

## Overview: Pond Components

*Drs. Foster & Smith Educational Staff*

*A healthy fish pond is a self-contained ecosystem that seeks to keep itself in balance. Everything you do as a pond keeper should be designed to optimize this interdependent relationship of plants, fish, and micro-organisms. Here's a brief overview of how each component in a typical pond system contributes to its overall health.*



### Pump

Your pump is the heart of your system. It must run continuously to recirculate at least half the volume of your pond each hour. You will need more capacity depending on the kind and amount of fish kept, and the size and height of your waterfall. For example, koi ponds require a flow rate that is twice the gph as the pond volume.

### Filter

The key to maintaining healthy water conditions is a multi-stage filtration system. Bio-filters house bacteria colonies that recycle waste products like ammonia, mechanical filters and skimmers strain out debris, and chemical filters help remove unwanted minerals and dissolved organic compounds.

### Skimmer

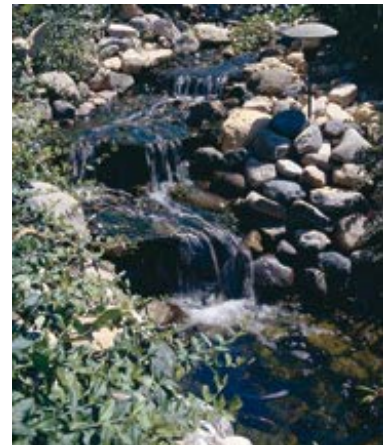
Typically camouflaged in the ground next to your pond, a skimmer box draws leaves and debris from the pond surface, helping prevent clogs in other parts of your system. It is the perfect place to conceal your pump, and affords easy access for maintenance.

### Lights

Lighting enhances your pond inside and out. To save work and ensure the best possible locations, install submerged and perimeter lights during initial construction.

### **Waterfalls & Fountains**

As the focal point of your pond, accents like [waterfalls](#) and [fountains](#) also promote circulation, aeration, and add pleasant sound to the scenery. Complete kits are available to create beautiful falls, fountains, and streams, making the task easy.



### UV clarifier

Easy to install in-line, a UV clarifier economically

sterilizes water, reducing bacteria and parasites that can cause fish disease. Clarifiers also help clump free-floating algae, making it easier for your mechanical filtration to get the green out.

### [Aerator](#)

Circulates water while creating surface agitation, increasing oxygenation and helping prevent your pond from turning into a stagnant mosquito hatchery.

### [Flexible Tubing](#)

Use flexible tubing rather than rigid PVC to minimize the elbows and tight curves that can reduce the flow rate of your pump.

### [Shock Buster GFCI for Ponds](#)

Install a Shock Buster GFCI for Ponds to safely control the operation of your pumps, UV clarifiers, underwater lights, and other necessary items from one convenient location.

### **Pond Planning Tips**

- Before breaking ground, always consult with local utilities, and if necessary, obtain permits. Once you begin, take your time. Your new pond is a work of art you'll enjoy for years.
- For best success with flowering pond lilies, plan the position of your pond so that it receives at least six hours of sunlight. Too much sun can overheat the water, so shade is equally important. Positioning your pond close to your home can help, and may also simplify electrical and water hook-ups.
- Pond size and shape are always important decisions, but when it comes to the health of your pond, depth is even more critical. Koi prefer a depth of at least 3 feet. To prevent water from freezing completely in winter you may need to dig deeper, up to four feet or more if you live in the far north.
- Select your pond components in advance from a knowledgeable and experienced supplier. Kits are an excellent option because the matched components always fit, and the directions are easy to follow. For a trouble-free installation, select the best quality components you can afford.

