



# Simple and Low Cost Water Features

- *Fountain in a pot*
- *Cobblestone Fountain*
- *Rock Bubbler Fountain*
- *Japanese Water Fountain*
- *Pond-in-a-Pot*

Small water fountains and gardens are no harder to create and maintain than a pot of annuals. They are “pondless”—that is, you do not need a pond or a large area to enjoy the benefits of water features. Any small space can be adaptable to a pondless feature. For the most part, all you need is a container that holds water, a nearby electrical outlet for a pump, and a few minutes to add water as it evaporates.

## General Considerations

### Location

**When planning the location of your water feature, consider the following.**

- **Style of your home and backdrop for the water feature.**
- **Do you want the feature to be a focal point or blend in with the surroundings?**
- **View from inside your home.**
- **Type of sound you want to hear—is it the peaceful sound of a gentle flow or the invigorating sound of moving water?**
- **Protection from the wind.**
- **Sun exposure—it affects your selection of plants and ability to have fish.**
- **Nearby power source.**
- **Location of underground utilities—if you plan to use an underground reservoir, you need to know where your underground utilities are located before doing any digging.**
- **Nearby water access for adding water as it evaporates.**

### Container selection

**Container selections are limited only by availability and your imagination.**

- **Use tubs, bowls, pots, birdbaths, urns, whiskey barrels, stone troughs, window boxes or almost anything that can hold a potted plant. Containers can be made of almost any material you can adapt to hold water.**  
**CAUTION: Metal containers are not recommended for plants and fish. They can heat the water during hot weather. If using a wood container such as a half barrel, line it with plastic to protect plants and fish from any harmful bacteria in the wood.**
- **Containers can be any size depending on the location and how they will be used. Remember, water is heavy. The larger the container, the more difficult it is to move.**
- **If fish or oxygenating plants are included in the water feature, the container needs to be a minimum of 15 inches deep. Oxygenating plants are totally submerged to provide oxygen to the water and help prevent stagnation.**

## Maintenance

**All moving water features need to have their water level checked regularly so the pump is not allowed to run dry and damage the motor. In warm weather, moving water evaporates faster from both the wind and the heat absorbed by the rocks or other materials in your feature.**

**Water exposed to full sun needs to be replaced if it turns greenish. The green is caused by tiny algae feeding on mineral salts. Because of the high levels of salts in tap water, use rainwater when possible.**

**Since ice may damage your pump, remove the pump before the first freeze and store it in a dry place. If your water feature is not freeze proof, you need to drain it and store it in a dry, protected area. If it is small enough, bring it indoors to enjoy throughout the winter.**

**Now that you know what to consider, let's take a look at five easy projects.**

## Fountain-in-a-Pot

**To create a fountain-in-a-pot, you will need a container, a submersible pump (available at hardware stores that sell pond equipment), plastic tubing (1/2 inch diameter or whatever size fits the pump), a brick and a sturdy rubber band.**

**Some small pumps come with transformers that convert to low voltage. Some come with lights too.**

**CAUTION: When using an electrical component around water, be sure to read and follow the manufacturer's instructions.**

### Directions

- 1. Place the container where you want the fountain.**
- 2. Place the submersible pump at the bottom of the container on the brick, and hold it in place with the rubber band. Raising the pump up prevents debris from clogging the pump intake. Make sure the fountain jet is facing up.**
- 3. Measure a piece of tubing from the fountain jet to the desired water level plus 2 inches. Cut the tubing and attach it to the water pump.**
- 4. Drape the cord over the rim of the container. Camouflage the cord by surrounding the container with plants.**
- 5. Fill the container with water and plug the cord into an outlet.**
- 6. Adjust the flow of water to the fountain by turning the flow adjuster on the pump.**

## Cobblestone Fountain

**A cobblestone fountain is easily one of the most popular moving water features because it fits into small gardens. It uses an underground reservoir (see Page 4). The feature consists of water falling from a spout onto cobblestones, providing both movement and sound. When constructing the underground reservoir, place a small piece of mesh over the larger grid to catch the smaller cobblestones used for the fountain surface.**

## Rock Bubblers Fountain

**You can make a modified cobblestone fountain with a large rock drilled through the center to accommodate a rigid pipe extending from the submersed pump up to the top of the rock. Support the rock on a galvanized metal mesh grid placed over the underground reservoir (Page 4). The water bubbles out of the rock, circulating back through surrounding smaller rocks into the reservoir.**

## Japanese Water Fountain

Flexible tubing run through a bamboo spout makes a charming and simple oriental-themed water feature. Water flows or drips into a shallow stone bowl placed over an underground reservoir (Page 4). Place cobbles around the bowl to disguise the underground reservoir and to provide secure support for the bowl.

## Pond-in-a-Pot

A pond-in-a-pot is a large watertight pot with submerged or floating water plants arranged to create a pleasing composition. You can add fish if you are so inclined. They are voracious consumers of mosquito larvae. A pump isn't absolutely necessary, but it does prevent the water from going stagnant and breeding mosquitoes, and also adds the enjoyable sight and sound of moving water.

### Plants

The plant selections for water gardening in small containers include many of the plants grown in and around ponds, such as lotuses, lilies, bog plants, floating or marginal aquatics and moisture-loving perennials, annuals and tropical plants. Even plants that would be invasive in a pond can be restricted in the space of a container.

Start out with inexpensive plants to see how they do in your container. Floating plants are the easiest to use. Just spread out their roots and place them in the water. Shallow water and bog plants also work well in containers. They are rooted in the bottom, grow above the water surface, and generally have very showy flowers. They include cannas, irises, and other flowering aquatic plants.

Take advantage of the expertise and free advice of the nursery staff that sell water plants. They are more than willing to help you.

For planting a plant in soil, use a plastic pot with heavy garden soil. Do not use commercial potting mixes as they contain additives that may be harmful to plants or fish in a pondless water garden. After planting, cover the soil with ½ inch of sand or pea gravel and water well. Sink the potted plant into the water garden container so that the rim of the pot sits 4 to 6 inches below the surface of the water. Use a brick if needed to raise the pot to achieve the correct level.

## Building an Underground Reservoir

A water feature with an underground reservoir uses water stored below ground level (hidden) in a watertight container. A submersible pump directs water through a plastic tube or metal pipe to the decorative feature above ground. Hiding the reservoir eliminates the need to construct a pond above ground.

Underground reservoirs are relatively simple to construct and require minimal maintenance. The following directions assume you are digging a hole and lining it with preformed plastic liner (available at home improvement stores that carry water garden supplies). Any watertight container will do, however. Kits are also available commercially.

### Directions

1. **Determine the volume of water.** Begin by determining the volume of stored water needed to operate your submersible pump properly while maintaining the desired flow level. If the pump is run continuously, a considerable volume of water can be lost through evaporation. The plastic liner or bin should hold 2-½ times the volume of water required.
2. **Position the vertical tube.** Make sure the vertical tube coming from the pump is as high as possible inside the above-ground portion of the fountain. If the top of the tube is too low, all the water above the tube returns through the pump into the reservoir when the pump is turned off.

3. **Select a pump.** When selecting a pump, there are two terms to know. The rate of flow refers to the amount of water passing through the pipe in a given amount of time (usually rated in gallons per hour, or gph). The head defines the height that the pump is required to lift the water above the level of water in the reservoir. For small features, this is about 3 to 6 feet. For fountains with a single spout of water, the height is easy to identify.
4. **Dig a hole.** Create the reservoir by digging a hole large enough to hold a preformed plastic liner so it sits flush with the ground. Spread a small amount of sand in the hole, making sure the liner is level. Add soil around the sides to hold the liner in place. Remove any soil that fell into the liner.
5. **Position the pump.** Support the submersible pump on a couple of bricks in the bottom of the liner. This prevents the pump from drawing in debris that may accumulate on the bottom of the reservoir. Stabilize the vertical pipe/tube on the pump.
6. **Add water.** Fill the reservoir with water and cover it with a plastic or galvanized metal grid or lid sufficiently strong to support the decorative elements of the feature. Use decorative stones to cover the grate.
7. **Place.** Place the water feature over the vertical pipe that extends up through the grate.
8. **Connect and adjust.** Connect the pump to the electrical source, following all safety precautions. Adjust the water flow as desired, using a flow restrictor if necessary.
9. **Enjoy!** Sit back in your favorite chair and enjoy your new water feature!

### Fish

The recommended ratio for fish is 1 inch of fish per gallon of water. To keep the water fresh and clear, add 1 to 2 tablespoons crushed aquarium charcoal topped with a layer of pebbles or river stones. Remember the container must be at least 15 inches deep and in a shady area.

Let the water garden stabilize for a couple of weeks before adding any fish. Just like adding fish to an aquarium, float the bag with the fish on the water for 15 minutes or so to acclimate them to the water temperature.



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