Fountains AND Aerators FOR Large Ponds

Photos courtesy of Aqua Control, Inc.

In deciding upon a water display for your lake or large pond, you need to determine exactly what you want the water display to do: just look pretty with towering or arching streams in fanciful patterns, or aerate the water to increase pond water circulation for improved water quality and water clarity.

"Pretty" water features are fountains. They work from a pump that generates high heights but at low flow rates. Work-horse, water-circulation features are aerators. They generate low heights but at high flow rates. High flow rates are required for good pond circulation, and, when combined with the generation of many small droplets, they provide superior aeration. Contrary to popular conception, aerators are not merely frothy bubbles emitted below the water's surface like a venturi system set up in a Koi pond. They can be every bit as 'pretty' as fountains. High flow rates are what make a 'fountain' be an aerator.

Good pond aeration is critical to provide adequate oxygen for marine life and to facilitate aerobic digestion of organic sludge that builds up in ponds. While organic sludge is still digested under stagnant, anaerobic conditions, the by-product is the foul-smelling, fish-toxic hydrogen sulfide. An aerator should pump 4 to 5 times more water per horsepower than a fountain.

If you want to promote optimal water circulation in the pond, avoid systems with shallow intakes. Look for a system that features a deep suction design so that deeper, stagnant, oxygen-deficient water is drawn through the pump. This will create a circulation pattern or movement within the pond that can actually turn the entire pond over from bottom to top. If your pond is deeper than six feet, you may wish to select a system that offers an extension suction tube to allow circulation below the thermocline, the stratification layer in such deeper bodies of water. The water below the thermocline is often low in oxygen and does not adequately support aquatic life or aerobic bacteria.

Shallow depths of as little as twenty inches of water can still accommodate fountains or aerators by using a horizontal setup or one that is set up on the pond's bottom.

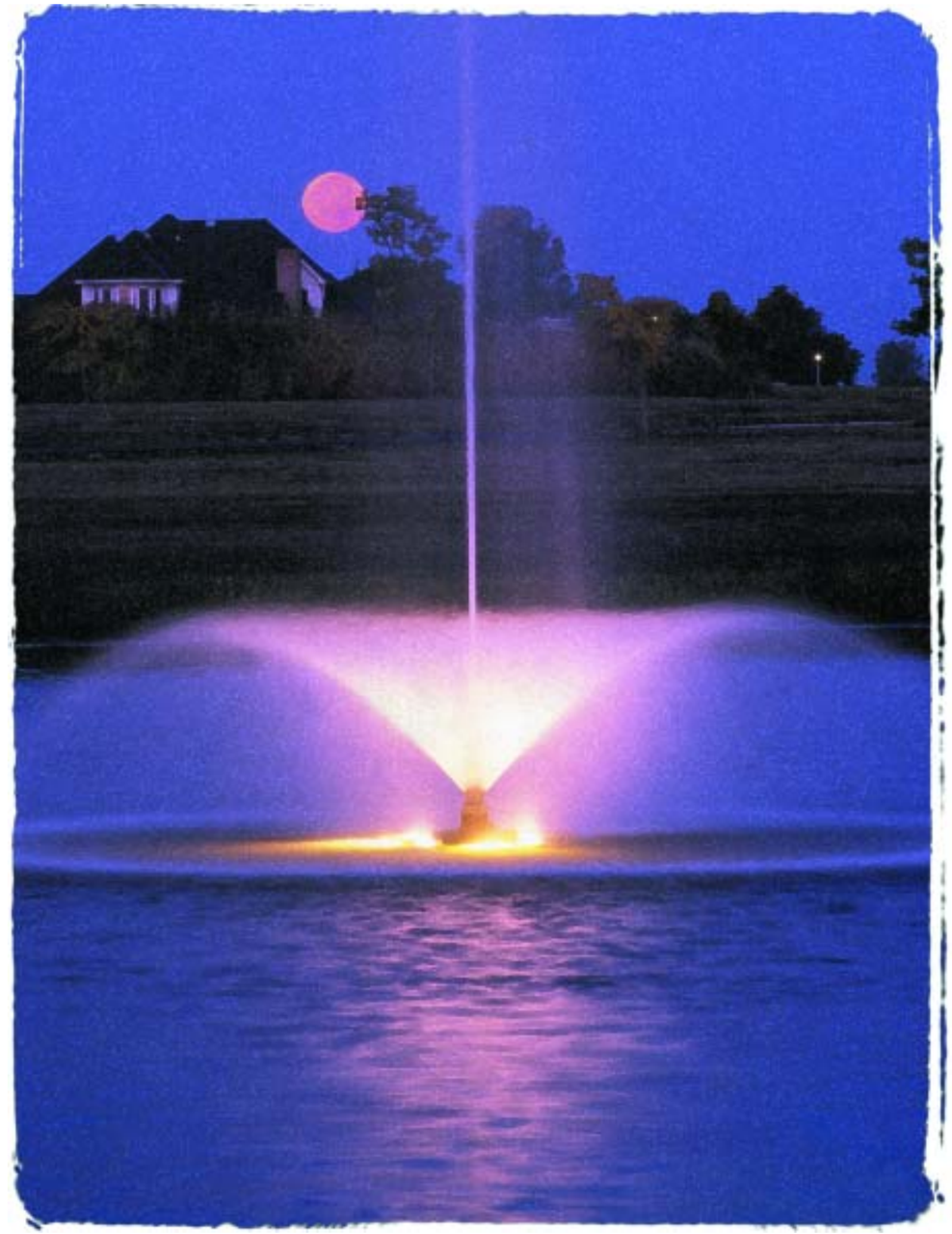
After you have decided whether you want a fountain or an aerator, do some comparison shopping. Compare flow rates and operating costs. Consider the area in which you'll use the system, and observe the model you are considering in operation. For example, what sounds good on paper may, in fact, produce streams of water too thin to hold up in any wind at all. In that case, you'll want to explore higher flow-rate systems.

Winter Operation of Aerators and Fountains

by Willis Dane

That fountain looks gorgeous in the summer, but what do you do in the winter?

Winter operation of a fountain or an aerator, even in severe winter weather can keep a portion of a pond open for use by livestock, waterfowl, or wildlife; provide aeration for fish; or protect docks



Nighttime lighting of your fountain or aerator makes for magical, elegant displays.

Winterizing aerators and fountains by removing, sinking, or continually running them can protect the units from freezing damage.

from ice damage. To keep a portion of a pond or lake free of ice, the water should be at least 5 or 6 feet deep to ensure adequate temperature difference between the surface and bottom water, and the aerator or fountain must take suction several feet below the water surface. Ponds and lakes are kept open when warmer bottom water is circulated to the surface. Pond depths of 15 feet or more offer greater reservoirs of warmer water that allow for even better ice prevention when the proper procedures are followed. For example, a pond of less than one acre and about twenty feet deep, using a fifteen-foot-deep suction created with a thirteen-foot extension suction tube on a 1 HP aerator, brought warm water to the surface and maintained a very large open area even after a week when the temperature never rose above zero.

In climates where a pond does not freeze over in the winter, or where it freezes lightly for short periods, there are no restrictions to operating either a fountain or an aerator. Even short periods of freezing temperatures will not interfere with the operation. Some spray may freeze during a cold snap, but as long as the pond surface does not freeze, there is no problem.

While it is possible to operate aerators and fountains safely in winter weather, operation with a nozzle in severe freezing temperatures should never be attempted. The nozzle must be removed to prevent water from spraying into the air. Sprayed water cools rapidly and increases the likelihood of ice-buildup around the unit. It will also cause the pond water to cool unnecessarily. Operation without the nozzle allows the water to simply gush from the head, thus maximizing the flow of warmer water while minimizing cooling from air contact. It also prevents ice-buildup on the float. Fountains, which use an impeller instead of a propeller, pump much less water than aerators and will keep much smaller areas ice-free.

Use of a timer during severe winter operation is not recommended unless the unit is below the surface (see paragraph below). Surface units should run continually to avoid freezing inside the upper tube, head, or nozzle, which could cause damage to those components. Surface-operated aerators of fountains should be checked regularly during winter to insure continuous operation.

To operate an aerator or fountain to keep waterways free of ice: deeper is better. A suction tube extension can be added on the pump to bring the warmer, deep water to the surface and assure good circulation. This is especially effective in keeping larger areas ice-free when the pond is more than ten feet deep.

An even better method of de-icing is the submerged operation technique that combines the sinking operation described below with the unit's full operation with the nozzle removed. This automatically "blows" the warmest water to the surface and minimizes exposure of the unit to winter elements. It also keeps the aerator or fountain out of harm's way if it stops running due to power outages, timer operation, etc.

An aerator or a fountain can be sunk, either for storage or to allow de-icing operation. This procedure provides perfect safety, eliminates the need to remove the unit, eliminates storage concerns, eliminates cable handling and storage, prevents motor freezing or loss of internal water, and allows simple and safe de-icing operation if desired. Sinking can be accomplished by attaching dense weights, such as weight lifting weights, equally to the float eyebolts (about 12 pounds total weight per inch of float showing above the water surface). Do not attempt to use concrete blocks since they are not dense and would require a very large number of bulky blocks. The ropes that attach the weights must allow the weights to hang 2 to 3 feet below the pump intake so that they contact the pond bottom and allow the pump to float just above the bottom. Be sure to attach a floatable poly rope to a float eye and to a flotation device for unit retrieval in the spring.

If the aerator or fountain will be used for de-icing, the nozzle should be removed before sinking, then the unit can be operated and the warmest pond water will be 'blown' to the surface to keep a portion of the pond ice-free. Using this technique eliminates any concerns about power loss, allows the pump to be operated under timer control, and allows for periodic shutdown.

A fountain or aerator should never be operated in a pond used for ice-skating or ice-fishing

Fountains and aerators can also be used during severe winter weather to prevent portions of ponds and lakes from freezing, offering environmental benefits while protecting water structures from damage.

An aerator provides necessary aeration to a pond's water to make it safe and healthy for aquatic life, including aerobic bacteria that work to keep the pond clean and sparkling.

without proper safeguards since thin ice areas around edges of open water can create a hazard. If the aerator or fountain is positioned properly or repositioned near a dock, the de-icing function can help prevent dock damage due to ice.

Aerators or fountains removed for the winter should be stored in an area that cannot freeze. Motors are filled with an antifreeze solution which is designed to prevent damage from freezing, but that solution can be gradually replaced with pond water and freezing inside the motor could then cause damage. Store the units with the motors tilted above the horizontal position to prevent internal water from leaking past the seals. Preventing water leakage extends motor life since a shortage of internal water can lead to accelerated bearing wear during startup, before the motor has a chance to refill itself.

Winterizing aerators and fountains by removing or sinking them can protect the units from freezing damage. Proper installation and use can allow continual running during severe winter weather to prevent portions of ponds and lakes from freezing, offering environmental benefits while protecting water structures from damage.

Willis Dane is President of Aqua Control, Inc., a leading manufacturer of water quality management systems that include fountains, aerators, and water treatment products and developer of the horizontal configuration attachment for fountains and aerators. For more information contact: David Thrailkill, Sales & Marketing Manager, Aqua Control Inc., 201 Walnut St, Peru, IL 61354; Ph: 800-377-0019; E-mail: aquacontrol@hotmail.com; website: www.aquacontroline.com/

Towering fountains add structural interest to ponds set in flat terrains.

Fountains FOR Water Gardens

by Helen Nash

Fountains offer art in motion…with sound!

Froth, foam, geysers, sparkling droplets, shimmering sprays, and glistening ribbons – fountains offer art in motion. Inviting this magical form of moving water into your garden can be as simple as a fountain head kit or a plumbed statue. When you consider where to place your fountain, however, remember that water lilies do not like moving water or water spray on sunny days.

From a Simple Kit

Inexpensive fountain head kits offer a variety of moving waters: a single surging jet, tiered droplets, a gleaming inverted bowl, a ring of slender, arching streams, or an oscillating dance of entwining waters. The least expensive of these kits are black plastic units that attach to pump outlets. Often the kits come equipped with several interchangeable, snap-on heads to vary the spray patterns. The fountain is set up with the head attached to the outlet port of a submerged pump, and the fountain head is outside the water. The kits may be sold with or without a pump. Installation requires a safe electrical outlet served through a ground fault circuit interrupter and a stable, level position for the pump and its attached fountain head. Dave Artz, a Texas landscape designer, suggests using an upside-down flower pot to stabilize the fountain: simply thread the hose through the hole in the bottom of the pot. Use a carpenter's spirit level to verify the base's level. A ball valve in the line from the pump provides handy control of the water flow. Provide camouflage for the wiring.

Fountain Accessories

Fountain accessories are often available separately. Telescopic stems, for example, can dou-

Adding a fountain to your pond can be as simple as affixing a fountain head to a submersible pump.

Large statuary and fountains can be set within the pond if you provide adequate support for the base, along with protection to the pond bottom.

ble the height of a fountain head, important if you wish to have your pump in deeper water to provide better circulation of the whole pond. Flow regulator valves can decrease the rate of flow through the fountain head, but you should decrease the flow by no more than fifty percent to avoid stressing the pump.

Larger Fountains for Water Gardens

The primary difference between the installation of small and large fountains is the support base the unit sits upon. If the larger fountain is only a fountain head attached to a pump, the installation remains the same. Enclosed within heavy stonework, a fountain should be set level and firmly upon a solid plinth or platform. Often these require additional support both below and over the pond liner. A substantial concrete slab, reinforced if necessary, is installed *before* laying the liner in the pond. Another layer of liner or padding is used on top of the liner to protect it from punctures. If you use concrete blocks to build the fountain support, either paint them with black sealing paint, rinse them well with vinegar, or put them through numerous washings to prevent lime from leaching into waters inhabited by fish.

Plumbed Statuary

Garden statuary adds an artistic dimension to the garden. Small ornaments such as cherubs, frogs, or turtles may be set on the edge of the pond to emit a stream of water. These features may be plumbed directly to their own small pump, or they may be diverted from a larger pump that services a waterfall or stream by using a valved tee connection. Use black tubing to avoid algae buildup that will gradually affect the flow and eventually stress the pump.

Any small object that allows a plastic tube to be inserted through it can be used as a plumbed

Your garden décor does not have to stop at the edge of your pond.

water feature – urns or hand pumps, for example. The only requirements are that an inconspicuous point of water tube entry be provided and that the feature be otherwise waterproof. Terra cotta pottery, for example, is porous enough that water 'weeps' through it. While it is watertight enough to allow use as a flowing water feature, it takes little time for the wet outer surface to become coated with slimey algae. A couple coats of poly seal on the inside prevents this.

A delightful variety of plumbed statuary offers selections suitable to any garden design.

Set up your spouting statuary within the pond and frame it with plants.

If the statuary will be set up within a pond, provide a solid and level support so the feature cannot topple over. If the stone and its support weigh more than 200 pounds, provide a concrete support pad beneath the pond liner and an appropriate protective layer over the liner.

Spilling statues and spouting ornaments can be set on the edge of the pond.

Stand-alone Flowing Water Features

If you would feature the statue apart from a pond setting, provide a hidden reservoir of water from which to circulate the water. This can be as simple as a buried, heavy-duty, plastic barrel. Determine how many gallons per hour the pump requires to operate the feature and provide 1 ½ to 2 times that amount in the reservoir. Conceal the reservoir beneath a heavy-grade, stainless steel or plastic grate covered with cobbles. (You don't want the grate to rust!) Heavy statuary requires a solid support, such as a reinforced concrete base, to ensure its stability.

To determine the size of pump required for your feature, measure the height of the water outlet and multiply that figure by 1.5. Consult a manufacturer's pump chart and find the column titled 'shut off.' Find the height you need within that column and you know what size pump to use.

Wall Fountains

Traditionally, wall fountains are classically designed, such as spouting gargoyles or lion heads. However, any flat-sided sculpture can be used as a wall fountain if it is provided with a hole from which the water may spout. Nor is a sculpture necessary; the fountain may flow from a spigot in a stucco, stone or brick wall. The water can spew forth or trickle down the face. All that is required is a reservoir of water and a recirculating pump. Because these pumps are usually submersibles, use either a basin of water or a concealed reservoir. Since no fish are involved, the water can be treated with chemical algaecides to maintain clarity. Particularly if the feature is in sunlight, scrub the feature weekly with one tablespoon of bleach in water to prevent unsightly algae stains. (*Do not use bleach for cleaning features containing either fish or plants.*)

A simple wall fountain provides an elegant touch to the garden.

A stand-alone fountain display is run by a concealed reservoir system constructed below the cobbles at the base of the statue.

Millstones and Spilling Waters

The millstone is a slightly concave stone circle with a plumbed tunnel in the center that the water flows up to fill the basin and then overflow. Traditional millstones are surrounded by cobbles or pebbles that allow the overflowing waters to flow back through them into a reservoir below. A strong grate covers the reservoir to hold the cobbles above. Millstones provide a soft gurgle of water in a childproof setting. They can be adapted, however to pond situations. Set the millstone within the pond with the basin above the water level so that the water flows in a gentle cascade all around. The millstone is particularly attractive to birds and offers a unique birdbath and drinking basin. Usually the millstone displays a bubbling or foaming water entry that is only a few inches high. The pump selected, however, determines the height of the center water display.

Fountain Maintenance

Even if the fountain operates from sterile waters kept chemically clean, provide a prefilter unit to prevent particulate matter from circulating through the pump and fountain accessory. This may be as simple as a fine mesh screen placed over the water intake port; many pumps come equipped with these. Monitor the filter screen and hose it clean as necessary. Fountains with small holes may still clog. When you notice this happening, shut off the fountain and use a toothpick or some device with a fine point to clear the holes. Scrub the outlets with a bristle brush to prevent algae stains. If fish are kept in the water, use only salt as a cleaning abrasive.

Winter Care of Stone Statuary and Fountains

Do not use antifreeze in fountains. Antifreeze will kill birds and small animals. If the fountain is too large to store inside, remove the figure and pump to store inside. If the pump is oil-encapsulated, store it in a bucket of water to prevent the seals from drying out. Mag drive pumps may be stored dry. Turn the bowl upside down on its pedestal, if possible. Otherwise, fill the bowl with absorbent material – old clothing, burlap, an old blanket, etc. Place a cover over the entire basin. If water condenses or leaks into the basin, the fabric will absorb it and prevent the bowl's cracking from freezing water's expansion.

If your fountain is small enough and does not splash, bring it inside and run it during the winter…it makes a wonderful humidifier and the sound is relaxing.

Unless the fountain structure is already elevated above ground level, provide an elevated base, even an inch thick, to prevent freezing water from breaking the fountain's base.

If your fountain is painted, spray it with clear acrylic once a year to preserve it like new.

Preserve the integrity of natural stone with a water sealant applied each year. Clean stone features that do not contain plants or fish with a tablespoon of bleach in water to control algae and stains.

Houston Pond Tour

by Dan Robinson and the Lone Star ZNA Koi Club

THESE TEXANS LOVE THEIR KOI!

The Lone Star ZNA Koi Club serves the greater Houston area. It was founded in 1986 and is associated with the All-Japan Koi Appreciation Society and Association of Koi Clubs of America. We have an active membership with a variety of interests and talents. We meet the third Sunday of each month, usually in the home of a member, between 2:00 and 4:30 P.M. We have hosted many Koi seminars and Koi shows. We are one of the host clubs for the 2001 national AKCA Seminar. The photographs that follow are just a small representation of the exciting variety of ponds and gardens from our members' homes.

Henry and Mary Burkhardt

Located in Pasadena, Texas, Henry and Mary have created a tranquil garden. Like many of our members, this is not their first pond. They started with a 35-gallon Mother's Day kettle that sat on their patio. It held a few goldfish and some water plants. Their current pond is about 1100 gallons and measures 8 by 12 feet. It is a liner pond with a flagstone deck. For a Koi pond, it would be considered a little shallow at 18-24 inches deep. It is about 5 years old and was built by a local landscape designer. The surrounding gardens are home to many species of plants, including ginger, palm trees, spider lilies, ises, dwarf philodendrons, day lilies, azaleas, lantana and dwarf nandina. An oak tree shades much of the yard and pond. The bench by the pond is their favorite place to view their 15 Koi. The splashing of water from the moss rock waterfall adds to their tranquil environment.

A bench by the Koi pond invites the Burkhardts to enjoy their tranquil garden.

Grady and Virginia Joiner

Grady and Virginia are located in northwest Houston. Like many of our club members, they have multiple ponds. A two-foot-high natural rock ledge surrounds all three of their ponds. The wall and ledge provide a great place to sit, view, and feed the fish. The wall also serves as a protective barrier from visiting grandchildren. The largest pond is made from gunite and is 14 x 12 ft x 6 ft. The other two are liner ponds. All three ponds have waterfalls and biological filters. Koi inhabit two of the ponds, with comet goldfish and shubunkins living in the water garden. The goldfish pond has a globe that sits above the water's surface. The goldfish can swim up inside the globe. The water garden has assorted lilies, iris, and other emergent aquatic plants. The Joiners have used tropicals, perennials, ferns, vines, and statuary in the surrounding landscaping. They have benches in different areas of the yard to give them the opportunity to view the gardens from many different angles. Everything is done in natural stone, including the patio. Shade arbors, made of wood, keep a natural look as vines soften the lines of the arbor. The Joiners love the sights and sounds of their backyard.

Goldfish and shubunkins live in their own special pond.

Water lilies are a favorite planting in the Joiners' water garden.

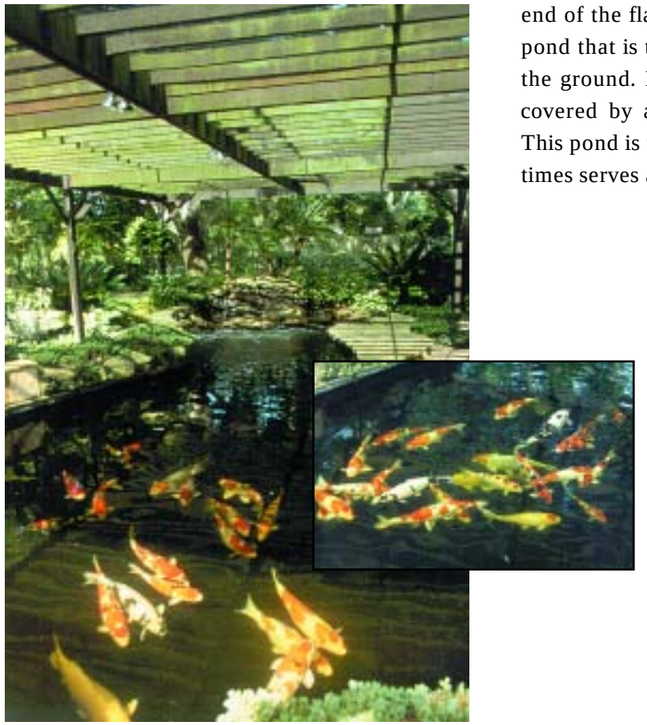
An arbor graces the view of the Joiners' large Koi pond.

One of the Joiners' comet goldfish enjoys swimming in the globe.

Buddy and Diane Caulk


The main pond's natural stone waterfall recycles the pond's 11,000 gallons.

A formal lawn is the first sight at the Pasadena home of Buddy and Diane Caulk. There is a small lily pond containing various types of lilies adjacent to the swimming pool. Their main pond is an 11,000-gallon free-flowing body of water with a natural stone waterfall. This pond is home to 22 large, show quality Koi. Surrounding the pond is a flagstone deck, ledge, and patio. Over the pond is a wooden arbor covered with a shade cloth. This protects the colors of the Koi from the sun. The landscaping around the pond consists of hollies, junipers, golden *Euonymous*, sago palms, and red tip photinias. These plants enable the grounds to look green and colorful year-round. Surrounding the pond are tropicals and a wide variety of hanging baskets. At the end of the flagstone patio is a 1700-gallon liner pond that is two feet below and two feet above the ground. It is built out of wood and is also covered by a wooden arbor and shade cloth. This pond is the home to smaller koi and sometimes serves as an isolation tank.


The Caulks' special Koi pond is protected by a shade-cloth-covered arbor.


A small lily pond is sited near the Caulks' swimming pool.


A smaller Koi pond, built both above and in-ground, serves as a nursery or as an isolation pond.

Charlotte Hilger

Charlotte Hilger of Pasadena, Texas, is another of our members with multiple ponds. Her gardens are home to a huge variety of fish, parrots, and plants. The plants include 30 hybrid tea and miniature roses in combinatioin with crepe myrtles, formal azalea hedges, and a collection of crotons and other tropical plants. A garden room is filled with tropical plants and five parrots. Adjacent to the garden room is another enclosed area. Here there is a 500-gallon, shallow L-shaped pond that uses a barrel up-flow filter. In the corner of the pond is a flagstone and river rock waterfall. In this pond are small, show quality Koi. The pond is surrounded by tropicals, bromeliads and hanging ferns. The backyard is completely enclosed with lexan and lattice. It has a rectangular 3,500-gallon pond filled with show quality Koi. The waterfall and surrounding rocks are moss stone combined with other native stone. The filter is an in-pond underground filter that was the state of the art in the late 60's and 70's, the design still being used in California. The late Mitsuru Nakamaru of Asahi Koi, Inc. in Gardena, California, designed it. The patio is flagstone surrounded by flowerbeds containing many unusual tropicals, bromeliads, and specialty ferns in baskets.


Charlotte tends a collection of bromeliads and other tropical plants.


Inside an enclosed area next to the garden room is a 500-gallon L-shaped pond.


Charlotte Hilger's main pond holds 3500 gallons.

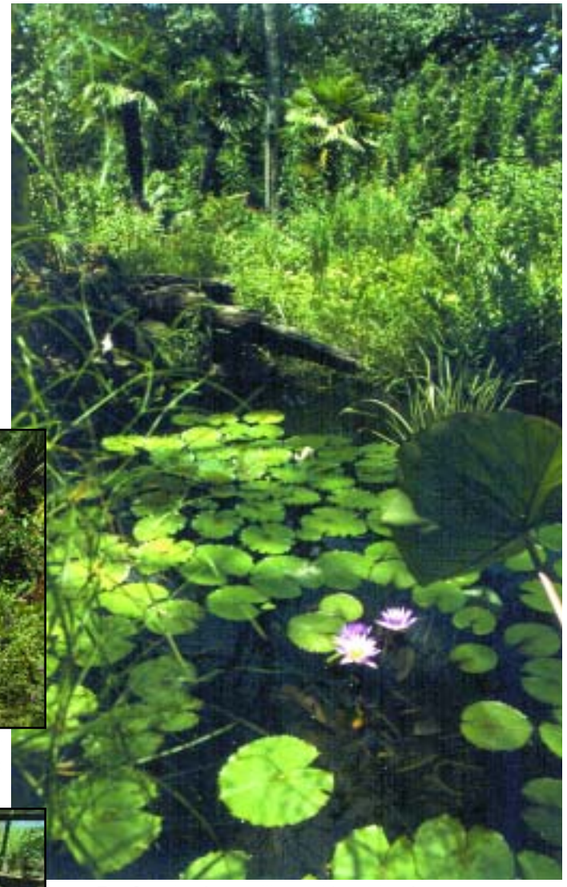
Bruce and Beth Grunden

Bruce and Beth Grunden have created an award-winning collection of ponds and gardens in the Memorial region of Houston. There are three main ponds and garden areas:

The original backyard is a shady setting for the long, river-like pond of about 6500 gallons. Three separate waterfalls divide the pond so that Koi can be housed according to size and gender. The up-flow biological filter, sand filter, and sediment tanks are hidden in a filter room at the rear of the garden. The gunite pond was built in the early 80's when knowledge of Koi pond construction was limited. Therefore, this is a classic example of updating/retrofitting a pond to bring it up to today's standards. An example is the bottom drains which sit on the pond bottom rather than being built into the pond floor. The original garden/pond design was by Plan & Planting Associates.

Completely apart from the main ponds, a small water feature is created with a small waterfall built into a rock with a small reservoir system.

The Grundens' large formal Koi pond in the enclosed garden room.



The Grundens' water lily pond 'next door.'

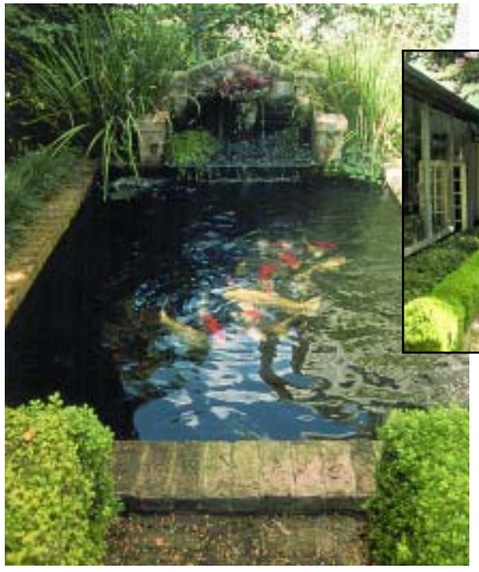
The large lot "next door" was purchased in 1997 and turned into a sunny tropical garden complete with an Hawaiian totem pole in the ginger garden, rock features, a gazebo entry, a medieval barn entry, a winding stream complete with waterfall, and various pieces of garden art. A 4,000-gallon water lily liner pond is fed from the garden stream, using the bog garden as the pond's filter system. A water lily pond skimmer clears debris before recycling water back to the waterfall. Bruce and Beth have done most of the landscaping themselves, although the pond and bog garden were designed and built by Nelson Water Gardens who were also consultants for the garden. Steve Pastor Masonry created the rock waterfall and gunite stream. Plants grow in the decomposed granite covering the stream, thus giving the creek's bed a natural look.

A waterfall and tropical plants make for an elegant design to the enclosed koi pond.

Rolf and Anita Nelson of Nelson Water Gardens designed the bog garden that functions as a vegetable filter for the connecting water garden.

The third garden area is a 1500 square foot glass/polyurethane garden room extension to the house. French doors open from the living room so that the garden room becomes part of it. Ceiling panels and walls can open and close electronically to regulate air and water temperatures. A 15,000+-gallon rectangular Koi pond (8 ½ ft deep) houses jumbo show quality Koi. A separate filter building holds the state-of-the-art biological and mechanical filter system. The pond also has a UV system, aeration tower, and several adjustable air systems. Humidity from the pond makes the room a natural setting for plants, as well as the vines that crawl over the large waterfall. The gunite pond design and construction is by Clear Water Filters, the waterfall by Steve Pastor Masonry, and the garden room structure by Sun Fun Enclosures.

The original, winding pond in the now-shady backyard.



Now hooked on Koi, Don's Koi pond offers superb filtration and depth of the relatively small 6 x 8 foot Koi pond.

The original courtyard with Don's small pond.

Don Bayer

Don Bayer has constructed a formal garden in an old historic home in central Houston. The back porch swing is a perfect place to view the ponds and gardens. His first pond was a small, raised pond in a central courtyard surrounded by meticulously trimmed hedges. That pond is currently home to some small fish. A whimsical waterfall is constructed out of birdhouses. Adjacent to the pond is a greenhouse with many blooming orchids. The Koi pond is also adjacent to the formal courtyard. It is about 6 by 8 feet and houses an impressive collection of Koi. The high quality filters and great depth of the pond allow the Koi to thrive in an otherwise small environment.

Dan Robinson

Living in Spring, Texas, our ponds are among the newer Koi ponds in the club. My first pond was a 2000-gallon liner pond, mainly constructed for water lilies. A few Koi and goldfish were later added to keep the water lilies company. Eventually, the Koi become the primary focus of our pond with just a few ornamental plants. Shortly after building our new home, I constructed a large pond in the backyard. About two years ago, that pond was upgraded from a liner pond to a gunite pond. It measures about 11 by 23 feet with a depth from 3 1/2 feet to about 5 feet at the drains. Total volume is about 7000 gallons. It features a rock waterfall, two bottom drains, two skimmers, and a flagstone deck. I have many different varieties of Koi as I enjoy some of the more unusual varieties of Koi.

Dan Robinson's new Koi pond holds approximately 7,000 gallons to house his unique collection of Koi.

JJ Kjellberg's water lily pond is a legacy of the peace and serenity of her special garden.

JJ Kjellberg

JJ Kjellberg of west Houston was always interested in fish and water gardening. Her backyard has two ponds: one is a water lily pond (12 x 16 x2 ft) with a dry waterfall; the other is a Koi pond with a small waterfall. A Japanese, dry riverbed is part of the landscape. The use of moss stone and bamboo in the construction of the garden along with a berm and Oriental statuary gives the garden an Oriental look and feel. A bonsai bench displays 15 different bonsai Japanese maple trees. A deck, built out over part of the Koi pond, offers the Koi some shade from the hot summer heat and allows a perfect vantage for Koi-watching in this peaceful and serene garden. JJ Kjellberg recently lost her battle with cancer and is missed by her friends of the Lone Star ZNA Koi Club.

Jerry Vaughn

Located on a two-acre lot in the Spring Branch region of Houston, Jerry Vaughn created a pond that is the perfect relief at the end of a stressful day. The pond is also a great setting for entertaining. The entire lot is landscaped with hundreds of plants such as azaleas, youpon, Chinese fringe plants, and roses. There is also a fountain in the front yard occupied by goldfish and water lilies. The rear of the property is highlighted by a 6,000-square-foot earth-bottom pond that has been designed to look as natural as possible. The main features of the pond consist of a waterfall, rock edging around the sides, a dry riverbed, and a dock walkway to a floating gazebo, the iris beds, ginger, horsetail and other plants.

If you would like to receive our free E-mail newsletter, send an E-mail with your name and E-mail address to Daniel.robinson@prodigy.net. We also invite you to visit our website: http:://www.lonestarkoi.com. Also you can view photographs from our recent meetings and Koi show at this link: http://content.communities.msn.com/LoneStarZNAKoiClub/PhotoAlbum.

Jerry Vaughn's 'backyard' pond is a unique, naturally-designed earth-bottom pond.