or incorrectly enter the reading in their notebook. For this reason, Village Utility Billing uses a monthly report through the Billing System that creates a report of any suspected high or low consumption numbers. This report is reviewed, and suspected misreads are automatically scheduled to be re-read.

How often should a water meter be changed?

Water meters often lose accuracy as they age. Therefore, they must be replaced every 20 to 25 years. The Village is slowly installing new meters, as funds allow, that include remote reading technology that will save labor time, ensure accuracy, and minimize the need for utility employees to go on the private property of residents.

The bottom line, as unpopular as it may be, is that meters don't overread the amount of water used. They may under-register a consumer's water usage but that is usually resolved through the billing process.

Further, the Village has a process for looking into high or low readings to determine if a meter was read incorrectly. So, it is important that the water customer have a sense of the water they use, be aware of excessive usage, and watch out for leaks of any kind. It's simply not the water meter . . .

For Further Information, Contact: Steve Clark, Sewer Commissioner, 586-784-9151