

# WATER SHAPES

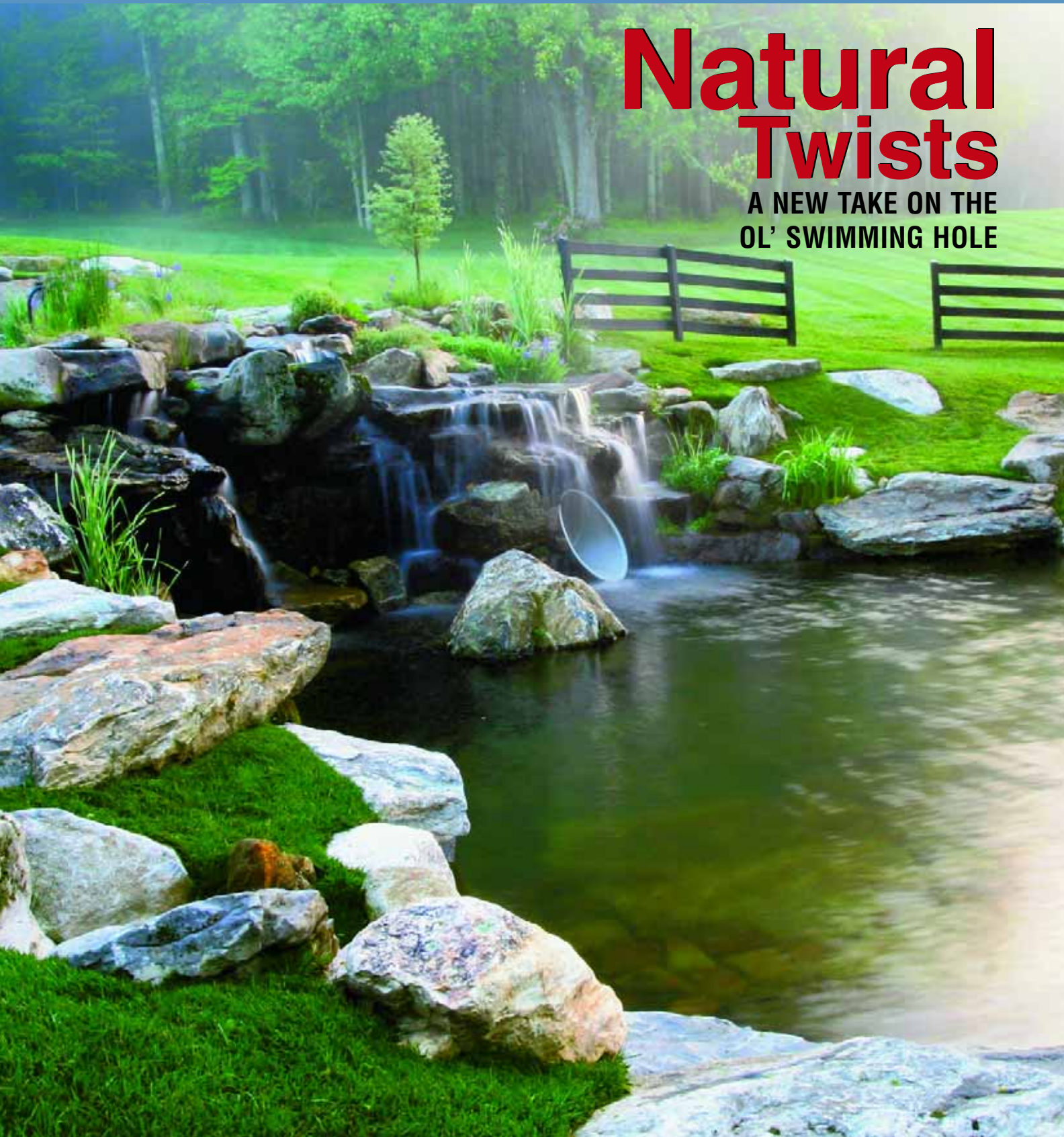
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## Natural Twists

A NEW TAKE ON THE  
OL' SWIMMING HOLE



# Swimming with Nature

For years, pond/stream specialist Bob Dews has sought perfection in the art of creating naturalistic bodies of water. Just last year, however, a client challenged him to reconsider his usual approach to pond design and develop one expressly for swimming. The result seen here is a composition in rock, plants and water that, rather than serving as a home for fish and aquatic life, is instead a safe environment for people – and lots of aquatic fun.

By Bob Dews

**I**t's no secret that many homeowners who have ponds on their properties use them to cool off or even for swimming. These bodies of water are seldom intended for such purposes, but because of humankind's affinity for water, the fact is that ponds often become "swimming holes" in which people are happy to take the occasional refreshing dip.

At Xstream Ponds (Cashiers, N.C.), we've built our ponds to date strictly for their decorative value. We've made them play host to fish and other creatures, and it has never been our thought to design them with bathers in mind – until last spring, that is, when a couple approached us with a simple mandate: They wanted their pond to be suitable for swimming.

It was the first time I'd ever received such a request, and I was a bit surprised by how challenging it was simply to wrap myself around the *concept*, let alone design and install a pond that would be safe, beautiful and, most of all, fun for them and their extended family.

As described here, the result is a hybrid between a pond and a pool. On the one hand, the vessel has many of the characteristics of a pond, including use of a liner, stone finishing material, extensive plantings and a large waterfall. On the other, the stone material was selected and placed to be conducive to safe entry and egress from the water, and the design includes a number of play features that are much more closely associated with pools than ponds.

## A Family Place

The clients live on a 50-acre homestead horse farm in Cashiers that dates to the 19th Century. Typical of the area, the site includes both heavily wooded hills and expanses of pasture land that in this case have been manicured nearly to golf-course standards.

Through the years, they've turned the place into a compound, and it is their intention to keep it in the family and leave it to their children and grandchildren. Those grandchildren spend large parts of summer here, so the clients are interested in having ample places for them to play and enjoy the surroundings.

The property includes a large, natural pond surrounded entirely by grass. At first, the clients thought that perhaps we could modify that body of water for swimming. It's large at about 100





by 50 feet in size, but it is *truly* natural, with a muddy bottom, murky water, lily pads and reeds. Without major reconstruction, there was no way we could make it serve the purpose – but in evaluating it, I couldn't take my eyes off a gentle earthen slope that rose up a few feet before flattening out as a large space overlooking the water.

It wasn't long before I suggested that we leave the natural pond in place and use that plateau to create a new pond dedicated to swimming. It would be simple to link the two bodies of water visually, I said, and make it all look as though it had always been there. The clients immediately liked the idea and hired us to get the job done.

As mentioned above, this is very much a pond, what with its liner-and-stone

**We found a great site for the proposed 'swimming pond' on a gentle slope on the far side (from the home) of the property's natural pond. We scraped away the turf, then began digging in earnest in preparation for installing a multi-level water-shape that was to be built like a pond (with a liner, bottom filtration and a natural stone finish) but was to have many of the interactive features of a swimming pool (including a slide and a cave).**

construction, edge plantings, waterfalls and overall naturalistic appearance. At about 30 by 40 feet, it holds approximately 20,000 gallons and has a maximum depth of five-and-a-half feet.

It's a basic fan shape, resembling an amphitheater, perhaps, or maybe the outfield of a baseball park. The wide

area is essentially the "shallow end." As the pond narrows, it gets deeper – which is where we located the base of the waterfall and several other features to be described below.

At first glance, this looks nothing like a conventional swimming pool and is indeed every inch the pond. Behind the scenes, however, it's much like a swimming pool that uses natural filtration techniques, but there's an important distinction here: This is *not* a swimming pool that has a pond-like appearance and "organic" water treatment, but is instead a pond we've rethought and made suitable for swimming.

### Entry and Egress

That conversion process led us to use a couple of approaches we'd never take

with a fully naturalistic pond. For one, we needed to make it simple for bathers to get easily and comfortably in and out of the water – and make certain they had good footing once inside the pond.

To make this happen, we organized the bottom as three broad terraces or shelves that step down into the water from the wide, shallow area over toward the narrower, deeper section. The deepest level is near the waterfall and is relatively small compared to the other sections. Then there's a mid-level area at a three-foot depth leading to a shallow level that encompasses much of the perimeter and is 18 inches deep. (There's also a kiddie-pond area just two inches deep; I'll discuss it below.)

Easing transitions from level to level,

we created broad steps with six-to-eight-inch risers made up of large, flat pieces of Georgia granite – a material that is highly symmetrical by nature. Between those stairs, we established relatively smooth bottom sections using a tumbled Tennessee fieldstone laid out over the liner in a sort of flagstone pattern.

(We used this fieldstone because when it's harvested at the quarry, it naturally breaks into flat, broad pieces with squared edges. It's not exactly brick-

like, but it's close enough that it let us fashion a basically uniform surface. We had the stone tumbled, too, so it lacks any sharp edges.)

Instead of grouting the stones, we filled the gaps with tiny pea gravel that allows water to flow down into our bottom-drain manifold. (The gravel also provides a measure of biological filtration on its own, but we didn't rely on it as anything more than a supplement.) As provided, the stones varied in thickness, so we also installed them on a bed of gravel to enable us to create a flat, even surface.

We went to great pains, in other words, to make certain there was nowhere inside the pond to stub a toe: To the touch, in fact, it feels like a stone patio surface.

**For us, the most unusual activity had to do with installing and hiding the slide and cave features. They ultimately went in with no hitches – and ultimately left no visible traces other than the two access points on the top level and the mouth of the slide down below.**





Once the terraced 'swimming pond' was ready and all of the surrounding rockwork and associated circulation systems had been completed to satisfaction, we filled the dozens of planting pockets we'd built into the structure and did all we could to make it look as though the pond was part of a rock outcropping that had been there for ages.



### Sleight of Hand

As mentioned in the accompanying text, the pond we built here is visually (but not physically) linked to the natural pond located just below it. The two bodies of water are, in fact, separated by an earthen dam that rises about three feet above the surface of the natural pond.

We installed a pair of small waterfalls on that sloping surface, making it appear as though water from the new pond breaks through its perimeter and flows down to the real pond.

In organizing this part of the project, we wanted to create an unobstructed path between the two bodies of water, so instead of creating false streams, we built something of a weeping-wall effect, making it seem as though the water had broken through its levee and was emerging from exposed outcroppings of stone.

In actuality, however, this water comes from and flows down into the natural pond: The two bodies of water have no shared circulation and are completely separate. When you walk across the earthen dam that separates them and look down toward the lower pond, you might get the impression that the levee is leaking badly and might be on the verge of rupturing. That may be unsettling, but it's also visually dramatic – and entirely an illusion.

– B.D.

When you gaze down into this watershape, it looks nothing at all like a typical pond. The flat bottom, steps and terraces clearly reveal a human touch, and there's almost a sculptural look to it. Our intention wasn't to fool anyone here; rather, we wanted to make anyone entering the water feel comfortable and relaxed in moving from one part of the pond to another. To be sure, the bottom isn't perfectly flat and it certainly won't tempt skateboarders if the pond ever needs to be drained, but for bathing and swimming purposes, it's just right for comfort and safety.

We also placed sets of steps made with flat boulders on either side of the pond's broad area as additional points of access. You can easily enter the water from most places along the perimeter, but we figured there would be some who might use the pond who would feel more comfortable with this pool-like approach.

One goal we had in all of this was to make certain there were no spaces on the perimeter where anyone could fall into deep



**On misty mornings and in the bright light of day, the swimming pond emerges as an overall environment that fits admirably into its surroundings. We secured that impression with countless details – the graceful waterfalls, the bog area that feeds water to the system, the ample plant material, the rockwork in the swimming area, the clarity of the water – all of it relating beautifully to the original pond and the home across the way.**

water (as you can in most swimming pools). It's yet another way we walked the extra mile in making this body of water particularly safe for bathers of all ages.

## Play Structures

At the pond's narrowest point – a span of about 20 feet adjacent to the deep end – we placed a waterfall structure that (at first glance, anyway) has the look of a great many of our ponds. Closer examination, however, reveals that this deeper area is where we became most creative in designing the pond for lively, interactive play.

For starters, the slope carrying the waterfall also includes a slide we buried in the rocks so that only the openings at the top and bottom are visible. It's a polyethylene tube slide made by Summit-USA (Kelso, Wash.); they were very helpful to us in providing schematics and installation guidance. Over its 18-foot length, the slide drops about eight feet, including two dramatic plunges and a sweeping right turn.

The top of the slide sits near the center of a 20-by-20-foot bog-filtration area that stands above the waterfall structure, with access to the tube provided by a series of five-foot-wide stepping stones. To wet the slide, we diverted a small amount of the flow from the bog, which also feeds the cascades and waterfalls.

Beyond the bog, there's a path from which you can enjoy a view of the thickly planted bog as well as the new pond and the natural pond below. Speaking for myself, I particularly enjoy this view from the top and the layers that unfold before my eyes.

Once a bather passes through the slide and reaches the water below, he or she can move to the right and swim over to a cave entrance that appears as a gap in the rock face. Once inside, you crawl deeper into the cave – about ten feet in all – before reaching a ladder that takes you back up to the top of the slide. We created this feature using 34-inch culvert pipe concealed within the rock structure.

Aside from those rather dramatically non-pond wrinkles, the rock structure is much like those we often build for naturalistic features. It consists of fieldstone indigenous to the area that has all sorts of irregular surface features and beautiful coloration. We also shaped a number of planting pockets into the rockwork to make the structure part of its surrounding landscape – although in this case those pockets are raised above the water's surface to allow various plants to trail down toward the surface: Basically, we didn't want too



much plant material in direct contact with the water itself.

As is common with most of our waterfalls, we did not want to encourage rock-climbing on the waterfall for safety's sake, but in this case we also had to set things up to discourage anyone from climbing up the waterfall from inside the pond – not an ordinary line of approach in our usual projects. Our approach here was to make the interior wall of the pond beneath the waterfall quite flat, vertical and hard to climb.

To satisfy kids' urges along those lines, we placed a large emergent boulder near the waterfall: It's easily accessible and rises about two feet above the waterline.

## Clean and Clear

Looking across from the waterfall toward the wider perimeter of the pond (in what would be left field, to pursue the baseball analogy once again) is the area in which we placed the kiddie pond mentioned previously. This six-by-six-foot feature has a coarse, sandy bottom that serves as a return area for the filtration system while also providing a safe, comfortable place to play. The water here is just two inches deep – perfect for small children who comfortably crawl through the water and dig into the sand.

This area flows into the pond, separated from it by a set of flat stones over and by which water flows out of the shallow area.

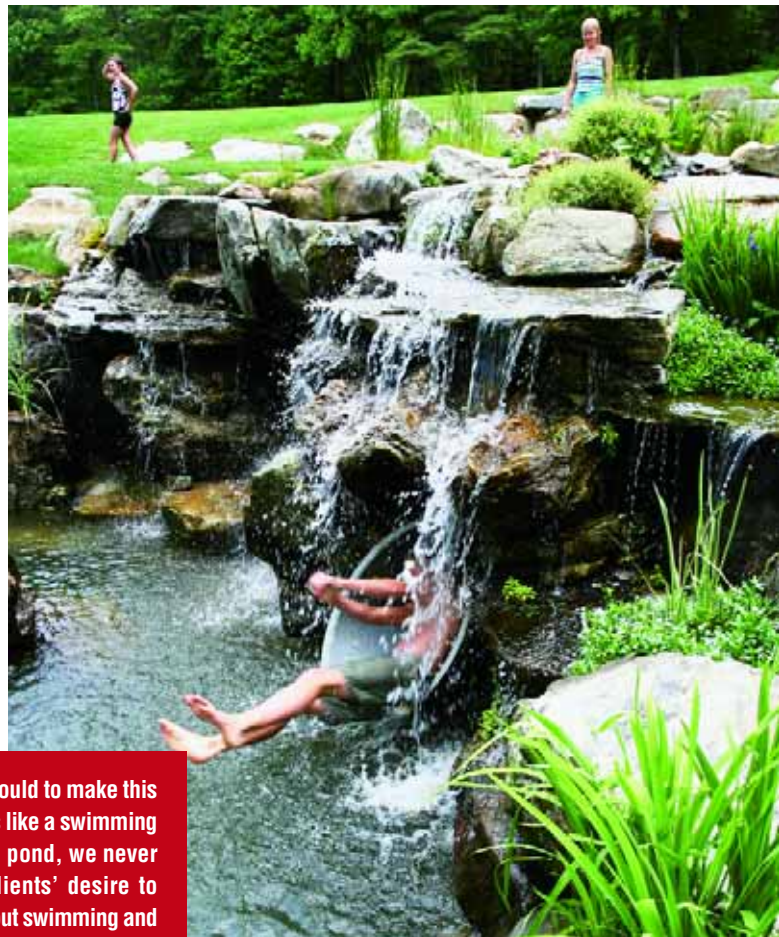
Here and elsewhere, the clients wanted us to organize things in such a way that no direct application of chemicals would be required to treat the water. We chose an ultraviolet sterilization system from Aqua Ultraviolet (Temecula, Calif.) along with a large bead filter, also from Aqua Ultraviolet. Although the pond system contains approximately 20,000 gallons of water, these components were upsized and would easily accommodate up to 30,000 gallons.

The filtration system has an under-drain system that pulls water between the flat stones on the bottom of the pond and through a gravel bed. Water removed from the system in this way is returned through upwelling systems located beneath the upper level bog and, as mentioned above, through the sand of the kiddie pond. We've found through the years that this circulation pattern produces extremely clear water.

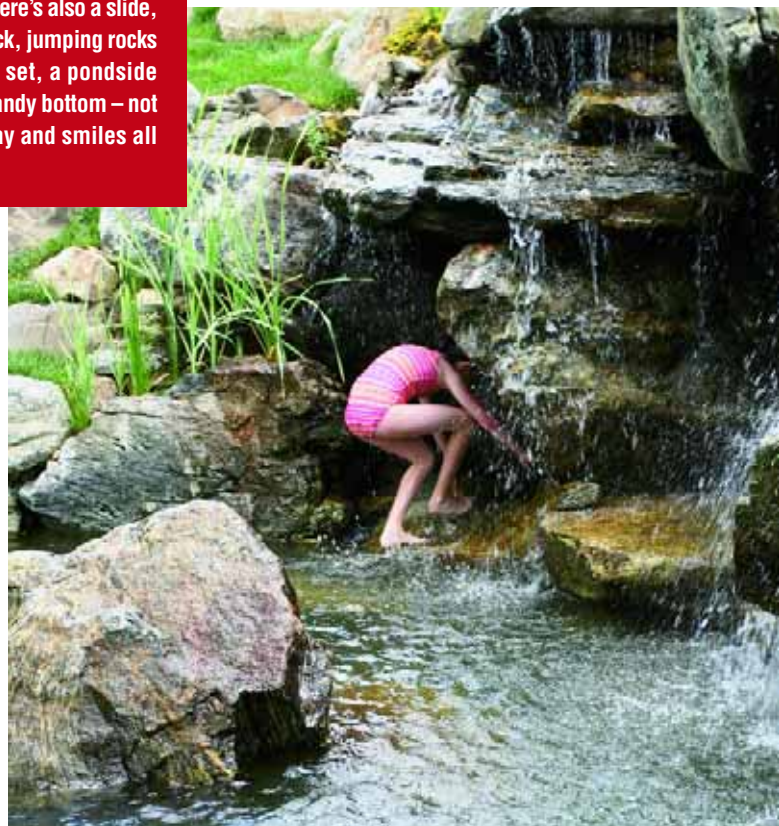
Finally, this is a pool built for swimming, so we completed the equipment package with a propane pool heater from Jandy (Vista, Calif.). All of this equipment, including pumps from Speck Pumps (Jacksonville, Fla.), is located in a subgrade, poured-in-place concrete vault measuring eight feet by ten feet with a seven-foot ceiling. It's accessed from above via a marine boat hatch.

Doubling back a bit, inside the pond itself we used an EPDM liner from Firestone Specialty Products (Indianapolis, Ind.) and skimmers from Savio Engineering (Albuquerque, N.M.).

In the year since we finished our work on site, the clients say that their grandchildren and other visitors have spent many



**While we did all we could to make this composition look less like a swimming pool and more like a pond, we never compromised the clients' desire to make this area all about swimming and general aquatic fun. So along with the clear, heated water, there's also a slide, a cave, a climbing rock, jumping rocks and, for the younger set, a pondside wading area with a sandy bottom – not to mention active play and smiles all around.**



hours enjoying the pond just as intended and that this area has become one of the most used parts of the property. They've also told us that nobody has yet ventured into the cave to gain access to the top of the slide, but they know it won't be long before that passage becomes another big part of the fun.

And that fun is what it's all about: For us, working on this project was a major learning experience, but throughout the process, we always enjoyed the challenges and the need to invent ways to meet the clients' desires and expectations. Will we build more? I certainly hope so, because it was extremely satisfying to design and build a watershape that not only has visual appeal, but also is a source of recreation for the entire family.

