



Ponds for profit!

Read these pond-building basics to put your new service in the right (and profitable!) direction.

By GREG WITTSTOCK

So, you want to get into building ponds. You research books and magazines on pond construction and maintenance, and talk to so many people that you have enough information to write a graduate thesis paper on water gardens. There's only one problem: everyone you've talked to and everything you've read conflicts with one another. Everything!

When you asked how deep a pond needed to be to have fish survive a zone 5 winter in Chicago, you heard: 3 feet, from the garden center; 4 feet, from the magazine article; and 18 inches from a friend who swears his fish live year-round.

Lots of misinformation

Why did what started off to be a profitable add-on service turn out to be such a fact-finding nightmare? The problem is simple. Although often well intended, the in-

formation produced regarding pond construction is from people who don't build ponds, or have built too few to thoroughly understand them.

As a professional pond builder, who builds ponds daily, I see the misinformation that permeates the water-gardening industry. The one who is affected the most is the pond owner left with an inferior product that requires excessive mainte-

nance. The other loser is the contractor who installs them.

Contractors are losing sales due to the confused customers and are spending excessive amounts of time educating themselves and their customers about water gardening. Yet, the popularity of ponds continues to rise despite all these problems. It's as if all the problems are worth the rewards to new pond owners.



Approach constructing a pond with the idea of creating a balanced ecosystem with proper filtration, plants, and fish. It will dramatically reduce maintenance, and make customers smile.

PHOTOS BY AQUASCAPE DESIGNS

This reality makes me ponder how popular water gardens would be if it were easy for contractors to get accurate information. I'd like to take a step in that direction by letting you know how my company approaches water-garden construction. Even though my ideas may ruffle some feathers, here is what I know works, and what doesn't and why, when building ponds.

If you've done much reading on water-feature construction you've probably seen the word ecosystem. In plain English, to establish an ecosystem in a pond you need to work with nature and not against it. That means you shouldn't use chemicals but should instead create a balance in each pond you build. To do this you need a mechanical skimmer filter, biological filter, pump, plumbing, rocks, gravel, fish and aquatic plants. Eliminating any one of these can hamper your efforts to establish a proper pond balance.

Mechanical skimmer filter

Water is a magnet for wind-blown debris. (Swimming pool installers figured this out 100 years ago and started making skimmers.) To remove debris, you need a skimmer filter that constantly runs to keep your surface free of debris. Additionally, a skimmer filter will break surface tension and take highly oxygenated water (the surface area) and discharge it into the biological filter.

Your biological filter is a container where high numbers of bacteria live and work to clean the water. Bacteria break down nutrients that lead to algae and green water. In essence, bacteria eat the nutrients that would lead to green water.

Pump and plumbing

Your pump needs to run 24 hours a day, 7 days a week. If you turn it off, bacteria will start to die and oxygen levels needed to sustain your fish will dwindle. Use a high-efficiency, energy-saving pump and place it in the mechanical skimmer



Providing customers with beautiful water gardens is easier than you think if you put together a step-by-step installation plan.

vault to prevent it from clogging. Use a pump that can turn the water over at least once an hour. Do not restrict your pump flow by using narrow, rigid pipe. A pump rated between 1000-3000 gallons per hour (GPH) should use 1-2 flexible PVC pipe.

Rock and gravel

The most overlooked construction materials are rocks and gravel. Spreading 3 inches of gravel over the entire liner is about 50 percent of the battle against green water. You should place 1 to 2 inches of gravel on the horizontal areas of your pond and 6-12 inch granite cobblestones on the vertical areas. (We suggest using 45 mm fish grade, rubber EPDM liners because they are easy to install and will last 50-plus years when covered with rocks and gravel.) When you

rock-in the entire pond you create a giant biological filter. Bacteria thrive on the rocks, rocks hold the liner down, and block out damaging UV rays. Additionally, a gravel bottomed pond is beautiful.

Fish and plants

Don't be afraid of fish. They're the perfect pet and an important part of establishing an ecosystem. Fish will feed on insects and algae in your pond. (Most people however, can't help feeding them and giving them names as well.) In Chicago, fish and plants will naturally overwinter in two feet of water.

Aquatic plants open up a whole new world for gardeners. Most water plants are like any other perennial plants. They'll come back every year with the additional bonus that unlike their terrestrial counterparts, they're self watering. Tropical plants can also be added and treated like any other annual.

When you approach constructing a pond with the idea of creating an ecosystem, your chances of success increase dramatically. Don't cut corners or leave out any of the previously mentioned items unless you're willing to sacrifice pond quality and your time.

Clean the entire pond and filters every spring, empty the skimmer debris nets every few weeks, and periodically sprinkle in natural bacteria, and you'll be set.

Pond construction isn't and shouldn't be made out to be rocket science. I hope I have cleared up some confusion you may have had with building a pond.

Landscaping with water captures all the senses and soothes the soul like nothing else. □

Look for "Estimating and selling water gardens" in the August issue of LM.

—The author is president of Aquascape Designs, based in West Chicago, IL, and produces materials and seminars geared towards helping contractors succeed at building and selling water features.