

Leaks from pipes, plumbing fixtures and fittings are a significant source of water waste for many households. Research has shown that the typical home can lose 2,000 to 20,000 gallons (7.6 m³ to 76 m³) of water per year due to leaks. Some leaks are obvious, such as dripping faucets and leaking water heaters. Unfortunately, many leaks go undetected for years because the source of the leak is not visible.

Do you need to find leaks in your home? Use the helpful information below.

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Whole House Meter Check for Leaks

Larger leaks or a combination of small leaks can often be detected by your water meter. Using your water meter you can perform a simple leak check with the following steps:

1. Make sure all water is turned off inside and outside the home. This test must be performed when no automatic water equipment is used, such as irrigation controllers, clothes washers, dishwashers, etc.
2. Record the reading of the water meter, and wait 15 minutes. Be certain no one uses any water during this time.
3. Record the reading of the meter again. If the meter has recorded water use during the test, it might be due to a leak. Verify that the water use is not due to small appliances such as water filters, water softeners, or whole house humidifiers.

The meter test only verifies large leaks. Using this test you cannot verify that small leaks do not exist within the home. Even when leaks are detected, this test does not indicate the location of the leaks. Further investigation is needed to detect and locate all significant leaks.

Water Softeners

Water Softeners are often the biggest cause of undetected leaks. Many people are under the mistaken impression that if the softener is turned off or unplugged that water is not passing through it. Unless the softener is BY-PASSED water will still pass through. After a long period of use, water will run continuously through the softener and go right down the drain. And even worse if the resin releases into the water system it will clog pipes and cause low water pressure from your faucets. The Village of Sugar Grove softens your water to 5-7 grains per gallon so a water softener is not really necessary.

Faucet, Shower, and Tub Leaks

Faucet leaks are a common occurrence and usually simple to repair. A faucet dripping slowly at only one drop every two seconds will waste more than 1,000 gallons (3.7 m³) per year. The repairs necessary to stop the leak depends on the type of faucet, and there are four basic types found in most homes: compression valve, ball types, cartridge types, and ceramic discs. Each type of faucet has unique methods of repair. If you are accustomed to using tools and making minor home repairs you should be able to repair minor faucet leaks.

Toilet Leaks

Toilets are one the most common sources of leaks in the home, and usually go unnoticed because the leaks are often silent and out of view. Several research studies have found 20% to 35% of all residential toilets leak to some degree. Large toilet leaks can be detected when the valve constantly emits a hissing or gurgling sound when the toilet is not in use.

To begin looking for leaks remove the tank lid and inspect the flush mechanisms. The water level in the tank should be no higher than 1 inch below the top of the overflow tube. If the water level is to the very top of the overflow tube, water is slowly leaking into the overflow tube and down the drain. The problem has one of three causes: 1) the water level is adjusted too high; 2) the float is damaged and not shutting off the refill valve; or, 3) the refill valve (ball-cock assembly) is worn and needs replacement.

Dye Test

You can perform a simple dye test to check for leaks in the flapper valve. Place dye tablets (available at Village Hall) or a couple drops of food coloring into the tank water to give the water color. If the colored water appears in the bowl within 15 minutes, there is a leak in the flapper valve. Leaks occur when the flapper valve does not create a watertight seal. The seal can be compromised due to several reasons: a) the chain snagging, not allowing the flapper to drop completely onto the valve seat; b) the valve seat is worn; or c) the flapper is worn or warped. A worn flapper is the most common cause by far, and can be easily replaced.

Whole House Humidifier Leaks

Some homes have whole house humidifiers, most common in homes with forced-air central heating systems. This humidifier is usually attached to the furnace ducting and directly plumbed to the water supply pipes to provide constant water supply to the appliance's water reservoir. The equipment often includes an overflow drain to the sewer in case the refill valve fails to close. When the valve does fail, the water is sent directly into the sewer. This allows leaks to occur for months or years before anyone realizes the water waste. It is important to check the operation of this equipment regularly during the heating season, and turn off the water supply to the equipment during seasons of non-use.

Lawn Irrigation Systems

In the Midwest climate the ground freezes and thaws every year causing the plumbing from lawn irrigation systems to move under the ground and eventually may cause an undetected leak because the line cracks or breaks. You should monitor your water consumption closely when you are using the irrigation system. Make sure the irrigation system is winterized and shut off for the winter. Water left in the lines can freeze and damage plumbing, valves and sprinkler heads also causing undetected leaks.

Pool and Fountain Leaks

Even a minor swimming pool leak can cause substantial damage and result in huge water bills and it is estimated that one pool in every 20 has a leak. A pinhole-sized leak in a pool plumbing system with 40-pound pressure (psi) will lose approximately 970 gallons (3,672 liters) of water in a 24-hour period. This comes to about 30,000 gallons (113,562 liters) a month or 360,000 gallons (1,362,748 liters) per year. Some signs that your pool might be leaking include a loss of one-eighth inch (0.32 cm) or more of water in a 24 hour period, algae formation too soon after chemical treatment, loose or falling tiles, pool deck cracks, gaps and cracks in the pool shell, a settling of the whole pool or spa structure into the ground or constantly damp soil surrounding the pool and/or under the house.

To check for a leak in your pool or fountain, place a bucket on the top step of the pool and fill it with water (also applies to fountains). Put a piece of tape on the inside and the outside of the bucket and mark the water level of the pool and the water level in the bucket. After 24 hours make a new mark on the tape with the new water level in the pool and the bucket. If the water level in the pool/fountain has dropped more than in bucket, there probably is a leak in the pool/fountain structure or plumbing system.