

## Fish Pond Filter

### What do I need for a fish pond filter?

*By Stephen M. Meyer*

Q. My pond is approximately 1500 gallons — 15 feet long, 12 feet wide, and 2 feet deep. There is a 1-foot-wide shelf around the pond, and there is a waterfall about 5 feet high, with four steps. The pond holds 15 koi — four 4-inch fish and eleven 18-inch fish. The pond gets full sun all day.

At present, I use a 4-inch perforated PVC pipe wrapped with foam as the only filter. The wrapping frequently falls off, leaving no filtration at all. I presume this is not sufficient. What do I need for a pond filter? Also, how often should the pond be cleaned and how do I care for the pond while it is being cleaned? Are there any organizations in my area for pondkeepers? I have lots of questions and would like to learn all I can.

A. According to my estimate, your fish load is acceptable by most pondkeeper standards for a pond with a reliable biological filter of sufficient capacity. However, you are courting disaster with the makeshift system that is now in place as a biological filter.

I have several rules of thumb, but the one that applies here is no more than one kilogram of fish per 10,000 liters of water in unfiltered ponds. I estimate your fish total at about 9 kilograms (assuming you measured fish length head to tail) in 5700 liters, so you are at about 16 times over my threshold! The only reason you may not have observed serious fish health problems by now (maybe you have) — such as ammonia poisoning — is because the foam wrapping is acting as a bed for nitrifying bacteria. With a more appropriate-sized biofilter, your fish load would be about 1.6 times my maximum limit, which would be much safer ground.

Properly maintained ponds should never need to be "cleaned," per se. Except for removal of leaves and yard debris, everything else can be removed by partial water changes and flushing of the settling basin or mechanical filter if you have one (your foam-wrapped pipe qualifies in the latter category). When carrying out maintenance, the fish should be left in the pond.

You bet there is a good club in your area — although it is so large the word "club" is a gross understatement. Get in touch with the Mid-Atlantic Koi Club. This is the largest, most dynamic, most active association of pondkeepers I know. The club continues to grow by leaps and bounds and has many local chapters. I have met a good number of the membership and they are enthusiastic, knowledgeable and highly motivated. They will "drown" you in good information. Call their membership directors, Anita and Charles Walker, at (703) 590-3875.