



Water Department

# Conducting a Household Water Audit

## Become a Champion of Water Conservation:

By using the following home water audit information you will become aware of how you use water throughout the day and you will be able to identify ways you can minimize water use by following some simple conservation measures. An added bonus will be reduction in your monthly water bill and knowing that you are doing your part in ensuring water availability for future generations. We hope you will take a few moments and calculate your daily water use to find out how your home measures up.



### How do I calculate water usage in my home?

The Town of Payson Water bills provide usage data for the current month, as well as the number of days in the billing cycle. You

simply divide this usage by the number of days to determine your average daily usage during that month. It is important to realize that water use throughout the year often varies with the season. Most people use more water in the warmer months for gardening, washing cars and other outdoor activities than they use during the winter months. You can also request a water history of your account to obtain the same information.

### How Does My Water Usage Rank?

The [Town of Payson Water Resources Management 2030 Status Report](#) estimates the average daily usage to be 83 gallons per person. To determine the approximate per person usage in your household, simply divide the number you found above by the number of people living in your home (this includes indoor as well as outdoor water usage). Then look at the following chart to rate your water usage:

Gallons Per Person Per Day	Rank	Comments
<70 gal/day	Excellent	Wow! You use water wisely. Please share your conservation techniques with friends and neighbors.
70 - 80 gal/day	Good	Good Job! You use less water than the average Payson citizen. Look at the conservation tips below to learn how you can conserve even more water.
81-100 gal/day	Fair	You use more water than the average Payson citizen. Read the conservation tips below to learn how you can conserve water.
>100 gal/day	Poor	You use a lot of water. Read the conservation tips below to learn how to conserve water in the home.

## Estimating water use:

To determine how much water certain plumbing fixtures in your home use, you can follow the steps below to measure the water flow:

To calculate flow for faucets (indoor and outdoor) and showerheads, turn faucet to the normal flow rate that you use, and hold a container under the tap for 10 seconds and measure the quantity of water in the container. Multiply the measured quantity of water by 6 to calculate the gallons per minutes (gpm).

To calculate flow for toilets, turn off the water supply to the toilet; mark the water line on the inside of the tank, flush, and then fill tank with water from tap. Measure the volume of water that is required to fill water back up to the water line mark on the tank and record this number. Turn water on to the toilet to resume normal use.

If your appliances or fixtures are relatively new, you may be able to obtain the flow rate from the manufacturer's specifications. Otherwise, use the following averages:

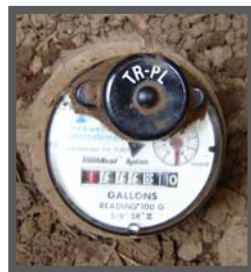
Washing machine (top loading) = 41 gal per use  
Dishwashing machine = 9 gal per use

Next, measure how many times per day or how many minutes each day you use each fixture or appliance. Multiply the water flow per fixture by the minutes per day the fixture is used. Multiply the flow average for each appliance by the number of times the appliance is used each week. Don't forget to include the amount of time you use outdoor faucets each day. The [residential water audit spreadsheet](#) is a useful tool to evaluate water use in the home.

## How Can I Conserve Water?

An average of about 14 percent of residential water is lost through leaking fixtures or pipes. You still pay for this water!!

An easy way to check whether you have leaks in your house is to read your water meter. Turn off all water fixtures, both inside and outside. Check the meter for movement of the low flow indicator, as shown in these pictures.



If the red dial or black triangle is spinning that means water is passing through the meter and you should check around your home for signs of a leak. For a more detailed explanation please see our brochure [“How to Read Your Water Meter”](#).

## Pipes

A leaky pipe is usually pretty obvious. Visually inspect all pipes in your home and look for telltale watermarks on walls or ceilings. In the yard, the ground above the water line may stay wet continuously, there may be an unusual patch of green grass or weeds or you may even see water bubbling at the surface. If a pipe is leaking, repair or replace it.

## Toilets

Leaking toilets are common and can be large sources of water loss. A leaking toilet can waste anywhere from several gallons to more than 100 gallons per day (that's over a quarter million gallons per year!). Leaking toilets are not as easily identifiable as leaking faucets; however, the following are some simple clues that you may have a problem:

- If you have to jiggle the handle to make a toilet stop running
- If you regularly hear sounds from a toilet that is not being used; or
- If a toilet periodically turns the water on ("runs") for 15 seconds or so without anyone touching the handle.

Even if your toilet does not display any of the above symptoms, it could still be leaking. These silent leaks can go undetected for long periods of time, but a simple dye test will detect a leak. All you need do is drop a dye tablet (available at the Water Department) into the tank, wait 30 minutes and if the water in the bowl contains dye, then the toilet is leaking.

You can also use food coloring or a powdered fruit drink mix as a substitute for the dye tablet.

There are two possible culprits when a toilets leaks, the flush valve or the refill valve. To determine which valve is responsible for the leak, draw a pencil line on the inside of the tank at the water line. Turn the water supply for the toilet off (located behind the toilet) and wait for 20 to 30 minutes. If the water level remains the same, it means the leak is occurring at the refill valve (unit in the left side of the tank). If the water level falls below the pencil mark, the flush valve (unit located in the center of the tank) is leaking.

Most homeowners are capable of making their own toilet repairs. Visit your local home improvement or hardware store, purchase the parts, turn off the water supply to the toilet and follow the directions on the packaging. Do it yourself books and videos can be found at the [Payson Public Library](#) or the Internet has thousand of sites with easy to follow instructions.

## Faucets

A leaking faucet is easily identified, but do you know how much water can be wasted from what seems like only a small drip? To find out, you simply count the number of drips per minute. You can use the following chart to estimate the amount of water waste, or you can use [Waterwiser's© drip calculator](#).

**Estimated Water Loss Through Leaks**

<b>Drips Per Minute</b>	<b>Water Wasted Per Month</b>	<b>Water Wasted Per Year</b>
10	43 gallons	526 gallons
30	130 gallons	1,577 gallons
60	259 gallons	3,153 gallons
120	518 gallons	6,307 gallons
300	1,296 gallons	15,768 gallons

Drips can usually be eliminated by replacing worn washers, or by tightening or repacking the faucet. Replacement washers or repair kits for washerless faucets are available at hardware or home improvement stores.

## Retrofit/Replace Fixtures and Appliances

Once you have repaired any leaks in your home, the next step is to evaluate the efficiency of your current fixtures and appliances. A simply retrofit can conserve several gallons of water per year, and save you money in the process on your water bill. The following table provides average water use for conventional and low-flow appliances:

Fixture/Fitting/Appliance	Water Use in Gallon Per
Vintage Toilet	4-6 flush
Conventional Toilet	3.5 flush
Low-Consumption Toilet	1.6 flush
Conventional Showerhead	3-10 min
Low-Flow Showerhead	2-2.5 min
Faucet Aerator	3-6
Flow Regulating Aerator	0.5-2.5 min
Top Loading Washer	40-55 load
Front Loading Washer	22-25 load
Dishwasher	8-12 load



For the past several years, the Town of Payson has offered rebate programs to assist water department customers in making these important improvements in their homes and businesses. We are currently offering a toilet rebate to [qualified residential customers](#) as well as, [small business owners](#). In addition, we have aerators and showerheads available to our customers for free on a first come, first serve basis.

## Modifying Your Habits and Becoming an Efficient User of Water

Making changes in your daily behaviors that are simple and inexpensive will go along way towards conserving our most precious resource – water. Consumers have often considered water conservation as a temporary solution only invoked during times of drought or other emergency water shortages. It is time to replace this thought with “how can we be more efficient in our water use so that future generations are guaranteed the same advantages that we have today?” For example:

- ✓ Do you let the water run while you brush your teeth or shave?
- ✓ Do you run your clothes washer or dishwasher before it is fully loaded?
- ✓ Do you take long showers or baths?
- ✓ Do you have an automatic shut-off nozzle on your outdoor hose?
- ✓ Do you water your landscape during the coolest part of the day?

For more suggestions, see our [Water Conservation Tips](#) or visit some of the following sites:

