

# Water Features

By Jason Miller

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**Give your yard a touch of serenity by adding a water feature.**

Backyard ponds and water gardens are gaining in popularity as new and innovative techniques provide new ways to make water gardens increasingly low maintenance and relatively affordable. Water in any form is a calming element in the garden and well worth incorporating into your landscape. Who wouldn't love waking up to the gurgle of a stream or the sight of a bird sipping at the edge of a quiet pool?

Whether you build a pond into your landscape, or use a barrel or prefabricated patio container, the effects of a water garden on wildlife are remarkable. Water is a magnet for birds, butterflies, frogs, and insects such as dragonflies or damselflies. In my last yard, before I installed a small pond, I would spot maybe half a dozen dragonflies over the course of a summer—and all of the same species. After the pond went in, I quickly lost count of the number and species of dragonflies.

So let's talk about ponds, beginning with choosing its location. This step requires some thought. Place the pond where it can be viewed from a patio or deck, but do not locate it too close to trees. Most aquatic plants prefer full sun, and besides, you'll create a full-time cleanup job for yourself with all the leaves, twigs and other debris the trees will drop into your pond.

The size of your pond depends on your personal preference. Keep in mind, though, that contrary to popular belief, large ponds do not need more maintenance than small ponds. In fact, a large pond is more likely to become ecologically balanced than a small one; therefore, it will need less attention. One that is too small cannot sustain long-term stability. Mature water gardens become stable as plants, bacteria colonies and other vital life forms become established.



**The Discovery Garden pond is home to a multitude of water creatures, including frogs, water boatmen, and water striders.** Photo by Jason Miller



**Water features are magnets for birds, butterflies, frogs, insects—and pets.** Photo by Jason Miller



**This small, newly installed pond anchors an equally small backyard. When it comes to water features, size doesn't matter; scale and proportion are far more integral to success on an aesthetic level.**

Photo by Jason Miller.

You'll need some form of pond liner to keep water from seeping away, no matter how compact your soil is. Rigid pond liners come in a variety of shapes and might be a good choice for a beginner. The first water feature I built used a rigid, prefabricated liner, which was a good way to get my feet wet, as it were. Almost inevitably, though, many "water gardeners" eventually feel these prefab liners are too small, and they long for an approach that lets them enlarge the feature and show off their creativity.

If you want to design your own pond shape, consider a flexible liner of ethylene propylene diene monomer (EPDM) rubber. This stuff will remind you of inner-tube rubber. It's thick and flexible, and resistant to ultraviolet light, which can break down less-expensive plastic liners. (Plus, some plastics can be toxic to fish.) Because of its heft, it also can better stand up to the pressure of possibly thousands of gallons of water pressing it against the rocks and sticks in the soil. Still, it's always a good idea to line the hole with an underlayment before putting in the EPDM liner.



**An EPDM liner, shown here during a 2006 renovation of the Discovery Garden pond, is the best choice for water gardeners who want to decide what shape their pond will take.** Photo by Jason Miller.

Cement also is an option as a pond liner. This will probably be your largest expense as you install your water feature, but well worth the cost. You can save potential labor and aggravation later, too, because a cement liner won't get punctured or wear out. It *could*, however, develop a crack if it isn't mixed and/or installed properly. For that reason, I must admit I'd have a cement liner professionally installed.

One challenge about tending a water garden is the dreaded green algae. Like cholesterol, however, there is good and bad algae. Some algae are beneficial. They provide food and oxygen for aquatic life. Over-production of that nasty, slimy, green algae occurs when a natural balance in the pond has not been achieved. An example of this is if there are too many fish in relation to the amount of plant material in the pond. A good rule of thumb is one inch of fish for every square foot of pond surface. Remember that fish grow and multiply.

To block the sunlight that promotes algae growth, 50 to 70 percent of the pond surface should be covered by plants. You might also try floating bundles of barley straw in your pond (sized appropriately for your pond's water volume), which is a good natural algae fighter. As the straw breaks down, it releases an enzyme that inhibits algae growth. You can find barley straw at stores that specialize in pond equipment.

As for plants, a number of options await you. Floating plants, such as water hyacinth, frogbit and water lettuce, free-float on the water and are good choices for covering that 50 to 70 percent of the surface. Submerged plants, such as anacharis, hornwort and vallisneria, help to oxygenate the bottom of the pond, which your fish will appreciate during the winter months. They also absorb through their leaves the same nutrients that "bad algae" needs to grow, thereby lessening the likelihood of an algae outbreak. Finally, submerged plants provide spawning areas for fish, frogs and snails, which becomes a safe place for baby fish to hide.

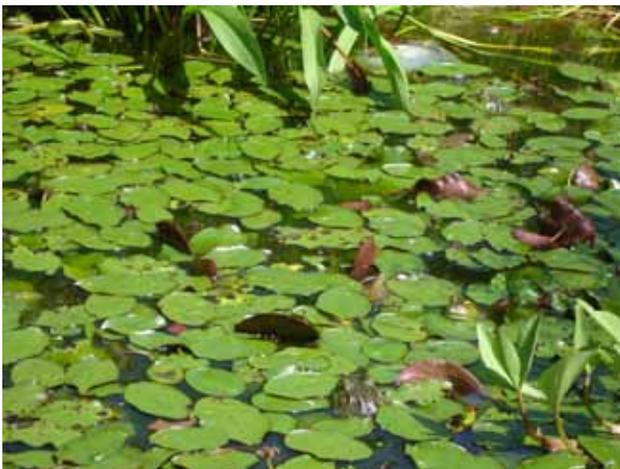
The ever-popular water lily and lotus plants cover the water surface, too, with their flat, round leaves and festive blooms. Along the water's edge, bog plants are happiest with their roots submerged and their heads in the sun. Plants in this category include rushes, palms, pickerels, marsh marigold, and water-loving types of lobelia and hibiscus. Use these and other bog plants to soften the edges of a pond, which is often lined with rocks to anchor the liner.

Many—if not most—gardeners eventually decide they want fish in their pond. This is a decision that should be made before you build the feature. Whether you put pricey koi or less expensive goldfish in your pond, it is wise to design it deep and wide enough to allow your fish to escape sharp-eyed predators. Place underwater tunnels, rock ledges, and sunken drain tiles for fish to explore and to hide in when necessary. Here in Skagit County, the usual suspects when it comes to predators include herons and raccoons. Raccoons do not like to swim for their food; rather, they'll fish from the pond edge. A pond at least eight feet wide gives fish the chance to stay out of reach. Using a motion-activated mechanism that shoots a stream of water when predators are near is another often effective deterrent.

In the end, whether you choose to install a full-size pond or opt for a simple, self-contained fountain on your deck, it's a good idea to explore your options at local nurseries or landscape businesses that specialize in water features. Spend a little time on Google, create a wish list, talk to the professionals, and make decisions that will meet your needs and desires for many years.



**This umbrella palm is a bog plant, meaning it likes its feet wet and its head in the sun.** Photo by Jason Miller



**Water lilies help to prevent rampant algae growth by shielding the water from the sun, while providing cover for fish and frogs (bonus points if you can spot all four frogs in this photo).** Photo by Jason Miller



**Water lilies and lotuses are popular choices for shielding the surface from the sun's rays, which hastens algae development.** Photo by Jason Miller