



Leak Detection Test

Once you know how to read your water meter, you can begin to check for the presence of continuous leaks by following the procedure below. Do not use water or operate any water-using devices in or around your home during the test.

READING THE ANALOG DISPLAY METER

The large sweep hand on the dial measures water use in gallons or cubic feet. One gallon or one cubic foot of water passes through the water meter as the sweep hand moves from one number to the next (e.g., 0 to 1). A complete rotation equals 10 gallons or 10 cubic feet depending on the unit measured. Most analog dials have a low-flow indicator that turns as water moves through the water meter. This typically looks like a small triangle (shown), star or gear.

Analog Example: The sweep hand (long hand) is on the "1" so the read is 1,356,411 gallons. The last number on the right is a static zero (does not change). When the sweep hand is on the "3" the read will be 1,356,413 gallons. When you record your reading in the Leak Detection Test, make sure to use the number indicated by the sweep arm as the final digit.



FOR ANALOG DISPLAY METERS

- 1.) Observe the sweep hand. If it is moving, you have a continuous leak.
- 2.) Observe the low-flow indicator. If it is moving, you have a continuous leak.
- 3.) Some leaks are so small that the movement is almost undetectable. To determine if you have a slow leak:
 - a. Read your water meter and record the numbers in the boxes we've provided ("Fill in your meter readings").
Use the number indicated by the sweep arm as the final digit.
 - b. Wait 20 minutes then read your water meter again and record the numbers.
 - c. Subtract the first water meter reading from the second.
 - d. If Gallons Used is greater than zero you have a continuous leak.

1 st Read	100
2 nd Read	150
= Gallons Used	50

METHODS TO DETECT THE LOCATION OF LEAKS

This guide provides two methods to detect the location of leaks:

- 1.) The Isolation Method
- 2.) The Visual Inspection Method.

A brief description of both methods follows:

1.) ISOLATION METHOD

The purpose of the Isolation Method is to isolate different sections of the plumbing in and around your home. If your Leak Detection Test indicated a continuous leak, consider using the Isolation Method to discover the leak location. This is often the quickest way to locate ongoing, hard-to-find leaks. You will turn water supply valves "off" to prevent water from flowing into water supply pipes. If you are comfortable turning valves on and off, go to Isolation Method for Continuous Leaks.

2.) VISUAL INSPECTION METHOD

Conduct the Visual Inspection Method if you did not detect a continuous leak when you performed the Leak Detection Test or if you are uncomfortable with the Isolation Method.

CAUTION! Shut-off valves may fail or break if they are old or corroded. You should only turn shut-off valves by hand or request the assistance of a water district staff member should you not be able to shut the valve off.

Example of the presence of a continuous leak:

2nd Read: 1356423

- 1st Read: 1356411

= Gallons Used: 12

Wait 20 minutes between taking meter readings.

Enter readings below to determine number of gallons used.

2nd Read: enter 2nd reading

- 1st Read: enter 1st reading

= Gallons Used

OUTDOOR VISUAL LEAK INSPECTION

Service Line and House Check

Step-by-Step Instructions

A service line is an underground pipe that carries water from your meter to your home.

STEP ONE

Find your water meter. Most residential water meters are located near the curb or sidewalk at the front of the property in a concrete "box." The box will have a metal or plastic lid and may be marked, "Water Meter." Carefully lift the cover and check for leaks. Find Your Water Main

STEP TWO

Find the house (main) shut-off valve on the water supply riser, generally located in the front or on the side of the house below the hose bibb. Check for leaking water around exposed pipes and valves.

STEP THREE

Visually inspect your property between your house shut-off valve and your water meter. A wet spot, small hole or depression may indicate an underground leak in the service line. Refer to Service Line Check if you suspect a leak in your service line.

STEP FOUR

Check all other hose bibbs and/or outdoor faucets for dripping water and/or wet spots.

Some water providers lock their meter boxes. Contact your water provider for more information. In the meantime, continue with Visual Leak Inspections if you cannot access your water meter.



Irrigation Systems

The most common leaks found around the home occur in the irrigation system. A typical irrigation system consists of a backflow prevention device, valves, underground pipes, emitters and/or sprinkler heads and an irrigation controller.

Step-by-Step Instructions

First, walk around your property to look for leaks. Check the backflow prevention device, the irrigation valves and look for wet spots, small holes and depressions, as these may indicate an underground leak.

Next, run the irrigation system and walk around your property again to look for leaks that only occur when the system runs. Use the checklists below.

BACKFLOW PREVENTION DEVICE

A backflow prevention device protects drinking water from contamination due to backflow. Backflow can occur when the water system pressure decreases (such as in the case of a water main break). Begin your check for irrigation system leaks at the backflow prevention device, generally located near the house shut-off valve. Inspect backflow prevention device for leaks. Occasional dripping or squirting may indicate that backflow prevention occurred and might not necessarily be a leak. A puddle of water on the ground or continuous dripping may indicate a leak or possible failure of the backflow prevention device. Contact your water provider for information about how to locate a certified backflow contractor in your area to test and repair your backflow prevention device.

IRRIGATION VALVES

Inspect irrigation valves for signs of leaks, such as mud or standing water, in the irrigation valve box.

Check sprinkler heads when they are not running. Continuous seeping often indicates a malfunctioning valve. Valves can fail over time or debris (rocks, dirt, etc.) can prevent the valve from closing properly.

Irrigation Systems

SPRINKLER HEADS, BUBBLERS AND DRIP IRRIGATION

Visually inspect equipment and property:

Look for missing or broken drip irrigation emitters or cracked tubing. (Water should trickle rather than squirt from emitters.)

Check wiper seals between the neck and base of the sprinkler heads. (Water will seep out of a worn seal.)

Look for missing or broken sprinkler heads or cracked riser pipes.

Check for missing or broken bubblers or cracked riser pipes.

Inspect your yard for wet spots, small holes or depressions, as these may indicate an underground water leak.

INDOOR VISUAL LEAK INSPECTION



Toilets

Toilet leaks are the most common type of leak found inside the home. Because this type of leak can be silent, it may go unnoticed. Understanding the basic mechanics of your toilet can save you thousands of gallons of water per year.

Step-by-Step Instructions

PERFORM A TOILET DYE TEST:

- Lift the tank cover.
- Place a few drops of food coloring into the tank.
- Wait 15 minutes (do not use the toilet).
- If the color appears in the toilet bowl, you have a leak.

IF YOU HAVE A LEAK, CHECK:

- A. Overflow Tube: Water should be a half-inch below the top of the tube.
- B. Lift Chain: It should not catch on anything.
- C. Flapper: Ensure it is seating properly.
- D. Flush Handle: Make sure it functions properly.

TOILET MAINTENANCE TIPS:

Consider replacing your flapper every 3-5 years, as they are prone to warping and leaking. Putting chlorine products in the tank may decrease the life of your flapper.

Turn off the water at the supply line before removing tank parts.

To help you find the right replacements, take old toilet parts with you to the home improvement store.

Did You Know?

A leaking toilet can waste over 6,000 gallons per month. That equates to as much as 72,000 gallons of water per year!



Faucets, Showerheads and Bathtubs

An annoying, dripping sound is often the first sign of a leak. Faucets, showerheads and bathtubs may also have leaks hidden from view.

Step-by-Step Instructions

Look for dripping sink and bathtub faucets and showerheads. Worn-out washers typically cause faucet and showerhead leaks.

Check under and around sinks for wet spots, a musty smell or bowed cabinetry.

Check for moisture around faucets, showerheads and bathtubs.

Water Supply Lines, Valves and Corrosion

Water-using devices can leak and cause damage to walls and floors, potentially creating an environment for mold or mildew. Look for continuous leaks in supply lines, fittings and valves. Also, look for leaks caused by corrosion, such as a rusty water heater bottom. Leaks may be intermittent, meaning they only occur when a water-using device is in operation. Run water-using devices, such as a clothes washer or dishwasher, to see if a leak occurs while running.



Look and listen for running or dripping water on:

Refrigerators with ice/water dispensers

Humidifiers

Water softeners

Clothes washers

Icemakers

Reverse osmosis (RO) systems

Dishwashers

Water heaters

Any other water-using device