



*You design it... You create it...  
You enjoy it!*

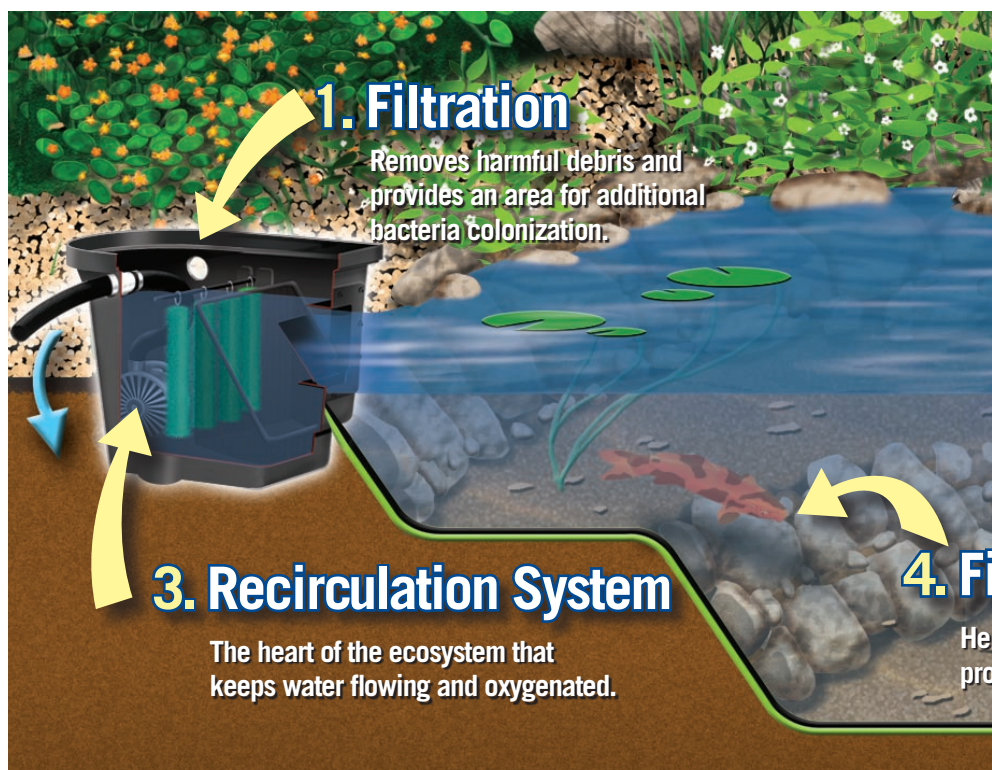
**YOUR GUIDE TO PLANNING, CREATING AND UNDERSTANDING  
YOUR OWN WATER GARDEN PARADISE**



**All about creativity, getting your hands dirty, then sitting back to admire!**

# The *Aquascape* Ecosystem

Featuring the Five Healthy  
Elements of a Naturally  
Balanced Water Feature





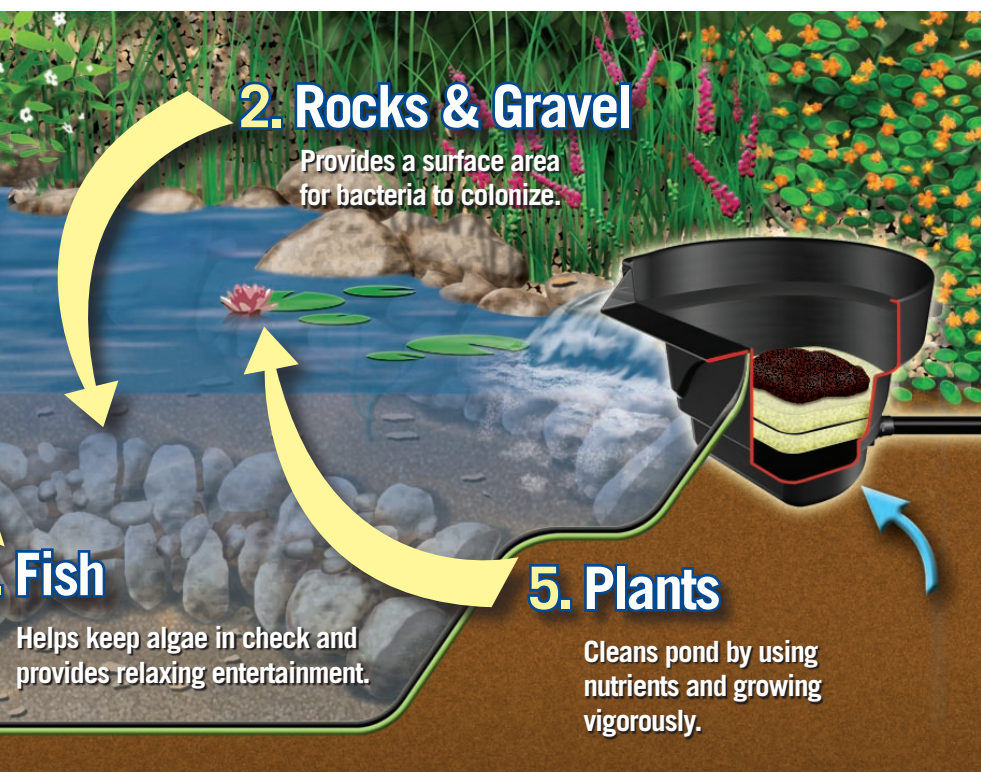
It's amazing to think that you can have an aquatic paradise in your very own backyard, and you're all gung-ho to get started, but the truth is, you don't even know where to begin!

There is a ton of information out there about water gardens, but it's contradictory and just plain confusing sometimes. This booklet is designed to provide you with the right information to help you make an informed decision about building a naturally-balanced, beautiful water feature.

The Aquascape System leads the way in filtration, and most importantly, produces a gorgeous end result with little maintenance and a lot of enjoyment. Take the time to look through this booklet and explore the world of

water gardening as we take you through designing, creating, and enjoying your ecosystem water garden.

Perhaps the first and most important thing you'll want to learn about is how a naturally balanced pond ecosystem functions, the importance of each element, and the role they play in your water feature. The diagram below gets you started, with a brief explanation of each element, while the following pages take you through the impact they have on your watery wonderland!



# Let's Talk About the Five Elements of the Healthy Ecosystem

## 1. Filtration System

**Includes the use of both a biological and a mechanical filter.**

- A MicroFalls® biological filter provides surface area for beneficial bacteria to colonize and remove excess nutrients from the water.
- A MicroSkim® mechanical filter will not only pre-filter the water and house the pump; it will also skim debris from the water's surface to prevent the accumulation of organic materials on the pond floor.



## 2. Rocks and Gravel

Rocks and gravel will not only protect pond liners from UV light degradation, but they will also provide tremendous surface area for beneficial bacteria to break down excess nutrients in the water and dissolved organic debris on the pond floor.

## 3. Recirculation System

This is really just a fancy way of saying “pumps and plumbing.” The proper size pump and pipe diameter are extremely important for the aesthetics of a water feature. More importantly, an efficient circulation system will keep the water moving and provide the necessary oxygen levels for healthy fish and plants.



## 4. Fish

Fish are an integral part of any ecosystem. Unfortunately, fish are often seen as high maintenance. Contrary to popular belief, fish actually reduce pond maintenance as they graze on string algae and bottom feed from the pond floor. They also make very enjoyable pets, providing hours of natural entertainment.



## 5. Aquatic Plants

Mother Nature's true filters, plants are great for adding character to a pond by providing color and texture, but from a filtration perspective, they're second to none. Thriving from the excess nutrients in a pond and depriving algae of its food source, the aquatic plants in a water garden, given proper coverage, are critical for the overall health of the ecosystem.



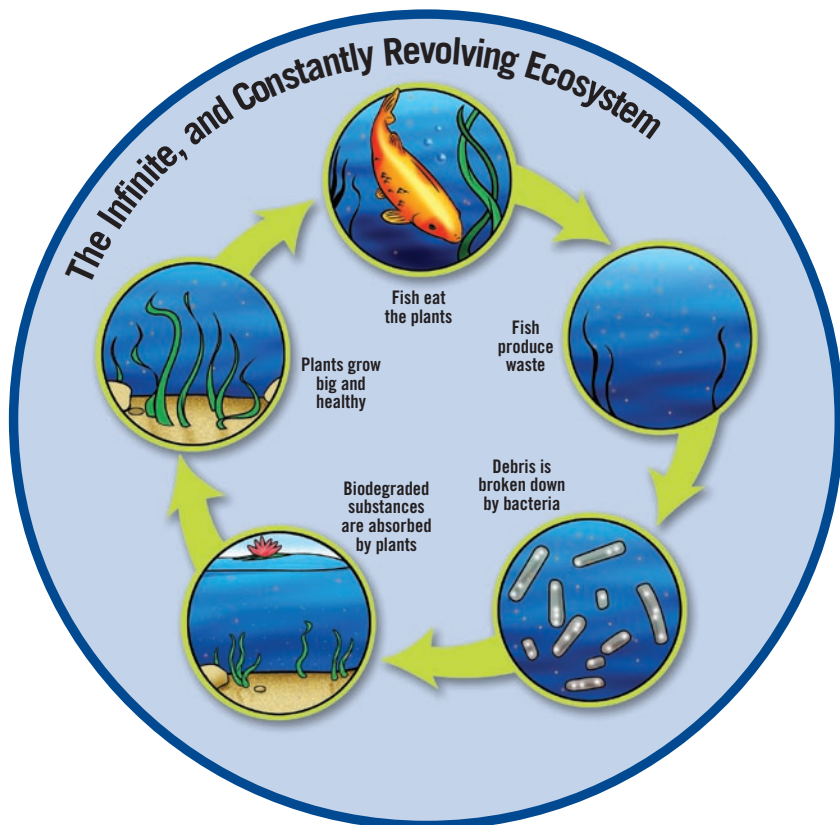
## How Do All These Elements Work Together?

In order to have a successful water gardening experience, you must think systematically and understand the critical role of each ingredient in Mother Nature's recipe.

- The fish nibble on the plant life (and everything else), including the algae.
- In turn, the fish produce waste that, along with other forms of natural debris, fall to the pond's bottom.

- Debris is broken down by the aerobic bacteria and the other microorganisms colonized on the rocks and gravel all over the pond bottom.
- Once broken down, these substances are absorbed as nutrition by the plants.
- The plants grow and are once again nibbled on by the fish... 'round and 'round it goes, infinitely.

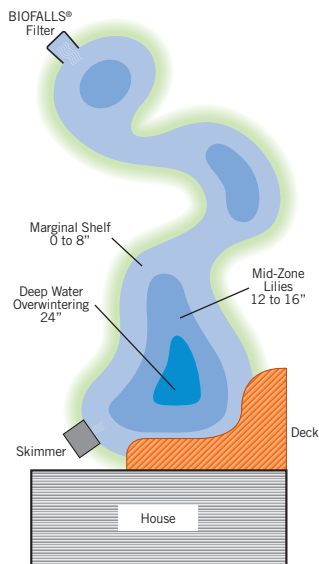
So, in a naturally balanced water garden, you have this never-ending aquatic circle of life where all parts complement the others, and play critical roles in the pond's natural born harmony.



# You Design It...

## Choosing the Site

Now that you have an idea of what you want your pond to look like and what it will include, it's time to make another important decision – where to put your water feature. How do you choose the best site for your pond? Like the design, there are a few standard guidelines that help simplify the process. Common sense can guide you in the right direction for this decision, however, there are also some common traps that people can get themselves into. Let's go over some of the major aspects that need to be considered.



## Visibility

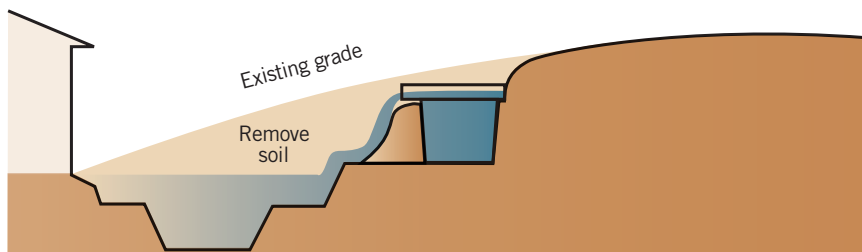
Make sure the pond is visible from the yard's outside seating areas, as well as your favorite rooms inside the house.

Think about where you will spend most of your time. Even though you would like to go outside and enjoy your yard more, it is very likely that much of your time at home is spent in the living room or kitchen. In this case, wouldn't it be nice if you could glance out your window and see your fish swimming around or sit in your favorite chair and view a beautiful waterfall crashing down over the rocks?

## Keep It Close

When you are outside, you should not have to walk far out into your yard or leave the areas where you and your friends are most likely to congregate to





enjoy your water feature. Bring the water feature up close to the hardscape, where you can feed the fish and hear the waterfall.

## Other Considerations

It's best to keep your water garden on higher ground if at all possible. In low-lying areas, ground water can build up underneath the liner and cause it to bubble up above the surface of the water and shift.

Choosing a location that has a natural slope to work with is something else to consider. The slope can greatly aid in creating a natural-looking stream or waterfall.

All of this information may seem a little overwhelming, but as long as you do some research of your own and plan ahead for your water feature, everything should fall into place.



# You Create It...

## Are You a Do-It-Yourselfer?

Now that you have an idea of the design and location of your water garden, there is still one final question. Do you want to tackle this project yourself or let a hired professional take control? In order to answer this question, you have to understand just how much work is involved in building a pond, and whether or not you're ready to tackle such a project.

The bottom line is, in order to install your own water feature, you should be prepared for a great deal of physical

labor. Building a pond usually involves digging a decent-sized hole and placing a few tons of rock and gravel. So, needless to say, it's not easy work. However, you may be the kind of person who enjoys a challenge – a “weekend warrior.”

When it comes to pond construction, if you have all the right tools to get the job done, following 20 easy steps should get your pond in the ground and keep it flowing quite nicely. Here's a quick synopsis of what should be going on during your pond project.

## 20 Construction Steps



**1** Locate and mark out your basin area.



**2** Place skimmer and biological filter into position.



**3** Lay plumbing.



**4** Hook up and level biological filter.



**5** Excavate your pond basin.



**6** Install the liner and underlayment.





**7** Install skimmer.



**8** Hook up pump and plumbing.



**9** Rock in pond.



**10** Wash stones.



**11** Fill pond.



**12** Build the waterfall.



**13** Bring in topsoil.



**14** Build the retaining wall.



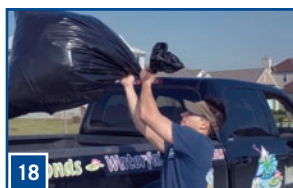
**15** Plug in and tweak the waterfall.



**16** Trim the liner.



**17** Mulch the berm.



**18** Clean up.



**19** Add bacteria, and refer to owner's manual for daily maintenance questions.\*



**20** Enjoy!

For more detailed instructions on how to install a pond, ask about our *Small Water Features Installation DVD*.



\* A full set of instructions is included with your pond kit.

# You Enjoy It!









# Aquatic Plants Add Beauty to Your Water Garden



## Aquatic Plants

One of the best things about a water garden just happens to be the plants that you can grow. Some people have pets ... you have a very personable water lily. It doesn't bite, it won't run away, and it's always on its best behavior. Plants are great additions to your water feature.

## Water Lilies

The crown jewel of water gardens across the country is the lily. They are the most popular of the aquatic plants. Their ability to spread a multitude of leaves across the surface of the water and to flower throughout the season make them a sought-after addition to the pond. Lily pads shade the pond water from the heat of the summer sun, allowing fish to retreat underneath the shelter of their leaves. They come in many different flower colors, shapes, and sizes.



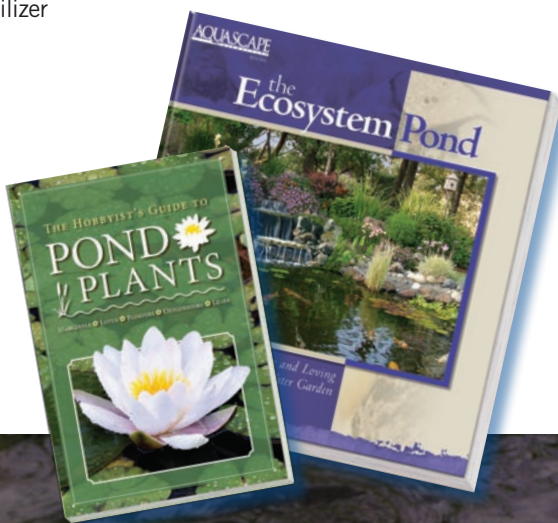
# Fertilizing

Fertilizing water lilies on a regular basis will encourage more frequent blooming and larger flowers. Time-released, granular fertilizer mixed into the soil at the bottom of the pot or plant pocket is a great way to fertilize lilies at the time of planting. Any other time, however, it would be messy and inconvenient. That's when lily fertilizer tablets work great.

EcoSystems® EcoTabs™ work well, lasting up to 30-45 days, containing a 15-5-10 nutrient mix and a low phosphorus ratio to keep water clear, which is tops when it comes to fertilizer. Whichever fertilizer

you use, do not put it in direct contact with the plant's roots. The idea is to encourage root growth throughout the pot or pocket, so push tablets against the sides, away from the plant, and mix granular in only at the bottom of the pot or plant pockets.

For more detailed information on aquatic plants and how to plant them, care for them, and design your landscape with them, pick up your copy of *The Ecosystem Pond* book or *The Hobbyist's Guide to Pond Plants*.



# The Joys of Fish



Very rarely will you meet a water garden-er who doesn't want to chat about their fish, whether they've gotten a brand new shubunkin or their koi has grown a whole inch since last year.

Pond lovers get fish because they add color and interest to the water garden. With the exception of tempting your senses, plants are neither interactive nor friendly, while fish are both of these things, especially at feeding time. Of course, fish are also attractive, interesting, and even personable. Their color can enhance the visual impact of a pond. Koi in particular, as a species, grow very large, and their sheer size adds an impressive element to some water features (but not without a significant impact on the balanced ecosystem).

## Feeding

If you want your fish to grow fast and large, then you'll want to feed them more, and perform more water changes. This is true even if you possess a very

good filtration system. Feeding several times per day produces more waste and is hard for the natural ecosystem to balance against. The equilibrium comes from a combination of filtration, water changes, and plant nitrate reduction. For best results, and maximum growth, use a food that principally contains fishmeal as the top ingredient. The Koi Balance™ line of fish food is always a good choice, with different types available for different situations, such as LoTemp™ (for lower temperature feeding) and UltraGard™ (immune supporting food).

Feed the fish two to three times per day. During a feeding, allow all the food the fish want to eat in about four to five minutes, and stop feeding when ANY food remains floating on the surface after these few minutes have passed.

In a planted water garden, you may feed your koi and goldfish twice per week.





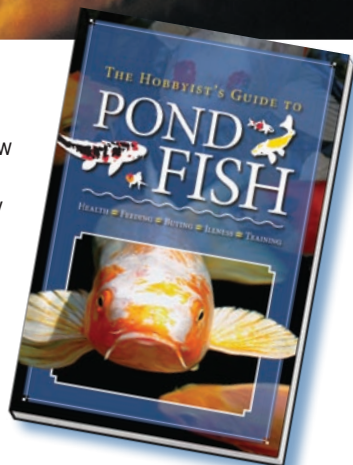


## How Many Fish Should I Have in My Pond?

You should have no more than one inch of fish per 10 gallons of pond water. It's really that simple. If you have more fish than that, you have created a more difficult equilibrium to maintain.

If you have less than one inch of fish per 10 gallons of water, you will have better luck and better growth among your fish.

For more detailed information on pond fish and how to care for them, pick up your copy of *The Hobbyist's Guide to Pond Fish* book.



## Other Accessories for Your New Pond



### **BITTY BALES™ Clear up water with Bitty Bales™!**

Bitty Bales™ activate quickly, allowing the enzymes to provide results in as little as two weeks, while maintaining the ecosystem's delicate balance.

- Pure food-grade barley straw • Easy installation and replacement
- Inconspicuous – Fits comfortably into BIOFALLS® Filter and Skimmer



### **AQUACLEARER™ EXTREME BACTERIA**

AquaClearer™ Extreme Dry and Liquid versions contain specific beneficial microbes and enzymes that are effective at reducing sludge, uneaten fish food, fish waste, and excess nutrients that cause poor water quality and clarity. • Enjoy clear water, healthy fish, and a beautiful pond. • Safe for fish and plants



### **ECOBLAST™**

EcoBlast™ is Aquascape's #1 treatment for breaking down algae! Quickly start using EcoBlast™ to spot treat the trouble areas in the pond and follow up with S.A.B.™ Extreme on a monthly basis to help keep it clear! Fast Acting! EcoBlast™ is not temperature sensitive and can be used during colder temperatures. 100% safe for fish.



### **10-WATT WATERFALL LIGHT**

- Small, halogen light ideal for highlighting waterfalls
- Flat base, so it is easy to place and hide under a waterfall
- Light may be used in or out of water • 15 foot cord length
- Small compact size: measures 1 1/2" diameter, 7/8" height



### **MICROSPOT™ 20-WATT LIGHT**

- Powerful 20-watt low voltage light with 15 feet of cord
- Comes with 5 interchangeable lenses (clear, blue, green, red, amber)
- Includes adjustable light stand
- Also available as a 3-light kit.



### **S.A.B.™ EXTREME**

S.A.B.™ is formulated to help reduce pond maintenance and promote the growth of beneficial bacteria and enzymes. S.A.B.™ will assist in the breakdown and reduction of debris in the stream, waterfalls, and pond.

- Not a chemical • 100% safe for fish • Fortified with bacteria

## How to Find a Professional in Your Area...



If you want to hire a professional, the world of water gardening can be pretty confusing. With conflicting information and different opinions from friends and neighbors, you may be a little worried about finding a good contractor in your area.

Well, have we got a website for you! Log on to [www.certifiedaquascapecontractor.com](http://www.certifiedaquascapecontractor.com) to get all kinds of information about finding a contractor in your area – it's now easier than ever!

The resource library location on the site is also a great educational tool that can enlighten you on filtration, construction, supplies, and much, much more. Best of all, you can learn a little bit more about what it takes to be a Certified Aquascape Contractor, along with a directory to find one near you. Jump on the Internet and learn how easy it can be to get a great pond built right...the first time!



[www.aquascapeinc.com](http://www.aquascapeinc.com)

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**Item #99593**

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