

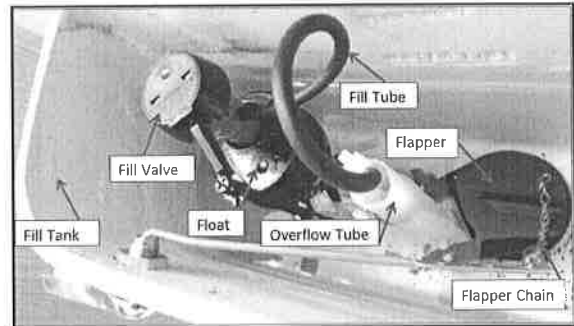
Potential Causes of High Water Usage

By Jeffrey Bennett, Utility Inspector, Engineering Division, Public Service Commission of West Virginia

#1 Toilet

Leaking water toilets are a major cause of high water usage. A leaking toilet can easily run as much as 5,000 gallons per day, or 150,000 gallons per month, if the flapper remains stuck open. A flapper can occasionally stick open from a tangled chain.

Small leaks around the flapper can be diagnosed by putting food coloring or a colored drink into the toilet's holding tank. The coloring should not appear in the bowl until the tank is flushed. To detect very small leaks around the flapper seal, let the colored water sit overnight.



Another cause of a leaking toilet is water running into the overflow tube in the holding tank. A properly adjusted float will shut the water off about an inch below the overflow tube.

#2 - Service Line Leak

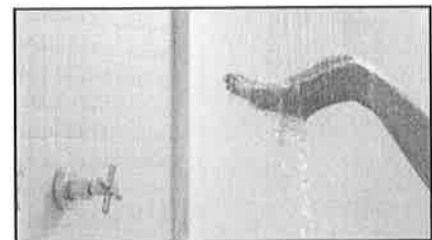
A leaky service line between the meter and the house can easily be detected by closing a valve where the water line enters the house and then watching the water meter for movement. Water utility personnel can assist with watching the meter for movement. This type of leak usually qualifies for a leak adjustment by the utility after the repair is made.

#3 Outside Hose Spigot

High water use from an outside hose spigot could be as simple as accidentally leaving the valve on and the hose running for hours or days. Theft of water from an outside hose spigot is rare, but has been known to occur. Nearby construction, pranksters, or other unauthorized water use while the homeowner is away are rare, but possible. Filling swimming pools, washing cars, and watering lawns and gardens can result in a substantially higher water use. Parents sometimes find hoses left running for extended periods of time by unsupervised children.

#4 House Guests

Average residential water consumption is approximately 50 gallons per day per person, or 1,500 gallons per month per person. Friends or relatives spending a few days during the holidays could cause an equivalent increase. Although this varies somewhat, usage higher than 50 gallons per day per person should have some other explanation.



#5 Hot Water Tank

Hot water tanks have a Temperature & Pressure (T&P) safety valve on the side of the tank. The valve is designed to prevent a tank rupture or explosion. The valve will open if either the pressure is too high (usually 150 psi) or if the temperature of the water is too high (210 degrees). Since these valves rarely open, they become corroded, and in the event the valve does open, it may not close fully due to corrosion. If installed properly, the valve will be piped to a drain and a leaky valve could go unnoticed. If the T&P drain pipe feels hot to the touch, you may have a problem.



Thermal expansion can cause the T&P valve to periodically open and can be corrected with a small thermal expansion tank. Water utilities should have literature available to explain the causes and solutions for thermal expansion.

#6 Leaky Faucets

A leaky faucet is usually not a significant problem unless the faucet is running a steady stream. A steady stream the size of a pencil lead equates to a half-cup per minute, or 45 gallons per day, or 1,350 gallons per month.

#7 Water Softeners

A properly operating water softener may use an extra 50 gallons of water per week during the regeneration process. This alone is not enough to cause a high water bill; however, some softening units with mechanical timers have been known to stick during the regeneration process, which could cause significant water usage.

#8 Washing Machine

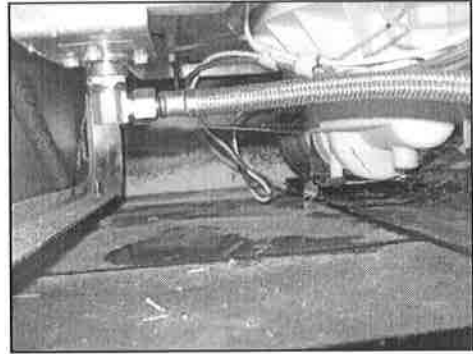
New washers use less than half the water per wash used by those made 20 years ago. The older conventional washers used approximately 40 gallons per load. These washers had mechanical timers that could malfunction and stick during the rinse cycle. The problem should be easily recognized by the homeowner having to manually move the timer. Most of the High Efficiency (HE) models use between 13 and 17 gallons per wash. *Consumer Reports* found that if an HE top-loader senses a severe imbalance, the washer may keep adding rinses until the problem is resolved. This could result in the use of up to 100 gallons on some models.

#9 Furnace Humidifier

Automatic whole house furnace humidifiers will cause an increase in water use during the winter. Many of the newer units are rated at around 17 gallons per day, or 500 gallons per month. Although rarely a problem, it is possible that a humidifier installed on a forced air furnace could malfunction and cause water to run continuously to a drain.

#10 Automatic Dishwashers

Automatic dishwashers are normally not a cause of high water usage unless the timer malfunctions (similar to conventional washing machine timers). Older dishwashers use eight to 15 gallons per wash, while newer models may only use four to 10 gallons per wash.



Tapper Says:



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The 5 W's for Handling Customer Complaints

By Vicki Lemley, Consumer Affairs Technician, Water and Wastewater Division, Public Service Commission

Water and sewer utilities are often faced with customers complaining about various aspects of their operations or service. When this occurs it is essential that the utility have a procedure in place to respond and address these customer complaints. The utility, in accordance with the Commission's Water and Sewer Rule 4.5., – (Complaints) must ensure the customer's complaint is investigated fully and promptly. Further, Water and Sewer Rule 4.5.a sets forth that the utility must investigate the customer's complaint directly or through a filing with the Commission. In the event the complaint is not adjusted or resolved, this Rule also requires the utility to notify the customer that he or she may file an informal or formal complaint with the Commission.