

HIGH WATER USE ACTION PLAN

A GUIDE FOR CITY OF MESA WATER CUSTOMERS AND HOMEOWNERS

Have you recently found yourself staring at your water bill in disbelief, thinking, “How could I have used that much water?” If you don’t know how much water you use in a typical month, you are similar to many other water customers. This guide is intended to assist you in understanding your bill and tracking down answers to questions you may have about your water usage.

This guide will help you to:

- ◆ Understand your water bill
- ◆ Read your water meter
- ◆ Look for hidden water loss and identify savings opportunities
- ◆ Compare your water use to other customers
- ◆ Develop a high water use action plan specific to your needs
- ◆ Explore further water conservation resources

UNDERSTANDING YOUR WATER BILL

Your City of Mesa utility bill is itemized for easy reading. The following two examples can help you determine just how much water you are using.

Water (1000 Gallons)		
Current Month	Last Month	Last Year
.38	.50	.55

The image shows a sample water bill from the City of Mesa. A callout box highlights the 'Average Daily Usage' table, which includes a sub-table for 'Water (1000 Gallons)'. The sub-table has columns for 'Current Month', 'Last Month', and 'Last Year'. The values are .38, .50, and .55 respectively.

1 A summary of average daily usage for the current month, the previous month and last year (the same calendar month one year prior) is shown on the first page of your bill. This information may be useful in determining if your current usage is higher than it typically has been in the past.

WHERE DOES ALL THAT WATER GO?

- YOUR HOME LAWN SPRINKLER SYSTEM USES ABOUT 10 GALLONS PER MINUTE. A BROKEN SPRINKLER HEAD CAN LOSE UP TO 12 GALLONS PER MINUTE.
- A ½-INCH DIAMETER GARDEN HOSE DELIVERS 5 TO 8 GALLONS OF WATER PER MINUTE OR OVER 300 GALLONS OF WATER PER HOUR.
- REVERSE OSMOSIS WATER TREATMENT SYSTEMS USE UP TO 5 GALLONS FOR EVERY GALLON OF PURIFIED WATER THEY PRODUCE.
- AN AVERAGE SWIMMING POOL (400 SQUARE FEET) USES ABOUT 16,000 GALLONS TO FILL AND LOSES ABOUT 22,000 EACH YEAR TO EVAPORATION AND BACKWASHING. EVAPORATION LOSS IN THE SUMMER CAN BE AS HIGH AS 2,500 GALLONS EACH MONTH.
- A FIXTURE WITH A SLOW-DRIPPING LEAK CAN WASTE 350 GALLONS PER MONTH.

The image shows a detailed table from a water bill. A callout box highlights the 'Water' section, which includes a table with columns: Meter Number, Register Type, Current Read Date, Current Reading, Previous Read Date, Previous Reading, Number of Days, Read Difference, Multiplier, and Billed 1000 Gallons. The values are: 263385, WTR, 10/11/05, 774, 09/12/05, 763, 29, 11, 1.000, 11.

The image shows another sample water bill from the City of Mesa. A callout box highlights the 'Water' section, which includes a table with columns: Meter Number, Register Type, Current Read Date, Current Reading, Previous Read Date, Previous Reading, Number of Days, Read Difference, Multiplier, and Billed 1000 Gallons. The values are: WTR, 10/11/05, 774, 09/12/05, 763, 29, 11, 1.000, 11.

2 Under the subheading for **Water**, there is a more detailed table showing the meter number, current and previous monthly reading and the billed gallons used (in thousands of gallons). It also includes the date the meter was read and the service charge.



READING YOUR WATER METER

A water meter measures the amount of water entering your plumbing system. Most meters are located in boxes in the ground near the curb. Open the box carefully (let the critters scatter) and inside you'll find the water meter.

The meter dial can be found under the small, hinged cover. If the glass is dirty, wipe it clean to make it easier to read. The meters used in Mesa measure water in gallons. [Other water providers may measure in units of cubic feet (cf).]

READING YOUR WATER METER

Your water meter is much like your car's odometer, showing the cumulative total of water that has run through your meter. The sweep hand, which moves like a clock hand, measures each gallon

of water, up to 10 gallons. Notice the first number on the right of the total is a stationary zero; there's no need for it to move because the sweep hand does its work. Except for the stationary zero, the rest of the number is read like an odometer. The movable dials to the left of the stationary zero read in 10s, 100s, 1,000s of gallons, and so on. For example, the meter pictured to the right reads a little more than 408,482 gallons, which, for billing purposes, would be rounded down to 408,000 gallons and be recorded as 408 in the "Current Reading" box on your bill.

A triangular dial near the center of the meter face is used for leak detection and will spin even if there is an extremely low flow through the meter.



METER ACCURACY

The City has repeatedly found that meters less than 10 years in age test very accurately (plus or minus 3 percent), and that meters, when they do begin to lose accuracy, almost always under-report flow passing through them.

WHERE YOUR WATER SYSTEM BEGINS

The City of Mesa provides service and maintenance up to, and including, the meter. Once water exits the meter, it enters the customer's privately owned system and area of responsibility. If City staff observes potential leaks or other problems with your plumbing, they will let you know. However, you are responsible for assessing and making any necessary repairs or calling a qualified plumber to do so on your behalf.



WHY IS MY BILL SO MUCH HIGHER THAN LAST MONTH?

IF YOUR AVERAGE DAILY USAGE HAS RECENTLY SPIKED, CONSIDER THE FOLLOWING POSSIBILITIES:

- HAS THERE BEEN A RECENT CHANGE IN THE NUMBER OF PEOPLE IN THE HOUSEHOLD, HAVE FRIENDS OR FAMILY BEEN VISITING?
- IF YOU WERE ON VACATION, WAS A CARETAKER WATERING OR WATCHING THE PROPERTY?
- HAVE YOU INSTALLED A NEW LAWN OR LANDSCAPING?
- HAVE YOU REFILLED A SWIMMING POOL?
- ARE AUTOMATIC DEVICES SUCH AS IRRIGATION CONTROLLERS AND WATER SOFTENING SYSTEMS WORKING PROPERLY?
- HAS THERE BEEN A SEASONAL CHANGE IN YOUR WATER USE HABITS, SUCH AS INCREASED LANDSCAPE WATERING, DUE TO A CHANGE IN THE WEATHER?
- ARE YOU TAKING INTO ACCOUNT THE LENGTH OF THE BILLING CYCLE? BILLING CYCLES MAY VARY FROM 26 TO 35 DAYS.
- ARE YOU AWARE OF ANY INDOOR OR OUTDOOR LEAKS? (WE'LL BE DISCUSSING LEAKS AGAIN ON PAGE 3.)



LOOKING FOR HIDDEN WATER LOSS

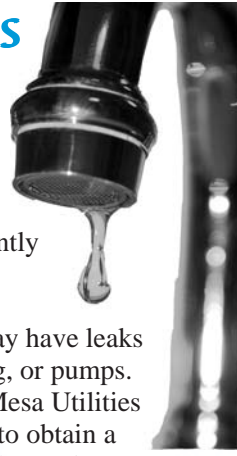
Searching for leaks and other hidden losses of water can be an adventure. Consider enlisting your kids to help and offering them a prize if they successfully identify a leak.

To check for a water leak, turn off all water sources in and around your home. If the triangular dial remains stationary, there is no water flowing through the meter, hence no leaks. If it continues to move, you have a leak. To detect how much water is being lost, note the position of the sweep hand. Wait at least 15 minutes and check the position of the sweep hand again. This method only identifies leaks that are ongoing. Some installed devices such as pool pumps may leak only when they are running.

Fixing a leak is simple, inexpensive, and can save more than 500 gallons each

month. Here are some useful tips:

- ☑ Listen for dripping faucets and toilets that intermittently refill themselves.
- ☑ Pools and spas may have leaks in their basins, piping, or pumps. Contact the City of Mesa Utilities Conservation Office to obtain a copy of “How to Seek a Swimming Pool Leak” to find out how to track down these water losses.
- ☑ Don’t forget to check outdoor faucets, pipes, and hoses. Check your sprinkler system valves. Investigate unexplained patches of damp earth.
- ☑ Check your evaporative cooler,



if you have one, to ensure that the recirculation pump is working properly.

- ☑ Problems with the automatic recharge cycle of water softeners are common. A faulty timer or stuck solenoid may waste hundreds of gallons during the night.
- ☑ Catch a silent leak from your toilet tank into the bowl by putting a few drops of dark food coloring into the water tank. Wait about 10 minutes. If the colored water seeps into the bowl, your toilet is leaking. Sometimes the float arm gets out of adjustment, allowing water to flow down the overflow tube. More commonly, the flapper valve needs to be replaced.
- ☑ Investigate if you notice a “hot spot” underneath your floor — this could indicate a broken hot water pipe under the concrete slab.

COMPARING YOUR WATER USE TO OTHER CUSTOMERS

Usage during the winter months mainly reflects the demand for water used inside the home. That usage will remain fairly constant unless you implement some indoor water-saving strategies. The seasonal demand for irrigation and an evaporative cooler (if you have one) will cause higher usage during the summer months.

If your usage is substantially different from the typical range, you may want to prepare a home water audit — a detailed evaluation of how water is used in your home. You can request information to get you started on a water audit by contacting the City of Mesa Utilities Conservation Office at 480.644.3306 or www.cityofmesa.org/utilities/conservation/.

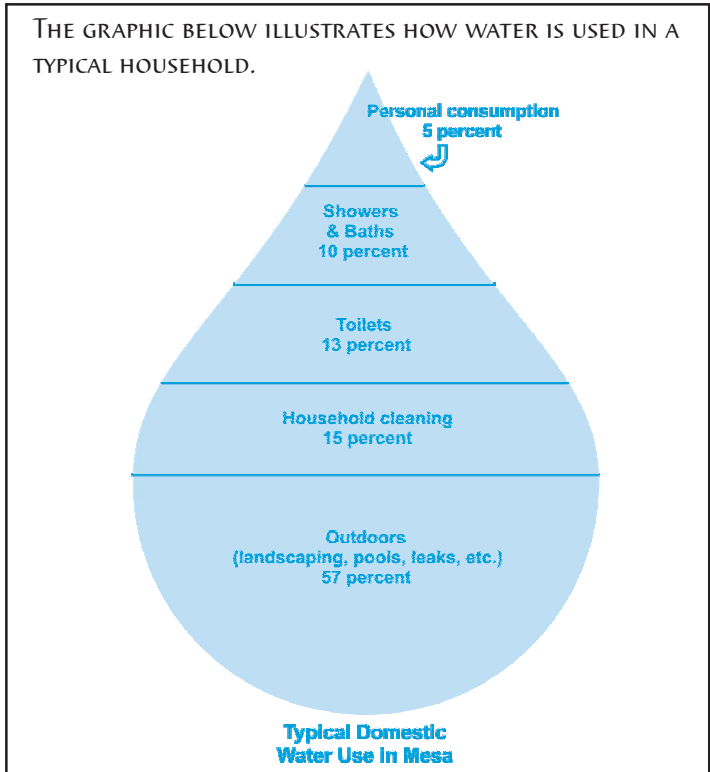
THE AVERAGE RESIDENTIAL WATER USE IN MESA IS 150 GALLONS PER PERSON PER DAY, BUT MAY BE 230 GALLONS FOR A HIGH USE HOUSEHOLD OR 100 GALLONS FOR A MORE WATER EFFICIENT HOUSEHOLD. THESE FIGURES ARE ROUGH ESTIMATES AND CAN VARY GREATLY BASED UPON FACTORS SUCH AS:

- NUMBER OF PEOPLE LIVING IN OR VISITING THE HOME.
- SIZE AND TYPE OF LANDSCAPING AND HOW IT IS IRRIGATED.
- PRESENCE OF A SWIMMING POOL OR SPA.
- WATER EFFICIENCY OF PLUMBING FIXTURES.
- PERSONAL HABITS.
- WHETHER LEAKS ARE PRESENT.

USING THE WATER BILL ON PAGE ONE, THE FOLLOWING EXAMPLE SHOWS HOW TO FIGURE OUT YOUR AVERAGE DAILY USAGE PER PERSON PER DAY.

11,000	÷	3	÷	30	=	122
(Gallons used each month)		(Number of people in household)		(Days per month)		(Gallons per person per day)

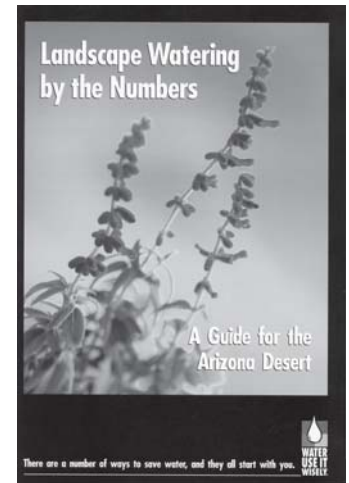
CALCULATING YOUR USAGE PER PERSON PER DAY



DEVELOPING A HIGH WATER USE ACTION PLAN

Now you are ready to move forward with developing your personal action plan for reducing high water use. Consider the following action items:

- ☑ Contact the City of Mesa Utilities Conservation Office to get a copy of *Landscape Watering by the Numbers* to make sure you are watering your plants properly.
- ☑ Conduct a search for leaks and easily preventable losses of water.
- ☑ Contact a leak detection specialist if you find that there is an ongoing leak problem on your property that you've been unable to isolate. Some leaks may occur below the ground and not be apparent.
- ☑ Replace high water using devices older than 15 years with lower use devices as finances permit and opportunity arises. These may include toilets, washing machines, and showerheads.
- ☑ Visit www.wateruseitwisely.com for more great water-saving tips and resources.



EXPLORING FURTHER WATER CONSERVATION RESOURCES

The City of Mesa Utilities Conservation Office has many resources available to help you save water. They include:

- **Landscape Watering by the Numbers.** Explains how to properly water your plants to keep them healthy and beautiful.
- **Landscape Plants for the Arizona Desert.** Features more than 200 low water using plants.
- **Xeriscape: Landscaping with Style in the Arizona Desert.** Provides a step-by-step guide for planning, installing, and caring for your water thrifty landscape.
- **Converting to Xeriscape.** Outlines the necessary steps to remove grass and convert to Xeriscape.
- **Desert Lawn Care.** Offers tips for proper mowing, fertilizing, and watering of your lawn.
- **Water—Use it Wisely.** Presents a number of easy ways to save water around the home or office.
- **Waterwise Gardening in the Valley.** Lists Xeriscape and landscaping books available at the Mesa Public Library.
- **How to Seek a Swimming Pool Leak.** Details how to find out if your pool, spa, pipes, or pumps are leaking.
- **The Toilet Papers.** Flushes out the facts on water-efficient toilets.
- **A series of Landscape and Irrigation Workshops.** Teaches residents about landscaping in the Sonoran desert; offered for free. Registration is required.

To request any of the above publications or to obtain an updated workshop schedule, visit our Web site at www.cityofmesa.org/utilities/conservation/ or call Utilities Conservation at 480.644.3306.

