



Build a Water Garden in Your Backyard

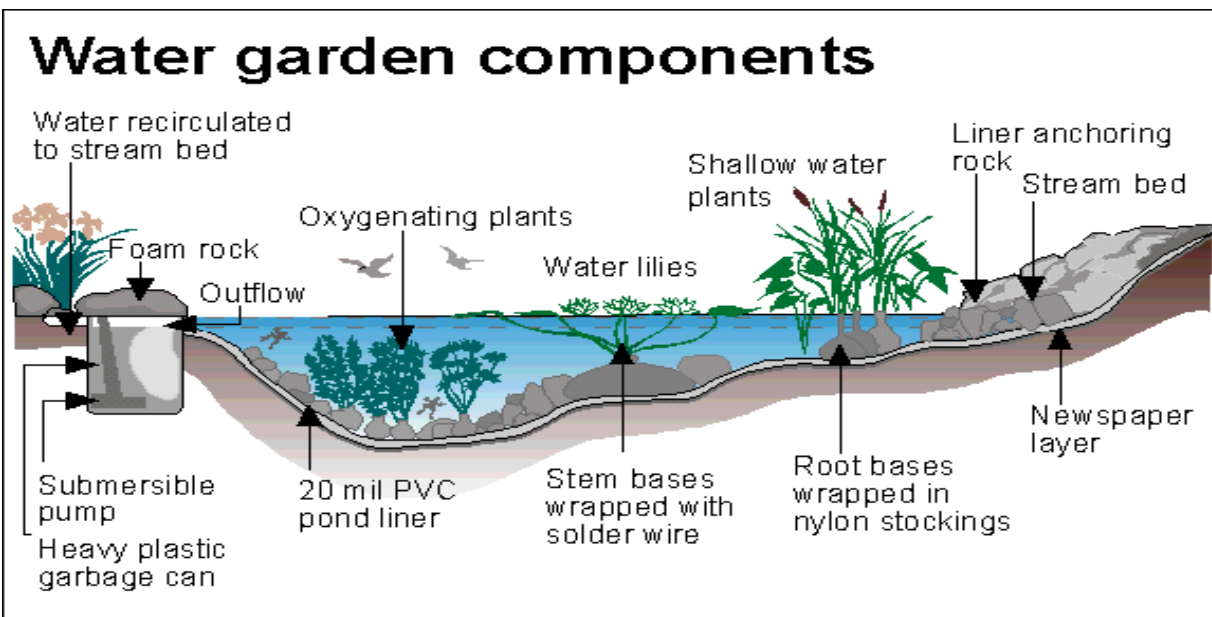
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If a tropical vacation is not in the budget, consider bringing a bit of paradise to your backyard by constructing a water garden or pond. Whether it be free-form designed and installed to your exact specifications or prefabricated from one of many designs, the result will be an attractive addition to your landscape. And, in most cases, it's a project that can be accomplished in a weekend.

While there is no limit to size, most water gardens take up very little space. A pond can occupy be 8 by 10 feet or twice that size – whichever works for you. It's important to place it in your existing landscape so that it looks like nature placed in your yard. Best of all, constructing a water garden requires no special skills, but you will need a strong back to remove soil and to import rocks and plants for your new oasis.

A water garden is shallow, requiring less than two feet of excavation – the average depth ranges from 18 to 24 inches. Once dug out, the area is lined with a heavy, **vinyl waterproof liner**, or a **prefabricated plastic pond** is placed into the excavated area. **Decorative rocks, small stones** and **coarse gravel** can be randomly placed around the pond's bottom. This also provides an added level of protection for the vinyl liner. The entire area does not need to be covered; just enough to conceal most of the liner and to anchor the plants in position.

Most importantly, a backyard pond does NOT have to be a breeding ground for mosquitoes or other pests. But you need a **closed-cycle pump** and **filtration system** to keep the water moving and filtered. A 110-volt outdoor electrical outlet is required and, due to its proximity to the water, it should be protected by a ground fault circuit interrupter (GFCI). What the filter doesn't take care of, your school of debris-eating fish will. When planned and installed properly, your water garden should be virtually maintenance-free.



See step-by-step procedures on page 2

Tools & Material Checklist:

- Garden hose or rope
- Wheelbarrow
- Shovel, other digging tools
- Level
- Sand
- Paving or stone
- Pond liner (flexible rubber or hard shell)
- Pump, filter, and heater (optional)
- Large and small stones, decorative rocks and coarse gravel
- Mortar: 3 parts sand and 1 part cement
- Gravel
- Mulch
- Closed-cycle pump
- Filtration system
- 110-Volt outdoor electrical outlet
- Ground Fault Circuit Interrupter (GFCI)
- Flexible plastic tube
- Fish, aquatic plants and greenery for edges

Step 1. Outline Shape and Remove Sod

Locate pond in a level area, preferably at the lowest point in the yard and with mixed sun and shade. Use a garden hose or rope to outline the perimeter of your pond. **Use the soil that is removed to build up the area and serve as a landscape berm.**

Step 2. Excavate

If using a hard-shell liner, dig out the center to full depth and then slope sides. With a rubber or reinforced PVC flexible liner, you can create a shelf for plants around the perimeter of the pond. Do this by excavating the entire area to plant-shelf depth (typically 6 to 12 inches) then dig deeper (18 to 24 inches) in the remaining area.

Step 3. Level and Smooth Area

Remove all rocks and roots. Line the leveled horizontal surfaces with an inch or two of wet sand. If using a flexible liner, also cushion the walls with long-lasting polyester lining.

Step 4. Install Liner

Drop in hard-shell liner, or drape a sun-warmed rubber liner into the hole so it overlaps at least a foot on all sides. Weight the edges with large stones. As you fill the hard shell with water, backfill with sand between the shell and the earth. As you fill the liner with water, smooth out large wrinkles in a fabric liner and trim off excess for a 4- to 6-inch overlap.

Step 5. Landscape the Edge

To disguise the shell's hard edge or to cover the exposed liner, landscape the perimeter with stones and plants. For a formal edging, called coping, set paving stones in a bed of mortar (3 parts sand, 1 part cement). For a natural look, set stones on plant shelves; cover the liner with gravel and mulch for plants, or soil for sod.

Step 6. Add Plants and Stock Pond

Visit your local pet shop for help in selecting to correct types of scavenger fish.

Step 7. Plants and Greenery

Among the important elements to constructing a successful pond are the plants around its edges. In addition to providing color and helping to create a natural setting, they provide an environment that is attractive to frogs, turtles and birds. If they don't show up on their own, they can be imported. They are a must to keep your school of scavenging fish company.

The proper plants also help the water from becoming stagnant by keeping it properly oxygenated, fresh and clear. The water lily, water hyacinth and lotus are the most popular flowering aquatic plants. For shallow water along the perimeter, consider suning arrowhead, pennywort, water hawthorne or sweet flag.

You should also have underwater oxygenator plants such as anacharis or caboma. Figure about two bunches for each square yard of the pond's water surface. Each of these plants does best when placed at different depths, therefore the base of the pond should be sloped or stair-stepped to the shore to facilitate planting.

Finally, a word about safety... A youngster can drown in two feet of water. Therefore, you'll want to keep the safety of children in mind as you design and build your backyard oasis.