



HILLSBORO PUBLIC UTILITIES
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Water Bill Seem High?

Have you received a water bill that seems unusually high? Your water bill could be higher than normal for a number of reasons. Here are some ways you can troubleshoot to see why your bill is high:

1. Your bill includes the water consumption (in cubic feet). Does the consumption seem normal compared to the previous billing period or the same billing period last year?
2. Has the amount of water you've been using changed? Have you had houseguests for an extended period of time? On average, a person uses 40-80 gallons of water per day.
3. During the 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 gallons of water. If you use a hose to water, did you forget to go back out and turn it off?
4. There could be a leaking faucet or a running toilet in your home. Check for a possible leak by turning off everything in the house and then going out and looking at the water meter. It should not be moving at all. If it is moving, you have a leak somewhere in your house.
5. Did you fill a swimming pool with a garden hose? Or maybe use a pressure washer to clean the deck and driveway? At four gallons per minute, pressure washing for four hours can use 960 gallons or over a unit of water.

How Much Water Do I Use Daily?

On average, a person uses about 40 to 80 gallons of water per day (gpd):

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



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A “Running” Toilet Leak

One of the most costly household wastes of water is a leaky toilet. According to the American Water 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 to your house, a running toilet can leak 1 gallon of water per minute which adds up to 1,440 gallons per day. This is almost 2 units of water a day and if left undiscovered, a running toilet can waste almost 60 units of water a month.

Fortunately, most toilet leaks are relatively easy to fix. 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 (#1 below). A toilet can also waste water due to an improperly adjusted or broken fill (ballcock) valve causing water to enter the tank and flow into the overflow tube (#2 below).

1. 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 supply flappers. How to check for a leaky toilet flush valve (flapper):
 - Carefully remove and set aside the tank lid. (Don’t worry, this water is clean until it enters the bowl.)
 - Add some food coloring or a dye tablet to turn the water a different color.
 - Put the tank lid back on.
 - Wait 15 minutes and do not flush.
 - If dye appears in the toilet bowl, the flapper valve in your toilet is leaking and should be replaced.
2. 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 simple by taking the tank top off and observing if water is flowing into the overflow tube once the tank is full. If you do need to replace the entire toilet, look for a Water Sense labeled model.



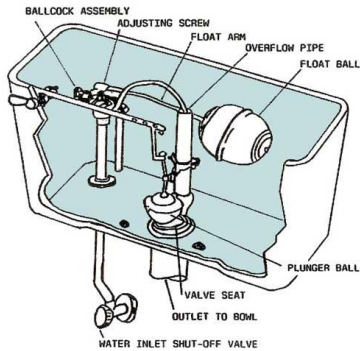
It's Only a Small Drip...Right?

Slow drips of water can add up quickly. **A toilet that “keeps running” after you flush or a sink that drips after it is 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 won’t go away on their own.

Detecting Leaks

To determine whether you have a leak, confirm that no water is being used and remove the meter lid. Take a reading from the meter, wait 1-2 hours and read the meter again. If the reading has changed, you probably have a leak. Most meters have a small triangle in the center of the meter. If this triangle is moving, there may be a leak. If there is an indication of a leak, you can isolate its location by turning off the water at the valve where your water service enters the house. After turning off the valve, once again read the meter and wait approximately one hour. If the reading has changed, the leak is in the service line between the meter and the turn off valve in the house. If the reading has not changed, the leak is in the house. Check your toilets, humidifiers, and faucets.

- Toilets are the single **BIGGEST** water consumer in the household accounting for 40-45% of water usage.
- Leaks in toilets can **DOUBLE** or **TRIPLE** overall water consumption each month if gone undetected.
- Toilet leaks usually occur in toilet tanks where water drains down the overflow or past the plunger ball.
- Toilet leaks can be detected easily by adding food coloring to the toilet tank. If the coloring enters the bowl within 30 minutes, you have water loss through the toilet. Make the necessary repairs ASAP.
- Older toilets (installed prior to 1994) use 3.5 to 7 gallons of water per flush and as much as 20 gallons per person per day.
- Replacing an old toilet with a new model can save the typical household 7,900 to 21,700 gallons of water per year, cutting both your water and wastewater bills.



A Leaking Faucet

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 (keywords “repairing leaky faucets”) for help on how to repair faucet leaks.


A leaky faucet that drips at the rate of one drip per second can use more than 3,000 gallons per year!

A showerhead leaking at 10 drips per minute can use more than 500 gallons of water per year.

Leak Source	Typical Leakage	Gallons/Day Used	Gallons/Month Used	Units/Month Used
Running toilet	1 gallon/minute	1,440	43,200	58
Leaking faucet	1 drip/second	9	259	.3
Leaking showerhead	10 drips/minute	1.4	43	.05
In-ground irrigation	1/32" in diameter (about the thickness of a dime)	210	6,300	8
Overflow tube in toilet tank	1/4" in diameter	7,200-8,640	216,600-259,200	290-347
A garden hose left running or a missing sprinkler head	1/2" in diameter	14,440-17,280	433,200-518,400	579-693

Leaky Automatic (in-ground) Irrigation Systems and Spigots

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 1/32nd of an inch in diameter (about the thickness of a dime) can waste about 6,300 gallons of water per month!

Leak Size	Gallons Per Day	Gallons Per Month	Cubic Feet per Quarter
 A dripping leak consumes:	15 gallons	450 gallons	180 Cubic Feet
• A 1/32 in. leak consumes:	264 gallons	7,920 gallons	3,168 Cubic feet
• A 1/16 in. leak consumes:	943 gallons	28,300 gallons	11,319 Cubic Feet
• A 1/8 in. leak consumes:	3,806 gallons	114,200 gallons	45,681 Cubic Feet
• A 1/4 in. leak consumes:	15,226 gallons	456,800 gallons	182,721 Cubic feet
• A 1/2 in. leak consumes:	60,900 gallons	1,827,000 gallons	730,800 Cubic Feet