

COMMON QUESTIONS ABOUT WATER GARDENING

- 1. How deep should my pond be?** This depends on what type of pond you want. There are basically two types of garden ponds - water gardens and Koi ponds. A *water garden*, which is our focus at Aquatic & Garden Decor, is built to house water plants and goldfish and should be a minimum of 18"-24" in depth. In the Cincinnati area, where the winters are typically mild, there is no need to build a water garden deeper than two feet. Around the perimeter, you may also want a 10"-12" deep area, or shelf, for shallow water plants. A *Koi pond* is built especially to house Koi fish and not a wide variety of water plants. There are also specific design factors, which should be researched if you are considering a Koi pond.
- 2. Where is the best location in my yard for my pond?** We recommend installing your pond where you will enjoy it the most. Place it close to an outdoor sitting area such as a deck or patio and, if possible, near a window, allowing you to view it any time from inside the house. When planning the location, do keep in mind that your pond plants will need at least five hours of direct sunlight per day.
- 3. Where is the worst location in my yard for a pond?** Do not install your pond in an area of your yard that naturally holds water. Excessive ground water under your pond will cause your liner to float, whether it is preformed or rubber liner.
- 4. When is a good time to install my pond?** Any time of year is a good time to install a pond as long as the ground is not frozen.
- 5. What are the differences between pre-formed ponds and rubber liner ponds?** With pre-formed ponds, the shape is determined for you. Rubber liner, however, can conform to any shape, size or depth that you desire; therefore, your only limit is your imagination. Also, the rubber liner itself is typically less expensive than a pre-formed pond shell. For rubber liner ponds, we offer a heavy duty 45 mil, 'fish friendly' rubber liner that comes on 10', 20', or 30' wide rolls, that we can cut to any length. This material is also great for lining a waterfall off the side of your pond (all waterfalls on the outside of ponds must be lined). This material also has been stabilized to protect it from sun damage.
- 6. How do I protect my pond from punctures?** Proper underlayment must be used. This includes fabric underlayment or sand. Either type is fine for rubber liners, although fabric underlayment has some advantages. It is easier to use and will not erode or decay. Also, fabric underlayment will protect your horizontal pond bottom and shelves as well as the vertical side walls, whereas sand can only protect the horizontal portions.
- 7. How much sun does a water garden need?** A minimum of five hours of direct sunlight per day is recommended. Most water plants need at least five hours of sun per day, especially those that bloom.
- 8. Do I need a pump in my pond?** No. A pump is not necessary, however, there are benefits to having a pump in your pond. First, the sound and appearance of a waterfall or any water feature is a very soothing and attractive element in any pond. Also, moving water helps deter egg laying mosquitos because the larvae need stagnant water to survive.
- 9. Will a pump aerate my pond enough to clear the water?** No. A pump will aerate the water somewhat but is not sufficient for balancing the pond. The most effective, natural way to clear and balance a pond is with the correct water plants and a water garden aeration kit.

10. Is a pond aerator helpful to the overall health of my pond and its inhabitants? Yes! Oxygen levels are higher toward the top of your pond, and there is less oxygen at the bottom of the pond. A small aeration kit, with air stones or small air plates on the bottom of the pond, helps to distribute the oxygen more evenly throughout the water, creating a healthier environment for your pond and its inhabitants. Additionally, aerators are the *best* way to keep your pond from completely freezing over in the winter, and they use very little energy.

11. Do I need a filter? It is not necessary to use a filter in a water garden because the plants themselves will clear the water, if the pond has the correct balance of water plants. A filter could help clear the water a bit faster in the spring, while your plants are establishing themselves. For a Koi pond, a filter will most likely be necessary because Koi fish typically eat or destroy the plants that balance the water.

12. When should I add plants to my pond? As soon as the pond is complete, aquatic plants should be added. However, if you install your pond during the winter, we suggest you wait until the following spring to add plants. Important reminder: because water temperatures increase and decrease much more slowly than air temperatures, tropical water plants, such as water hyacinths and water lettuce, should not be added to a pond until May.

13. What plants go in the shallow area of my pond? These plants are known as bog plants, marginal plants or ledge plants. They should sit in the shallow area, or on a shelf in the pond, which is 10"-12" deep.

14. What plants go in the deep area of my pond? Water lilies and oxygenating plants (hornwort) should be in this area, which is 18"-24" deep.

15. What should I consider when adding water lilies to my pond? Water lilies grow best in still water, so locate them away from waterfalls and spray heads. Water lilies are not recommended for ponds with destructive fish, such as Koi. Most lilies need five hours of direct sunlight per day in order to grow well and bloom; however, shade tolerant varieties are available. For best growth and blooming, fertilize with aquatic plant fertilizer, during the growing season, according to the directions on the fertilizer package.

16. When do I propagate (split) my pond plants? Anytime is fine for most plants. At Aquatic & Garden Decor, we split most of our plants in late summer and early fall. If you divide them then, just make sure you complete the process two to three weeks before you close your pond. They need time to root themselves in before they are cut back for the winter. If you have questions regarding specific plants, just ask our water garden staff, and they will be happy to help!

17. Do I need to fertilize my pond plants? We recommend fertilizing water plants during the growing season, which begins in March and ends in October or November. For best growth and blooming, fertilize with aquatic plant fertilizer, according to the directions on the fertilizer package. Do not fertilize in the fall, at the end of the growing season, when the plants are preparing themselves for winter dormancy.

18. Can I run a spray head or a spitter in a pond with plants? Yes, you can, but only if your pond is large enough. If you have water lilies, they need to be able to grow and spread on the pond surface without being sprayed or splashed on. Lilies prefer still water. If a spray head or spitter is too close to a lily, it may harm or kill it. Remember: Your lilies are essential to pond water balance; a spray head or spitter is not.

19. How do I get rid of an algae bloom (green water) and balance my pond? We recommend the natural way - with the correct balance of water plants. To naturally balance a pond, you need to have 2/3 of the pond surface water covered with plants (such as water lilies, water hyacinths and water lettuce) along with the correct amount of oxygenating plants (hornwort) on the bottom of your pond. One bundle of oxygenators for every two square feet of pond surface water is recommended. This formula rarely fails and will result in clear water. The addition of a water gardening aeration kit is also helpful as it speeds up the breakdown of organic matter on the bottom of the pond, thus reducing excess nutrients in the water, further reducing the likelihood of an algae bloom. Barley bails or barley extract is another good tool for minimizing algae growth, especially in the early part of the growing season.

20. How do I control string algae in my pond? String algae can be pulled out of the pond by hand or by twirling it around a stick or net. As the growing season progresses and the surface coverage from the plants increases, string algae will naturally diminish. Remember, some string algae is normal in a healthy pond. At Aquatic & Garden Decor, we offer various algaecides that are effective for controlling string algae. Always read the instructions before using any pond additive.

21. How do I control algae on my waterfall? At Aquatic & Garden Decor, we offer a granular algaecide that is effective for controlling string algae on waterfalls. Always read the instructions before using any pond additive.

22. Do I need to de-chlorinate my pond water? It is necessary to de-chlorinate tap water before introducing fish into a pond. Products available at Aquatic & Garden Decor are the same ones we use in our ponds for de-chlorinating, and they are safe for water plants. They also remove chloramine, while protecting and repairing the fish's slime coat. Always read and follow the directions on the package when adding any treatment to your pond.

23. What type of fish should I put in my water garden? We recommend any type of hardy goldfish (Shubunkins, Comets, Fantails) as they are cold water fish and can live in the pond year-round. For a water garden, we do not recommend Japanese Koi, Catfish or any bottom dwelling or predator fish that may attack more gentle ornamental fish. Japanese Koi tend to destroy pond plants and stir up debris from the bottom of the pond, keeping water cloudy. In a water garden, where plants are used to balance the water, Koi and Catfish should not be introduced.

24. How many fish should I put in my pond? A pond will support only so many fish. We recommend no more than one fish inch per ten gallons of water.

25. Do I need to feed my fish? No. Fish can sustain themselves in the pond by eating insects, larvae, algae, etc. However, if you want to tame your fish, so they swim up to greet you when you approach your pond, they can be fed floating fish food. Always feed them according to the directions on the package. **Do not overfeed!** Uneaten food results in excess nutrients which can cause an algae bloom. Feed your fish no more than what they can eat in five minutes.

26. Can I add frogs and snails to my pond? Yes. Both are great additions. Frogs will often find your pond on their own, and if not, you can add tadpoles to your pond. Frogs will eat mosquito larvae and insects. Snails eat small amounts of algae from the sides and bottom of the pond. Turtles, however, are not recommended for ponds, as they typically will eat water plants and fish.

27. What are the most common pond pests? Blue herons, raccoons, turtles, ducks, insects, and snakes.

28. How do I determine the number of gallons of water in my pond? For most ponds, which have an irregular shape, the formula is: $Length \times Width \times Depth \times 5.90 = Gallons$. For ponds which are square or rectangular, and all one depth, the formula is: $Length \times Width \times Depth \times 7.50 = Gallons$. Length, width and depth should be measure in feet.

29. When do I open my pond? We recommend in March or early April. Refer to our 'Starting Up Your Pond In The Spring' tip sheet for assistance.

30. When do I clean and winterize my pond? We recommend this be done in fall. Refer to our 'Winterizing Your Pond In The Fall' tip sheet for assistance.

31. What do I do with my plants for the winter? Hardy plants can stay in the pond year-round. Tropical plants must be brought indoors. Please see our 'Aquatic Plant Care' tip sheet for information on specific plants, or ask one of our water garden staff members.

32. What do I do with my pump in the winter? Pumps should remain off during the winter months. Running a pump in the pond to keep a hole in the ice will only make the pond water colder and encourage a thicker layer of ice on the pond, which will endanger your fish. Also, as the perimeter of the pond and/or waterfall freezes, the ice can divert the moving water out over the edge of the pond, thus draining it! It is not good for a pump to sit in freezing and thawing water. Larger waterfall pumps, that are deeper in the pond where the water will not freeze, can remain in the pond for winter. Smaller pumps located on shelves or in shallow water should be moved to a deeper part of the pond.

33. How do I prevent my pond from freezing over in the winter? During the winter months, it is recommended that an opening on the surface of the pond is maintained. This allows gases that are harmful to fish to escape and allows oxygen to enter. The best way to accomplish this is with a water garden aeration kit. They are extremely energy efficient and offer year-round benefits to your pond and its inhabitants. A thermostatically controlled floating pond de-icer can also be used. Please be advised that an aerator or de-icer is not a substitute for properly cleaning and winterizing your pond. Please see our 'Winterizing Your Pond In The Fall' tip sheet.

Seeing really is believing...and understanding! It truly is worthwhile to see all of our water garden displays!

For additional questions or advice, please stop by Aquatic & Garden Decor and visit our water garden staff. We are always happy to help!

All products and accessories discussed in this tip sheet are available at Aquatic & Garden Decor.