

# Cleaning and Maintenance for Your Waterfall Feature

by John Olson  
Graystone Industries

Few things in life are as soothing as the sound of running water. The calming effects of falling water have been enjoyed by mankind for thousands of years. Once the sole domain of the rich, recent advances in the technologies of water fall supplies and systems have brought this tranquil and relaxing pastime to tens of thousands of people.

Across America and the rest of the world, news weary people are ever more opting to take refuge from the world not in some foreign tourist spot, but beside a backyard stream or waterfall of their own creation. The rushing water, the sights and sounds that make waterfalls so popular, allow each of us to turn our own yards into a personal retreat from the cares of the world. With or without an adjoining pond, waterfall features can become an increasingly desirable spot for the entire family to picnic, party, and play.

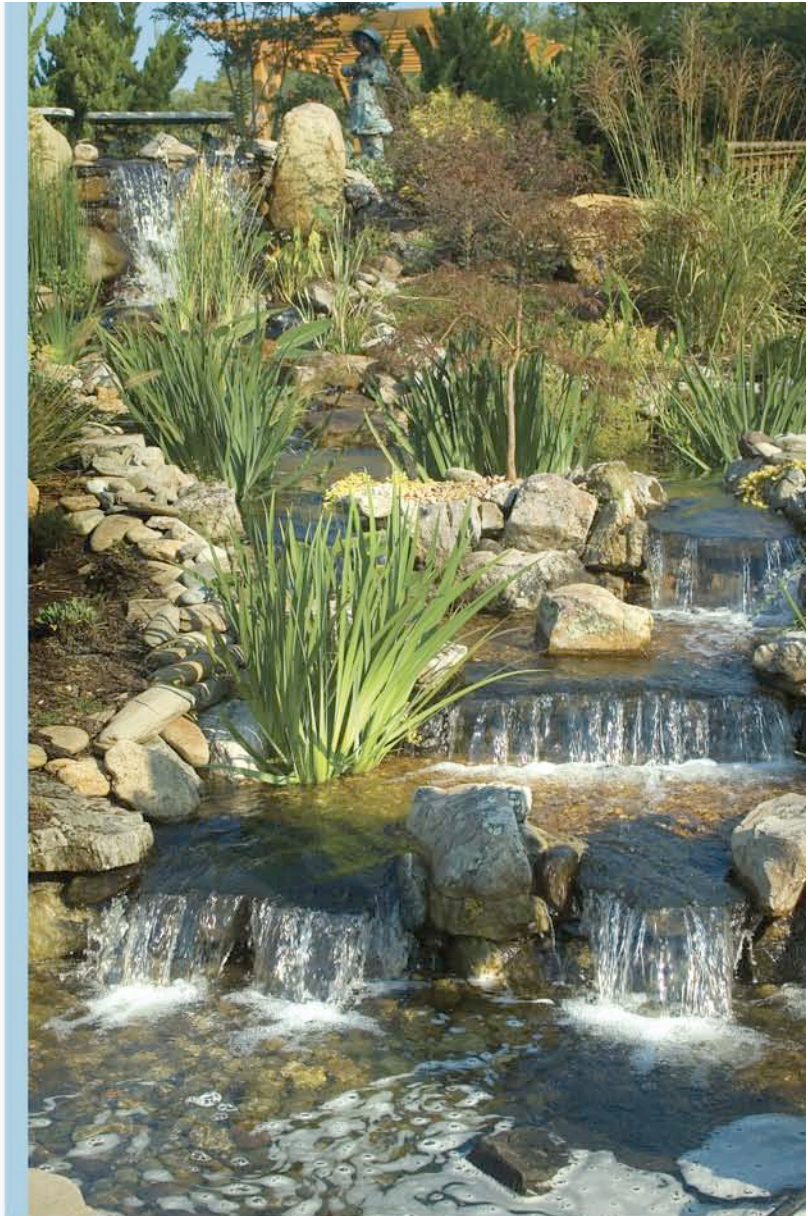
Yet with more and more of these easy to install backyard waterfalls popping up across the nation I find one of the most frequently asked questions is about how to maintain and clean a waterfall feature. A quick search across the Internet provides a variety of products and a plethora of conflicting information. Below you will find practical advice on simple procedures and supplies that will help you keep your home waterfall clean, clear and the crown jewel of your landscaping project.

Let's look at some of the basic waterfall maintenance and care questions and address them in an easy to understand manner.

## My Backyard Waterfall keeps going dry, do I have a leak?

It is possible that you have a leak, but there are many other reasons why your waterfall may require you to add water frequently. Before assuming the worst, check your waterfall for the following:

**1.** Is your waterfall facing the full afternoon sun? Evaporation may cause the loss of several gallons or several hundred gallons of water each day depending upon the size of



your waterfall. Evaporation is extremely high in sunny dry climates, but affects almost all regions.

**2.** Has it been extremely windy in your area lately? Wind, like sun, can cause huge losses of water from evaporation. A combination of the two can help dry up your water feature in a surprisingly short time.

**3.** Does your waterfall have a large distance with free falling water? The higher the waterfall is, the more possibility of both evaporation and splashing. Splashing can also rob your waterfall of water. Check outside the stream or waterfall area for wet rocks, plants, or dirt. If your water is not staying in the waterfall this can be a big source of your problem.

**4.** Do you have plants that extend over into the stream or waterfall that are partially diverting the flow of water from the feature? Once I had a wonderful Queen Fern that thrived so well its leaves actually grew under the falling water and were deflecting it outside of my waterfall liner.

After checking for the above, pare back any plants that are too big or growing too far into the waterfall feature. Splashing can be controlled by adjusting the rocks or gravel at the base



Photo by: Freddie Combas, Florida Water Gardens

of the waterfall. AFTER the waterfall feature is built, there is not much you can do to avoid sunlight or wind but you can make sure your waterfall is equipped with an automatic water fill valve. This inexpensive little item is attached inside the water basin and uses a float switch to automatically add water to your waterfall through a small hose whenever the level falls to low.

### I checked all the above and still think I have a leak, what do I do?

Before you tear apart your waterfall to track down that mysterious leak, check the simple things first.

**1.** Check the connection from the tubing to the waterfall filter or spillway. A poorly fitting connection or one that has worked loose could be spraying out water behind your waterfall.

**2.** Check the spillway itself and make sure water is not spilling out and going back behind the unit or under the pond liner.

**3.** Check the tubing from the waterfall pump all the way to the spillway. The two most common types of tubing used in waterfalls are flexible, spiral non kink tube or a flexible thick PVC tube. These tubes are very strong but if damage occurred during installation or the tube had a defect in it, you could find that you are losing water right into the ground where you have the tubing buried.

**4.** With the waterfall off, check the level of the water in the basin. Check it again the next day. If the water level has stayed the same then you have two possibilities (assuming you have checked the tube and the connection). The leak is in the waterfall or the stream itself or you are back to the evaporation problem previously covered.

**5.** If the water in your basin has lowered while the waterfall is turned off then you very likely have a leak in your basin. I would allow the water to continue to leak out until it

stops. The water level will drop only to the point of the leak and then stop. Once it stops you will have a much easier time finding and repairing the leak.

A leak in the basin made with EPDM pond liner is fairly easy to fix. You can purchase an EPDM repair kit from many retail stores in person or on line. These kits contain a primer, scrub pad and a section of EPDM patch material. A few hours later you will be ready to refill and once again enjoy your waterfall.

If the leak is not in your basin then unfortunately it is likely inside the waterfall lining itself. If you had the pond professionally installed this would be the time to call them out to inspect. They will most likely repeat many of the above steps before tearing down the rocks and waterfall itself. If you installed the waterfall on your own then you have a bit of work to do. The rocks in the stream and waterfall will need to be removed and the entire liner inspected for damage. Once found, you may use the EPDM repair kit to fix.

If your waterfall is made of PVC, concrete or some other type of material you will need to research additional information on repairing these less common types of liners.

### What is the best way to clean out leaves that have blown into my Stream or Waterfall?

Waterfalls and streams are home to many size rocks. These rocks create crevices that will often trap wind blown leaves. If you notice a few leaves here and there you can probably pick them out by hand. If you find a lot of leaves in your waterfall or stream it is important to remove them as they will decay and affect the quality of your water if you do not. The very best way to remove an abundance of leaves is to turn off the waterfall and allow the rocks and leaves to dry out. Once dry, a regular leaf blower is perfect to dislodge most trapped leaf



String algae can completely overwhelm an otherwise beautiful waterfall.

matter. If you do not have a leaf blower try a stiff bristled broom. It may take a bit more elbow grease but you can get the job done.

### I have green stuff growing on the rocks in my waterfall, How do I clean them?

First, let's consider what your green stuff might be. Algae, moss, or Lichen are the three most likely suspects.

Moss is the most evolved of the three and in many varieties you can actually see leaf like structures, which are not present with algae. Moss loves moist, wet environments, but does not grow in the water itself. If you have a thick green carpeting on your rocks but it does not extend far into the water itself, you probably have moss.

Some of the most beautiful waterfalls in the world have water cascading over moss covered rocks. The velvety texture and the varied green colors of many moss types add a colorful natural addition to a manmade waterfall. Some people even pay to have moss added to their waterfalls and take great pride in growing such a wonderful highlight to their feature. If you feel that the moss adds beauty and makes a more natural looking waterfall you may wish to consider leaving it alone.

If you prefer to remove the moss you will want to physically remove as much of it as possible and then use one of the treatments discussed below. Turning the waterfall off and using a pressure washer is a great way to deep clean your rocks but you can simply lift or scrape off most moss.

Lichen is a symbiotic, simple-celled composite plant that requires both a fungus and algae to thrive. These organisms can cover the face of rocks, wood, and even soil itself. Lichens come in a variety of shapes, sizes and colors. They can survive long periods without water and have even been known to survive in the vacuum of space. Like moss, the lichen coverings on rocks surrounding waterfalls are generally sought after by the owner and left to add a touch of nature to the waterfall feature. If you decide to remove the lichen, again physical removal is usually required followed by a treatment of algaecide or debris scrub described below.

Algae are the one basic celled plant that most pond and waterfall owners would just as soon do without. Most often the algae you find on waterfalls are known as string algae and if you have it you will understand the name. Long stringy fingers on this algae can grow up to 2' in length. The algae itself will not harm the water in any way but is mostly viewed as a nuisance.

If your waterfall is attached to a pond with fish you will have a much higher chance of having a problem with algae in your waterfall. Algae grows when an abundance of nutrients are present. The nutrients combined by energy from the sun allow algae to develop and thrive. The nutrients in the water typically come from fish waste and the ammonia and Nitrates

they produce. If your waterfall is not hooked to a fish pond system, then the algae has developed from decaying plant matter that has found its way into your waterfall system.

### OK, I think it is algae that I have. How do I get rid of it?

To eliminate string algae growth from your waterfall that has a pond you can use a variety of different methods.

**1.** Physical removal is possible if you have the time and patience to do it. The use of a toilet brush or something similar will allow you to twist the string algae and wrap it up like spaghetti on a fork. A little time consuming but certainly effective.

**2.** Remove the algae food source and the string algae will not thrive. The addition of beneficial bacteria to your fish pond will establish a colony of beneficial bacteria. This invisible Bacillus bacteria will thrive on the same excess nutrients that algae love to consume. If the pond bacteria is consuming enough of the nutrients then the algae will not thrive.

**3.** Use an oxygen based debris scrub product to blast the algae off the surface of the rocks. These products abound on the market and all typically are based on a chemical called Sodium Percarbonate that is a white crystallized water-soluble combination of Sodium Carbonate and Hydrogen Peroxide. The Sodium Percarbonate is the primary ingredient in eco friendly bleaches, cleaners and teeth whitening systems.

Simply sprinkle the debris scrub material lightly over the effected area with the water turned off. Wait at least 8-12 hours before you resume the waterfall flow.

*NOTE:* If your waterfall is very large and covered with a lot of algae and attached to a pond that is very small you may need to treat half of it to start with. Once treated, wait two days before treating the other half. The debris scrub will use the power of oxygen to destroy the algae but the dead algae will go from producing oxygen to consuming oxygen as it dies. If too much algae dies at once it may be necessary to add extra aeration to the pond water with an air pump or fountain. Additionally the dead algae that ends up in your pond will become the source of nutrition for new algae to grow so be sure to add lots of beneficial bacteria to your pond in order to consume this dead matter before it can cause further problems.

**4.** Use a solution of concentrated barley extract. Barley has been used by farmers for hundreds of years to prevent the growth of algae in their farm ponds. This method can work for waterfalls as well. The barley changes the water as it breaks down and makes it less suitable an environment for algae to grow in. Barley extracts are easily found in just about any pond related retail store.

**5.** Use an EPA registered algaecide. Be very careful with any algaecides that contain copper as an ingredient if your

waterfall or stream flows into a pond. The use of this type of product can kill your fish and plants. Algaecides come in many different types of liquids and powders. Even without copper an algaecide can harm your fish by removing oxygen from the pond and if too much algae dies at once you may need to add additional filtration by air pump or fountain until a new balance is achieved. The addition of beneficial bacteria to the pond is strongly recommended to reduce the chances of further problems.

### Waterfalls Without Ponds

If your waterfall does not flow into a pond then you can easily use the above methods without damage to your fish. Just read the labels on any product that you purchase as some of the EPA registered algaecides will also contain ingredients that can harm any water plants you have in the waterfall.

### What does EPA registered Algaecide really mean? Do I have to have one?

A product that is registered with the Environmental Protection Agency as an algaecide has been tested extensively to prove that claim. Generally EPA registered algaecides are specific chemical compounds that act in a way to kill algae.

You will find a great many products on the market that will help you maintain your pond and waterfall that are not EPA registered. These products often do things such as consume the same nutrients that algae would use to grow and thus preventing the algae from getting a foothold in your pond or waterfall.

### Why are these other products not EPA registered?

Some products for use in ponds and waterfalls are not EPA registered because they do not kill or eliminate algae as an algaecide does with chemicals. Additionally many of these products are common chemicals or naturally occurring products such as barley extract and Bacillus bacteria that many manufacturers know about and offer for sale. An EPA registration can take hundreds of thousands of dollars and up to 10 years to complete. Once the registration is in place for that product ANYONE can use that registration to offer the same kind of product without going through all the work and money. No company wants to spend a quarter million dollars on registering a bale of barley! No company wants to make that kind of effort to register a naturally occurring bacteria when all of their competitors could immediately start using the registration as well without paying a penny.

It certainly makes finding suitable NATURAL pond products frustrating, but these products are widely offered to the public and do not make any type of claim about eliminating algae.



Photo by: Freddie Combas, Florida Water Gardens

*NOTE:* At the time of this article Sodium Percarbonate has received an EPA registration as an algaecide in the water treatment field under the name PAK 27 (registered Trade Mark). I expect to see this product widely offered as a debris scrub algaecide this next year.

### Conclusion

Your waterfall can be an endless source of beauty and enjoyment to you and your family and friends. The work and time maintaining a backyard waterfall and stream are minimal but very important. By following the simple care tips above, you will keep your waterfall in pristine condition and ready for enjoyment at all times. Wishing you and your waterfall the very best! ☘

### About the Author

**John Olson** is the CEO of Graystone Industries and an avid alligator wrestler. Graystone is a distributor for over a dozen brands of quality pond supplies with warehouse and retail locations in GA and NC as well as an internet store at [www.graystonecreations.com](http://www.graystonecreations.com).



John resides at Rosemont Estate in north Georgia with his wife and two children. When not riding go carts, gold mining, or trout fishing with the children John helps other businesses in achieving their true potential.

[john@graystoneindustries.com](mailto:john@graystoneindustries.com)  
706-865-0220