

Did you receive a high water bill? Take a look at your water bill. What are the dates of service that your bill covers? Now it's time for some self analysis. The change might be attributed to some water usage habits. Some common changes include: additional house guests, filling a swimming pool, additional landscape watering, washing cars, more laundry. If there is nothing different during that time period that you can think of ... you might have a leak.

## Lets Begin ....

### How to Conserve Water

- Install a 1.6 gallon toilet
- Buy a water-efficient washing machine
- Repair Leaks
- Reduce water use in lawn/garden
- Wash full loads
- Minimize shower time

### **Small Drip...no big deal**

Slow drips of water can add up quickly! A toilet that "keeps running" or a sink that drips after it's turned off can waste thousands of gallons of water a year. A small leak in your automatic irrigation system can waste about 6,300 gallons of water per month! If the drip is hot water, you are paying for wasted energy too! Fix leaks as soon as you find them.....they don't fix themselves and they are costing you money.

One of the most costly household wastes of water is a leaky toilet. According to American Works Association, toilets account for 45% of all indoor water use in a typical residence. *It is estimated that 20% of all toilets leak!!*

Toilet leaks can range from small to large, constant to random, or from being heard or silent. They all cause wasted water. Depending on the water pressure in your house and the size of the leak a toilet can leak 1 gallon of water per minute which adds up to 1,440 gallons per day. The most common places inside the tank that can leak into the bowl: a worn out flapper or ball, a damaged seat under the flapper, a damaged gasket under the flush valve, a hole or crack in the overflow tube, a refill valve (ballcock) that needs a new seat or washer.

### **Signs of a leak:**

If you have to jiggle the handle to make a toilet stop running.

Any sounds coming from a toilet that is not being used are sure signs of leaks.

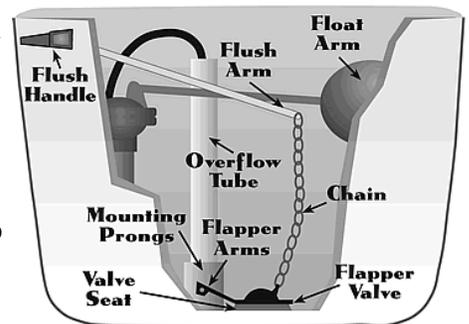
If you have to hold the handle down to allow the tank to empty. This can also mean the chain or strap is too long and doesn't lift the flapper or ball high enough to float on its own.

If you see water running over the top of the overflow, you definitely have a leaking refill valve. If you are unsure whether or not water is running over the top of the overflow pipe; sprinkle talcum powder on the top of the water in the tank, then you will be able to clearly see whether or not it is.

If you can see water trickling down the sides of the toilet bowl long after it's been flushed.

If water drips out of the refill tube into the overflow pipe

If a toilet turns the water on for 15 seconds or so without you touching the handle, this is otherwise known as the phantom flusher.



**Anatomy of a toilet**

**Leak??** It doesn't always mean a puddle on the floor, a leak can be water being drawn through the meter and through a fixture and down the sewer system without you knowing about it.

## Checking for a leak in your toilet

Most toilet leaks are caused by a faulty valve (also known as “flush valve ball” or “tank stopper”). A flapper valve should be replaced every 3 to 5 years. Most hardware, plumbing and home improvement stores should supply flappers. How to check for a leak toilet flush valve (flapper) (this works only if you have no colored cleaners in your toilet tank):

Remove the tank lid: (Don't worry this water is clean until it enters the bowl)

Add some food coloring or colored toilet tabs. (Toilet tabs are available at most hardware stores).

After about thirty minutes look in the bowl. If you see colored water, you have a leak. If water is clear, water is not leaking from the tank to the bowl. In a properly functioning toilet, no water should move from the tank to the bowl, unless the toilet is being flushed. A leaking toilet loses water from the tank to the bowl without being flushed. A toilet can also waste water due to an improperly adjusted or broken fill (ballcock) valve that causes water to enter the tank and flow into the overflow tube.

Color appeared in your bowl? Let's find what part is leaking.

Draw a pencil line on the back wall of the tank on the inside of the tank at the waterline. Then turn the water supply off, either under the tank or at the main shutoff – wait 30 minutes. If the water level remains at the pencil mark—the leak is occurring at the refill valve (the unit in the left side of the tank). If the water level falls below the pencil mark—the leak is in the flush valve, the unit located in the center of the tank.

There is also the possibility that there is a bad stopper or a damaged seat or a problem with a damaged gasket under the flush valve, meaning that the tank will have to be separated from the bowl in order to get to the connections.

The flapper is the rubber valve in the bottom of the tank that lifts up when the toilet is flushed. If the flapper is worn or cracked, it allows water to continuously flow from the tank into the toilet bowl without flushing.

Pass this test? The second most-common type of toilet leak is caused by an improperly adjusted or broken fill (ball cock) valve. If the float is set too high or if the shut-off valve fails to close completely, water will continue to enter the tank and flow into the overflow tube. This type of leak can be seen simply by taking the tank top off and observing if water is flowing into the overflow tube once the tank is full. Ideally the water level should be set so that it's even with the fill line on the back of the toilet tank (approximately  $\frac{1}{2}$ " below the overflow tube). If the water is too high in the toilet tank and is spilling into the overflow tube, the water level can be adjusted by turning the adjustment screw or by very gently bending the float arm down so that the water shuts off at a level below the overflow tube.

Flush Handle Problems: If the handle needs to be jiggled to keep the toilet from running, the flush level bar and chain (or the handle itself) may be sticking. Adjust the nut that secures it in the toilet tank. If that doesn't work the handle may have to be replaced.

Water on the floor around a toilet is certainly a problem. It can be dripping off a sweaty toilet tank during humid weather; it can mean the wax sealing ring under the bowl has disintegrated or the bowl is cracked; or it can mean the connections under the tank are leaking.

### Leaky Faucets

A leaking faucet is frequently the result of a bad rubber washer. The washer on a sink is typically located under the handle. A washer is relatively easy to replace with the right tools. It does require shutting off the water under the sink, and removing the handle. Check local home centers or the Internet for instructions on how to repair a leaky faucet. If you don't feel comfortable doing the repair yourself, a plumber is your best option.

Call a plumber  
for help, don't  
attempt any  
repairs that you  
are not  
comfortable  
with.

## Leaky Automatic Irrigation Systems and Spigots

Look and feel for portions of your property that are always wet, it may be the sign of an irrigation system leak. An irrigation system should be checked each spring before use to make sure it was not damaged by frost or freezing. An irrigation system with pressure set at 60 pounds per square inch that has a leak 1/32<sup>nd</sup> of an inch in diameter (about the thickness of a dime) can waste about 6,300 gallons per month.

Also check your garden hose for leaks at its connection to the spigot. If it leaks while you run your hose, replace the nylon or rubber hose washer and ensure a tight connection to the spigot using pipe tape and a wrench.

## Water Softeners and Water Heaters

Most water softeners have a bypass lever. Turn the lever to allow water to bypass the softener, check to see if your leak indicator is still moving. Some signs that your water softener is malfunctioning are abnormally high use of salt, and recharging more often than it should. You should also check items like water cooled air conditioners and ice machines. A water softener can be leaking or be recycling too often. Periodically they backwash themselves with fresh water to regenerate. Sometimes the backwash valve can get stuck in the open position, causing water to be continuously washed into the sewer system. It can go undetected as there is little noise associated with this other than a soft trickling sound in the sewer pipe.

Water Heater: Check for water on your basement floor around the appliance or rusty marks like water has been coming out of the appliance.

## How Much Water Do I Use Daily?

gpd (gallons per day)

Use	Average/Person gpd
Bathing	15-25
Sink	3-5
Toilet	5-15
Washing Clothes	10-20
Washing Dishes	5-10
Cooking	1-2
Miscellaneous	1-3
Total	40-80

Remember each of us uses water differently, some of us water the lawn, wash our cars, or have pools. Did you use a pressure washer? Many of our homes have water leaks, even more of us have older style toilets that use more than 1.6 gallons per flush. During summer months, watering your lawn more frequently is the most common reason a bill can be high. Running your sprinkler for just one hour can use 400 plus gallons of water.

## Meter

It is helpful to become acquainted with your water meter. It will be in your basement/crawlspace. About a foot away from the main shutoff water valve, just follow the water pipes until you find it. You may also want to check the main meter reading at night time and then don't run any water overnight and check the meter reading first thing in the morning. If it has changed something in the house is drawing water through your meter at night. Once you discover that there is a leak, the next night you can try to figure out where there is a leak. Turn off the valves on all your toilets, read your meter and then next morning see if your meter moved. If it didn't change during the night, then it appears that your toilets are in need of repair.

## Getting Help

If you have tried all of the suggestions above and feel your water bill is still high - call the Water Department and we will look into it! 701 577-8105

### THE SILENT THIEF...

1 HOME WITH 1 LEAKING TOILET CAN LEAK  
25,000 GALLONS PER MONTH OR MORE!