

A User-Friendly Guide to Fixing Leaks

Is there a leak in your pond, or are your frogs drinking all the water?

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Leaks are among the most misunderstood and misdiagnosed problems anyone can have in their pond. Understanding the basic principles of leak detection and repair will save you time, money, and headaches in your water gardening adventures ... I guarantee it!

What is Evaporation?

First, let's have a look at what evaporation is and what it isn't. Evaporation is caused by water turning into a vapor and escaping from your pond. The amount of water loss will vary according to the region of the country and the time of year. Ponds that are located in areas of the country with moderate temperatures and high humidity can expect to see 1 to 1 ½ inches of water loss per week during the spring and summer. Most of this evaporation should be replaced naturally by rain. However, if you live in an area with high temperatures and low humidity, it's possible to see 3 inches or more of evaporation in a week, or even 1 to 1 ½ inches of water loss per day if the pond is heavily populated with fish & plants.

The quantity and size of your waterfall(s) will also affect the amount of water that is lost. Regardless of the climate, a 4x 6' pond with a 20-foot stream and 5 feet of cascading waterfalls may lose as much as 2 inches or more every day! Why? Splashing and moving water has greater exposure to additional evaporation than does the still water in the pond. If that same pond was 16' x 21' pond, you'd probably never even notice the additional evaporation because it's a larger pond.

What It Isn't

Evaporation is not filling your pond up all the way one evening, and waking up the next morning to find the water six inches lower. That's a leak! If your pond is experiencing a loss of water at a more rapid rate, you either have a leak, or your frogs are drinking the water. Seriously, let's figure that it's a leak. What do you do then?

Low Edges

Look for any low edges. Settling at the pond's edge is the most common cause of a leak, especially in a new pond. Typically, the low edges are found around the stream and waterfall where settling may have occurred after a few rainfalls. These areas are usually built up during the construction of the pond using the soil from the excavation, and are prone to some settling.

Your first line of defense is to carefully inspect the edges of not only your stream and waterfall, but also the perimeter of the pond. As the dirt around the stream or waterfall settles, it can create low spots that may cause water to escape over the edge of the liner. Keep your eyes peeled for wet mulch or gravel, or muddy areas around the perimeter of your pond. If you find a spot that's leaking, all you have to do is lift the liner up and push some soil under it in order to raise the edge. Bingo - leak fixed!

Another possibility is that water is splashing out of your stream. To fix a "splash leak," all you have to do is adjust a few of the rocks under and around your waterfall. This will contain or redirect the splash and it will stop the splash leak. Once again, you've solved the problem the easy and cost-effective way ... using common sense.

Low edges can be built back up by simply backfilling and compacting soil beneath the liner in order to raise the edge of the liner above the water level.

Obstructions in the Stream and Waterfalls

In addition to checking for low edges, you should also check your stream and waterfall. Rocks and excessive plant or algae growth in the stream or BIOFALLS® filter can restrict the flow of water and divert it over the edge of the liner. Plants and algae should be maintained by trimming them back in order to let the water pass freely. All in all, these leaks are extremely easy to fix.

Still Leaking?

You've spent 15 minutes or so following the suggestions listed above and you still can't find the leak. What do you do next? It's time for a little more work, and some drastic measures. You'll have to shut your pump off for a day. By doing this, you'll be able to determine the approximate location of the leak.

- Make sure the pond is filled to the appropriate level.
- Unplug the pump.
- Let the pond sit for 24 hours.
- If the water level drops, then you know the leak is in the pond.

When the Water Drops

- To find out where the leak is occurring, allow the water level to continue to drop. The level where the water stops dropping is the level where the leak is located.
- Concentrate your search around the perimeter of the pond at the level that the water has stopped dropping.

Now the fun begins! At this point, you may want to consider calling in a pond professional, but in order to reveal the exact location of the leak, you'll need to:

- Remove any rocks around the entire perimeter at the level where the water stopped. You can then carefully check for some sort of puncture, or hole in the liner.
- When you find the hole, you simply patch it with a liner patch kit available at pond supply retailers.
- Now you can replace the rocks, fill the pond back to the top, and enjoy!

Steady and Level

If the water level remains the same, then it is safe to assume that the leak is not in the pond. Now you'll need to check the pipe, the plumbing fittings, and the pump connections for leaks.

Another possible culprit is the faceplate of your skimmer, if you have one. If the water level stopped dropping above the bottom of the faceplate you should investigate the skimmer. It may not have sealed correctly.

If the Leak Is in the Skimmer

- Investigate the skimmer faceplate without disassembling it.
- Simply move a few rocks around the front of the skimmer and slide your hand behind the liner, feeling for wet soil around the opening of the skimmer. If the soil is saturated, then the faceplate may have not been installed properly and might be the source of the leak.
- Remove the faceplate, clean all of the old silicone off the liner, and refer back to the instruction manual on proper procedures for sealing the skimmer faceplate to the skimmer. Hopefully, you've solved the leak.

It's not fun when your pond is losing water. It can be a time-consuming and frustrating process to locate the leak. Hopefully with these steps and tips, you can quickly locate the source of the leak and get right back to enjoying your water garden.

SWG's Leak Detection Test & Repair Policy

Leak detections & repairs are conducted on an hourly basis, in which we will inspect all plausible factors that may be contributing to the water loss & repair as needed. A leak detection test performed by the customer is required for all repairs pertaining to water loss. The LTD is required PRIOR to scheduling & must be completed in full on estimate / work order. This helps us to narrow down the location of the leak by a process of elimination, thus saving our customers time/\$\$! If there are multiple leaks that were not detected on the initial visit, the customer will be asked to perform another leak detection test. The costs of materials are not included in the hourly rate. LEAK SERVICE CALLS HAVE THE POTENTIAL FOR ADDITIONAL TRIPS THAT COULD GO BEYOND THIS SERVICE CALL DATE/TIME, THIS IS DUE TO POSSIBILITY OF MULTIPLE LEAKS. ADDITIONAL CHARGES WILL APPLY FOR ADDITIONAL VISITS.

LDT directions, info required for service:

- Autofill present? If yes - turn off for test.
- Saturated ground visible? Y / N / Where?

**Top off water to normal level & add dechlorinator, if fish are present.

Keep PUMP ON & monitor for 12-24 hrs.

Amount of water loss with pump ON? Time frame?: _____

(Ex: lost 3" within 24 hrs)

**Top off water again to normal level & add dechlorinator, if fish are present.

Turn PUMP OFF, wait 10 minutes to mark water levels (to allow transitional water to settle) & monitor for 12-24 hrs.

Amount of water loss with pump OFF? Time frame?: _____

(Ex: no water loss overnight, approx 12 hrs)

If leak is present with pump OFF, let it continue to decrease & see if water level stops at a certain level.

Leak After Cleanout Service - A cleanout does not CAUSE a leak unless the integrity of the pond/equipment is already compromised. A LTD is required prior to scheduling & mobilization. Cleanouts on water features with a pre-existing, slow leak may notice more water loss afterward because the cleanout removes overgrown plants silt & any other debris that may have previously clogged the hole or tear. Additional charges may apply for subsequent trips made for leak detection/repairs.