

Troubleshooting Guide: How to Determine If Your Home Has A Leak

Moulton Niguel Water District has developed this troubleshooting guide as a tool for our customers to determine if your home has a leak. Please review the guidelines below.

If you need additional help troubleshooting, we are here to answer your questions by phone or email. Please give us a call at **(949) 448-4025** between 8am-5pm Monday-Friday or email us anytime at **conservation@mnwd.com**.

We appreciate your efforts to find and stop water leaks!

- 1.** Locate your water meter. For most homes, the water meter is located in the front yard, near the sidewalk. Make sure your irrigation is off and other valves, such as pool fill valves, are closed. If your dial is still moving, and known water sources are off, you may have a leak.
- 2.** Locate your house valve and carefully turn it off.
- 3.** Recheck your water meter for movement.
- 4.** If movement has stopped, with your house valve turned off, you may have an indoor leak. Carefully turn off water supply valves to the toilet(s) and turn your house valve back on.
- 5.** If there is still no meter movement, you probably have a toilet leak. If movement continues with the toilet supply valves off, you probably have an indoor leak issue, possibly a slab leak. If you think this is the case, call a licensed plumber or leak detection company.
- 6.** If meter movement continues with the house valve off, you could have a service line leak. Call a licensed plumber or leak detection company.
- 7.** Check your irrigation timer. Over watering landscapes is a very common issue. Over watering and under watering can be equally stressful to your plants. Consult your irrigation timer manual and visit **www.bewaterwise.com/calculator.html** for a watering calculator by zip code. Rachio timers should be set up on a Flex Monthly or Flex Daily schedule. See **www.rachio.com** for further details.



We want to help you inspect your home for opportunities to save money on your water bills and prevent any potential property damage that might be occurring. If the cause of the high water usage is discovered, please fill out a bill adjustment request on our website at **mnwd.com/adjustments**. For more detailed steps to find leaks please review the following pages.

The following steps can be used to troubleshoot high water consumption:

- 1 Check your Water Meter-** Find your water meter, which is located in front of your home by the sidewalk, generally in a straight line from your hose bib and house shut off valve. You can lift the cover of the meter box with a long-handled screwdriver to view your meter. Be careful to not damage any wires located inside the meter box.



Note: Meter covers are heavy and generally marked "Water".

Now that you've found the meter, determine if you have an analog or digital display. Instructions for reading both types of water meters are included in the section below.

 **WATCH VIDEO: How to Check Your Meter-** bit.ly/CheckYourWaterMeter



If all your indoor water using devices, outdoor irrigation, pool fill, and other valves are turned off, you should not have movement on your meter. Use the flow indicator to determine whether water is moving through your meter. If the flow indicator is moving, there is water moving through the meter.

Note: These are examples of typical water meters in our district. Your meter may look slightly different.

Analog Meter- For analog meters, the flow indicator usually appears as a red triangle on the face of the meter. If water is moving through the meter, the flow indicator will spin; if water is not moving through the meter, the flow indicator will stay still. The longer arrow shows the volume of water passing through the meter in .01 cubic foot increments. Note: for small leaks, it may take a minute or more to see movement on the flow indicator.



Flow Indicator

Digital Meter- For digital meters, the flow indicator is a plus sign (+) with a circle around it. The flow indicator will only appear if water is moving through the meter. The symbol will not appear if water is not moving through the meter. The numbers all the way to the right of meter face indicate the volume of water moving through the meter in .001 cubic foot increments. If you see a plus sign and the last number to the right counting up, this is also a sign of water passing through the meter.



Flow Indicator

Moulton Niguel meters measure the flow of water in cubic feet. To read a meter in cubic feet, read the first 4 numbers to the left of the decimal point.

1 cubic foot = 7.48 gallons; 100 cubic feet = 748 gallons = 1 billing unit

If there is movement on the meter, and there is no water being used at the property, begin turning off valves to help isolate the source of the potential leak. It is advised to first turn off your house valve, which is typically located at the front of your home just below the hose bib. You may need to turn the valve slowly, if the valve is older or corroded. If the valve is too difficult to turn, you may need to call a plumber for assistance. Once the house valve is off follow Step 2.



- 2 Check For Indoor Leaks-** If the meter movement stops when your house valve is turned off there is likely a water leak in your home past the house valve. To start your indoor survey, leave your house valve in the off position. Check your toilet(s) first by turning off the toilet water supply valve(s), also referred to as an angle stop. The toilet angle stop is located below the toilet next to the wall where the water supply line to the toilet tank is connected.

Toilet
Angle Stop



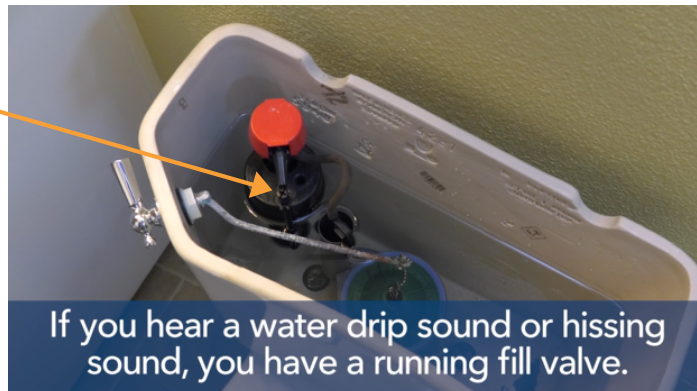
You may need to turn the valve slowly if the valve is older or corroded. If the valve is too difficult to turn or appears to be corroded, you may need to call a plumber. Once your toilet valve is closed, turn your house valve back on and re-check your water meter to see if movement on the meter resumes. If there is still no movement on your water meter when the house valve is turned on and while your toilet valve is in the off position, it is a toilet leak. Repeat this process for each toilet in the home. If movement continues with the toilet angle stop(s) in the off position, it is a leak somewhere else in the home, possibly a slab leak. Please, call a plumber or leak detection service.

Diagnose The Type of Toilet Leak: Toilet leaks can be caused by a faulty flapper or a running fill valve. Check out our "Potty Talk" video series that was created to help identify and fix toilet leaks. Visit mnwd.com/fix-a-leak to get started or follow the instructions on the next page.

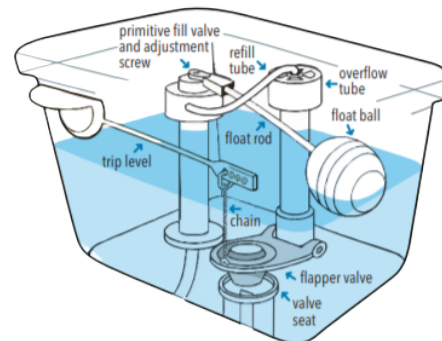


The most effective way to check for toilet leaks is to remove the lid from the top of the toilet tank to allow the sound to get out. The porcelain tank lid can mask the sound of a slowly running fill valve. Even brand-new toilets can generate very high consumption when they are not working correctly.

**Adjustment
Screw**



Please check the adjustment screw on the fill valve to ensure optimum water level. The optimum water level is approximately $\frac{3}{4}$ " below the top of the overflow tube which is located in the middle of the toilet tank.



Next, do a toilet leak test to check your toilet(s) for leaks caused by faulty flappers. Follow the simple steps below:

1. Ensure you do not have a sticking handle mechanism as it can cause a flapper to remain open.
2. Drop a toilet dye strip into the toilet tank so that it will turn the water blue. Toilet dye strips are available free of charge for Moulton Niguel customers. Visit mnwd.com/fix-a-leak for more information.
3. Wait 15 minutes and check for dye in the toilet bowl. If the water in the toilet bowl changes color, you've got a leak.



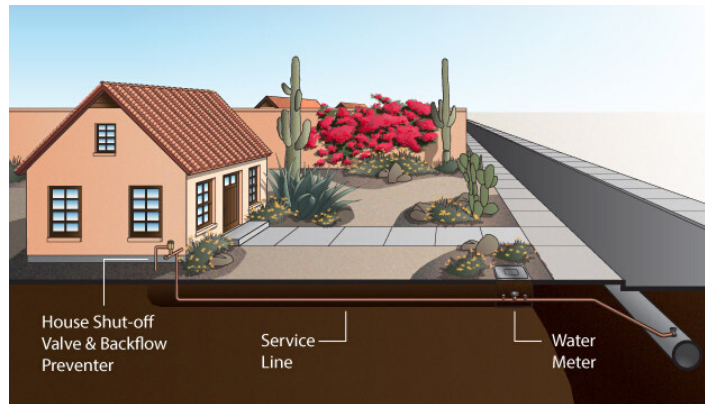
You've found a toilet leak, now what?

View our Potty Talk 401 video tutorial at mnwd.com/fix-a-leak for step-by-step instructions on how to fix your toilet leak.

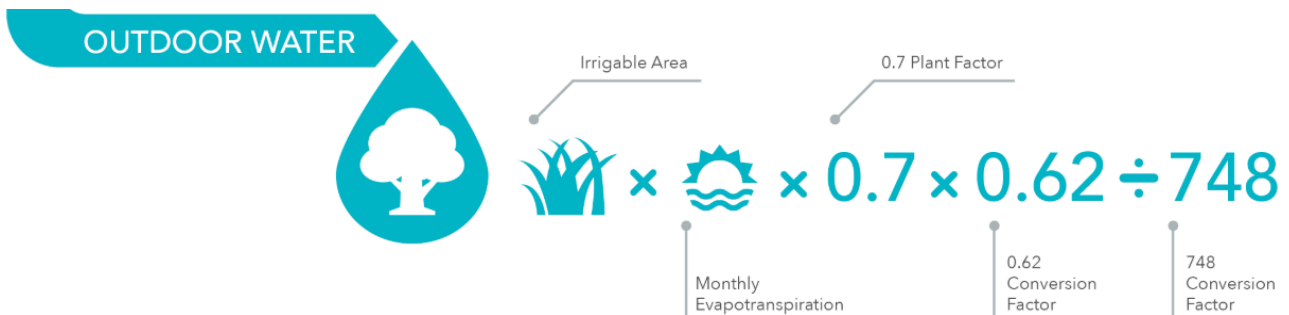


Note: If you find that your toilets are working properly and there isn't an obvious source for the indoor leak, we recommend that you call a licensed plumber or leak detection company.

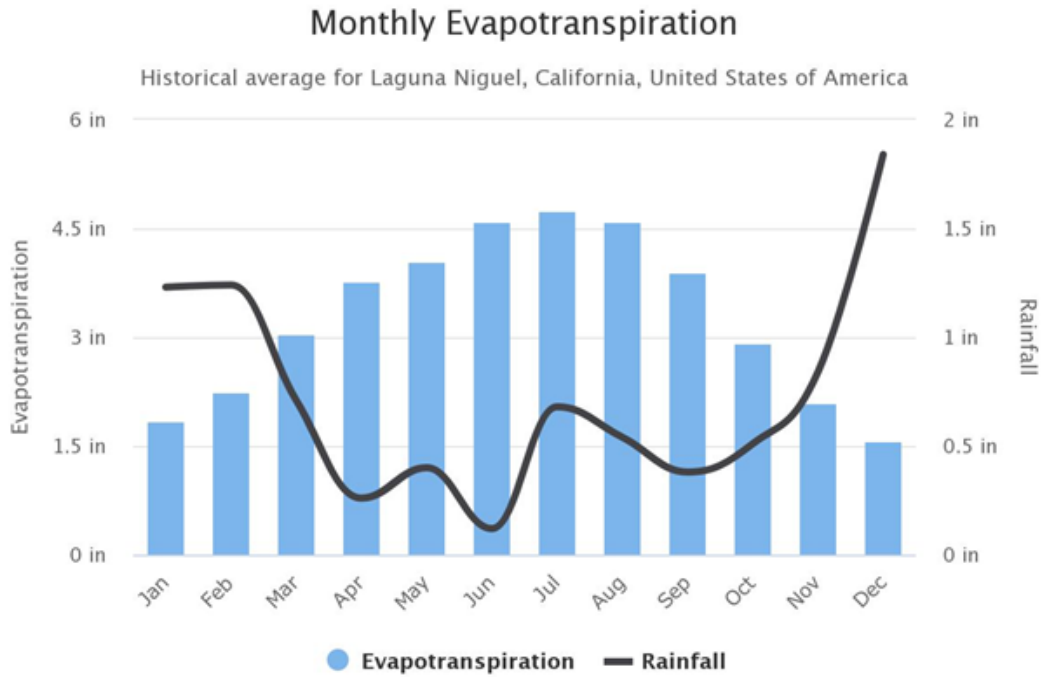
- 3 Check For Service Line Leaks-** If the house valve is closed, and you were able to close all other valves, including irrigation valves and pool fill valves, and the meter is still moving, then it could be a service line leak. The service line is the main water line from your water meter to your home. If you find that this is the case please call a plumber or leak detection service.



- 4 Check Your Irrigation Timer-** One of the biggest challenges customers face is knowing how to correctly water their landscape. Your outdoor water budget fluctuates monthly due to varying daily evapotranspiration rates. This is the amount of water lost from the irrigable area of your landscape. The irrigable area of your property includes permeable, landscaped areas or the surface area of your pool or spa.



The healthiest and most efficient way to water your outdoor plants is to seasonally change your irrigation timer's watering settings. Optimally, if your timer's watering settings are changed at least 4 times per year, this could save water and money on your bill and is best for your plants. Plants can suffer from either too little or too much water. To give an example on how much water is lost due to evapotranspiration, historical monthly data was taken from central Laguna Niguel, CA and listed below.



If your property is near the ocean, set your timer for shorter run times and fewer days per week. If your property is further inland, you will need slightly longer run times. Your water budget is customized to incorporate weather data for your particular location within the Moulton Niguel service area. For more information, see our ET over Service Area Map: <https://gram.mnwd.com/etmap/>.

Need guidance on how much to water your landscape?



Use a watering calculator by visiting bewaterwise.com/calculator.html.



Consult your irrigation timer manual.



Call our Water Efficiency team at **949-448-4025** for further questions.



Attend a Moulton Niguel Irrigation Workshop. Visit mnwd.com/irrigationclasses for more information.

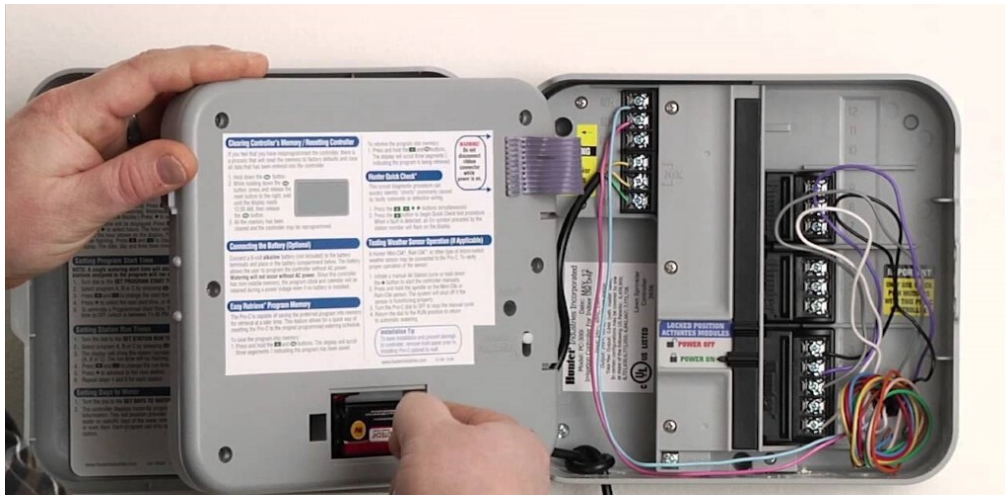
Common Irrigation Timer Manual Reference

- **Dig:** www.digcorp.com/uploads/manual_file/file/13/9001DC_eng-web.pdf
- **Hunter:** www.hunterindustries.com/resource_guide/owners-manuals
- **Irritol (RainDial):** www.irrigationrepair.com/manuals_irritol_controllers.html
- **Orbit:** www.orbitonline.com/help-center/
- **Rainbird:** www.rainbird.com/homeowners/products/timers-controllers/support
- **Rachio:** www.rachio.com
- **Weathermatic:** www.weathermatic.com/manuals-instructions



- **Rachio Timers:** Please ensure Rachio timers are programmed with a Flex Monthly or Flex Daily Schedule. In addition, it is advised to group similar plants and/or irrigation equipment together on hydrozones. Additional information can be found on www.rachio.com under their Help Center, located at the bottom of their webpage.

Check Irrigation Timer Battery- All irrigation timers have a backup battery in case of a power outage.



The backup batteries save the scheduled programs in the event of a power interruption. Make sure your irrigation timer has a new backup battery. Many of the older timers (more than 7 years old) have a 9-volt battery which should be replaced annually.

Newer irrigation timers have a nickel sized watch type battery, which can last approximately 5 years. If there is a power interruption, and there is no battery installed or the battery is dead, the timer will revert to the manufacturer's default settings. Depending on the manufacturer, this can be 10-15 minutes per day, every day, typically around midnight.

5 Check For Irrigation Leaks- Manually running and inspecting your irrigation system for leaks should be done regularly, but especially after a high-water bill. Please run each individual station for 2-3 min and inspect the following areas:

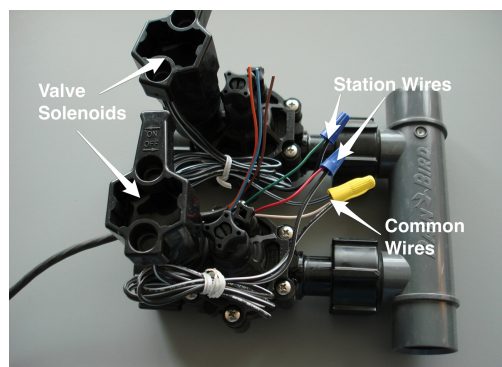
Sprinkler heads



Drip lines and emitters



Valves: Inspect for leaking on the valve body as well as viewing the solenoid. The solenoid is the black cylinder that receives the two wires and connects it to the valve. When solenoids are cracked and worn, showing indications of rust, they can cause valves to stick open/stay on.



Note: Areas of low water pressure can indicate an underground irrigation leak. If that is the case we recommend that you call a licensed plumber, licensed landscape contractor, or leak detection company.

- 6 Check Your Swimming Pool For Leaks-** If your pool is equipped with an auto-fill valve, it is advised to check this device. When pool fill valves get stuck open, they can use a surprisingly large amount of water. Many pool auto-fill valves look like, and operate like, a toilet float fill valve.



Once you have determined that your auto-fill valve is not leaking, check for other possible leaks by performing the Swimming Pool Bucket Test:

1. Place a bucket on the first pool step, fill it with water to the same level as the pool water level outside the bucket.
2. Check the differences between the two levels in 24 hours.



The evaporation rates in the bucket and pool should be the same. If your pool water level is dropping faster, you may have a leak. Please call your pool service or licensed contractor for repair.

- 7 Check Your Water Softeners and RO Systems-** Although rare, occasionally incorrect programming, corroded valves, or faulty tank parts will cause higher water usage. If you notice that your system is back washing/regenerating many times per week, this is a sign that it is malfunctioning. If you have a system that indicates how many gallons have passed through, it can also help you determine if you might have a leak inside the home. Note the reading and check again in a few days to see if the difference seems logical.

Thank You For Taking The Time To Check Your Home for Water Leaks.

If the cause of the high water usage is discovered, please fill out a bill adjustment request on our website at mnwd.com/adjustments. If you have any further questions please contact our Water Efficiency Department by phone at **(949) 448-4025** between 8am-5pm Monday-Friday or by email at conservation@mnwd.com.