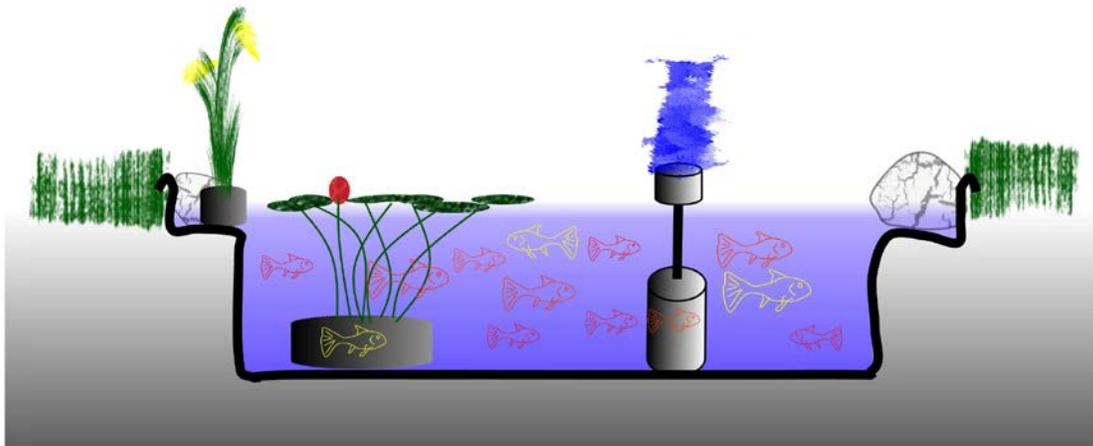




# Backyard Water Garden Pond styles

## Starter Pre-formed Pond



Even though starter or pre-formed ponds are very popular, there are only a few benefits to this pond style. In fact, many people become so frustrated with the problems of starter ponds that they may decide all pond styles are too much work to maintain. Hard shelled pre-formed ponds only work better than flexible rubber liners when used indoors or on top of a deck.

If you must dig a hole for a hard shelled liner, you must be very careful to dig it the proper size and shape. If the hole is too big, the weight of the water will cause the hard shell to sag and crack or sag and let the water out of the low side. In areas with heavy clay soil or compacted soil, the hard shell liner can pop out of the ground when rain or irrigation water fills the hole under the pond liner. In any situation that requires digging and even in some above ground situations, a flexible liner is much better. Pre-formed ponds are the old fashioned and mostly out of date way of making a water garden.

### Advantages

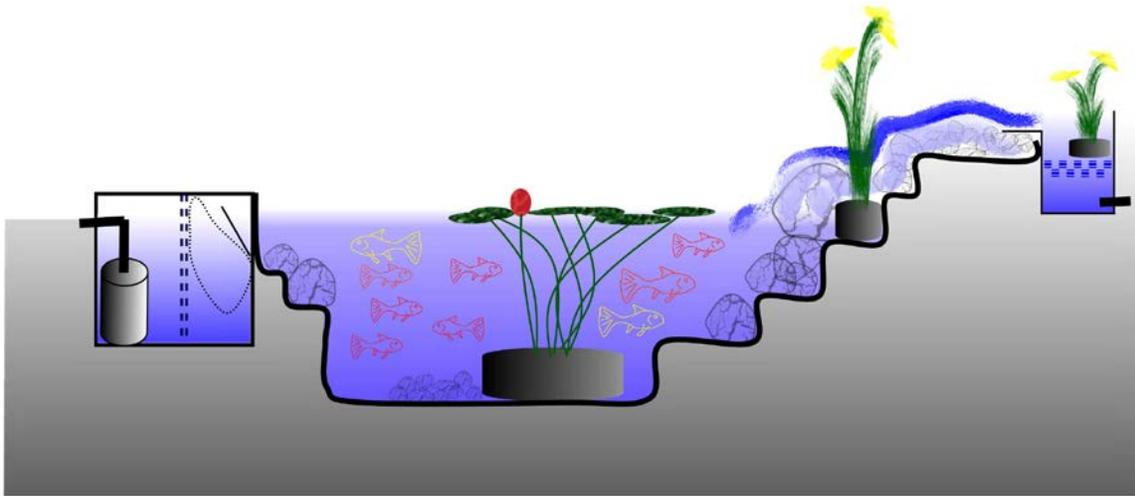
1. Low Cost.
2. Shallower pond is be safer.
3. Can be used with out digging a hole, such as indoors.

### Disadvantages

1. Harder to install in the ground since the hole must fit the shape of the hard shell, otherwise the pond can crack.
2. Pump in the pond is ugly and hard to hide.
3. Pump in the pond is very prone to clogging and is hard to clean.
4. Pump in the pond is not fish safe.

5. Filters in the pond are ugly and hard to hide.
6. Filters in the pond are very prone to clogging and hard to clean.
7. Because an ecosystem is hard to create in a starter pond and the filters are prone to not work well, the water tends to be dirty and algae tends to be a problem.
8. Not suitable for lots of fish or for large fish.
9. Fish have no place to hide from predators. These small ponds are sometimes called 'Raccoon Feeders' or 'Heron Feeders'.
10. Sludge accumulates on the bottom.
11. Tends to be too warm in the summer and too cold in the winter.
12. Tends to look artificial and the waterfalls tend to look fake.

### Flexible Liner Water Garden



Water Garden ponds using a flexible liner have several advantages over the smaller Starter Ponds and the larger Koi Ponds. They are much easier to install since the flexible liner form fits to any hole shape or size that you can dig. Flexible EPDM rubber liner has a twenty year warranty when exposed to sunlight and comes in rolls as large as 50 feet by two hundred feet, so seams are not necessary for most people. However, don't be afraid of seams since they are easy to make and very reliable if done correctly. Two or more water garden ponds can be linked with streams, using one or more pumps and filter systems.

The biological filtration system is based more on bacteria growing on the rocks and gravel in the pond, than it is on bacteria growing in the filter boxes. This design is safer for the fish if there is an extended power outage that shuts down the pump and filters.

A Basic Water Garden is as large as 10 to 15 feet and as much as two and a half feet deep. They are great for goldfish, but not good for growing large healthy koi.

Advanced Water Gardens are larger and deeper and they often have re-circulating streams feeding them. If properly sized, they can easily grow large healthy koi.

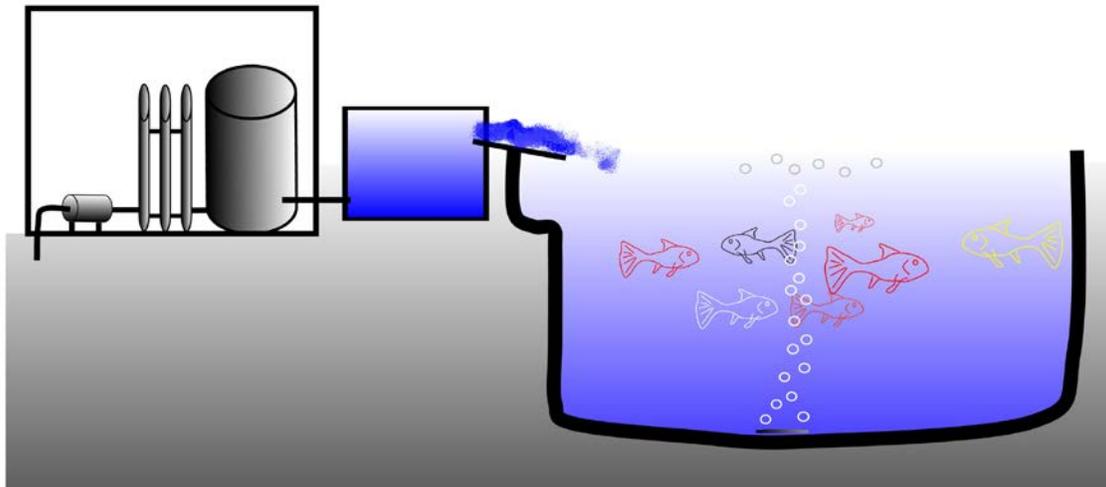
### Advantages

1. Low maintenance due to larger filters.
2. Easier maintenance due to the filters being outside the pond.
3. Using a skimmer designed for ponds will prevent a lot of dust, dirt and debris from accumulating on the pond bottom.
4. A bottom drain on ponds over 4 feet deep will filter out even more dirt and debris.
5. Because an ecosystem can be created using bacteria, rocks and gravel, and plants, the water will be clearer and algae will not be as much of a problem.
6. Basic Water Gardens will support more and larger goldfish. Advanced Water Gardens will support koi.
7. The pond edges can be shallow for safety, while still having deeper areas for fish to hide from predators and for fish to spend the winter in northern climates.
8. Natural plantings, rocks, gravel, and hidden filters all add to the natural beauty.
9. Shallow edges are natural bird baths, making this pond style the best for birds.
10. Greater water volume is healthier for fish and other pond life.

### Disadvantages

1. Greater initial cost, but it is paid back in greater enjoyment, less maintenance, and higher resale value.
2. More digging and more left over dirt.

### Koi Pond



Koi Ponds are designed to promote the best health for koi. In this pond style they will grow larger and develop a better shape. A good solid muscular body shape is important for showing the koi at koi shows. These ponds will have the most water volume for the area because they will be very deep and have straight down sidewalls. There will be few shelves so that predators cannot wade into the water and this also means there will be fewer places for plants to grow. An ecosystem approach is not often used in koi ponds because there are very few rocks and gravel in the pond so that the fish can not scrape themselves and ruin their value. The biological filtration is almost entirely dependent on electricity powering the pumps and very large external filters. A backup electrical system

should be in place to protect the fish if the power is off for an extended length of time. Koi ponds are designed to show off the fish like an outdoor aquarium that is only viewed from the top.

Koi ponds are typically larger than 15 feet by 15 feet. They start at four feet deep and occasionally run over 12 feet deep, but 6 or 8 feet is more typical. The vertical sidewalls often need to be supported with concrete blocks, poured concrete or with other types of reinforced walls. The pond itself can be made from concrete or coated with a concrete mix. The concrete may be coated with a rubber water proofing.

A water garden (or two) can be linked to a koi pond with streams. This provides the best of both worlds. Plants and a few fish can be grown in the water garden ponds and koi and a few plants can be grown in the koi pond. A single pump and filter system can feed the whole system or the ponds can be set up with their own pumps and filters so they can be run together or individually.

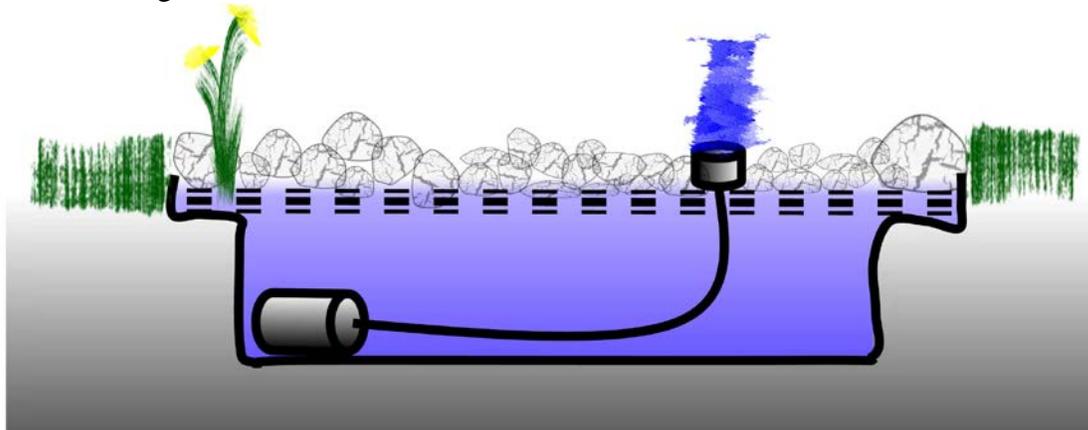
#### Advantages

1. Best suited for koi health.
2. Will handle large fish and lots of fish, as long as the power is on.
3. Offers the best predator protection.
4. Very long lasting if built properly.

#### Disadvantages

1. Least suited for fish health if power is off for a day or more.
2. Steep vertical sidewalls are a safety hazard to people, pets and wildlife,
3. Large required filters are harder to hide.
4. Highest cost for purchase and installation of filter system.
5. Most digging and the most left over dirt.
6. Least suitable for plants.
7. Very costly if built properly.
8. Can negatively affect property resale value.

#### Recirculating Water Feature



A Disappearing Waterfall or Moses Rock fountain are water features that has a hidden reservoir of water. The main difference between this design and a Starter Pre-formed Pond design is that in this case the visible pond is very shallow or can even be entirely hidden. Because the pond is not accessible, it is a safer design. This style is designed for low maintenance. There are no fish, but aquatic shoreline plants can be used. The pump can be turned off at night to cut costs and to dry the stream and waterfall stones so that fewer algae can grow.

This water feature is not 'Pond Less'. It has a pond under the ground and the waterfall and stream disappear into the ground and into the hidden pond. The pond is typically hidden under a layer of rocks. An improper method of building this water feature style is to waste your time and money digging a huge hole for a pond and then filling it with rocks. A much smaller hole can be dug and fewer rocks bought if you use a container for the reservoir. Ponds filled up with rocks are very hard to clean. Having a rock covering over a water filled reservoir is easier to clean.

#### Advantages

1. Safest for people, pets and wildlife.
2. Less costly to build.
3. Algae is easy to control.
4. Can be installed in small areas that don't have the room for a visible pond.
5. Easy to maintain, even for businesses.

#### Disadvantages

1. No fish.
2. No pretty body of water to look at.