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Design • Engineering • Construction

Volume 4  
Number 8  
September 2002  
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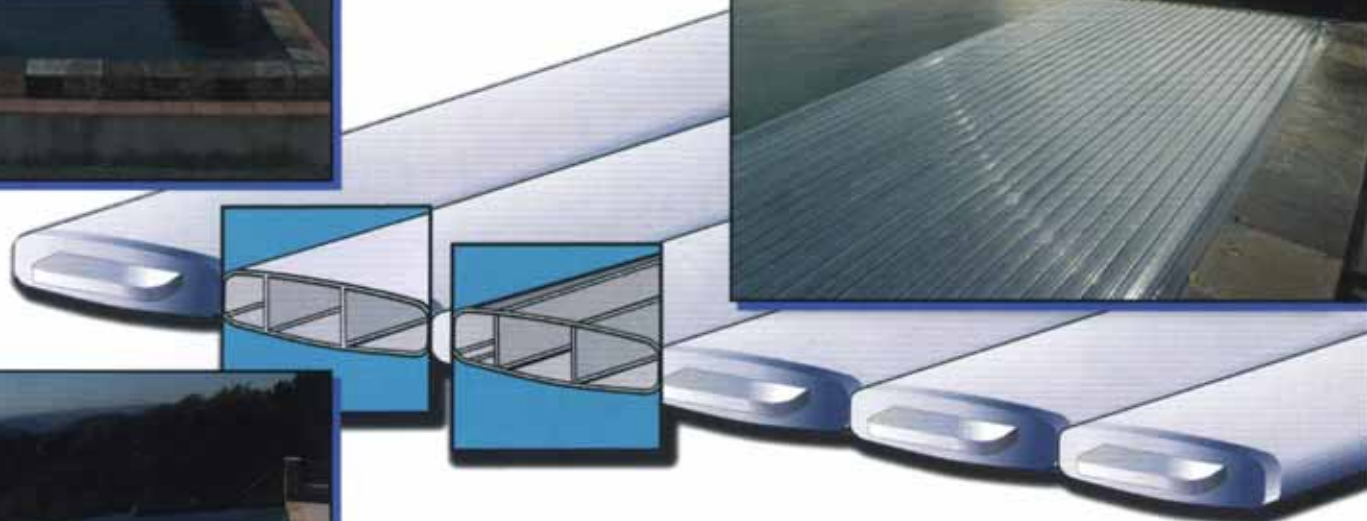
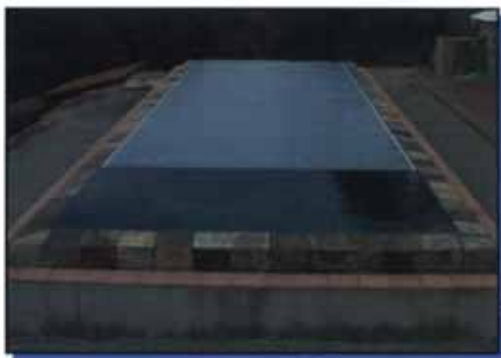
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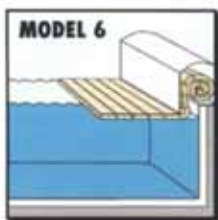
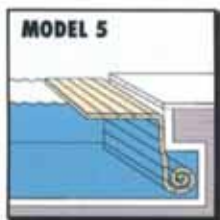
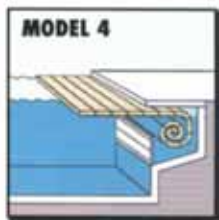
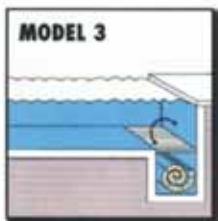
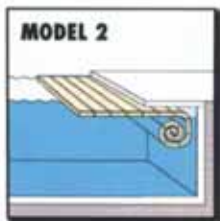
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**On the cover:**  
Photo courtesy Suzanne & Ron Dirsmith,  
The Dirsmith Group, Highland Park, Ill.

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## All Ears

I must admit that being editor of *WaterShapes* can be lots of fun. Just this past March, for example, I had the privilege of visiting the home of *Playboy* magazine's founder, Hugh Hefner – not to attend a gala party or special event of any kind, but to check out the renovation of a swimming pool.

The invitation came courtesy of Bruce Riley, president of Rock Formations, an artificial-rock specialty firm that had been hired to transform an ordinary backyard pool located across the street from the famous estate into a permanent, naturalistic video and film location for Hefner's company.

As Riley explains it, Hefner had purchased the neighboring home to be used as a sort of "overflow mansion" for the steady parade of guests and models who work on the company's videos and photo shoots. Riley invited *WaterShapes*' National Sales Manager Camma Barsily and me to check out the work he was doing on the newly acquired property. As part of the visit we were to be allowed to tour the grounds of the main mansion across the street.

Before that, however, we took a long look at the renovation project (covered on page 42 of this issue) and were impressed by the beautiful environment that Riley's firm had created in what had been a lackluster (but estate-sized) backyard. After that tour concluded, we made our way across the street.

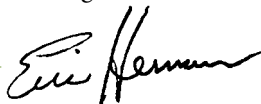
As we arrived, the place was crawling with dozens of maintenance workers and caterers preparing for an event that evening. We worked our way around the grounds for about an hour and had a wonderful time – no movie stars or bathing beauties in sight, but we did see the famous swimming pool and grotto along with the gracious zoo, game room and Japanese garden.

As a consumer of popular culture, I've seen photos of and heard stories about the mansion, and I was more than a little curious to see what this most famous of "private" residences was like in person. Unlike most people, however, I've had the privilege of becoming friends with architect Ron Dirsmith, the man Hefner hired in 1971 to design the interior and exterior of the Tudor-style mansion just after he purchased the six-acre property.

Dirsmith – who, along with his wife Suzanne, coincidentally contributed an article to this issue about designing another high-end estate (see "A Place for All Seasons" on page 54) – has been generous in relating personal stories about his long working relationship with Hefner. And having heard about the late-night meetings with the famous magazine mogul, his meticulous attention to detail and the sweeping concepts that went into shaping the whole property, I was truly fascinated to see what it is that makes this place so special.

Aside from the obvious cachet associated with all things Playboy, I believe that Playboy Mansion West, and especially its storied swimming pool and rock grotto, are designed with playfulness and a delight in surprise and mystery that give the location an otherworldly feeling. The polished ancient amber skylights in the grotto, the meandering paths in and around the animal habitats, and the many sheltered "trysting" places (Dirsmith's word, not mine) make this the kind of place that brings a smile to your face at every turn.

Looking back, I'm delighted to have caught an up-close glimpse of such a legendary landscape. Even more than that, I feel lucky to have the chance to get to know the fascinating people who create places designed to capture our imaginations.



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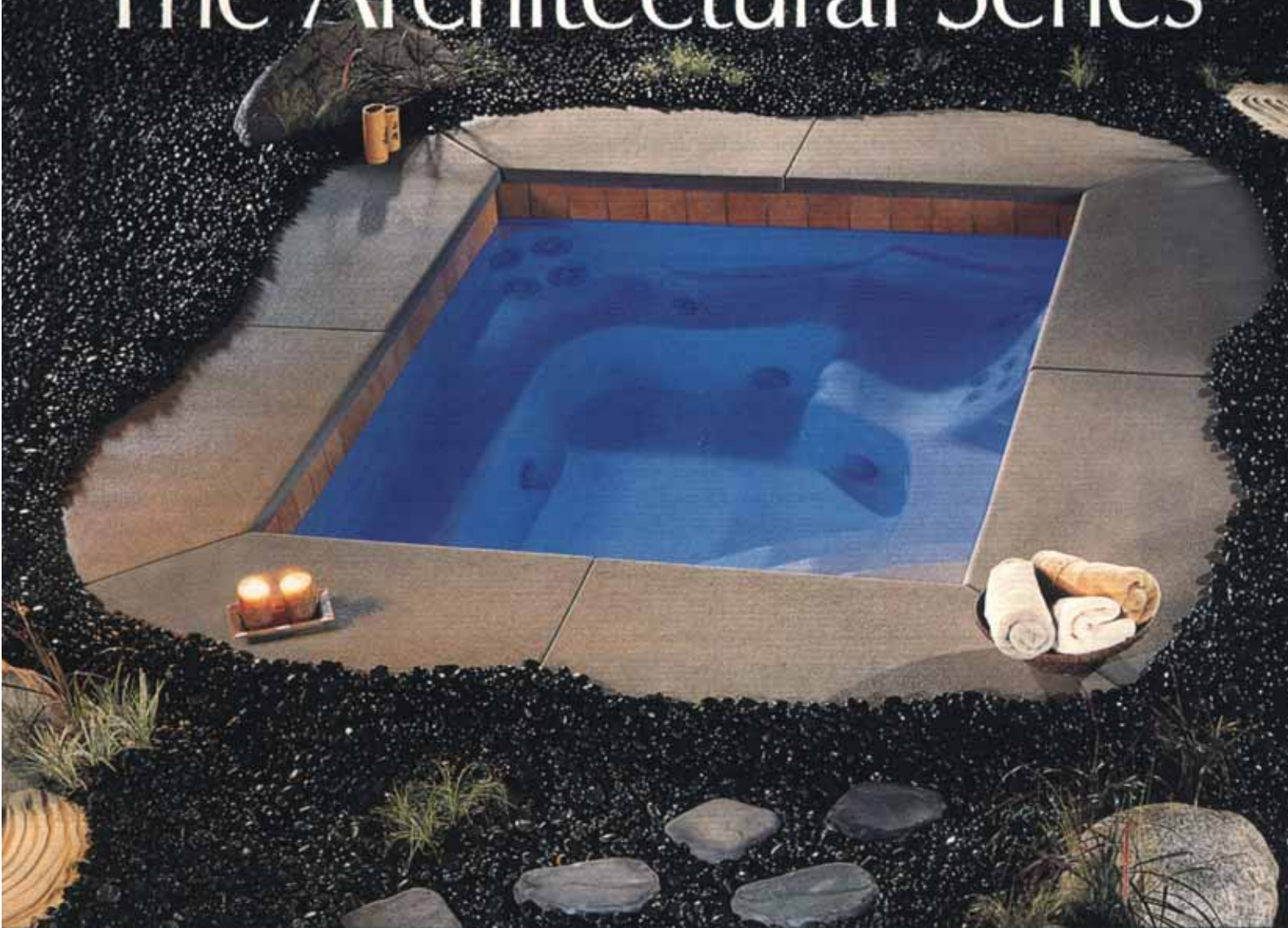
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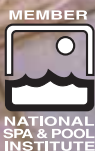


**Janet Rosenberg** is founder and principal of Janet Rosenberg & Associates Landscape Architects Inc. in Toronto, Ontario, Canada. With extensive experience in the development of detailed design features, the integration of artistic elements into landscapes and considerable horticultural expertise, she is actively involved in every one of her firm's projects and uses her design and management skills to find creative and functional solutions for each client. Before establishing her own firm in 1983, Rosenberg was Senior Landscape Architect for five years at Cumming Cockburn Ltd. Consulting Engineers & Planners. **Glenn Herman** has been a landscape architect with Janet Rosenberg & Associates since 1988. As the firm's Senior Designer, he works closely with Rosenberg and oversees all of the firm's projects from schemat-

ic design to contract administration. In those roles, he ensures the highest quality design output for both private and public-sector projects.

**Bruce Riley** has been in the rock and waterfeature business since 1976. He started his own company, Rock Formations, Inc., in 1979, and through the years has built artificial rock features for Disneyland, Raging Waters, the Radisson Hotel in Aruba, several resort hotels in Mexico and a theme park in Taiwan. The company pioneered the use of artificial rock in conjunction with swimming pools and now sells rock castings in addition to training contractors in the use of artificial rock.

**Steve Gutai** is a territory sales manager in the U.S. southwest for Laars & Jandy Pool Products, a division of Waterpik Technologies of Petaluma, Calif.



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*Interested in writing for WaterShapes on design, engineering or construction topics? Contact Eric Herman at (714) 449-1996!*

Gutai is a veteran of the swimming pool industry, having spent more than 13 years as an independent service and repair technician and subcontractor in the Los Angeles area. He spent three more years as a technical service manager and outside sales representative for Waterway Plastics in Oxnard, Calif. Gutai joined Laars & Jandy in 2000 and now works directly with contractors and engineers in designing circulation systems for pools, spas and other watershapes. He teaches hydraulics at trade shows throughout the United States and is featured hydraulics instructor for Genesis 3's Level 1 schools.

**Ron Dirsmith** is principal architect and co-founder of The Dirsmith Group, an architecture firm based in Highland Park, Ill., with operations worldwide. He and wife Suzanne established the firm in 1971 following employment with the pres-

tigious firms Perkins and Will and Ed Dart Inc. He has a BS in Architectural Engineering and a Masters in Architecture and Design from the University of Illinois. He is also a Fellow in Architecture of the American Academy in Rome, which for more than 100 years has been a research and study center for America's most promising artists and scholars. Dirsmith is one of only 172 architects to have been granted this honor. **Suzanne Roe Dirsmith**, president of the firm, holds a BS in Education from the University of Illinois and a Masters in Education from National-Louis University. She heads the education division of The Dirsmith Group, an effort dedicated to forwarding design and architecture education within the architectural community and to foster new thinking and raise awareness of architecture and landscape design as a blended whole.




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**I find more and more that designers of all sorts – be they architects, landscape architects, interior designers, sculptors or other artists – are keenly interested in connecting with people who understand both the aesthetic and technical issues of watershaping.**

### One to Another

I relate this story not to discredit advertising, but to point out the immediacy and effectiveness of networking as a promotional tool. As I've mentioned before in these pages, I rely almost entirely on referrals to generate business – about 60% to 70% through satisfied customers with the rest coming from professional contacts who can best be categorized as members of the design community.

As time goes on, in fact, I find more and more that designers of all sorts – be they architects, landscape architects, interior designers, sculptors or other artists – are keenly interested in connecting with people who understand both the aesthetic and technical issues of watershaping.

For so many years, the only “experts” available to designers have been mainline pool and spa builders, a branch of the watershaping tree that has never had a reputation for sophisticated design work or any particular interest in working at that level. This fact has left the door wide open for those of us who strive to work in that realm.

This orientation toward design is a trend that I see gaining great momentum of late. In my own business, my count of design projects has increased almost exponentially in each passing year. Whether I'm working a referral through a past client or via a strategic alliance with a designer I know, the situations are similar in that I'm called into the process as a result of my willingness to work with aesthetics.

Sometimes it's a matter of a client hiring me to participate as part of a design team. In other cases, a landscape architect or architect has recommended that I be brought in. Either way, those who are working with water from a de-

## The Power of Interest

**A**ll through my career, I've never really been big on advertising. In fact, the only place I've ever advertised is in Naples, Fla., where I've never been successful drumming up any business even though it's only a short distance from my home.

I gave it a good shot – a nice ad with a picture of a vanishing-edge pool, placed in a local newspaper's special section on backyard swimming pools. I was confident I'd get some response, but all that came back was exactly *nada*!

Despite that experience, I'm pleased to report that my “Naples drought” might be ending as the result of a conversation I had with a subcontractor in the area. The owner had called me asking for a statement she could use for marketing purposes. We started talking about business in the area, and I mentioned that I'd heard there were some good pool companies in Naples.

That wasn't exactly the case, she said, mentioning that with only a few exceptions, the overall state of the Naples market for pool contractors was pretty weak. In fact, she said, local architects and landscape architects were frustrated by the lack of quality design and construction services for pools, spas and other watershapes.

One thing led to another, and she referred me to a handful of design professionals in the area. Shortly thereafter, I had a conversation with a landscape architect who confirmed that he and others in the area were indeed in need of a quality watershape designer. I offered my services, and now it looks as though I may have finally broken through in Naples.



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sign standpoint are increasingly seeking out my services, largely because they believe I'm one of the few people from the pool/spa trades who is prepared to sit at the table with other designers.

Working this way has been great for business, and it can be fun and exciting, too. In my last column, for instance, I discussed a set of projects I'm involved

with on the island of Bermuda. My foray onto that beautiful Atlantic island began with a client referral, which in turn led me to work with a mechanical subcontractor who brought me in on two subsequent jobs during which I've forged an alliance with a client who builds elaborate spec homes.

It's a big wonderful web of contacts

that conceivably could generate business and further contacts for me for years to come. And it all started because there are people out there who value finding someone within the "pool industry" who has a working knowledge of design and is interested in spending time in the aesthetic arena.

## Willing to Listen

Obviously, there's a lot to be said for the value of developing design expertise. Yet the chains of events and connections that are now leading people to my door are based on something even more fundamental: my ability and willingness to listen.

When I think back on my lengthening career in the pool and spa industry, I can only come up with a short list of people who are truly interested in design – and even fewer who have ever bothered to get educated about it. For that reason, it's small wonder that there's never really been much of a connection between the pool/spa industry and the greater design community.

And how frustrating it must be for designers who are trying to incorporate water into their work and are unable to find anyone who's willing to have a conversation about water-related aesthetics!

I believe it is because I am willing to listen and capable of talking about design-related issues such as color, materials, texture, settings, ambiance and all of the other factors these designers live and breathe as part of their everyday lives that I've won a place at the table with design professionals. It's interesting and rewarding – but at the same time, it's a bit disappointing to think that the conversations I'm now having should've been ongoing for *decades*.

In that sense, it's kind of shocking to think that watershaping is just now becoming its own design specialty. At the same time, it's inspiring to consider the vast opportunities that moving in this direction now represent.

Because people in the pool and spa industry already possess (or at least *should* possess) much of the technical knowledge needed to be of service to designers looking to incorporate water into their projects, there's no question that rank-and-



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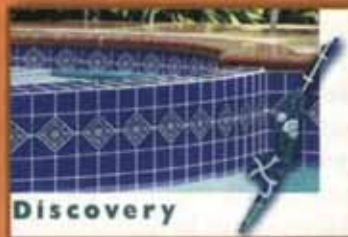
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file members of the pool industry can have something to offer to the process – but it'll only work if they're inclined to move in a "design direction" in their thinking and their work.

When you break your way into the circles of designers and their design-conscience clientele, the resulting strategic alliances between watershapers and those professionals and their clients can become a source of almost constant referrals and business.

Last time, I discussed what it's like to do business away from home and how becoming involved with faraway projects is the result of years of personal and professional evolution. The same holds true of building strategic alliances with designers: It's a process that emerges in the course of doing things well across the board.

Every situation is a bit different, and you never know exactly how things will unfold. But if you come to the process with open ears and an open mind and constantly work to educate yourself, good things are almost bound to happen. You can't just wake up one day and expect to begin working with designers, but you can point yourself in that direction and begin taking an interest in becoming more design savvy.

### A Different Crowd

For my part, I enjoy my associations with design-oriented professionals. The business side of it has been great, but it's also exciting to spend time working with people who are so committed to artistry and aesthetics and creativity. (For someone who came to the business via service and construction as I did, finding my way among the unusual personalities of designers has involved a *significant* shift in culture.)

So often these days, I find myself working with an architect, a landscape architect and some other sort of artist or craftsman. For the most part, these folks are concerned with things such as color, texture, spatial relationships, style and mood. I've been in situations where those sorts of discussions have gone on for hours – and the gritty issues of hydraulics, structural steel and excavation are the farthest things from anyone's mind.

I've witnessed a tendency on the part of pool contractors to dismiss those sorts of discussions as frivolous and way too artsy. What I've found in my work, however, is that not all designers wear only black, nor are all of them pure aesthetes in everything they say or do. What I've found instead is that these are serious people who look at their surroundings in certain and very definite ways and that participating with them means being prepared to work through a wide range of conversations.

In other words, you need to be comfortable with artists and with art. For some contractors, I think you might as well be asking them to fly to the moon.

Some time ago, I had the pleasure of working with a designer named Patrick Kennedy, an intensely artistic guy who works in Miami's South Beach area. I was brought in to help him execute a commercial waterfeature that consisted of a massive angled glass wall in the Astor Hotel, a beautiful Art Deco building. In the course of the project, I helped Kennedy develop a plan that was both aesthetically pleasing and fully functional with respect to hydraulics, lighting and safety.

**You need to be comfortable with artists and with art. For some contractors, I think you might as well be asking them to fly to the moon.**

It was an interesting situation, but no longer an unusual one for me in that my practical knowledge of watershaping came into play in a sort of hand-in-glove context with a purely aesthetic set of design considerations. As it turned out, I was disappointed with the performance of the contractor who did the installation, but the overall results were positive.

I recently visited Kennedy at his office and was pleased to discover that, since the Astor Hotel project had been completed, his star appears to be firmly on the rise in the swanky South Beach area. His reputation for creativity has gotten him involved in an array of new projects – some of which, he's told me, I may be asked to join.

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where my affiliation with this particular designer may lead. But if past experience is any indication, I can be fairly certain that whatever comes of our association, it will be unexpected and probably both fun and interesting.

### Gaining Momentum

As I've worked with all manner of de-

sign professionals, I've found myself gaining exposure to an ever-expanding set of ideas and concepts. This in turn fuels my own store of ideas and gives me even greater confidence each and every time I'm asked to participate in the design process.

In this sense, strategic alliances with designers have become part of an upward

cycle of new contacts, interesting projects and knowledge gained as a result of my participation. So now, even when I'm working solo on a project with a client, both my comfort level and ability to deal with aesthetic issues are becoming more polished and refined every day.

For example, and as I've mentioned in previous columns, a willingness to provide a palette of material options to clients can be a tremendously powerful tool, one that sets you apart from the competition. As I've watched the way that other designers combine materials and work with clients in establishing color schemes, textures, contrasts and motifs, I've become even *more* convinced that providing a range of choices is one of the most important things we can do.

In fact, I never cease to be amazed at how impressed some people are about getting to look through books of color samples for tile, marble or other materials. It's helped me recognize that, to some large extent, consultants are paid to give their clients these options and compensated for knowing what works well together in overall compositions.

By extension, this is the edge people from the pool industry have in this upscale world: Those of us who are specialists in the *staggering* range of things to be done with water and the materials that can come into play in watershape designs are uniquely qualified to provide options that clients and other designers can't obtain anywhere else.

If you fix your gaze only on the next hole you're about to dig and fill with water, there's a world of interest and potential that is sure to pass you by. But if you couple your knowledge with a confident eye for design, the possibilities for strategic alliances and referral business can be limitless. **WS**

**Brian Van Bower** runs Aquatic Consultants and is a partner in Van Bower & Wiren, a pool-construction firm in Miami. He is also a co-founder of Genesis 3, A Design Group; dedicated to top-of-the-line performance in aquatic design and construction, this organization conducts schools for like-minded pool designers and builders. He can be reached at [bvanbower@aol.com](mailto:bvanbower@aol.com).

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Boston, MA Area.....	Sept. 10	Des Moines, IA Area.....	Sept. 25	Albuquerque, NM Area.....	Oct. 16
NY/NJ/PA Tri-State Area		Lincoln, NE Area.....	Sept. 26	Montgomery, AL Area.....	Oct. 18
(Warwick, NY).....	Sept. 12	Salt Lake City, UT Area.....	Sept. 27	Phoenix, AZ Area.....	Oct. 18
Hartford, CT Area.....	Sept. 12	Kansas City/Topeka, KS Area.....	Sept. 27	Orlando, FL Area.....	Oct. 21
Long Island, NY Area.....	Sept. 13	Philadelphia, PA Area.....	Sept. 30	Atlanta, GA Area.....	Oct. 21
Danbury, CT Area.....	Sept. 13	Boise, ID Area.....	Sept. 30	Tampa, FL Area.....	Oct. 22
Chatham, Ontario,		Selinsgrove, PA Area.....	Oct. 1	Gladewater, TX Area.....	Oct. 23
Canada Area.....	Sept. 16	Baltimore/Washington DC Area.....	Oct. 2	Naples, FL Area.....	Oct. 24
Cincinnati, OH Area.....	Sept. 16	Portland, OR Area.....	Oct. 2	Miami, FL Area.....	Oct. 25
Milwaukee, WI Area.....	Sept. 16	Seattle, WA Area.....	Oct. 3	Dallas/Ft. Worth, TX Area.....	Oct. 25
Detroit, MI Area.....	Sept. 17	Savannah, GA Area.....	Oct. 4	San Diego, CA Area.....	Oct. 28
Columbus, OH Area.....	Sept. 17	Vancouver, BC Canada Area.....	Oct. 4	Austin, TX Area.....	Oct. 28
Green Bay, WI Area.....	Sept. 18	Memphis, TN Area.....	Oct. 7	Los Angeles, CA Area.....	Oct. 30
Traverse City, MI Area.....	Sept. 19	Indianapolis, IN Area.....	Oct. 7	San Antonio, TX Area.....	Oct. 30
Cleveland, OH Area.....	Sept. 19	Tulsa, OK Area.....	Oct. 9	Fresno, CA Area.....	Nov. 1
Grand Rapids, MI Area.....	Sept. 20	Louisville, KY Area.....	Oct. 9	Houston, TX Area.....	Nov. 1
Pittsburgh, PA Area.....	Sept. 20	St. Louis, MO Area.....	Oct. 11	Santa Cruz, CA Area.....	Nov. 4
Madison, WI Area.....	Sept. 20	Nashville, TN Area.....	Oct. 11	Sacramento, CA Area.....	Nov. 6
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## In the Zone

We're all familiar with the climatic differences we experience in areas that get lots of snow as opposed to places that seldom (if ever) experience freezing conditions. These not-so-subtle climate distinctions mean a lot to us as human beings – and have even more meaning in the world of plants and landscaping.

That's why almost every one of my columns about plant selection has contained a disclaimer about checking with your local nursery to see if a particular plant will grow in your area. That's also why the experts have developed a variety of systems intended to classify "climate zones" throughout the United States.

Each of these systems offers its own criteria for classifying particular plants as useable in given zones, and knowing a bit about a specific locale's characteristics and how various plant varieties relate to them can be a big help as you design your watershapes and their surroundings.

On the one hand, they give you an authoritative way to inform clients what they can and can't have in their yards. On the other, if you get a bit adventurous, they can help broaden your plant palette and help you move a step or two beyond what the nurseries have on hand to meet popular tastes.

Most published plant guides offer some sort of zone indicator right up front in a plant's description. You can also ask your local nursery for this information or check out plants you're interested in through the Internet.

### Different Strokes

A number of these climate-classification systems have been developed, but I'll focus on the two I've encountered the most: The USDA's hardiness-zone classification system and the Sunset climate-zone system.

❑ The United States Department of Agriculture became involved in this area when it created a classification system based mainly on average annual minimum temperatures found in the United States.

The zones are arranged from north to south, with Zone 1 at the top of the map and Zone 11 toward the south. When I started in the business about 14 years ago, there were only ten zones. An eleventh zone was added a few years back, and many of the other zones have been divided into "A" and "B" sub-areas.

To view the USDA map – and find a great interactive feature that will help you wherever you live and/or work – go to [www.usna.usda.gov/hardzone/ushzmap.html](http://www.usna.usda.gov/hardzone/ushzmap.html). In the map keys, you'll find that Zone 1 has an annual average temperature below -50 degrees Fahrenheit, while Zone 11's annual average temperature is above 40 degrees F. (It's not surprising that big swaths of Alaska and Canada are in Zone 1, while Zone 11 includes Hawaii and parts of Mexico.)

If you live in an area outside of the Western United States, the USDA system is your best guide to plant hardiness and should be your first stop when it comes to designing a landscape or garden that will thrive. Simply determine which zone you're in and use it as a tool in selecting your potential plant palette.

Most published plant guides offer some sort of zone indicator right up front in a plant's description. You can also ask your local nursery for this information or check out plants you're interested in through the Internet. One key point: If you live in a zone that experiences freeze, you should probably also consult with your local weather service for information on *when* to plant.

The addition of the new zone and subdivision of some others has made USDA's planting information much more precise, but the system still has some drawbacks. Remember,



for example, that temperature alone does not guarantee survival of plants: Soil, water and various other factors all combine to influence the success of any planting.

□ The *Sunset* magazine publishing empire has developed its own plant-classification system. Packaged in the thick *Sunset Western Garden Book*, this system not only considers temperature, but also a range of other factors such as latitude, elevation, ocean influence, continental air influence and mountains and hills – as well as microclimates.

The *Sunset* system is much more precise than the USDA system for planting in the western United States and therefore offers landscape professionals here a superior tool for ensuring the success of designs and installations. The book also gives a detailed explanation of each zone, outlining its features and specific characteristics and defining the growing seasons within each zone.

Not consulting this guide and simply picking plants you like can be a recipe for disaster when you have access to so much valuable information. As you become familiar with the system, it's also possible to push the boundaries of each zone and (as I often do) experiment with plants that are not considered hardy enough for a given zone but are within reasonable reach – that is, within a zone or two. I like the odds for success in lots of these cases.

Unlike the USDA system, which is structured fairly rigidly from north to south, the *Sunset* map has lots of detail and contours across its 24 zones. Zone A1 is in Alaska, while Zone 24 is in southern California, but in local areas around Los Angeles, for example, you'll find Zones 2A, 3A, 11 and 18 through 24.

My own work takes me all over Los Angeles, so it's imperative that I consider the zone system and its islands of variation when choosing plants. In the San Fernando Valley, for example, I grow many plants that survive blisteringly hot weather. Just a few miles over the hill in Santa Monica, those same plants may be stifled by the ocean influence.

Even within the confines of the Valley, the *Sunset* system contains many different zones. Up in the hills of Encino, for

example, I can use certain plants that won't survive a mile or two away on the valley floor, either as a result of freeze or extreme heat.

### Using the Guidelines

A key word to consider in using any zone system is *guideline*. Consulting hardiness maps is essential and a good first

step toward successful plantings, but it's important to know that they're reasonably conservative in what they tell you and that there are situations where you can push the boundaries.

For example, your client who lives in *Sunset* Zone 18 may have a passion for a plant that is considered hardy only for Zone 24 – generally speaking, a warmer

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climate than Zone 18. Placed in the middle of the yard in Zone 18, this plant will most likely have trouble thriving. Positioned directly next to the home, however, this same plant might do as well as or better than it usually does in Zone 24. Why? Because the heat generated by the home (or a watershape) may create a microclimate that is sufficient for the

plant's particular needs.

These microclimates come in many forms, depending upon exposure, temperatures, wind factors and more. You can even create a microclimate with plants themselves that will enable you to use plants you might not be able to otherwise: Sheltering less hardy plants from wind or other extreme conditions by us-

ing a hedge or some other garden enclosure, for example, might make all the difference.

Something else to think about when conceptualizing a design is that many plants, such as fruit trees and bulbs, *require* freeze. Say your clients in Sunset Zone 23 have told you they want plenty of fruit trees in the area surrounding their watershape: A quick look at your *Sunset Western Garden Book* might lead you to inform them that very few stone fruits do well in that area. But that's not to say you can't plant them there; all it may mean is that you will need to consult with a nursery or fruit grower to find out which varieties survive best under these warmer conditions.

As you consider your options, one of the things you will consistently find working in your favor is that nurseries typically carry only plants they can guarantee will grow in their immediate area. I was recently called in to install a landscape in Lake Arrowhead, a mountain resort about 6,000 feet up in the mountains that ring Los Angeles. Hostas usually only survive as annuals in Los Angeles and are therefore not carried in large quantities by our local nurseries, but the nursery I worked with up the hill (in Zone 3A) stocks hostas as a staple.

It can be fun crossing zone boundaries in this way, but you need to exercise a bit more caution with your plant selections and ask your nursery lots of questions before making your choices. As I've written many times, your clients will be much happier when 95% of their landscape survives through the first year because you considered hardiness than they would if only 75% made it because you were more concerned about planting plants you thought would look good! **WS**

**Stephanie Rose** runs Stephanie Rose Landscape Design in Encino, Calif. A specialist in residential garden design, her projects often include collaboration with custom pool builders. If you have a specific question about landscaping (or simply want to exchange ideas), e-mail her at [sroseld@earthlink.net](mailto:sroseld@earthlink.net). She also can be seen this season in six new episodes of "The Surprise Gardener," airing Tuesday evenings on HGTV.

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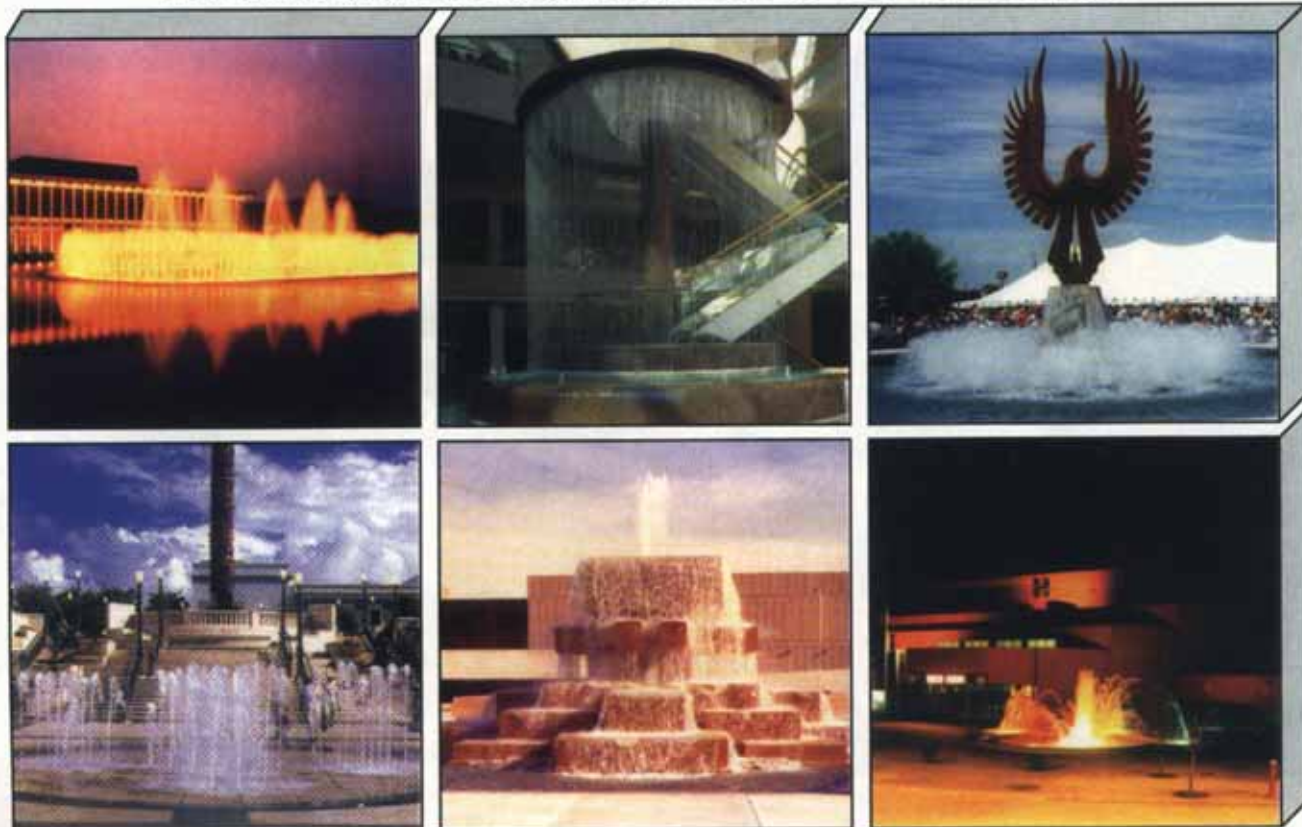


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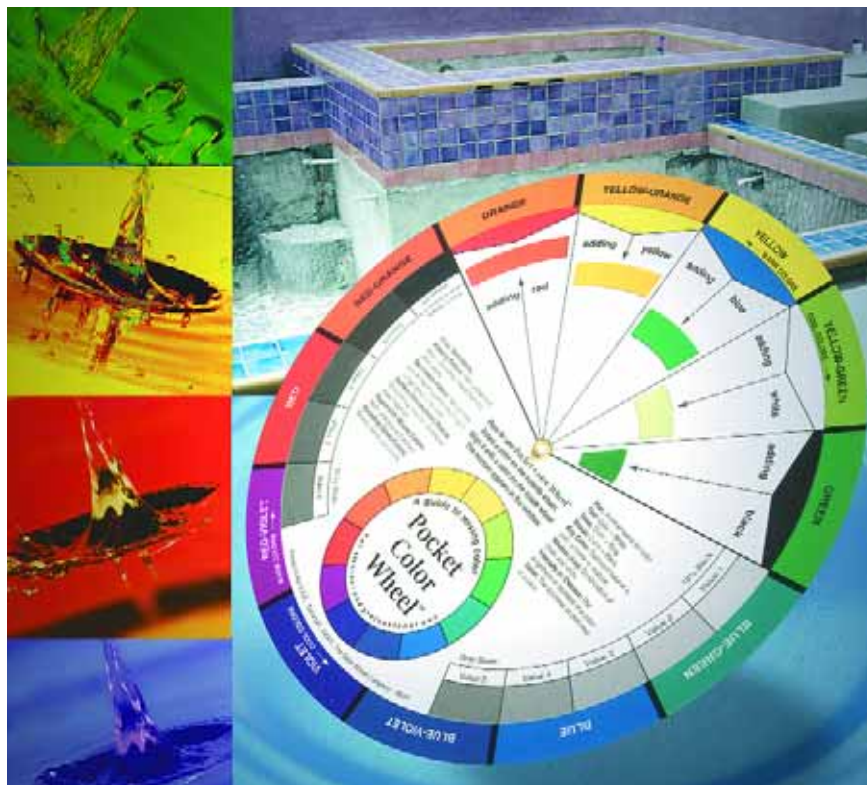


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We should consider water's colorlessness in designing structures that contain and surround it and think about the ways we can use this context to add weight, interest, intensity, distortions and more to the appearance of the water.

### Dull Reality

Watershaping is a truly specialized and dynamic type of construction, and what we generally see around us is one missed opportunity after another – with the not-so-occasional design abomination thrown in for good measure.

The water isn't the offending party: It is absolutely colorless and relies on reflections of the surrounding environment, absorption of ambient light and the colors of things that find their way into it (including algae) for its appearance of color. We see water as blue not because the water itself has that coloring; rather, it's because of physics and optics and, most obviously, the way the water reflects the sky.

We should consider water's colorlessness in designing structures that contain and surround it and think about the ways we can use this context to add weight, interest, intensity, distortions and more to the appearance of the water.

In nature, we see incredibly sublime blends of colors around water that always seem to "work." We see the primary colors (blues, reds and yellows) and the secondary colors (greens, violets and oranges) as well as a rich array of browns, creams and hundreds of shades of gray. When you look at those hues in nature, the composition is almost always beautiful.

But when you take those very same colors and put them in the hands of someone who isn't sensitive to how they work when transported to a different space, the results can be horrendous. I've screamed for years about all the projects where gray

## Chromatic Virtues

Color is amazing: It provides us with some of the greatest opportunities we ever have to create spaces that are emotionally evocative and visually compelling – yet it is also one of the most difficult design details to understand and put to good and effective use.

Trouble is, there's no easy way to simplify the challenge: Color is indeed a tough nut to crack, and that's as true for architects, artists, fashion designers and the people who choose colors for new cars as it is for watershapers. And because it's hard, an awesome majority of what we see around us on buildings, clothing and freeways tends to be "safe" – unimaginative, conservative and bland.

Designers aren't entirely to blame for this situation. The fact is, most of our clients live and work and are quite comfortable in environments and spaces that are terribly unsophisticated in terms of color. They've grown accustomed to the general dullness that surrounds them in the textiles, appliances, flooring, automobiles and apparel they see, buy and have been led to believe makes them happy.

In other words, just about everyone's afflicted to some degree by this conservative approach to color and limited appreciation of its power and beauty. What I'd like to suggest here is that we take a break from this go-with-the-flow mentality and look for something fresh and unusual in our watershaping palettes.





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plaster is butted up against near-fluorescent blue tile. Beyond making me double over in pain, these combinations *alone* put the lie to the assertion you hear that the dawn of colored plaster somehow made the pool and spa industry more "color savvy."

If there's anything "savvy" about the common practice of mixing colorants with white cement and any sense of pride in the pastel colors that often result, then we need a new word to describe these self-inflicted atrocities. Had someone in the loop understood color, they'd have known that a better option for colored plaster would have been to mix the color with gray cement.

What it takes to avoid design tragedies is, first, an awareness that color is both crucial and difficult to master, especially on a large scale; second, a recognition that there are tools that can help; and third, that this is yet another area of design in which education is important.



It's still a work in progress, but entering this backyard even now is a special experience because of the unusual range of colors and textures on the walls, decking and surfaces of the pool and spa.

### An Expressive Palette

There are no short cuts here. Color theory is something that can indeed be learned, and there are a great many resources available to designers in selecting and using colors.

But the key is simply opening your eyes to what's around you in nature and taking the time to seek the guidance of the great designers who've gone before us. I bring up Frank Lloyd Wright and John Lautner all the time, and any skimming

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## THE USUAL SUSPECTS

You know who you are.

You're the pool builder who adheres religiously to convention and wouldn't dream of anything more daring than a white-plaster vessel held down by a belt of basic-blue tile surmounted by an unimaginative, earth-toned coping of one material of another. For you, "daring" is recommending a patterned blue tile with dolphins or starbursts or geometric designs.

You're also the landscape designer or architect who plays the naturalistic hand so steadily and well that anything beyond the earth tones is reaching too far. For you, "bold" is accenting a spot or two with an upended rock or a purple plant that may or may not contrast purposefully with the colors of the dozens of other brownish rocks or greenish plants strewn around a pond or pool.

This is all bland, standard stuff – and, in far too many situations, exactly the wrong design decision.

There's a tendency we all have to play it safe, to err on the side of conservatism and sacrifice principles of good color design in the name of this year's hot material or hue. This isn't surprising, of course, because our trades are filled with people uneducated in many of the processes in which they're engaged – and color theory is among the hardest of all the disciplines to learn and apply.

Despite the fact that I earnestly wish it could be so, this one column won't remake the world. I do hope, however, that there's enough to go on here that some of you will be led to seek out the information you need. At a minimum, I hope this discussion has opened some eyes to the fact that, indeed, your eyes must be opened to put color to work in clear and effective ways.

–D.T.

of a book of their work shows them to be sublime, natural colorists. The use of color in Islamic architecture and textiles, in the art of the Italian Renaissance and in Chinese and Japanese gardening are also supremely inspiring.

When you open your eyes to color and look at the works of the masters, you see broad, rich color palettes. When you visit

the Taj Mahal or the gardens of Kyoto or Fallingwater, you see color used to create emotion as well as senses of space, surprise, harmony and enjoyment. These effects *don't* happen by accident, but instead are the direct result of the designer's understanding of the way colors relate to each other.

My sense of what colors can do for spaces is the main reason you've seen me advocate

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the use of green in and around watershapes so many times in these columns. When I mention green, pool builders almost invariably respond with revulsion because they immediately think of algae. But some greens are wonderful with watershapes because of the way they can blend with and complement the greens of the landscaping – as well as the blacks, grays, browns and creams of rocks and masonry materials.

(I say *some* greens just above because not all of them work. Green is made up of yellow and blue: If the blend has too much yellow in it, the resulting green can be *awful* in watershape applications. In other words, you need to know what you're doing to make the kinds of color decisions I'm discussing here.)

In the project we've been following for much of this year in these "Details," the use of color was of primary importance and took on a whole new meaning for me and my clients. This is admittedly an unusually expressive palette compared with much of what I've done in the past few

years, and it's a case where the clients are sophisticated, open-hearted, open-minded people who love color and beauty.

What we have going in this project is just the right people, just the right setting – and just the right spirit of adventure. All it took was a glance at the bright goldenrod plaster on the home's exterior to guide my color palette beyond the usual.

As I've mentioned in past columns, I became involved with this project after a landscape architect had convinced the couple to remodel their pool and surrounding space as a sort of mountain lake. The proposed palette of greens, grays and browns probably would have been inoffensive, but to my eye there was potential here for something much bolder, livelier and more fun.

Continued on page 28

This bump-out was needed to accommodate the skimmer. In a detail I've described before, we avoided having a white plastic lid by creating a lid from tile. This way, we kept the color palette consistent in every way we could.



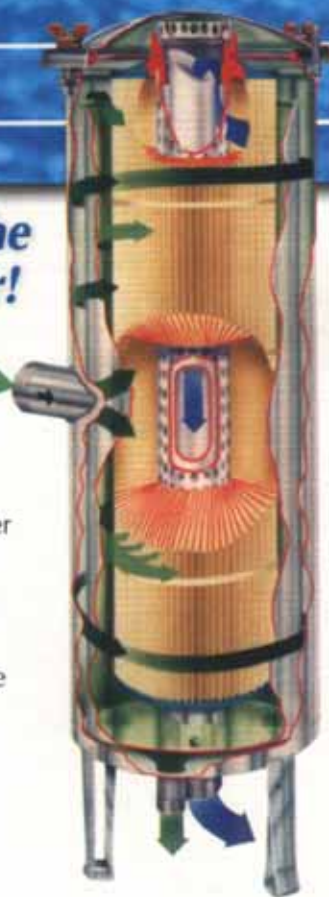
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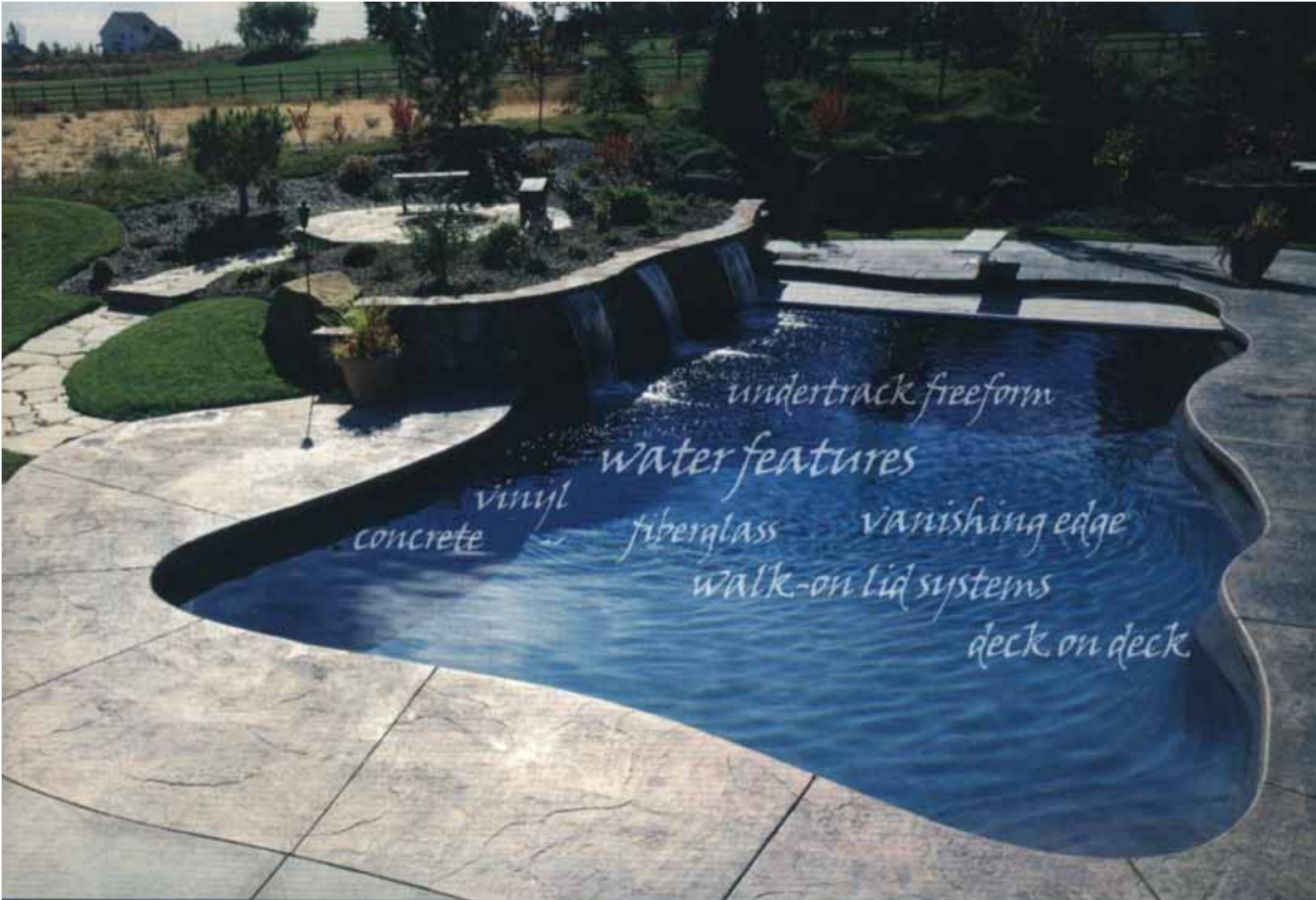


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## DETAIL 20

### Around the Wheel

Rather than a plain, naturalistic color scheme, what I saw instead was a palette of warm, expressive colors similar to those used by Mexican masters Luis Barragan and Ricardo Legoretta.

The clients – who had, after all, chosen a dazzling gold-enrod for their home's exterior – liked the idea of using bold colors not for shock value, but because they believed me when I suggested ways in which different colors would define and visually expand the available space. So now there's a narrow rectangular pool complemented by balanced architectural features that include broad walls, custom tile and colors that range from reds, blues and yellows to greens, purples, lavender, coral, bronze and black.

The key to using such vivid colors is understanding how they relate to each other. In this case, for example, you'll find walking and seating pads made of green concrete separated by eight-inch gaps from a bright, mustardy yellow in the tile that borders the pool. (The gap will be filled either with gray/black stones or some type of vegetation.) The walls enclosing the space are finished with a soft purple color that complements the lavender tile.

Expense becomes an issue here: With typical finish colors, you can get mixed batches of pigment for less than \$100 per pound. In the case of the purple used here, mixing up the required amounts of (inexpensive) red oxide and (*extremely* expensive) elemental cobalt to generate the desired color cost approximately \$2,600 per pound.

In this case, the choice made sense – and all of the vibrant colors around the watershape will be reflected and transformed by the surface of the water. That's why we're using a very soft red-plaster finish inside the pool: It will deepen and accentuate the reflections of the greens and purples and yellows.

This brings me to another point I've made time and time again: This pool exists as a complement to its environ-



Once the landscaping goes in, we'll be ready to apply a muted red plaster to the pool's interior – the perfect way to enhance reflections of all the vivid colors that surround the watershapes.



## MANAGING TRANSITIONS

Color me red or green, but not both – not side by side, anyway.

One of the common mistakes I see in the field is the use of red brick against green grass or foliage. A glance at a color wheel (available at art stores along with guides to color use and combination if the store has anything on the ball) will show you that red and green are opposites and fight with each other.

I use reds and greens often (as depict-

ed on these pages, for example), but they're held out of conflict because of the way I've used other colors taken from strategic spots around the color wheel, with greens touching yellows and reds butting up against purple and coral. Despite the boldness of some of the individual colors, they all co-exist in harmony because of the transitions established between them.

– D.T.

this and open our eyes to the chromatic relationships that exist all around us. It means looking at the work of past masters, finding ways to become versed in the use of a color wheel, or discovering the resources and color-combination aids many designers use to guide them in color selections. With hard work comes acumen; with acumen comes outstanding results.

Here's a moment to consider: When you gain this kind of insight, there will come a time when you truly do begin to see the world around you in all new ways for the very first time. **WS**

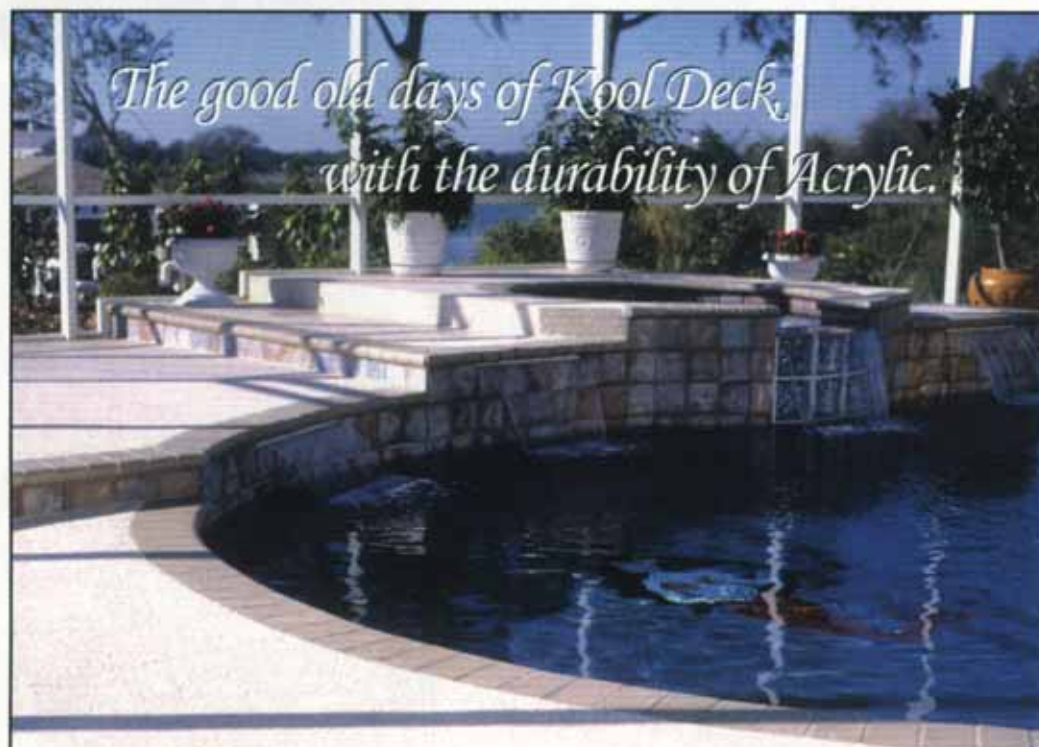
**David Tisherman** operates David Tisherman's Visuals, a design and construction firm based in Manhattan Beach, Calif., with offices in Marlton, N.J. He is co-founder and principle instructor for Genesis 3, A Design Group, which offers education aimed at top-of-the-line performance in aquatic design and construction.

ment, not as its focal point. A white-plaster pool and spa would have screamed for attention; instead, we have a space that's unabashedly rich with colors and spaces that play off of or balance with one another – and that's what is most important in this unique environment.

It's true that there are people out there

who are born with a knack for picking colors and making combinations work, and if you're one of those rare individuals, you should consider yourself fortunate. That doesn't mean you should avoid education, however, because talent combined with expert training is an amazing one-two punch.

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# REFINED EXPRESSIONS

By Janet Rosenberg & Glenn Herman

The designers at the landscape architecture firm of Janet Rosenberg & Associates believe that water can be used in almost every setting to add interest, beauty and a sense of tranquility to their work. What that means in design terms will change in response to a setting's needs and a client's expectations, say Janet Rosenberg and Glenn Herman – and can lead to solutions from the simple and retiring to the bold and complex.





No matter how it's used – as a focal point in a design or as just another feature balanced among many – the thoughtful use of water offers landscape architects and other watershape designers a huge range of aesthetic opportunities. Indeed, the water's texture, reflectivity, sounds and sculptural qualities can all be used to enhance the observer's experience as he or she moves through an environment, and in a near-infinite number of ways.

Regardless of how familiar one becomes with these attributes and using them in built spaces, the presence of water in a design often yields something new, interesting and even unexpected. Whether you use it as a visual transition, a physical destination, an expression of nature or an architectural statement, water is the designer's great ally – especially if it is used in a way that is inspired by, and harmonizes with, its surroundings.

Because we accept the fact that the application of water is so dependent on the setting and circumstances, it's difficult for us to categorize our work or cast broad generalizations about the way we use water in our designs. Therefore, the best way for us to discuss our approach to watershaping is to look at what we've done in the context of specific projects.

### Careful Variations

Many of our projects are installed in and around the Toronto area, where there's a need to control water in ways that might not be necessary in warmer climates. As you'll see in the group of projects discussed in this article, we often use smaller bodies of water so they can be immobilized quickly and easily for the winter season, or we'll plan our waterfeatures so that they can freeze and create interesting ice formations when the weather turns cold. In addition, a lot of what we do is inspired by the history of a given location or by its dominant function.

However the water is used, we work with the understanding that all of us love to be by the water's edge – a simple fact that invariably makes the effort and expense of quality watershaping worthwhile.

And make no mistake: Both the effort and expense are real factors in our area, where many people are reluctant to use water because of concerns over maintenance and both short- and long-term costs. Despite such concerns, however, we strive to use some form of water whenever we can and have, perhaps as a result of our advocacy, seen through the past several years a tremendous surge in the demand for watershapes across the full range of our projects.

Let's take a look at some recent cases in which water has served as a key or central element as a way of understanding this demand – and as a means of exploring the ways we use overall settings to set the context for our designs.



# A VINTNER'S TROUGH

Jackson-Triggs Estate Winery

This project encompasses an 11-hectare (27-acre) site immediately outside the historic town of Niagara-on-the-Lake near Niagara Falls. KPMB Architects of Toronto designed the building. Our firm was retained by the client to assemble the design team and create a master plan for the site.

The site program called for a main entry road, pedestrian and bicycle routes, parking, auto and bus drop-off routes, an entry plaza, terraces, gardens, a demonstration vineyard and an amphitheater – as well as naturalization and restoration of a flood plain and reconstruction of the existing vineyard.

The watershape we designed for this project is simple and modest – but of crucial aesthetic importance. Visitors approach the main building along a gracious, curved entry road that passes through the vineyard. They arrive at a grand entry plaza edged by a linear watershape – a trough approximately 65 feet long and three feet wide that provides a soothing transition from the wide-open viticultural space into the winery's Great Hall.

Although its rectilinear design is purely architectural, the trough's raw, unfinished concrete surface and the rough-hewn rock wall are inspired by structures used to contain irrigation water for the property's defining purpose. At the midway point along the trough, water sheets over a weir of stainless steel from the upper basin, whose backdrop is a raised, rough-hewn wall. Water cascading from three stainless steel spigots embedded within the wall add sound and motion to the otherwise simple but elegant system.

Continued on page 34



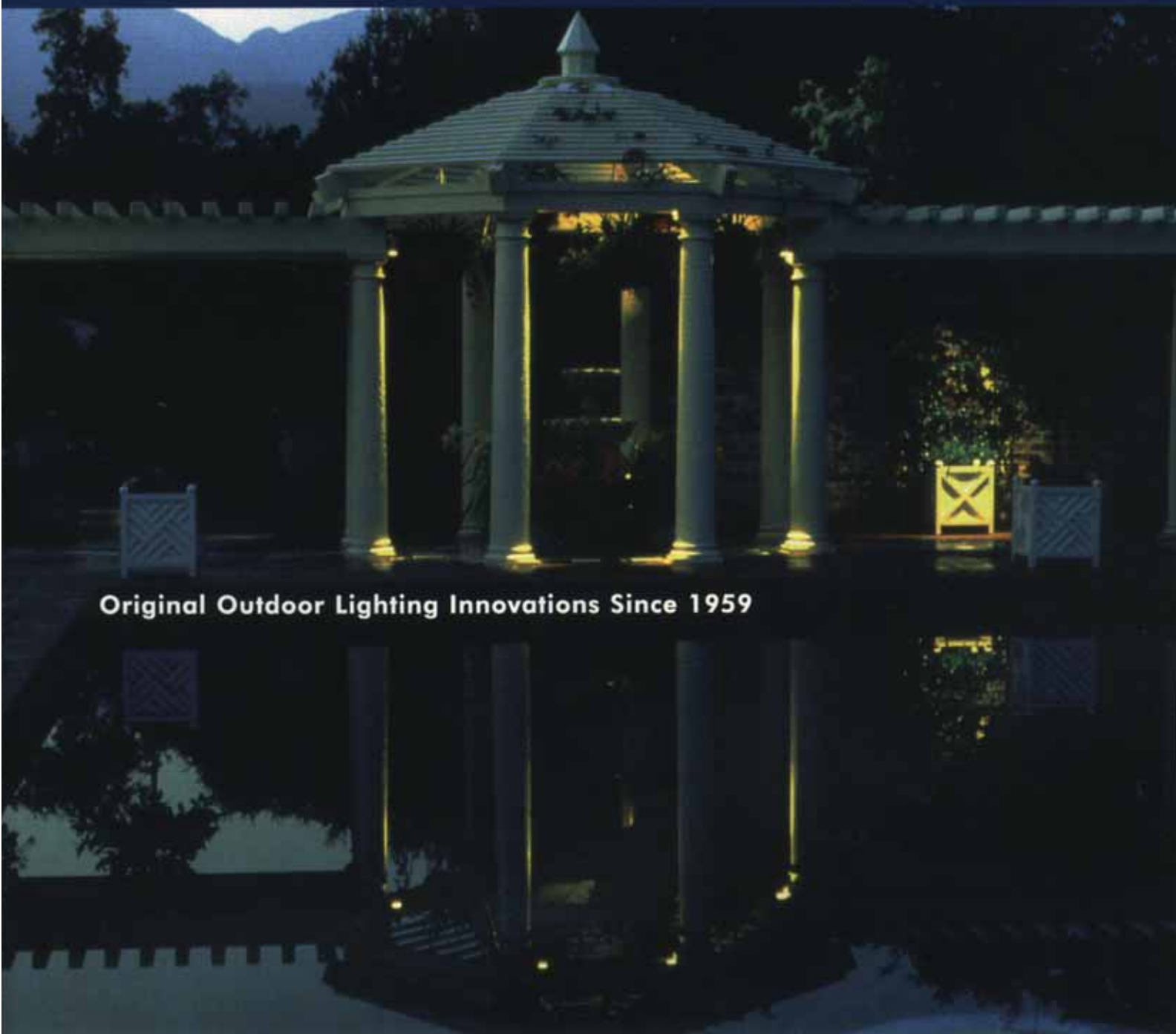


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## AN OVAL HEART

### The Common at York University

The Common is a ten-acre space nestled in a U-shaped complex of buildings that serves as the functional core of the sprawling campus of York University in North York, Ontario.

The main design feature is the grand ceremonial lawn. At the center of this space, we placed a large oval reflecting pond. The pond was originally intended to double as an ice rink in winter, but the cost of the system needed to maintain the ice proved to be prohibitive. In addition, we set a small circular fountain with simple vertical plumes in a large paved area that serves as a transition between the lawn and the adjacent building's main entrance.

The overall design of the plaza reflects the formal architecture of the surrounding structures. The surface of the simple, elegant pond reflects the sky, the surrounding trees and the architecture itself, lending a special sense of tranquility, beauty and interest to what is usually a busy plaza.

The rest of what we did on site fits into this program: The major pedestrian and vehicular routes as well as the lawn and pond are surrounded by colorful perennial gardens with graceful steel arbors. We also worked in chaise lounge-like benches, low walls, subtle grade changes and broad paved areas to create a variety of spaces in which students and staff may escape the confines and stresses of the university's buildings.

Continued on page 36





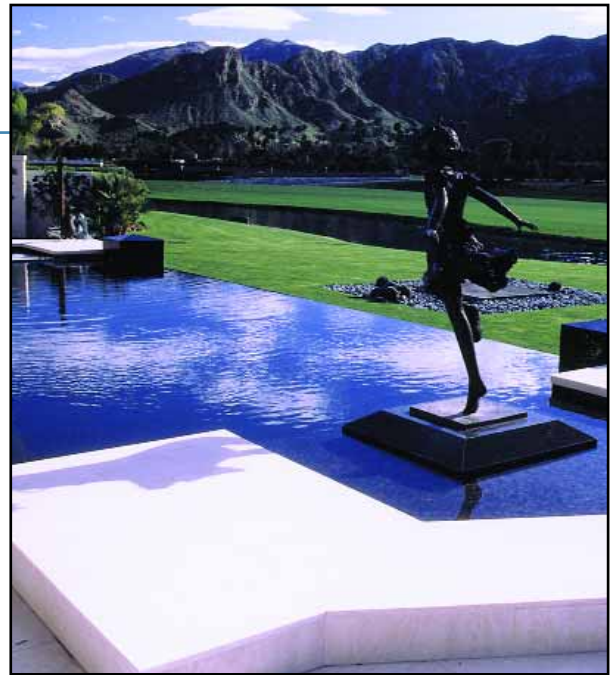
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December 4-8, 2002  
Toronto, Ontario, Canada  
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Projects such as Courthouse Square (seen on these pages) and many others have required careful and precise hydraulic designs that must function reliably under a range of conditions. Without the hard discipline of engineering, our watershapes would be little more than nice ideas on paper.

—J.R. & G.H.

## ELEVATED ELEGANCE Queen's Quay Terrace

Perched eleven stories up, this windswept terrace overlooks Toronto's Lake Ontario harbor. In this case, our goal was to transform a small, angular space into a unique, art-inspired contemporary garden.

Our work was inspired in part by a unique "music garden" located in the park below. Designed by renowned artist Julie Messervy, the garden makes use of spiral geometry and whimsical combinations of plants and materials in making its impressions.

High above the park on this private terrace, we used every last corner of space to hold a combination of raised stone planters, sculptures and contemporary watershapes — one a raised stone trough and spillway, another a hand-carved Indiana stone bowl and fountain. Throughout the design, textured stainless steel walls (including a serpentine steel wall on the south portion of the terrace) play off against the rough stone elements of the fountains and planters with combinations of linear forms and wave patterns.

We used the simple watershapes to establish visual links to the grand harbor and lake vistas beyond — and to resonate against, and harmonize with, the serpentine wall. At the same time, the gentle sounds of falling water conveniently help by masking the traffic noise from the city streets below.

We rounded out the visual experience with a variety of sculptures and six-foot-tall stands of specimen grasses that create a beautiful rustling sound as the wind blows across this lofty perch.





This project always worked in aesthetic terms, but it was a challenge to build.

For starters, the building is not equipped with a service elevator, so we had to carry materials up to the terrace by hand. In addition, there were limits on how much weight the underlying structure would support, which required careful coordination with a structural engineer in both the design and construction phases. And finally, due to a lack of storage space on the narrow terrace, materials had to be used immediately upon delivery so as not to invade the clients' private lives or interfere with their daily routines.

Ultimately, however, we all considered the extra effort to be worthwhile, considering the connections we established to the surrounding architecture and scenery.



## MONOLITHIC PRECISION

### Courthouse Square Park

The watershape in this design is among the largest and most complex we have created to date. The goal here was to revitalize a long-neglected space behind a courthouse in Toronto by transforming it into a vibrant urban square. Along the way, we designed streetscapes, public amenities and the waterfeature – and integrated them all with a variety of historic elements into the overall plan.

The watershape defines one of the boundaries of the square and serves as a transition to the adjacent streetscape. Large monoliths rise above a two-tiered system of troughs and runnels – an approach inspired by Luis Barragan's design for the Plaza del Bebedero de los Cabellos in Las Arboledas, Mexico.

Four large Algonquin-stone monoliths rise above the pools and serve as visual metaphors for the four historical buildings that once occupied the space surrounding the square. Water emerges from troughs in the tops of low walls that abut the monoliths and then flows down the sides of the precisely shaped stones into a system of troughs and pools below.

A specially designed auto-fill system adds water when needed to prevent any break-up of the uniform sheets of water, while an adjustable wall-mounted overflow system removes excess water in the event of rain. A special system used in winter creates "ice candles" that form as water trickles from the tops of the monoliths.

This evocative watershape contrasts with the subtle beauty of extensive plantings within the square itself, including an herb garden, a double row of espalier crab-apple trees and an unusual set of latticed steel columns that serve as planters and visual barriers that reinforce the geometry of the space.



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## CANADA BLOOMS

We created this "dream garden" for the 2001 Canada Blooms garden show in March 2001. Held at the Metro Toronto Convention Centre, this annual event is Canada's premier flower and garden show and is intended to promote the landscaping industry to the general public.

We were asked to create a focal point for the four-day event. Our design keyed on the use of water in a natural setting featuring sculpture along with decorative stone, steel and wooden elements. The display transformed a 4,000-square-foot section of concrete floor into a tranquil environment that included a 1,000 square foot pond, lush plantings, a wooden bridge and unique stone and metal trough waterfeatures.

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a wooden structure to contain a liner for the pond. We then moved in sod and stone to create berms that would effectively conceal transitions in elevation.

The garden was presented to visitors as a sort of secret haven protected by lush green hedging and a deciduous forest canopy. The plantings along the edges of the pond were critical in that they allowed glimpses of the garden. In strategic places, stone walls with detailed Chinese characters framed the view of the garden and enticed visitors to explore further.

Once inside, visitors were treated to a rich combination of elements including large, specimen rhododendron plantings and a pine canopy looming over a garden where whimsical statuary emerged from sweeping shrubs and combinations of perennials, annuals and bulbs.

—J.R. & G.H.



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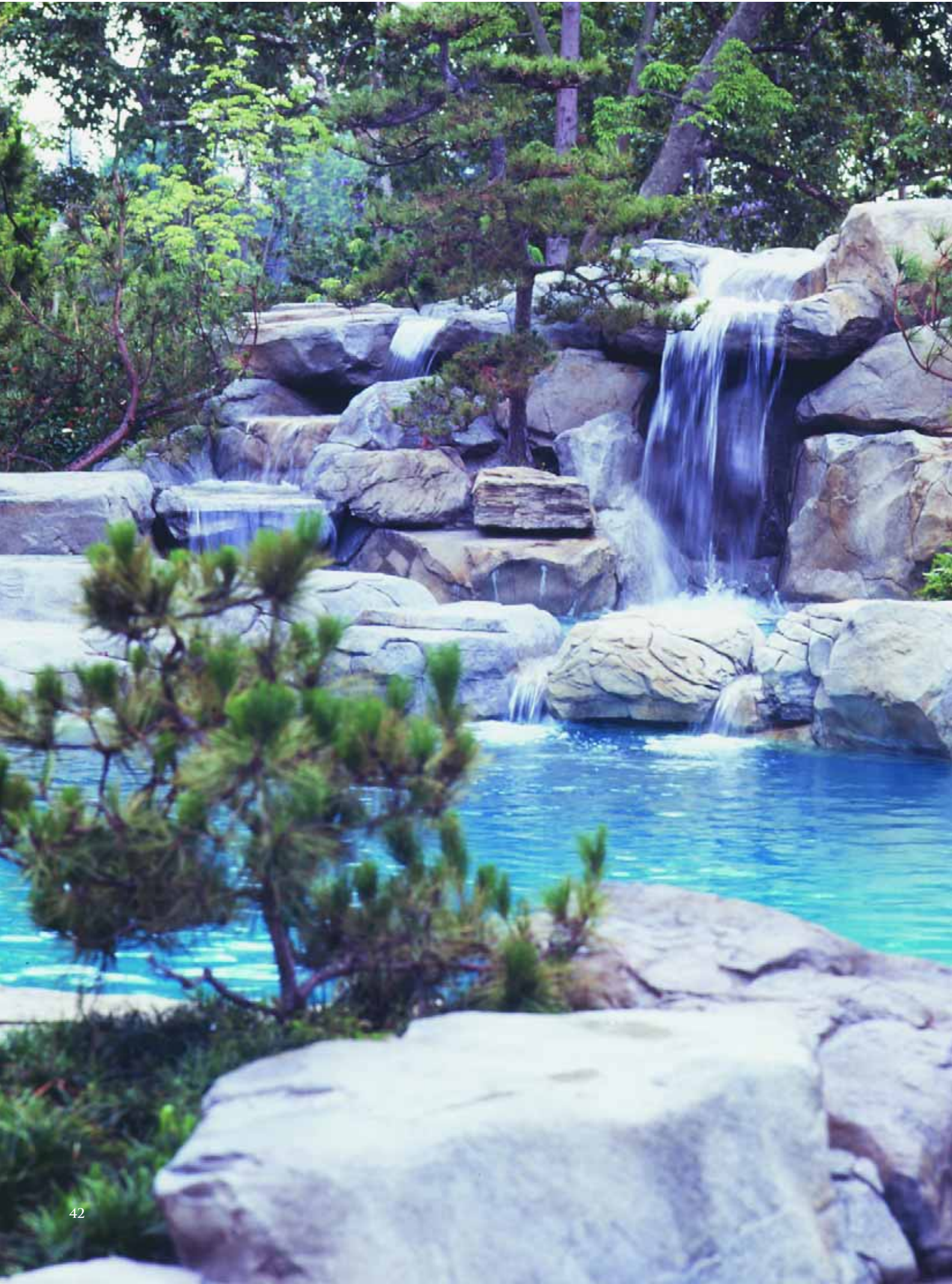
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The swimming pool and grotto at the Playboy Mansion West are among the most photographed and celebrated watershapes of all time. So when Playboy founder Hugh Hefner purchased a neighboring estate and wanted the pool remodeled to harmonize with the original masterpiece, rock specialist Bruce Riley knew he had his work cut out for him. After all, he says, the naturalistic rock castings had to create a setting worthy of a centerfold.

# A Playful Change of Scene

By Bruce Riley

**Transforming** a tired, old swimming pool into an inviting naturalistic environment is always a challenge, but when the client is *Playboy's* Hugh Hefner, the project becomes an adventure as well.

The original lagoon pool at Playboy Mansion West in Los Angeles, Calif., is still in great shape as a result of outstanding design, construction and maintenance. In purchasing the estate across the street, the plan was to add a "Playmate House" to the main compound.

Among the extensive renovations undertaken at the new property was the complete renovation of the backyard and its swimming pool. As was the case with the famed pool and grotto, the concept was to create a rocky focal point – one that would serve as a set for video and photographic shoots.

Several firms specializing in artificial rockwork were interviewed. In addition to concerns about quality and style, there was also a need to find a company that could design and execute the complete makeover in a six-week time frame. Following a series of interviews and site visits, our firm, Rock Formations of Fontana, Calif., was chosen.

In some respects, the project was typical of many others we've done; in others, however, it was the sort of project that comes along only once in a great while.



## A Flat Canvas

The existing pool and backyard gave us precious little as a starting place. But the free-form shape of the ordinary-looking pool *did* lend itself to a rock-pool treatment, and we planned to dress it with a flat, natural-looking artificial rock that was to be used in other spots around the sprawling backyard.

That was simple, but the design also called for a naturalistic eight-foot cascade and rockscape to be installed on the slope at the back of the pool, which was actually two-feet *below* the bond beam. The cascade was to fall into a shallow wading area with expanses of flat rock decking – basically to accommodate photographers and swimsuit models.

The client chose not to add a grotto or a waterslide to the pool, because the purpose of the pool was purely decorative – built for aesthetics rather than for recreation, as the original across the street had been. In a sense, the remodeled pool should actually be considered as a permanent “set” that will be used with great frequency as a backdrop for filming and photography.

In structural terms, creating the waterfeature required the

construction of a new retaining wall and an underground equipment vault. We were also responsible for replumbing the entire pool, installing new electrical and remote controls and replastering. Opposite the rock waterfall, we transformed an old step entry into a rock-textured beach entry.

Two pumps were plumbed to run the waterfall system. One draws water from the wading pool (so it can be isolated and heated for the comfort of the models). A second pump draws water from the pool through the filtration system for recirculation through the waterfall (so that the wading pool’s water can be cleaned and filtered). The system is set up so that only one pump functions at a time.

It was all fairly routine stuff, but the time frame was a real bear: Originally, we were told we had to complete our work in time for the filming of a Fox-TV special called “The Girl Next Door: The Search for a Playboy Centerfold,” which aired in May during Sweeps Season. Fortunately, the filming was delayed by two months, which gave us a much more realistic schedule to follow.

Even with the reprieve, however, we worked right up to the



**BLAND ORIGINS:** The pool we were called in to remodel was nice and big, but it definitely was lacking in the aesthetic appeal its owners required.



**BREAKING GROUND:** The first remodeling step involved installing the rebar and plumbing for the wading pool at the foot of the waterfall and its spillway into the main pool. A six-foot caisson with a deep footing is the main support element and is roughly in the middle of the structure. Footings also were used on the backside of the structure to ensure support for the waterfall structure on all sides.



**GOING UP:** Once the basin was shot, we started setting up the sub-structure for the waterfall rocks. In the past, we used broken concrete in the bases of our waterfalls, mainly as a way to dispose of old concrete decks and to avoid expensive formwork. In recent years, however, we’ve started using foam blocks instead. This reduces the weight of the structure, which is key in remodels such as this one in which the original bond beam wasn’t designed to accept much of a surcharge.

The alternative would have been to remodel the pool with additional steel and concrete, but we believe with artificial rock that the better choice is to minimize the stress on the bond beam and pool walls.



onset of production. In fact, the Fox crews were setting up as we applied the finishing touches to the rockwork and the electrician was wrapping up his work on the fiberoptic lighting.

## Matching the Glamour

The key design directive was to echo the look and feel of the famous pool at the main mansion, which had been designed and built in the early 1970s by architect Ron Dirsmith. But that did not mean that we had to do everything in exactly the same way.

The original, for example, was done with real rock. Given the timeline and budget, the remodel had to use artificial rock – which is almost certainly one of the reasons our firm, which has pioneered artificial rockwork since 1979, was selected to do the job.

The original had a style we needed to mimic, which meant we had to modify our usual approach and create castings that looked like large, stacked boulders. In addition, the waterfall was designed with several small basins and sheets of water, as opposed to the more irregular cascades that we typically install. As mentioned above, the waterfall is set up as a backdrop for photog-

raphers and videographers, which meant we also had to set things up with unusually expansive flat surfaces to allow models and actors to recline and pose for cameras.

To get the details right, we built a small-scale model of the project – both to enable our clients to visualize the proposed results and to serve as a guide as we constructed the waterfall and established its surroundings.

Because the waterfall was to be constructed on a broad, flat area, we spent a good bit of time making certain it wouldn't look like a volcano erupting at the far end of the pool. The raised decks and planters were set up as important intermediate design elements that enabled us to blend the waterfall structure with the surroundings. Taken together with the background landscaping, the waterfall looks like it belongs.

When you work with Hugh Hefner's organization, you quickly learn that attention to detail is the order of the day. In this case, *all* of the aesthetic elements were carefully considered and discussed. We suggested that the pool be finished with a pebble surface to blend with the rockwork and help create a natu-



**READY FOR ANYTHING:** Especially in California, we're concerned about seismic forces and the havoc they can bring. Our concern for structural strength is why we used a big caisson and footings in this project along with #4 rebar throughout. We also set up a slip joint at the intersection of the wading pool with the old swimming pool shell. This way, when the next earthquake rolls through the area, the two structures will move independently.

This adds a small surcharge to the pool shell, but we feel this approach is preferable to drilling dowels into the pool beam and knitting the two structures together, largely because of the hinge effect that might come into play.



**WEAVING A SCENE:** To integrate new work into old and to soften the appearance of the old shell, we placed rock ledges and outcroppings along the edge of the pool, increasing the sense that the new structure truly belongs where we put it. The area we did most of work in was actually below the old deck level, so we built up the surroundings with planter and ledges. Note that any casting located in areas that hold water were mortared in place only after the shell had been waterproofed.



**PLACING THE CASTINGS:** Placement of the castings is always the most artistic part of the job, and this project was no exception. We positioned the castings for the main waterfall in a single day, referring to the scale model (seen in the foreground) that we had built as a design tool.

After setting the castings, we spent another day installing chicken wire between the castings in order to hold concrete in the gaps. We then pumped in another truckload of concrete to encase all the rebar in at least four inches of concrete

– and to fill all the voids behind the castings.

In artificial rockwork, the “dirty work” is in this shaping process. Creating rebar shapes backed with metal lath or burlap for sculpting concrete is time consuming, so the temptation is to keep the shapes simple. By contrast, the trick with castings is to backfill and let the castings themselves do much of the shaping. As evidenced in this project, castings make it easy to create all sorts of compelling visuals, from cantilevers to interesting small formations and outcroppings.



realistic appearance, for example, but the client opted instead for gray plaster to echo the gray stonework found throughout the main property. (There also were areas in which our suggestions met with better receptions.)

By the time we were finished, we'd placed about 1,000 square feet of castings and approximately 60 cubic yards of concrete. It was a lot of hard, intense work – even with the more workable timetable – but it was mostly fun thanks to the cooperation and support we found at every stage of the project.

I must admit that we spent some time hoping for playmate sightings, but they proved to be infrequent – and seldom amounted to much more than glimpses of someone strolling from the mansion to a waiting car. But when we happen to see photographs and videos in the future, we'll all have the added interest of watching to make certain our waterfalls are working as planned!



**FINISHING TOUCHES:** The final step in our installation process involved the addition of color to the rockwork. We use an acrylic latex paint for masonry surfaces, diluting it with equal amounts of water and applying it with hand sprayers. Then we use water and sponges to create various aging and highlighting effects.

We do *not* use chemical stains because we've found that they do not last long and tend to react differently on castings as compared to sculpted concrete areas. Any applied color will fade gradually, but most projects can be repainted within a day.



**LIGHTS, CAMERA, ACTION:** The work of landscape architect Douglas Newcomb effectively completed the picture. The rock waterfall is now truly



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ready for its close-ups, with plenty of room to maneuver close to the waterfall as well as across the pool at the beach entry.

## Casting Call

One of the key decisions we made in this remodeling project was to use castings made of fiber-reinforced concrete (FRC) instead of sculpted concrete. It's been our experience that castings yield better character and detail than rockwork that is created entirely on site.

The castings we use require the same rebar and concrete schedules as do sculpted rock structures, so there was virtually no difference structurally speaking, and the methods are roughly comparable in cost.

—B.R.



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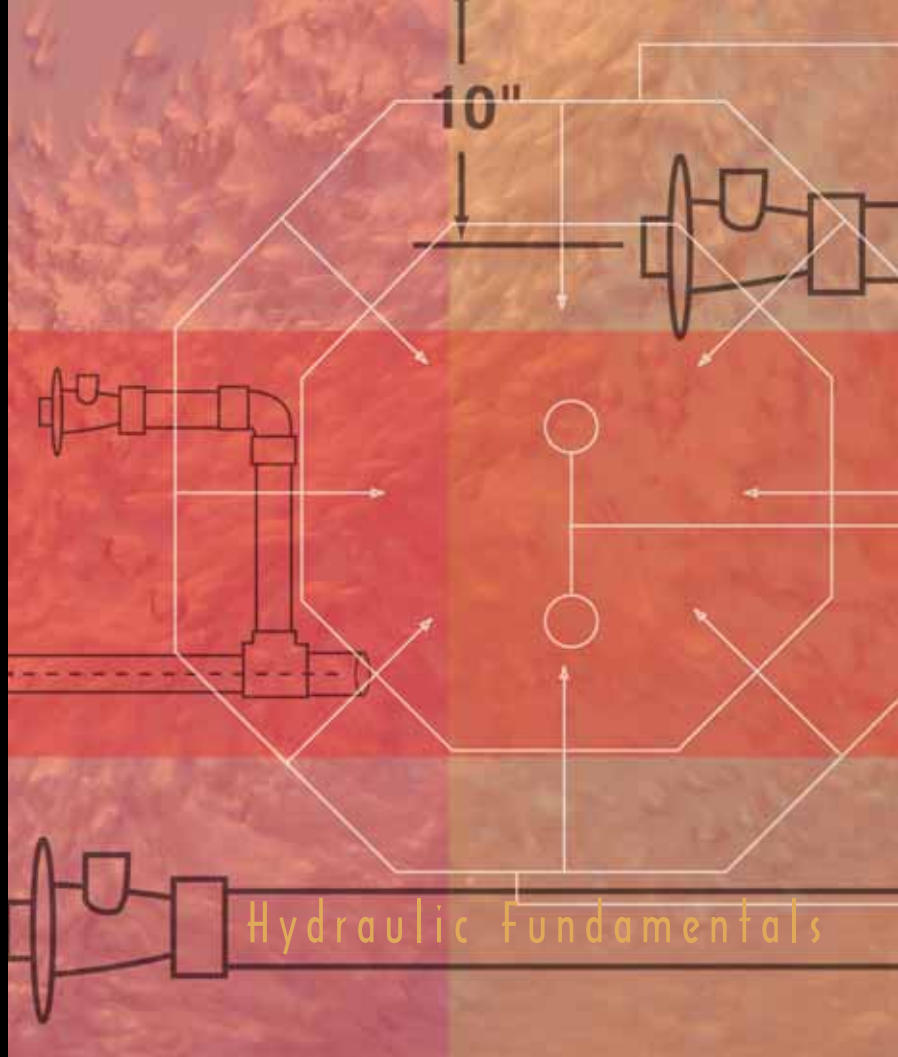
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# Crystalline Clarity

By Steve Gutai

The key to clear and clean water in just about any successful watershape is effective and efficient filtration. What this means for residential pools and spas in particular, says hydraulics expert Steve Gutai, is that the watershaper needs to understand the characteristics of available filter media as well as the nuts and bolts of how filters are installed. Here, he breaks down these basics with an eye toward matching systems perfectly with specific applications.



In conceptual terms, watershape filtration is about as simple as it gets: Water that picks up insoluble organic materials in the form of dirt, debris, dust and algae is drawn by the pump to pass through a filter medium of one type or another. The medium – whether sand, a cartridge or diatomaceous earth – traps these materials and lets only clear, clean water back into the vessel.

When the pump sends the cleaned water out of the filter, that water returns to the pool to dilute the dirty water in a continuous cycle of cleansing and dilution that ultimately results – when the system is set up the right way – in clear, clean water that's both aesthetically pleasing and safe.

Sand, cartridge and diatomaceous earth filters have long dominated the market, and each requires a filter tank with internal components specific to the filter medium it uses. There are common components (as discussed at the end of this article), but it's important for the watershaper to know that the three main filter types have different na-

tures, different installation requirements, different applications and different sets of benefits.

## Sand Solutions

Filtration via sand is the oldest form of water filtration and has historically worked well in residential and commercial swimming pools and particularly well in ponds, whether fish are present or not – although it's not typically used with spas for reasons discussed below.

A sand filter works through what is known as *depth filtration*. In this process, an internal *diffuser* evenly distributes the water coming in from the pump over the surface of a sand bed. The water travels down through the sand bed, driving the dirt and debris into the layers of sand, and finally reaches the tank bottom. Stripped of dirt while moving through the sand bed, the water is now collected by an *under-drain* or *laterals assembly* and returned to the vessel.

❑ **The Medium:** The most common sand used in these filters is #20 standard

silica sand. The rough edges of these sand granules are what collect the particles of dirt. Over a long period of time (generally five to ten years, depending on usage, weather and other factors), the rough edges erode and become smooth, at which point the sand needs to be changed. This is a major undertaking that requires disassembling the filter.

Supplementing the sand bed and increasing the efficiency of backwashing, pea gravel is often placed at the tank's bottom to cover the laterals. This material should have diameters between 1/8 and 1/4 inch.

To clean the sand bed, a *backwash cycle* is initiated in which the flow of water to the filter is reversed: The water is pumped to the under-drain laterals at the bottom of the tank and flows upward, disturbing the sand bed and effectively sending the top six inches of sand into solution while flushing the dirty water up through the diffuser and out the backwash valve to waste.

There are several options when it comes to this backwashing step. The sand fil-



ter on a residential pool, for example, may be equipped with either a push-pull, full-flow or top- or side-mounted multi-port valve, while commercial pool systems will tend to use a series of butterfly valves or an electronically controlled auto-backwash system.

The backwashing cycle on most sand filters typically takes somewhere between two and five minutes. As for timing, backwashing should always be based on an increase in filter pressure rather than on a time frame. In other words, there's no such thing as a "weekly backwash."

❑ **Installation:** When installing a sand filter, it's important to keep a few points in mind. First, plumb the filter after the pump (but before the heater). Second, make sure as well that the filter is sized to accommodate the pump's flow.

This is a very important point. The National Sanitation Foundation (NSF) requires a maximum of 20 gallons per minute per square foot of surface area for residential pools and a maximum of 15 gpm per square foot for commercial pools. If the flow rate is too high, it will cause *channeling* – that is, free-flow pathways through the sand bed that significantly reduce the filtering action. If, by contrast, the pump is undersized, then



Photo courtesy Commercial Pool Repair, Scottsdale, Ariz.

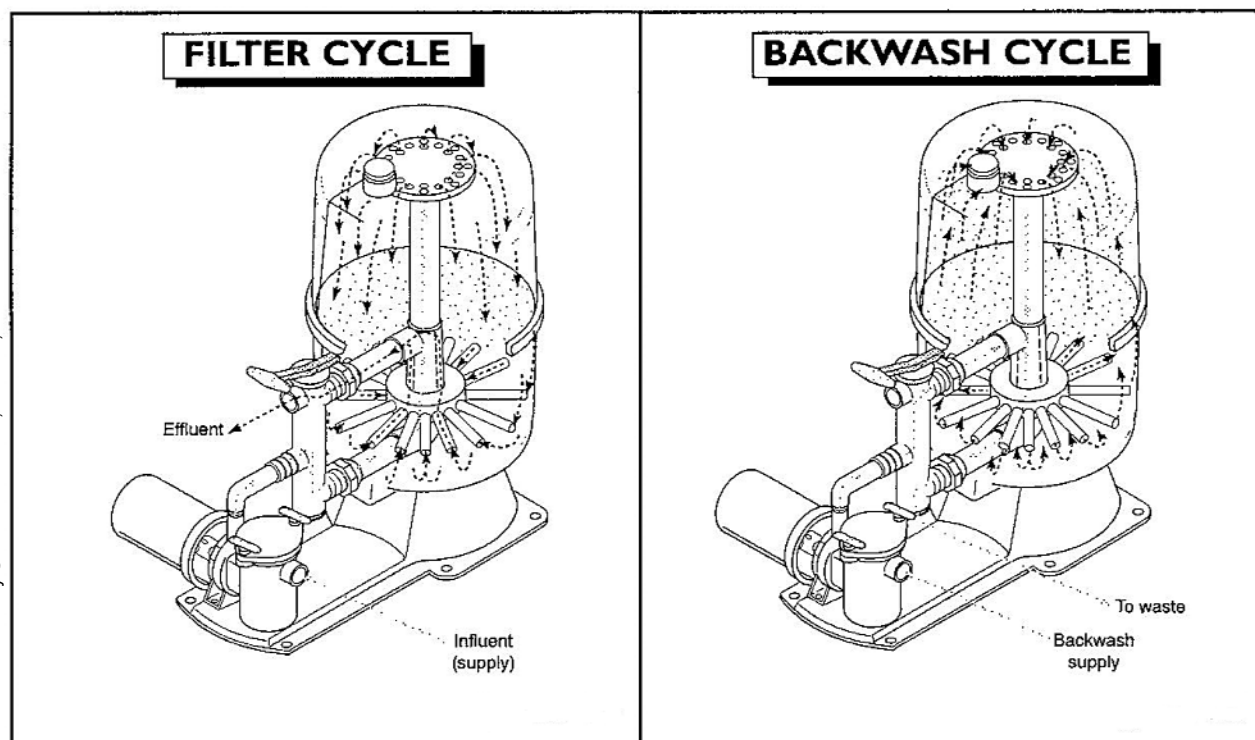
the backwash cycle will not have enough flow to disturb the sand bed and little of the debris will flow to waste.

It's also important to think about convenience of repairs and maintenance in positioning the filter on the pad – and therefore to make certain that the drain plug on the tank bottom is accessible.

❑ **Considerations:** Sand filters aren't for every vessel. For starters, they remove

only relatively large particles (in the 25-to-100-micron range), which means that there are some very small particles that will inevitably get through. This can be a concern in some applications.

You also need to consider the practical issue of how the backwashed water will be handled: If you tie the backwash valve into a drainage system or a P-trap, you need to know it can handle the flow. And if the body



Illustrations courtesy Sta-Rite Industries, Delavan, Wis.





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of water is small, you need to be aware that you'll end up draining away a good portion of the system's water during backwashing.

This last point is partly why sand filtration is not the best choice for spas: Because of the long backwash times and the fact that spas typically hold small volumes of water, you can end up draining most of the vessel during backwashing. In addition, because of the high temperatures of spa water, bathers' body oils are more readily released and will tend to seal the surface of the sand bed. This will pack the filter and shorten filter cycles considerably.

### Pleat Bargains

Although cartridge filters have been on the market for decades now, they remain the newest type of filtration used on swimming pools and spas. Cartridge filters work by means of *surface filtration*, meaning that the debris is captured solely on the surface of the filter media as the pump pushes water through a spun-bonded polyester-fabric cartridge.

The main internal component of these filters is the cartridge (or a series of fabric cartridges). These units provide a great deal of filtering surface area compared to other filter types, which means longer filter cycles and less time spent in maintenance.

The cartridges are usually connected to a *manifold* and a *locating device* of some sort used to hold the cartridges in place. The water flows into the filter tank's body, where it is diverted through the cartridge or cartridges by a baffle. The particles of dirt and debris are deposited on the surface of the cartridge.

□ **The Medium:** The filtering action with cartridges occurs on their pleated-fabric surfaces, which are capable of removing particles down to 15 or 20 microns – and even smaller in some cases, depending on the manufacturer and the medium.

For cleaning, the filter cartridges are removed from the tank and hosed off. If the cartridge is coated with body oil, suntan lotion, calcium, algae or rust, it must be soaked in a solution of tri-sodium phosphate or some other commercial cartridge-cleaning agent. Once it's clean, the cartridge is returned to the filter.

As with sand filters, cleaning times are

dictated by internal pressure in the system. When that pressure rises by 10 psi from its initial (clean) reading, the cartridges need to be cleaned once again.

□ **Installation:** Filters of this type are perhaps the easiest to install. They're plumbed on the discharge side of the pump (and before the heater) and require no drains or P-traps for any sort of backwash valve.

When installing these units, however, you need to keep in mind that they'll need to be disassembled frequently for servicing and that you need to leave enough space around the filter for easy access. Even so, the process is simplified because cartridge filters require no back-



Photo courtesy Premier Pools, Rancho Cordova, Calif.

wash valve, which means the plumbing ports can be located on different planes or tank locations.

□ **Considerations:** There's great flexibility with cartridge filters in that their smaller tanks can be mounted in a variety of positions relative to plumbing connections. This is a big advantage when it comes to portable spas, for example, where under-skirt geography can get quite convoluted. A helpful spa variant involves installing the cartridge within the skimmer throat. (This sort of flexibility is why the spa industry uses cartridge filters almost exclusively.)

With cartridge filters, however, you must watch your flow rates carefully. If the flow rate is too fast, it will drive the dirt particles through the filter cartridge and back into the pool – and if it's *way* too fast, the cartridge's medium can fail.

The maximum flow rate for residential



usage is .75 gpm per square foot of surface area. For commercial vessels, the recommended rate is .375 gpm. There are no recommended minimums: the slower the water flow, the better.

## Diatom Digest

Diatomaceous earth (D.E.) filters haven't been around quite as long as sand filters, but they have a long and varied history of use by the swimming pool industry.

The filter tank in a D.E. system holds an internal *grid assembly* set up in a wide range of sizes, shapes and configurations by various manufacturers. The grid itself is a plastic styrene frame encased in a specially woven polypropylene grid cloth. The pump draws water through the grid covering and the *cake* of D.E. that coats the grids.

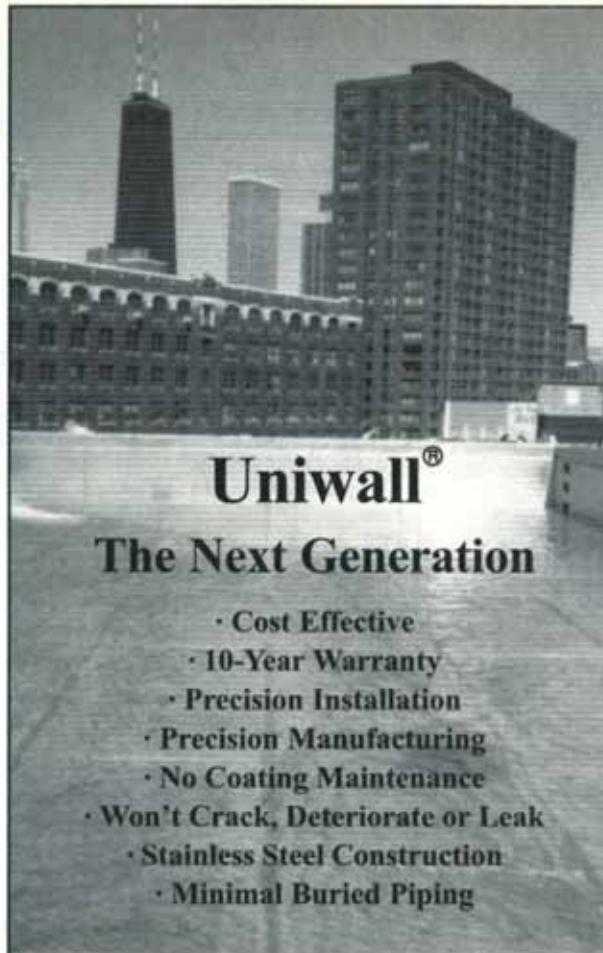
The cake traps debris at the surfaces as well as across the depth of the coating – hence these filters can be said to work by both surface and depth filtration. The water passes through the grid and then exits the filter through the manifold that holds the grids in place.

For the most part, D.E. filters are pressure filters and are set downstream of the pump and before the heater, as is the case with sand and cartridge filters. In some cases, however, D.E. filters are set up on the vacuum-side of the circulation system – that is, before the pump – but this is mostly true of older residential and commercial pool systems.

**□ The Medium:** Diatomaceous earth is a powdery material made up of the fossilized remains of ancient aquatic microbes known as *diatoms*. These tiny fossils are extremely porous and have rough surfaces that catch dirt and debris as water passes through it under pressure.

They make a wonderful filtering medium, removing particulates from swimming pool water down to 3 to 5 microns. The resulting water clarity is extremely sharp, which is why this form of filtration is so dominant in some regions.

As with sand filters, D.E. filters can be cleaned by backwashing. Here, the water flows through the manifold and up into the grids, blowing the caked D.E. off the grids and sending it to waste. When backwashing is complete, fresh D.E. is added to the system to recoat the grids. (Note:



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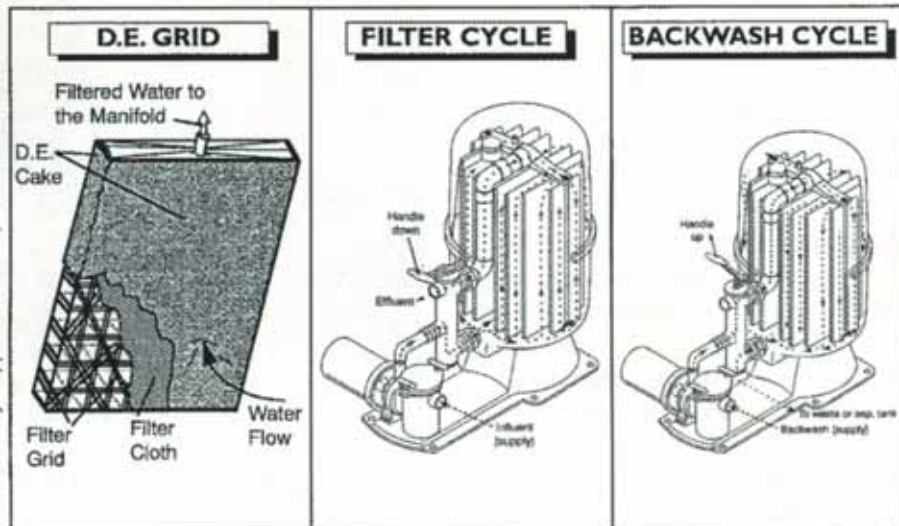
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Photo courtesy Coppercreek Pools, Scottsdale, Ariz.



In commercial applications, systems can include auto-backwash valves equipped with special slurry-feed systems that add D.E. to the filter after it's been cleaned.)

D.E. filters use a variety of backwashing valves. Push-pull valves (or piston-style backwash valves) are connected directly to the filter tank's inlet/outlet ports via unions. Multi-port valves are another

option that permits the operator to winterize, rinse, and bypass the filter water to waste. Some models of D.E. filters have a rotor-style backwash valve in the tank bottom. There are also full-flow backwash valves — increasing in popularity because they are designed to function with minimum frictional losses. Multiple gate or butterfly valves are also

used in some applications.

Separation tanks are a water-saving option that give the operator the ability to send the backwashed water back to the swimming pool rather than to waste. The water coming off the backwashing is sent to a tank where a fine-mesh polyester sack catches the debris before sending the clean water back to the pool.



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❑ **Installation:** Because D.E. filters need to be taken apart for service at least once or twice annually – and because the process of cleaning old, caked D.E. can be a messy proposition – installing these filters away from landscaping is a good idea. When the D.E. dries, it becomes a fine dust that gets into everything and may carry some health issues with it as well.

For those and other reasons, it's best to leave enough room in the equipment area for proper servicing of these filters.

❑ **Considerations:** The drainage system used for D.E. filters is a special concern. Not only do you need to make sure that the drain is adequate for the flows involved in filter cleanings, but also you need to be sure the lines flow well enough that they won't allow the D.E. to settle out and collect to create clogs that will be difficult to remove.

Charging the filter with D.E. is also a messy chore. The material must be mixed with water to form a slurry that is slowly fed into the skimmer at the level of one

pound of D.E. for every 10 square feet of filter surface area.

Flow rates for D.E. filters are 2 gpm per square foot of filter area for residential applications, 1.5 gpm per square foot for commercial projects.

## Common Bonds

Despite the basic differences among the three main filter media and the technologies used to put them to work, filtration systems of all types have certain key features in common.

For the most part, for example, modern residential swimming pool filters are installed *after* the pump (that is, on the pressure/discharge side of the pump) and before the heater. They can all be installed on the suction side – that is, *before* the pump – but this will change the filter's performance because more debris will be introduced to the filter – as if it were being asked to act as a pump strainer. Flow rates are reduced in these configurations, and filter cycles are

shortened as well.

In addition, all filters look similar, with a main tank body that sits on a base. The tank body itself will have one or two pieces. If there's just one piece, you'll find a small lid that clamps or threads onto the top. Some sand filters and most D.E. and cartridge filters, by contrast, come as two pieces held together with a tank band or a series of bolts or clamps – although smaller D.E. and cartridge filters will sometimes be single body with a threaded or clamped top lid.

These filter tanks are manufactured using a variety of different materials, including plastic, fiberglass, stainless steel and various composite materials. No matter the type, each will have a pressure gauge to indicate operating pressure and an air-bleed assembly to relieve pressure from the build-up of air in the tank body. Finally, at each tank's bottom, no matter the type, you'll find some sort of drain for servicing purposes.



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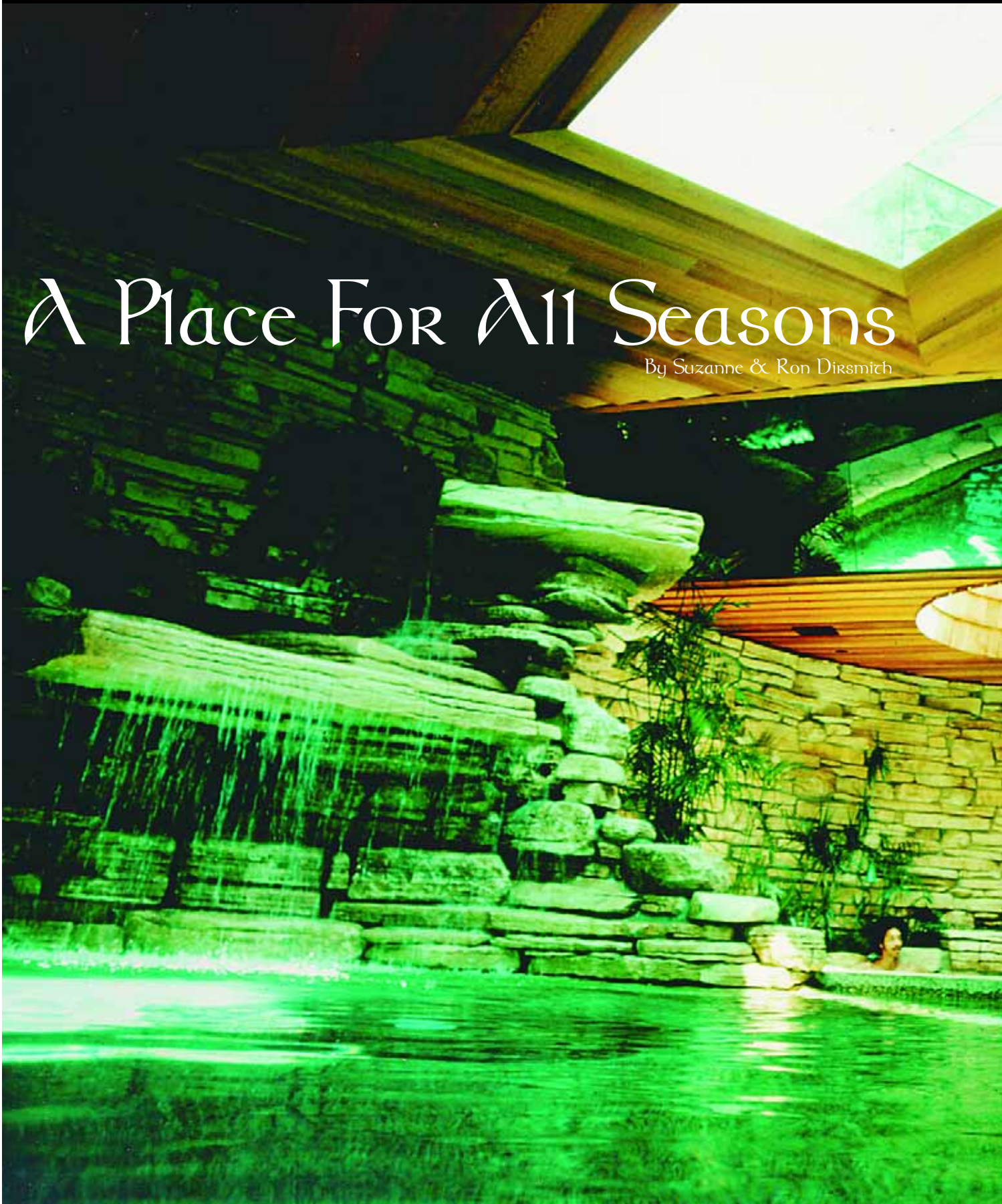
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# A Place For All Seasons

By Suzanne & Ron Dirsmith







Water can be a central feature of any design, but in many cases it is just one element among many of equal (if not greater) importance.

In the case of the project pictured here, the owners, a gentle and loving family, established and have maintained a vision of just the sort of warm and nurturing home and landscape they wanted, one in which the lives of family members and friends would be sustained, enriched and enlivened. Their vision (and their involvement with us) might have *begun* with the water, but it has since expanded to include nearly every detail of the property's interior and exterior spaces.

Our clients believe, as do we, that there is a natural order to the universe and that the "built environments" we create can confine us or free us, starve us or nurture us. As we move through our lives, our simple challenge is to live and love, work and play in settings that offer emphatic expressions of our essential humanity. In other words, what we build and create forever shapes our lives on a variety of physical and spiritual levels.

So while this property plainly has a beautiful swimming pool and spa and those features are important elements in the overall environment, what is more important is how the element of water is used to meet the spatial and spiritual needs of the clients and how it enhances all of the places they choose to occupy.

Taken out of context, that may sound a little high flown – so let's bring it down to street level with a look at the entire project and how it's come together through the past 20 years.



## Liquid Endeavors

The clients first contacted us in 1980 after they'd seen television and magazine coverage of the work we'd done for Hugh Hefner and had attended a wedding at Chicago's North Shore Unitarian Church, which we had also designed. Once they tracked us down, which wasn't hard given the fact that we're located in the same city, they asked us to create an indoor environment centered around a family swimming pool.

They told us up front that they wanted some of the same sense of fun, interest and mystery they had seen in our other projects. So we visited the large, 1950s vintage builder's home set on a 2-1/2-acre lot surrounded by native woods and a pair of golf courses.

At that point, the family had lived in the home for about two years, and the owners were ready to expand and upgrade the place in a variety of ways. We were told that the swimming pool and spa environments were to be the first in a series of projects that ultimately would bind us together with these clients for two decades. During that time, we also designed and built a large home at Casa de Campo in the Dominican Republic for them, along with a substantial estate on a private island near Boca Raton, Fla.

The father, a native Chicagooan like us, is a hugely successful industrialist who runs worldwide manufacturing and distribution facilities for his unique line of products. He's a quiet, shy, gentle person who treasures privacy; he and his family are all well-educated world travelers who have amassed a marvelous collection of fine and contemporary art including works by Liechtenstein, Picasso, Calder and many others.

One of our ongoing challenges has been to create environments for the family's ever-growing collection of indoor artwork and outdoor sculpture.

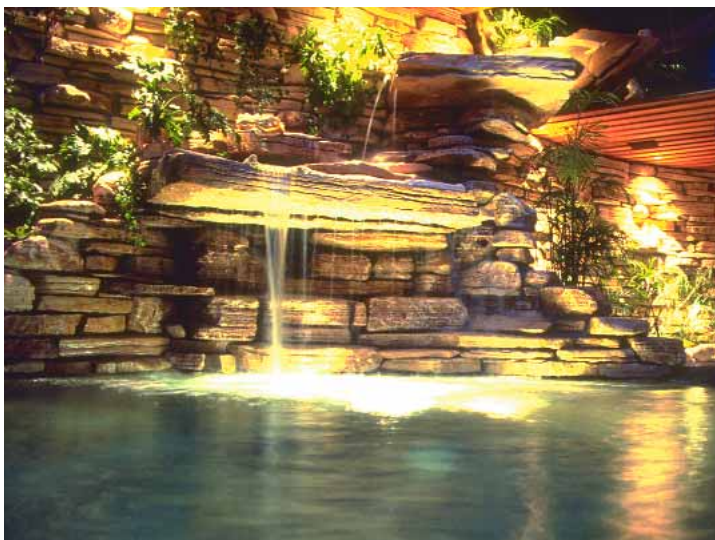
As we do with all of our clients, we spent a considerable amount of time initially just talking with them, getting to know them personally and coming to understand what they had in mind for their home and property. In this first set of encounters, our discussions covered how the swimming pool and spa complex would







Our work on this property began more than 20 years ago, when we were called in to design a set of indoor watershapes. From the outset, we strove to make the pool and waterfall and their surroundings seem a natural expression of the land -- right down to the elaborately patterned terrazzo decking.





be used throughout the seasons.

We soon learned that they were true nature lovers and, as such, wanted watershapes that would fit in seamlessly within the fabric of their land and home while providing the qualities of mystery, delight and comfort they wanted for themselves.

### Wrapped Around Nature

The pool and spa environments were to be enjoyable, but they had to “relate” to their majestic surroundings.

We set it up with a gentle, organic, intimate shape with a depth ranging from 3-1/2 to 5 feet. We find in many circumstances that this shallow depth is a practical, physical ideal for our clients. It allows the entirety of the pool to be used by everyone for swimming, games, floating, talking or simply walking around. It’s also cost-efficient in terms of heating, recirculation and chemical treatment.

Inside and outside the pool and spa, we set up a variety of seating ledges and alcoves and what we call “fun niches.” These are places where one lies back against the pool edge and looks up at the sky through skylights or reflects on nature as it is seen through large sliding-glass walls.

There’s also a large stone seat/ledge located under a waterfall on the deck next to the recessed spa. This seat was constructed from a single slab measuring roughly six by nine feet and looks as though it had been broken away from a large mountain outcropping. In the hydrotherapy spa, there’s a special spot with a specially designed array of jets that lift the body on a soothing surge of bubbles and warm streams of water.

And this was just the beginning: The *real* fun and magic came in blending these watershapes into the natural surroundings. Indeed, everything about this initial phase of our work keyed on the clients’ desire to bring nature together with the aquatic environment in interesting ways. So throughout the design, we blended stone, wood and metal to create a harmony between the built environment and the natural world.

When we were just getting started, the clients offered us their little plan sketch







Where the pool and waterfall are surrounded by glass and participate directly in the environment, the spa is off to the side – a private space meant for comfort, relaxation and therapy. The skylight above invites the sun into the space while offering spectacular views of the night sky.



of a rectangular space that was to house the swimming pool. We worked from that simple concept, adding a range of features including stone waterfalls, skylights, lighting and a variety of warm natural materials and textures.

The spa, for example, is embraced by the gently flowing lines of weathered-edge Wisconsin dolomitic limestone and sits beneath a shingle-lined skylight that opens like a flume to the sky above. The ceiling is surfaced with wood – a band-sawn, beveled cedar that covers the space in an intricate, mitered pattern that is graceful yet warm and nurturing.

### Delighting in Details

We carried this sense of the natural into every detail of the setting.

The pool decks and pool interior, for example, are all poured and finished in rustic terrazzo forms – a nice mix of Algonquin River pea gravel along with ox-blood (red) and obsidian (black) tumbled marble chips. Linear slot drains run along the edges between inset planter beds that feature lush tropical plantings, including areca palms, pothos, ferns and ivy. A series of smaller bronze mirror-banded skylights offer warm reflections of the sun, sky, trees, birds, rain or moon.

When the weather is clear, natural light and motion encroach upon the interior environment, bouncing off the swirling and rippling water surfaces while throwing com-

### The Hot Seat

The spa mentioned in the accompanying story was designed to seat ten people comfortably. Among its many features is a single hydrotherapy seat of which we are particularly proud.

In all, ten special jets pulsate, spin and gently massage the body here. The array of jets includes two in the floor under the feet; two in the lower seat wall behind the calves; two in the seat under the thighs; two in the upper wall in the lower back/lumbar region; and two just below the waterline that course across the upper back, neck and shoulders.

The whole of the spa, however, does the job of providing wondrous hydrotherapy massage in all seating positions – and all enjoy unique views of the surrounding structure's interior as well as the delightful exterior views found through the glass-paneled walls.

– S. & R.D.



plex reflections onto the surrounding stonework, plantings and wooden ceiling. When the weather turns, one can look up and see soft, delicate snowflakes falling on the glass overhead before they melt and run off in ever-changing tracteries.

Sometimes these views of nature are gentle and retiring, other times they are wild and exciting. No matter the season, there's always something different and intriguing going on.

The natatorium itself is wrapped around a huge, 150-year-old oak tree. Some of the large glass windows are frameless and seem to disappear into the surrounding landscape. And from any viewpoint within the building, one can enjoy views of the sculpture gardens, paths and axial views we created around the structure.

The pool/spa facility also includes a full kitchen, two wood-paneled shower and dressing rooms with cedar ceilings rising up to skylights, a full-sized sauna, and a special room that's used for a variety of functions. Finally, there is a special sound/television system distributed throughout the space for all to enjoy.

The pool and spa facility turned out beautifully and the clients were thrilled. We had no thought at the time that we'd be asked to do anything more on the property, nor did we have the sense that this project was only the beginning of what was to become a long and fruitful relationship.

### Expanding Vision

About two years after we completed the pool/spa facility, the owners contacted us again and asked us what we thought we might do if they were able to purchase two acres of property directly to the west of their existing land. At the time, this land was part of a 10-acre parcel owned by an elderly woman who had been born and raised there. She was a person of agile mind and great spirit – and owner of the largest single parcel still available in Highland Park.

Our clients explained that they had been trying to purchase the land from their neighbor for a couple of years, but that she was reluctant because she didn't want to see her family's land "devel-







## MIRROR MAGIC

Through decades of design experimentation and observation, we've discovered the special mystery and magic that can be gained through the careful use of mirrors.

In the project described in the accompanying text, for example, the skylights in the ceiling of the pool and spa housing are banded on their four vertical sides with mirrors. This creates an interesting effect where it appears as though there is no ceiling structure around the skylights and that the space is simply open to the sky.

As the sunlight moves across the sky (and as it changes its arc throughout the year), the reflections of the sky transmitted into the interior space by these mirrored surfaces are never the same – an ongoing, ever-changing, mysterious cascade of light that plays on interior wood, rock, plant life, metal and water. The same is true at night, as subtle reflections of moonlight caress the interior surfaces with a constantly changing interplay of light and reflection.

Any outdoor motion, from falling snow to wind-rustled tree branches, adds another dimension of mystery and variety – an effect that is particularly compelling at night as the up-lighting in the massive oak trees that embrace the building is reflected into the space via the skylight mirrors.

– S. & R. D.



As our clients acquired neighboring properties and expanded their estate, they called on us to take every advantage of the inside-to-outside views that became available. In some directions, the greenery is right up front, sheltering the indoor spaces; in others, the vistas spread dramatically across the sculpture garden and into the distant trees.



oped” in the usual way, with rows of townhouses or condos facing the golf courses. She was open-minded, however, and told our clients she might be willing to sell once she saw what they intended to do with the space.

We went right to work and prepared some sketches. Our idea was to open up a long axial view from the main house and set up a system of jogging trails and rustic pathways through the heavily wooded space. We also drew in pieces of outdoor sculpture, integrating the new space into a sculpture-garden concept for the overall property.

Based on the drawings, the woman agreed to let our clients purchase the property. During the next 18 months, we developed the space per the plan – but with about eight times the amount of sculpture! The new space became a natural extension of the stylized outdoor environment on the existing property, and their neighbor was thrilled to see land that had been so much a part of her life and family being used in such a harmonious and natural way.

Before long, our clients offered to purchase the eight acres she still had. She wasn’t ready for so dramatic a step, but she did agree to sell another 2-1/2-acre parcel and again waited to see what we’d do with it.

As things would have it, we had just finished planting an enormous stand of trees that included a variety of 18- to 24-foot evergreen trees at the end of the long view from our clients’ home. Nestled along the walkways and jogging trails were flows of flowering shrubs and ground covers, all augmented with landscape lighting, benches and about a dozen pieces of sculpture set into the landscape.

It was really beautiful, but we’d set it up as complete, never considering that we’d have another few acres to include in the program.

### Problem Solving

We weren’t sure how to proceed at first, but our clients ran right past our hesitation, agreeing to extend the program we’d developed to include the new acreage. So we extended the pathways, trails and lighting circuits, opening additional views into a variety of natural and sculptured alcoves.

We hung 70-foot rope swings on the limbs of 200-year-old oak trees and created a variety of seating niches and shorter vistas that capitalized on a number of special sight lines on the property. As for the stand of trees we’d just planted, we simply picked them up and moved them another 400 feet to the west, opening up a breathtaking view from the house even more effectively.

As the property was being developed and expanded in terms of the exterior gardens and landscaping, each and every section of the main house was also being carefully remodeled and expanded to take advantage of the new views we were establishing.

Before too many more years passed, our clients bought the whole of the adjoining estate. With each increment, they’ve more fully realized their dream of having a home environment that integrates nature with their living spaces – and does so gracefully through all seasons.

For us, the project began with watershapes and took off from there as an expanding canvas of natural beauty, sculptural art and architectural ingenuity. In all, it was an exceptional project. As designers and builders of spaces for humans to experience, we could scarcely ask for anything more.







By no means was our work on the estate limited to interior spaces or the immediate vicinity of the home. We designed the entire property to establish and take spectacular advantage of the long and short views that were available to us – and to place a large number of artworks in an array of appropriate settings





## NEW LIGHTING CATALOG

Circle 100 on Reader Service Card



BRONZELITE has released a 124-page, full-color catalog on its complete line of high-end, commercial-grade landscape and underwater lighting systems for landscapes, facilities, pathways, flagpoles, statuary, fountains and pools. The booklet highlights the company's most recent innovations, consolidates existing catalog supplements and offers quick access to all necessary specification information. **Bronzelite**, Littlestown, PA.

## FOAM JOINT FILLER

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W.R. MEADOWS offers SealTight Deck-O-Foam, a flexible, lightweight, non-staining polyethylene expansion-joint filler. Resistant to chemicals, UV stable and non-absorbent, this economical, compressible foam features an extended service life for both interior and exterior applications. The product comes with a removable strip that provides for a uniform sealing reservoir in the joint. **W.R. Meadows**, Hampshire, IL.

## NEW FOUNTAIN CATALOG

Circle 101 on Reader Service Card



AQUAMASTER FOUNTAINS & AERATORS has published "Master the Power & Beauty of Water," an all-new catalog on its line of fountains and aerators. Coverage includes the company's five product groups: floating fountain aerators, floating surface aerators, air injectors and the Oxymax and Ultimax aeration systems. Sizes range from 1/2 to 25 hp and all are UL Listed. **Aquamaster Fountains & Aerators**, Kiel, WI.

## DIRECTIONAL BORING SYSTEM

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CHARLES MACHINE WORKS manufactures the Ditch Witch JT520 Jet Trac, a directional boring system designed for burying wire and conduit in shallow runs up to 150 feet long. The easy-to-operate unit's compact size allows for maneuvering in tight spaces, while its rubber tracks and single-auger anchoring system have low impact on lawns and no adverse effects on sidewalks or asphalt. **Charles Machine Works**, Perry, OK.

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## WROUGHT-IRON COMPONENTS

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OUTWATER INDUSTRIES has published a catalog on its Architectural Products line of wrought-iron components. The 76-page booklet features many new products, including enhanced lines of railing, gate and grille components. Designed for both residential and commercial applications, the components are easy to weld, virtually unbreakable and easily painted, powder coated or clear coated.

Outwater Industries, Wood-Ridge, NJ.

## NEW SPRAY PATTERNS

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OTTERBINE BAREBO has introduced three new spray patterns for its aerating fountains. The Comet, Galaxy and Saturn models are designed for maximum aesthetic appeal and superior aerating performance while providing flow integrity in blustery or windy conditions. In addition, these patterns are interchangeable with the five other patterns the company already offers for its aerators. Otterbine Barebo, Emmaus, PA.

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## VERTICAL-LIFT-PATH LOADER

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BOBCAT has introduced the S250, a compact skid/steer loader with a new lift-arm system. Designed to offer greater lift capacity for handling sod, bricks or concrete blocks with greater lift height and an increased dump angle, the loader fills trucks quickly and easily—all day long. The loader also features a long wheelbase for a smooth, stable ride and controls that are set up with ease of use in mind. **Bobcat**, West Fargo, ND.

## TUBE-STYLE SLIDE

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AQUATIC & SITE TECHNOLOGIES announces the availability of the modified Seaside 10/0 slide. Designed for The Vistana Resort in Florida as a modification of a waterfeature on their pool, the slide uses the same SafetyTube design as all the company's slide models, with dual-level handrails to accommodate kids of all sizes, and is available in a variety of colors and combinations. **Aquatic & Site Technologies**, Portland, OR.



## CONTROLLERS WITH FLOW-CONTROL OPTION

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ACU-TROL PROGRAMMABLE CONTROLLERS has introduced the AK-PPM-P line of controllers for automatic and continuous monitoring and controlling of the entire pump room for pools and spas. The devices offer a new flow-control option in

a standpipe configuration that allows for plumbing into pressure systems while maintaining consistent flow. **Acu-Trol Programmable Controllers**, Auburn, CA.

## TELESCOPING POOL AND SPA FOUNTAINS

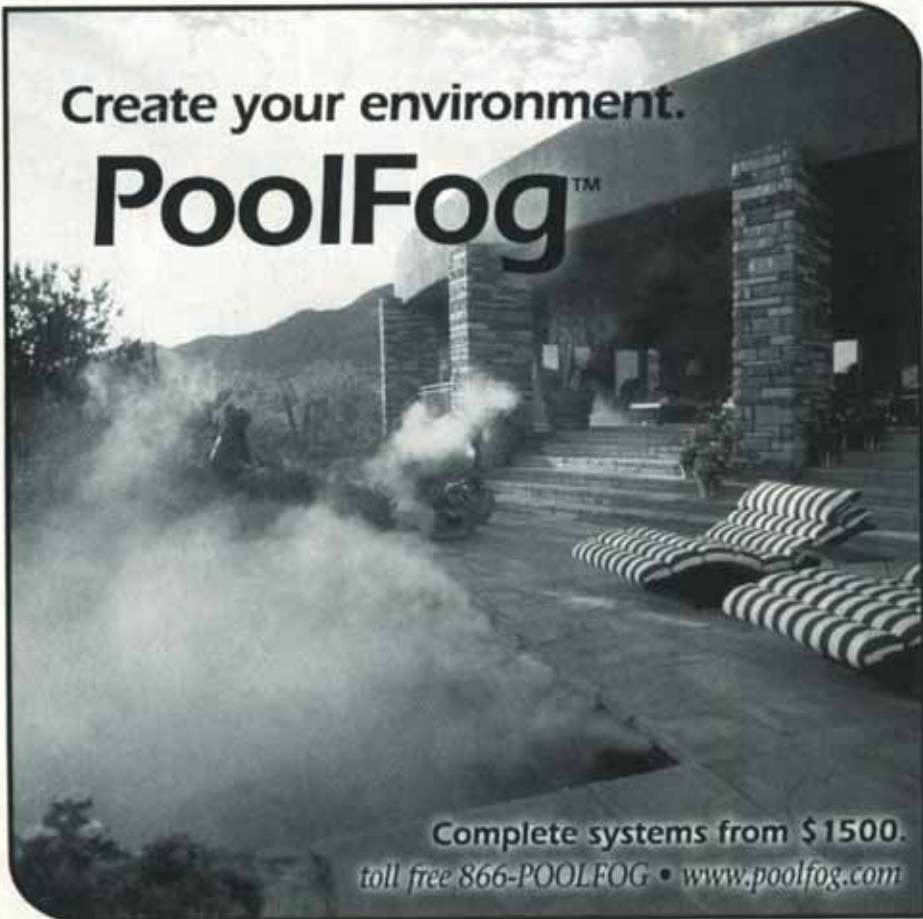
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FOUNTAINS FOR POOLS offers the Aquascope line of telescoping pool and spa fountains. Easy to install and use in depths from 8 to 108 in., the system features nozzles that retract flush with the bottom of the pool or spa when not in use. Powered by the pool's standard filter pump and available with four water patterns, all that's needed is a 1-in. line fitted with a gate valve. **Fountains for Pools**, Tarzana, CA.



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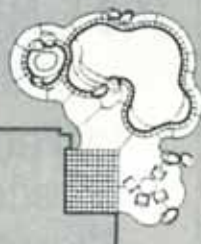
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## CONCRETE SAW

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MULTIQUIP has introduced the SlabSaver concrete saw. Small enough to exceed the demands of a job requiring pinpoint accuracy yet powerful enough to slice through any number of materials, the 102-lb FCG-1 cuts up to 3-1/4 in. deep with a 10-in. blade and is ideally suited for commercial green and cured concrete cutting, asphalt cutting and decorative work where accuracy is a must. **Multiquip**, Carson, CA.

## RANDOM-PATTERN RETAINING WALLS

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VERSA-LOK has introduced Mosaic retaining walls, a random-pattern system capable of producing walls much taller than most segmental systems. The unique panels provide a level surface every ten inches, an interval crucial for installation of geosynthetic reinforcement for construction of truly tall walls. The system's four unit configurations offer a natural, rustic, weathered appearance. **Versa-Lok**, Oakdale, MI.



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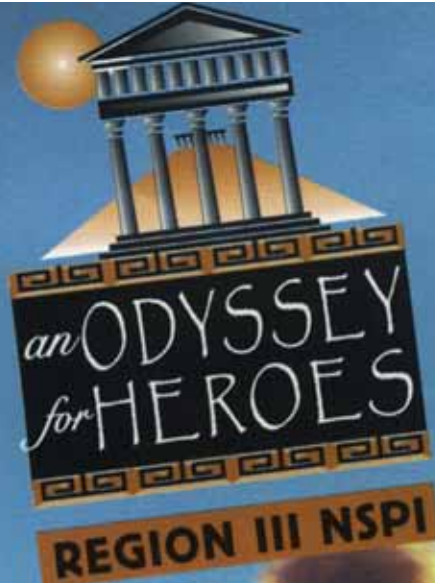
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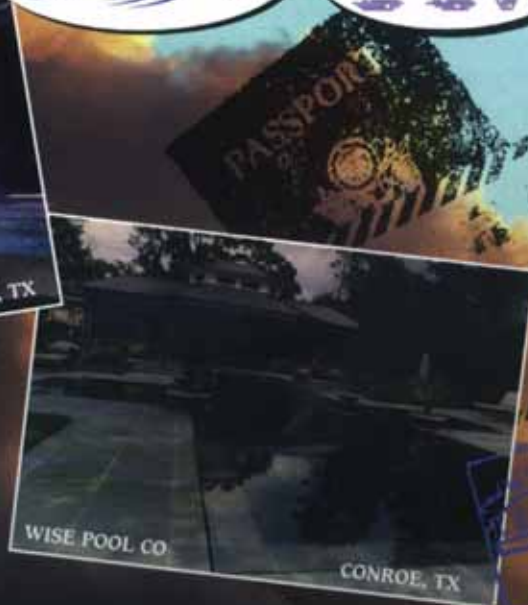
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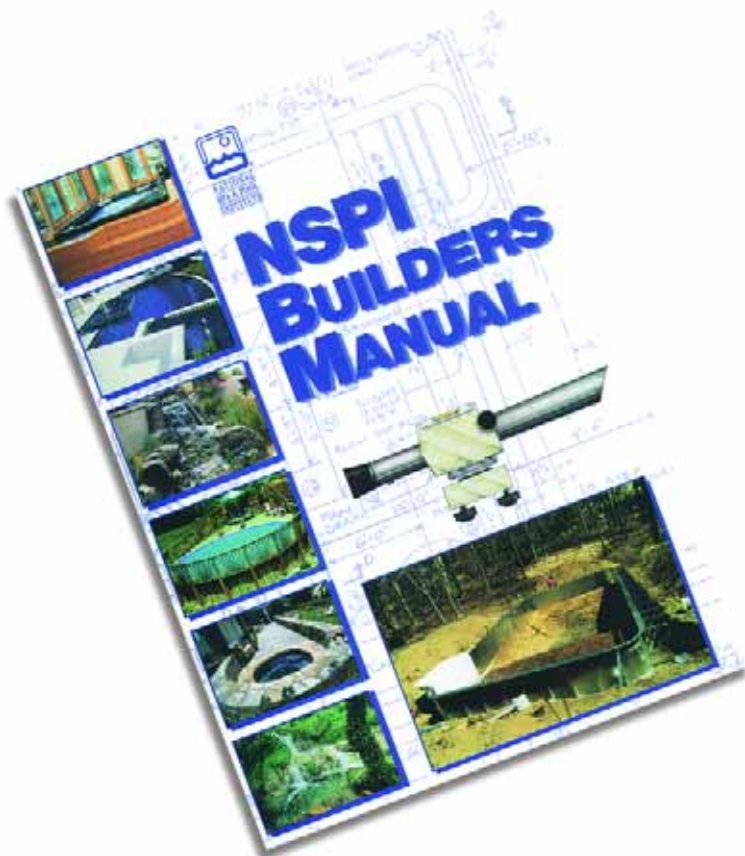
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## A Generalist's Roadmap

**T**his time around, I'll follow a detour from the design-oriented publications we've been covering to take a look at a truly unique resource: If you build residential swimming pools and spas or are considering moving into the field, the National Spa & Pool Institute's *Residential Pool & Spa Builders Reference Manual* is a useful and informative text unlike any other available to the trade.

Written and reviewed by dozens of NSPI's builder members, the manual offers a comprehensive overview of pool and spa construction while providing a good foundation of general business and technical information. That makes sense, because it is basically the textbook for NSPI members studying to pass the institute's Certified Building Professional (CBP) exam.

Unlike similar fields – such as landscape architecture or even garden design, which crowd my shelves with scores of books by generations of scholars and other experts – the pool and spa industry has always been short of this kind of practical/technical information. To its credit, NSPI developed the CBP exam and text in an attempt to fill this cavernous “education gap,” generating its latest edition in 1998 to serve a broad (some might say *too* broad) a range of market niches.

This breadth can indeed be a drawback. The manual surveys *everything* from business finances to excavation, from safety issues to structures, and from loss prevention to hydraulics. The result is a sprawl-

ing compilation of general information spread over 14 chapters and a glossary.

Some parts are useful to anyone in the business. Nonetheless, because the text moves over such broad subjects in so rapid a fashion, it cannot and does not cover any given subject to any great depth – and that can be troubling to anyone with detailed knowledge of one area or another, because he or she doubtless will find omissions large and small. Even so, the manual is impressive for the across-the-board foundation it provides for further study and exploration of individual topics.

In studying the text for my own crack at the exam (I passed), I found myself exposed to information that I will probably never need to consider in my work as a designer and installer of custom concrete pools and spas in my market. In the exercise, however, I'm reminded of studying landscape architecture in college: As an undergraduate, I took classes that had nothing to do with residential garden design – but that were nonetheless required for the degree in landscape architecture. This text serves a similar purpose in that you come away with a generalists' understanding of the field – something in which I see great value.

In other words, while I would certainly recommend that anyone involved in pool and spa construction should read this book as a foundation, I would suggest just as strongly that it is a starting place and that you should aggressively pursue other resources to develop expertise in your market niche.

The exam that goes along with the manual is pretty tough and takes a full three hours to complete. As is the case with the text, the questions cover a great deal of territory and not all of it was necessarily relevant to what I was doing – but that's what this kind of testing is about.

The manual can be purchased only through NSPI headquarters in Alexandria, Va. Once you've received it, you can take the test at various regional and national shows – but you must be an NSPI member to take it and earn the CBP recognition.

To be sure, no single manual can possibly be all things to all people, but this one certainly has a place on the shelf of anyone who is serious about building residential pools and spas. **WS**

*Mike Farley is a landscape architect with 20 years of experience and is currently a design/project manager for Leisure Living Pools of Frisco, Texas. He holds a degree in landscape architecture from Texas Tech University and has worked as a watershaper in both California and Texas.*



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