

MBCSD Water Saving Leak Prevention and Detection Tips

Included are water saving tips on how to detect leaks prior to the bi-monthly meter readings and a list of a few simple steps that can be followed to help avoid long-lasting or unknown leaks that may occur in underground water pipes and/or landscaping irrigation lines.

Tip 1: The most useful first step is to make sure that all garden hoses have auto-shut off nozzles that immediately shut-off the flow of water when not being compressed by your hand.

Tip 2: Also, installing water timers on all your garden hose bibs can be very useful. For example, when going to fill a hot tub, koi pond, or other garden use where you cannot use a hose nozzle, you can set the water meter timer for the estimated amount of time that you think is needed to complete the task and then not worry that you may forget and leave the hose running wide open unnoticed. (Home Depot and other hardware stores carry Orbit water timers for less than \$13.00 and you can easily install them yourself on the hose bib between the hose bib threads and the hose collar.)

Tip 3: One of the most useful tools for a home that has had previous leaks, or has a landscape irrigation system, is to learn how to do periodic checks of your own home's main water meter. Most residents know where their water meters are located, but if for some reason someone does not, it's usually located on your property close to the edge of the street where your home's address is located. (If anyone needs help finding their water meter, please don't hesitate to call the CSD District office and we will help you locate your meter.) It is a good to check for any dampness or water in the main meter box as often leaks can occur where the various waterlines and fittings meet at the main meter.

Tip 4: Once you have located your meter, the first useful test is to check your main meter for any, and all, types of leak. This is easy to do. Turn off all running water in your house (and make sure your irrigation system is not running), then go over to your main meter box, open the lid, and look to see if the white triangle in the middle of the meter dial is moving. If you have a leak, the diamond will be moving steadily, and depending on how fast it is spinning, will indicate how big a leak. The faster the triangle is spinning the bigger the leak and visa versa. But any leak is worth investigating because slow leaks add up too!

Tip 5: If you discover you have a leak, then it's good to do some simple preliminary investigation to try and locate the source. An easy first item to check is your toilet flapper valves. If a flapper is wearing out and getting stuck in the up position, then water will continue to run somewhat quietly out of the tank and into the bowl, and then into your septic system. If it is determined to be a toilet valve, then it is best to replace the valve, as it will most likely continue to stick periodically, and usually when you use the restroom one last time before leaving the house, so then it goes undetected while you are away.

Tip 6: Next, just walk around your yard or property and look for damp spots that seem unusual and there is no other reason why the ground would be damp in that location.

Tip 7: If you have an irrigation system, it is always good to check to make sure that your system's timer is not malfunctioning. It can be very useful to periodically check to see that the system is not still running during times when it should be off.

Tip 8: Other items to check on your irrigation system are; the automatic anti-syphoning valve, or missing sprinkler heads that have snapped off, or an irrigation tube that has separated and can increase the water rate from 3 gpm to 20 gpm.

Tip 9: It is also good to know how much water a normal irrigation system uses. You can periodically read your meter before it goes on, and then check again when it goes off to see if it is using the same amount, or more than usual, which may indicate a broken irrigation line. You will need to remember not to use any other water while running this test if the irrigation system is hooked up to the house.

Tip 10: It's handy to know what a 'typical' leak may look like when trying to determine its source. Below is a list of the amounts of water that various types of leaks can use to know whether you are looking for a leaky toilet or a garden hose.

Common water Loss examples:

Leaking Toilet @1/2 GPM = 21,600 Gal/month

Drip Irrigation @1 GPM = 43,200 Gal/month

Watering Garden for 2 hours @ 5 GPM = 18,000 Gal/month

Watering Garden for 2 hours @ 10 GPM = 36,000 Gal/month

Unattended Water Hose 1 night @10 GPM = 5,400 Gal

Broken Services Line 1 night @15 GPM = 8,100 Gal

1 day @15 GPM = 21,600 Gal

1 week @15 GPM = 151,200 Gal

1 month @ 15 GPM = 648,000 Gal

Stuck Ice Maker @ 2 GPM = 86,400 Gal/month

Stuck Check Valve in Washing Machine – 30 minutes = 240 Gal

Stuck Float Valve in Watering Trough @ 5GPM = 216,000 Gal/month

Obviously, this is not an exhaustive list, but these tips are a good first step to avoid some of the most common and pervasive leaks that many homeowners encounter. Irrigation leaks are particularly problematic as they do not qualify for the District's leak relief policy and so can be more expensive. But also, leaks in underground pipes can add up fast, and while they do qualify for leak relief, it is still costly being as all that water requires energy to pump it from the Well to the tanks and to be treated. Also, water is a valuable resource that we try to use conservatively, productively, and wisely. Here are some typical water uses to help conserve as well.

Typical Normal Water Uses:

1 Bath = 42 Gal in Standard 50 Gallon Bathtub

1 Shower = 17 Gal

Wash 1 Load of Clothes: Top Loader = 45 Gal / Front Loader = 33 Gal

Flush Toilet: Standard = 3 Gal / Low-Flow = 1.6 Gal

[Hope these tips can be helpful!](#)

See below for more information on how leaks can add up

Unattended leaks can quickly add up!

Water Leak Statistics:

The following shows the amount of water that can be lost for various size leaks.

A dripping leak consumes:

15 gal. per day
450 gal. per month

A 1/32 in. leak consumes:

264 gal. per day
7,920 gal. per month

A 1/16 in. leak consumes:

943 gal. per day
28,300 gal. per month / At 60psi, a 1/16" hole leaks 74,000 gallons (9,850 cubic feet) in 3 months

A 1/8 in. leak consumes:

3,806 gal. per day
114,200 gal. per month / At 60psi, a 1/8" hole leaks 296,000 gallons (39,400 cubic feet) in 3 months

A 1/4 in. leak consumes:

15,226 gal. per day
456,800 gal. per month / At 60 psi, a 1/4" hole leaks 1,181,500 gallons (158,000cf) in 3 months

A 1/2 in. leak consumes:

60,900 gal. per day
1,827,000 gal. per month

Muir Beach Community Services District

Bi-Monthly Water Rates

Type	Gallons	Charge
<i>Capacity</i>	N/A	\$ 8.65 Meter Reading
	N/A	\$ 78.04 Meter Charge (per 5/8"-1" meter size)
	N/A	\$ 390.22 Meter Charge (per 1.5" meter size, if applicable)
<i>Volumetric</i>	All gallons	\$ 2.19 per 100 gallons used

Note

1. Meter Charges are based on projected capital improvements.
2. Volumetric Charges are calculated per gallon; rate is shown per 100 gallons for clarity only.

Bi-monthly Conservation Discounts

Gallons	Discount%
0 to 4,500	50% for all usage
4,501 to 10,000	43% applies to all usage
10,001 to 30,000	30% applies to all usage
30,001+	0% applies to all usage