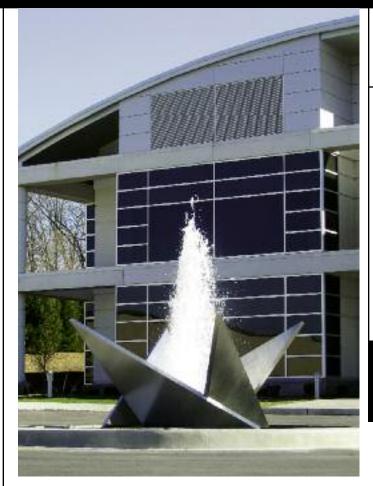
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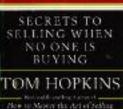
Making certain our
gardens are for people



By Mike Farley

Taking inspiration to all-new heights

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tructures

Cross Connections

By Eric Herman

As I see it, watershaping is an activity in which multiple disciplines come together to design, engineer and construct decorative or recreational systems that contain and control water: pools and spas, fountains, ponds, streams and waterfalls, interactive water systems - "everything from birdbaths to lakes," as publisher Jim McCloskey is relentlessly fond of saying.

Those multiple disciplines encompass landscape architects and designers, pool designers and builders, architects, interior designers, environmental artists and a host of subtrades as well as adherents of various movements, from historic preservationists to professionals in the green industries.

It's a broad amalgam of interests, and my sense is that, as time passes and creative people from still other disciplines see the practical and aesthetic potentials of watershaping, our new industry will only become more encompassing and inclusive.

Case in point: In March 2011, Jim and I attended the annual Concrete Decor Show in Nashville, Tenn. This was our second time at the event as exhibitors, and we made the trip because we recognize the creativity decorative concrete specialists bring to the table in the design and installation of exterior environments. More important, we also see them as potential creative collaborators.

On both occasions, we've enjoyed the opportunity to converse with professionals whose collective experience through the past decade has mirrored what's been happening with watershaping. Both are fields that, at the highest levels, are now clearly driven by passion, craftsmanship, artistry and the desire to push creative boundaries.

What intrigued us most is the fact that so many of these decorative concrete folks are so *keenly* interested in including water as part of their compositions, seeing their medium and ours as hand-in-glove companions. We were peppered with questions about waterproofing (by far their overriding concern), water quality and hydraulics and had the sense that they were determined to figure out the best possible ways to bridge the conceptual gap between what they do and what we do.

In quieter moments at our booth, Jim and I regularly discussed how both watershapers and decorative concrete specialists would benefit from making broader connections between the two disciplines. A bit of the potential was seen in seminars led by watershapers Paolo Benedetti and Scott Cohen – frequent contributors to this magazine who encountered enthusiastic audiences overflowing with questions.

We're all for encouraging these connections. To that end, some of you may have noticed articles in recent issues by decorative concrete professionals (Fu-Tung Cheng in March 2011, Tommy T. Cook in November 2010) as well as informative features on waterproofing (by Michael Mudrick and Elena Danke in January 2011 and by J.B. Werner in this issue). We've also been collaborating with *Concrete Decor*, the magazine that staged the Nashville show, to bring a range of decorative concrete-oriented articles to our newsletters and web site in recent months.

In doing so, we've cracked the door onto a new realm of possibilities – a place in which concrete is a startlingly protean material that can be made to look like just about anything you could imagine and one in which a common, familiar material meets its fuller artistic potential. If you think about it, that one sentence also tells the story of watershaping through the past ten years: Both are fields in which vision, energy and creativity have conspired across disciplinary lines to result in something fresh, original and authentic. En Hemm

It's all very cool.

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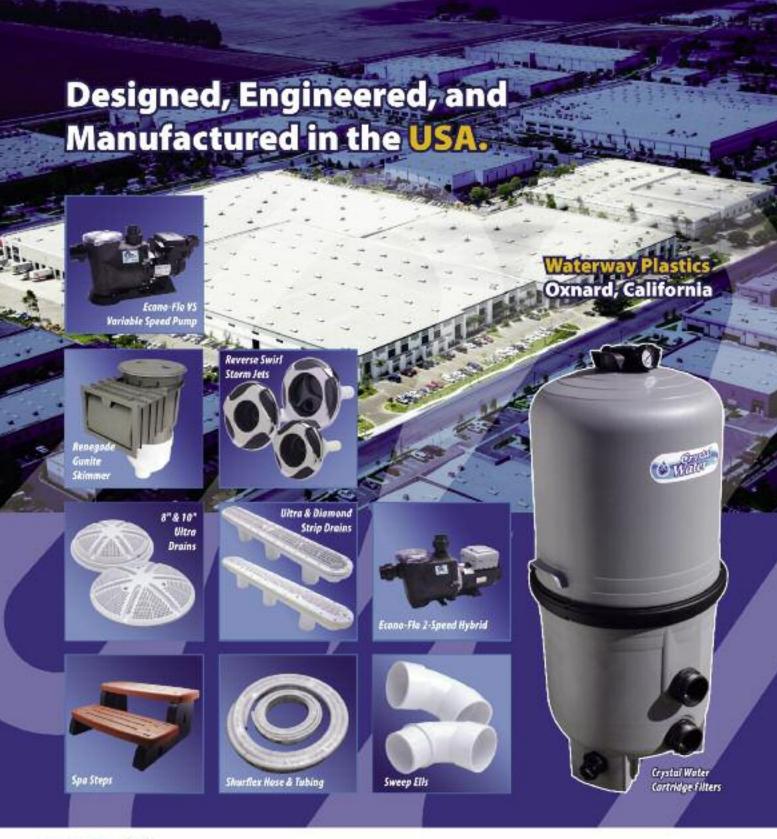


















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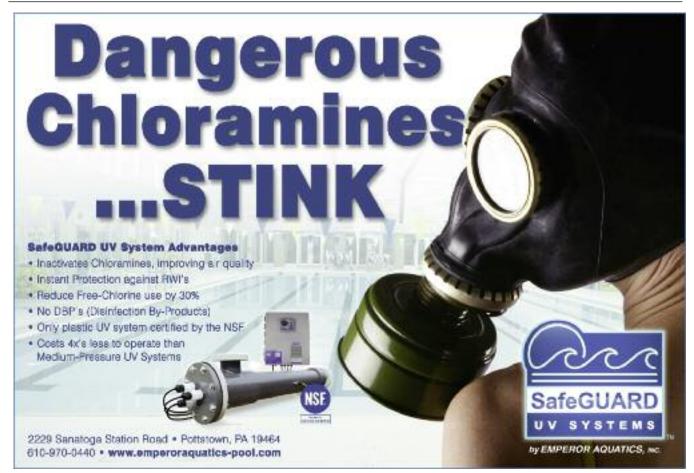
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Steve Kenny is owner and president of SRK Pool Services, a residential watershape construction and service firm based in Wainscott, N.Y. Kenny entered the industry as a service technician 25 years ago, stepping up into design and new construction in earnest in 2007 after pursuing renovations for a time. Before joining the pool industry, he studied at the Culinary Institute of America, graduating with an associate's degree before spending two years as a sous chef for restaurants in New York and Steamboat Springs, Colo. Kenny is currently a gold member of Genesis 3.

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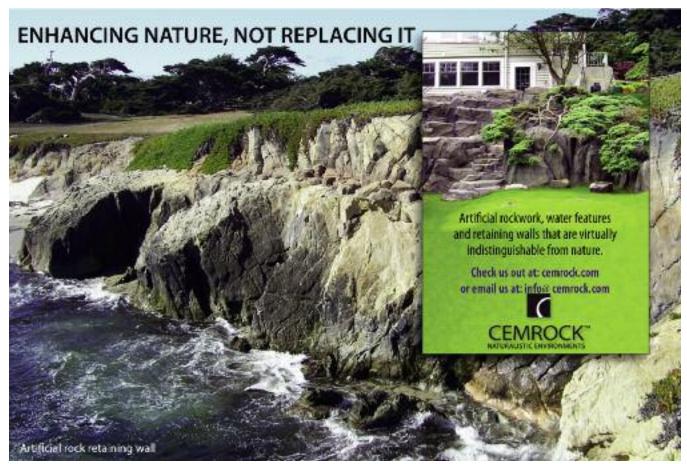


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Christopher Lines is founder of Christopher Lines & Associates, a landscape-design firm based in Walnut Creek and Carmel Valley, Calif. He has worked in the industry for the 18 years since completing studies in art and design at the University of San Francisco and at San Francisco's Academy of Art. Through the years, his work has been featured in *The Robb Report, Architectural Digest* and by Sunset Books. His international work has included participation in what has become known as the "World's Largest Pool" in Dubai. He is widely known for highly stylized, expressive designs that are both historic and romantic in nature.

Jeffrey Boucher is vice president and managing partner

of Drakeley Pool Co. and Drakeley Industries in Woodbury, Conn. A 17-year industry veteran with expertise in all forms of pool design, construction and service, Boucher is an expert in green technology and alternative sanitizers and has contributed to industry articles written on these topics. He also has a background in design and photography, and his work with Drakeley Pool Co. has been featured in national magazines including *Cottages and Gardens*, *Fairfield Country Home* and *Luxury Pools*. He is a participant in the Genesis 3 schools and is pursuing membership in its Society of Watershape Designers; he is also a member of the Nikon School of Photography and the American Shotcrete Association.



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Aqua Culture



Meeting Minds

By Brian Van Bower

et's begin this discussion with a question: What if you were so bad at your job that a person in a related field decided, for the good of his own business, he had to learn your business and replace you rather than cope with your incompetence? Most people would say that this would be a justified response to the fact that you do lousy work.

Unfortunately (or fortunately, depending how you look at it), this very thing is happening in the pool industry – or, more accurately, to the pool industry. For years now and with increasing frequency, landscape architects have decided they've had enough and are entering the pool industry. They are doing so because they're burnt out when it comes to dealing with the astonishing incompetence they encounter at almost every turn.

So now, rather than simply providing conceptual designs and turning them over to a pool builder to flesh out the skeleton and handle the installation – the longstanding *normal* state of affairs – more and more landscape architects are actively learning the technical specifics of watershape construction, and many have secured contractor's li-

People in the pool industry are dropping the ball, still underperforming in ways that make other designers sign up for classes in pool construction.

censes to perform the work themselves.

I can't quantify this trend, but I hear evidence of it almost daily, especially when I teach at conventions or as part of Genesis 3's schools. As I open each class, I start by asking for a show of hands of those who are landscape architects and designers. The number of hands I see has been growing larger consistently, and it has now reached a point where I'd say a good third of my students in some classes come from the landscape realm.

In raw count, I'd say those hands now number in the hundreds – and maybe even higher.

seizing necessity

The reasons for these migrations across industry lines are obvious. No doubt some landscape professionals see opportunities for increased revenue in the expansion of their scope of work and expertise. But right up there, so far as motivation is concerned, is the fact that almost every landscape architect I speak with has had an *extremely* negative experience with the mainstream pool industry.

And it isn't a single incident in most cases, but is rather a consistent pattern of entirely inadequate performances on the part of pool "professionals." Some of these stories would be laughable if they weren't also so pathetic or painful.

Expanding my survey a bit, I've recently taken to asking by show of hands how many landscape architects and designers are there because they saw attendance as a matter of necessity, given the problems they've had with pool people. Every time I ask that question, almost every landscape professional's hand goes up.

I'm not generally over-critical, and I know for a plain fact that there are lots of fantastic pool designers and builders out there. That said, what we have here is an industry that, overall, is so generally bad at what it does that professionals from a related field are moving in to fill the gap. And it's worth noting that this movement has gained momentum even during the worst recession most of us have ever seen.

I've always believed that every scrap of work should be treated like gold, and that's particularly true in times of scarcity. Even so, people in the pool industry are still dropping the ball, still underperforming in ways that make other design professionals roll their eyes and sign up for classes in pool construction, still doing things the old way even in times when it's vitally important to sharpen their skill sets.

Continued on page 12

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Aqua Culture

Now that the market is beginning to wake up once again — and now that some are even reporting the return of robust business activity — there may well be even *greater* motivation for landscape professionals to cross industry lines as the demand for pools and other watershapes increases.

What this all points to, I believe, is a growing chasm between competent players and those who have yet to embrace the concept that quality rather than mere quantity is what breeds success. Moreover, and as has been noted several times in these pages and elsewhere that, since the beginning of Genesis 3 in 1998 and the launch of *WaterShapes* in 1999, we've seen the emergence of a separate, parallel industry rather than any real growth in the mainstream pool industry.

I would argue that the emergence of watershaping landscape professionals is the strongest kind of evidence that this new industry is on the verge of coming into full bloom and that this movement will

become more pronounced and powerful as we move into the future. Those who have already hung shingles out in this new industry will be prepared to meet opportunities that are just up the road, while those who persist in relying on outdated paradigms will fall farther and farther behind.

out of opportunity

Being the optimistic guy that I am, I don't enjoy dwelling on the negative side of this discussion. I regret what is happening within an industry to which I've dedicated most of my adult life, but I accept the fact that there's little more I can do to open the eyes of those who just don't see the big picture. It saddens me, but it is what it is – so I move on.

The great thing is, for those of us on the positive, forward-looking side of the divide, that the presence especially of landscape architects among us spells opportunity in big, bold letters, both for watershapers and for landscape architects.

First, quality designers and builders never have to worry about someone swooping in and usurping their businesses. Even in the context of this recession, the quality/custom operations were the last to go down and are now among the first to rebound.

Second, now that more landscape architects are fully in the mix and have a greater understanding of what it takes to design and build good watershapes, we watershapers have a stellar opportunity to learn more about what landscape architects do and can position ourselves to forge fruitful working associations. As I see it, this is a win-win-win scenario for watershapers, landscape architects and clients. Indeed, the only people who have anything to worry about here are those who encouraged these shifts through their towering incompetence.

For my part, I love the fact that landscape architects are generally polished and professional, perhaps simply by virtue



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of having graduated from college on the way to becoming certificated landscape architects. I also love the fact that they work in exterior spaces and often design wonderful settings for my watershapes.

I truly enjoy these opportunities to develop fully integrated designs. I also appreciate the fact that they understand hard-scape and softscape in the context of great design styles and traditions, I like the fact that they know decks and pathways, garden ornamentation, loggias, arbors, pergolas, outdoor lighting, materials selections and spatial organization; and, finally, think it's great that they're becoming better informed about watershaping.

If this intimidates you, I suggest getting over it. For those of us who engage in constant professional growth and development, our associations with landscape architects gives us direct access to their expertise and the opportunity to respond to their presence by operating on new and higher levels.

In other words, what's happening, *right now*, is that we are learning from each other and finding ways to collaborate as never before.

here at home

I'm the first to concede that I haven't done everything to perfection in my career, but I know that among the smartest moves I've ever made has been the hiring of two landscape professionals to work side by side with me. Andrew Kaner and Miguel Hastings both have masters degrees in landscape architecture, and through their expertise and willingness to learn about watershaping, they have enabled me to add multiple dimensions to the services my company provides. With our veteran AutoCAD specialist Mark Krawczyk, we make for quite a solid team.

Their clear understanding of aesthetic issues, for example, has raised our level of design literacy to a point where we mesh easily not only with landscape architects but also with building architects as well. They've also enhanced our presentations and in many ways have made the work more fun because both of them are wonderfully creative.

Admittedly, in times past I'm not so sure I would have fully appreciated all they've

brought to my business. I recall, for example, that when we were developing the core curriculum for Genesis 3, I was puzzled by David Tisherman's insistence that a course on color theory had to be included.

I didn't see his point right away, but it wasn't long before I recognized that, like it or not, *all* watershaping is in some way

involved with the use of color. Very quickly, I saw not only that education on color theory was a good idea for our program, but that it was utterly essential to the work I do daily.

After absorbing everything Judith Corona's color course had to offer, I found that my confidence had grown and that



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Aqua Culture

I was no longer disadvantaged in speaking with architects and landscape architects about color. (I also liked the authority it gave me in working with clients!) Immediately, I was able to see why someone who suggested installation of a whiteplaster pool with blue waterline tile and red-brick coping wasn't considered competent by educated design professionals. It was like being given the key to a door that had always been locked before.

This leads to an important point, especially for those interested in stepping up and engaging landscape architects on a level playing field: The first thing you need to do is learn to speak the language.

Long before you can actually wield landscape-design concepts, you must know what they are, what they mean and what their application can do for a project. No shortcuts here: You must find venues where you can learn about color, line, visual weight, symmetrical and asymmetrical balance, sight lines, textures and the

Calling ASLA

I'd like to make an opinionated observation: Based on scores of conversations I've had with landscape architects who are members of the American Society of Landscape Architects (ASLA), I believe the organization is under-serving its membership.

When you look at the curriculum at ASLA's annual conventions, there is one clear gap in coverage: Only rarely is there anything about the design of watershapes in any form, perhaps with grand-scale fountains being the occasional exception.

Yes, there are lots of water-related courses having to do with irrigation, drainage issues and wetland management, but there's little or nothing to sustain the livelihoods of landscape architects who work with decorative or recreational water — many of them in the majority of their projects.

We at Genesis 3 have reached out to ASLA on multiple occasions, always pointing out that seminars on watershaping will benefit ASLA members, expand their control of job sites and enhance their ability to achieve the results they want with the water components of their projects. Most of our overtures have met with little more than courteous indifference, but the few programs we've done for ASLA groups have received tremendous response and enthusiastic endorsement.

I've never figured this out, frankly, but I would love it if somebody could explain these disconnects to me. And I must say I wouldn't mind opening an engaged and more engaging dialogue with the organization, basically because I think collaboration will do all of us a world of good.

- B.V.B.



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plant kingdom. In particular, you must learn about organizing spaces for human occupation and movement.

You can learn these things in classrooms, from books and by working with and paying attention to design professionals who have that knowledge at hand. You also have to recognize that there are pecking orders to be observed and that in some cases you'll run into substantial egos.

I dealt with the pecking orders and egos first by being confident in my own area of specialization, but I also did so by suppressing my own ego and being patient, respectful and ready to collaborate. In time, mutual respect has grown, egos are less of an issue and the pecking orders are occasionally even flipped, with land-scape architects subordinating their work to mine as the lead watershaper.

find your way

All of this requires flexibility and openmindedness when it comes to the way projects unfold. In some cases, you'll inevitably be a passenger, someone along for the ride in executing someone else's grander vision. In others, you'll call the shots yourself. In all situations, however, being involved with other design professionals (landscape architects, architects, interior designers, developers) puts you in an environment in which creative give and take is the order of the day.

These kinds of exchanges call on your knowledge, but they also require you to suppress your fear of the unknown.

So if you're so bad at what you do that landscape architects and other design professionals are coming after you, it's time – and I mean this in the kindest way possible – either to be inspired to do better or get out of the way. Either way, you must recognize that the status quo is *not* tenable.

For those who already work at a higher level, I suggest embracing other enlightened designers. Establish alliances with local landscape architects and fig-

ure out ways to build two-way streets in which the success of one of you means the success of both of you. Or do as I've done and bring people into your firm with the desired backgrounds and educations.

However you approach the issue, recognize that great work is almost always the product of great collaboration. Better yet, it's a much happier way to spend your days.

Next: To support the points I've made here, I'll follow this discussion up with some interesting anecdotes drawn from my own experiences in working with landscape architects.

Brian Van Bower runs Aquatic Consultants, a design firm based in Miami, Fla., and is a co-founder of the Genesis 3 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.

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On the Level



Gardens for People

By Bruce Zaretsky

"Landscaping is not a complex and difficult art to be practiced only by high priests. In any age of reason, it is the owner who . . . decides . . . the garden and the purposes for which it will be used."

hese words from landscape architect Thomas Church's seminal book, *Gardens Are for People*, ring as true today as they did when they were first published in 1955. Gardens truly *are* for people, and while that's manifestly an obvious statement, it seems to be a concept that insufficient numbers of today's watershape and landscape designers fully grasp.

That's nothing new. More than half a century ago, in fact, Church was motivated to write what is widely acknowledged as *the* book on creating gardens for the human experience by his observation that too many of his contemporaries were on the wrong course. They were, he regretted, delving into design work that might have satisfied their egos or looked great in photos, but didn't really take human use of the spaces they were designing into account.

I'm ever mindful that gardens are for people and that I'm devising spaces in which my clients will sit, swim, cook, socialize, reflect, exercise and/or play.

Let me confess that I too have occasionally been guilty of trying to stretch the creative envelope with my work – typically in display gardens, where making artistic statements is accepted and even encouraged. For the most part, however, I'm ever mindful that gardens are for people and that I'm devising spaces in which my clients will sit, swim, cook, socialize, reflect, exercise and/or play.

It's about clients, that is, rather than about ego.

tracing influences

Ironically, Church is probably best known today for his "radical" pool designs, particularly the "kidney bean" pool with which he graced a home in Sonoma, Calif., in 1948. In looking at this pool time and again, I can't help thinking how well its design has held up through the past 60-plus years. Certainly it's been knocked off countless times by other curvaceous pools, but it has an integrity that none can rival.

For all sorts of reasons, Church has had a major influence on my work – and on that of countless others. But while I admire him (and my numerous other design heroes) for barrier-busting design and engineering feats, in using them as inspiration I never, ever lose touch with the fact that my gardens are for my clients, not for me, my portfolio or my desire to walk in the footsteps of brilliant designers.

Yes, I want my projects to look good in photographs, basically so I can show prospective clients what I've done. But more important, I want my clients to want to be in their gardens: I want them drawn outside toward the pool, over to the colorful garden, onto the well-appointed terrace or into the kitchen garden.

And I don't see this practical ambition as an option. Indeed, I think it's wrong to impose my will on clients and design according to my preferences or my artistic ambitions. It's simply wrong to expect clients to accept this.

Case in point – and one that has nothing to do with watershapes or landscapes: My wife and I enjoy dining out and often notice how these experiences parallel elements of our working lives – a point Brian Van Bower has made many times in print and in his presentations. At its best, the dining experience transports us to a relaxing frame of mind, extracting us from daily









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On the Level

What I see is that too many designers have an 'I know what you want and need' arrogance about the process and form preconceptions before they ever ring the doorbell.

cares and giving us sensations of luxury and self-indulgence.

Sharon and I appreciate these experiences and enjoy finding new places. At one restaurant, however, as soon as we sat down neither of us could help noticing the flatware – beautiful, sculptural, artistic and, unfortunately, quite difficult to use.

The fork and knife had a quarter twist in them that made them rest on the table with their handles perpendicular to the tabletop. We commented on how they appeared to float on the tablecloth – a stunning visual effect – but to use them, we had to rotate them awkwardly in our hands and consciously turn them sideways to spear food off our plates. We both had the same question: Didn't the designers (or the restaurateurs, for that matter) ever try to use these things themselves?

Herein is the crux of my argument (as derived, of course, from Church's): Why don't we engage our clients and give them what *they* want rather than what *we* decide they want? Why don't we just come right out and ask them what they think? What we see instead is that too many designers have an "I know what you want and need" arrogance about the process and form preconceptions before they ever ring the doorbell. That's a shame – and it's *wrong*.

heart of the matter

As designers, it's our job to dig in and figure out what our clients really want. This enables us to create spaces that are worth what we've asked them to pay and that will be used (as intended and desired) for entertaining, by the kids or for myriad other purposes. To make this happen, we need to *listen*.

I can't count the number of times clients have told me, after I've presented a proposal, that ours was the only firm that actually listened to them and absorbed what they had to say. I like hearing this, of course, because it puts us on an inside track; but I'm also dumbfounded by the fact that so many of my fellow designers seem incapable of paying attention to those who will be opening their lives and homes to them.

Once again, Church hit the nail on the head: "No one can design intelligently for you," he writes, "unless he knows what you need, what you want, and what you are like. If you won't tell, he will have to guess."

Of course, it would be great if all clients insisted on giving designers all the information they might need. But let's face it: Not all clients are sharp enough or practiced enough or insightful enough to know how important it is to open up — which means, pure and simple, that we have to work at unlocking their minds.

Often, of course, they'll need practical guidance along the way, as when they don't understand local codes or the fact that their yards are too shady for the pools they want or too sunny for the

clumps of hosta they envision for their gardens. No matter: It's up to us to work with them, setting aside our preferences for certain plants or stone types or architectural styles and determining what it is that they really want and need – what it is that will make them happy with the project's outcome.

To that end, in my business we use a simple questionnaire to aid this process – just as many other designers do. We ask four pages of direct, simple questions about favorite (and least favorite) colors, how they intend to use the space and whether they like entertaining guests or prefer private dining. We ask if they like formal or informal gardens and all sorts of other questions, some of them doubling back so we come at key issues from multiple directions. We also ask about budget so we can focus on what's possible.

Entering this process, we let our clients know that design is subjective, and that everyone has an opinion. Then I remind them that when the job is done, I'll go home and they'll have to live with the results. "And so," I tell them clearly, "if you want a pink walkway with purple polka-dots, I will do that for you. I may not like it very much, but I will design it properly and install it perfectly."

seeing red

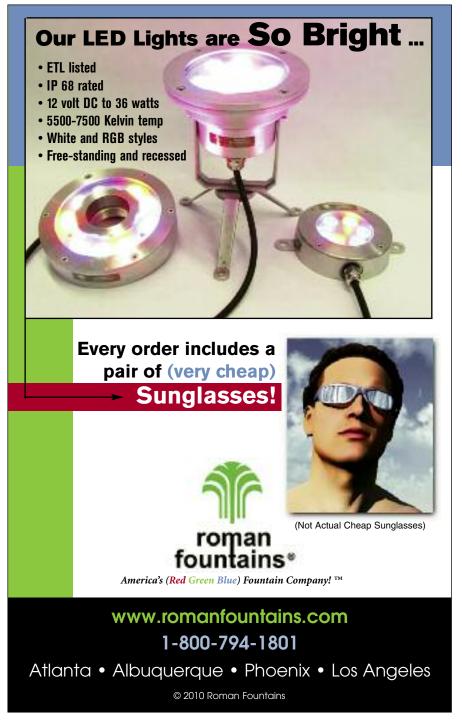
Naturally, I prefer working with those who trust us and the vision we set out for them, but each client is different. Some will say that indulging clients' sometimes erratic desires is a disservice to the design profession, but if the clients are happy and I did my best, who's to judge?

This brings me to another case in point: The notorious "red pool," a project by David Tisherman that was featured (and heavily debated) in these pages several years back. Here was a design that shocked *WaterShapes* readers with its audacity but is passing the tests of time as a standard-changing design.

The project was definitely *way* outside the box, but it worked for the client and aligned with a venturesome designer's need for unique, soul-satisfying work. In this instance, the clients had a vividly colorful home filled with African folk art,

and Tisherman brilliantly played off their tastes in creating an exterior environment perfectly befitting the clients and their tastes.

In another backyard for another client, this would have been the product of the designer's ego; in this backyard, however, it was brilliant. If I ever was given an opportunity by a client who trusted me enough to let me do my own thing, I can only hope that I would be as bold and inventive as Tisherman was with his red pool. I would also hope that I'd have enough sense to listen carefully to my clients and respond as appropriately as he did to their basic needs



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On the Level

and desires.

Several years back, I worked for a client who told me after I had suggested using a yellow-flowering Dwarf Forsythia that she absolutely hated the color yellow – and would not tell me why. "No yellow," she said in that long-ago, pre-questionnaire time. (It was only years later that I accidentally learned that her ex-husband had made a cutting remark about how she'd looked in a certain yellow dress – a bad enough memory that she had a vendetta against the whole color.)

This is why, even when a client tells me to "do my thing," I still pester them for information and thoroughly exploit our questionnaire. While the notion of a client leaving us free to create is fantastic in concept and does wonders for the spirit, it's also a great and incredible burden and responsibility – not one I would care to tackle blind.

But there's a tricky little issue buried in all of this: There are many instances out there of pure, artist-driven designs that just take my breath away – and some of the most noteworthy achievements in watershape and landscape design are among them.

Consider landscape architects such as Martha Schwartz and Ken Smith: These are designers I greatly admire, and they have made their bones creating landscapes that are considered to be works of art. For all that, I consider Schwartz's Bagel Garden and the plastic daisies Smith used for the Cornerstone Festival project as instances in which outsized egos overwhelmed the clients' needs.

adventures in design

It may be possible that the notoriety of the Bagel Garden ultimately made the client proud of having such an art installation on the rooftop, but does it really, truly invite anyone out there to enjoy a cup of morning coffee or an evening glass of wine? As for Smith's daisies, I'll grant that I myself am intrigued enough by the crazier potentials of display gardens that I can't protest too much.

And for the record, I am *not* slamming either Schwartz or Smith: They each have amazing talent and between them have done some very cool and eminently prac-



When we listen to our clients and give them what they want instead of what we decide is best for them, chances are better than good that they will be happy every time they enter and use the space. This formal garden is just such a space – designed for its owners and scaled to meet their desires for years to come.

tical projects. My point is that purely artistic works have great potential for running against the grain of utility; while I can admire the aesthetic achievement, I am supremely aware that I do not want to be seduced into thinking that making such bold statements is the best way to meet my own clients' needs.

By way of contrast, look at a "garden" such as New York's Central Park, which Frederick Law Olmsted presciently devised as a backyard for masses of walkers, bikers, joggers, Frisbee-players, boaters and sunbathers while also offering a showcase for trees, shrubs and perennials. All at once, it is as visually stunning as can be while also being about as people-friendly as a space can get.

One of the things I value most about Central Park is that it's so *understated*. It doesn't grab the eye with unusual details, which is a wondrously subtle way of suggesting that all of it – every tree, every flower, every path, every bit of water – has been there basically forever. It's a forest primeval through which people

have cut paths and shaped playing fields.

Above all, it's a magnificent response to Olmstead's clients: the citizens of New York and those who come to visit. In other words, Olmstead knew, as did Church, that *gardens are for people*. The challenge for us as designers is to keep our ideas fresh and exciting while still paying attention to what our clients want and need the most – that is, places to enjoy what they define as the finer things in life!

Coming up: a series of columns examining the practicalities of spaces created for human use.

Bruce Zaretsky is president of Zaretsky and Associates, a landscape design/construction/consultation company in Rochester, N.Y. Nationally recognized for creative and inspiring residential landscapes, he also works with healthcare facilities, nursing homes and local municipalities in conceiving and installing healing and meditation gardens. You can reach him at bruce@zaretskyassociates.com.







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Jeff Lokker Huntington Pools Glendora, Calif.

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John Schweizer Gaspar Landscapes Richboro, Pa.

Jeff Parker Ocean Scape Design Rancho Santa Margarita, Calif.

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Building toward Clarity

Having begun his career decades ago as a residential pool/spa service technician in East Hampton, N.Y., watershaper Steve Kenny has a profound appreciation of superior water quality – one he developed, he says, despite a near vacuum when it came to high-caliber industry education on the subject. Today, this self-taught expert applies what he's learned in building pools that combine unusual hydraulic designs with sophisticated water treatments.

By Steve Kenny



hen my family started in the pool and spa service business some 25 years ago, it didn't take us long to recognize that there was very little available to us by way of education about water chemistry – or, for that matter, about most of the other skills involved in maintaining pools, spas and other waterfeatures.

That didn't make much sense to us, even then. After all, how could an industry devoted to the health, safety and comfort of millions of people function without addressing the need for standardized approaches to water maintenance or the technical fundamentals?

To be sure, the industry has caught up a bit in the past 25 years, and a variety of trade shows and other forums are taking steps to fill the information gaps, but what I still see most often is education at a bare-sustenance level – enough to help someone who owns a vehicle, has a few containers of chemicals and harbors a willingness to do backbreaking work deal with common challenges, treat a few symptoms and maybe cope with some fairly serious conditions. But as I see it, there's still little or no support when it comes to helping professionals truly understand the essence of water management as it applies to watershapes.

This was certainly the case when I started working with my dad and two brothers back in 1985: We knew almost nothing about the tasks we were pursuing and had a hard time finding resources to point us in the right direction. Sure, we kept our eyes and ears opened and picked up some pointers along the way. Before long, we fell neatly in line with what was then the prevailing mentality about water treatment: *Just keep adding chlorine until the water clears up*.

We were operating, we began to see, in a universe ruled by ignorance – and desperately wanted to rise above it.

Serving Quality

As disconnected as it may sound, the main thing we had going for us in our fledgling business was our family's collective history in the culinary arts. My grandparents were restaurateurs, and all of us recognized the way fine dining was in our blood and influenced the way we approached our lives and our business.

From those early days to the present, this culinary orientation has continued to serve me well and has helped me focus on the concept of delivering quality to consumers in ways that encompass the entire experience. After all, food must look, smell and taste good to generate satisfaction and must also be presented by a knowledgeable wait staff in an attractive, comfortable setting. And all of this must be done so that customer expectations are met (or exceeded) at a reasonable price.

Early on in our pool service business, that culinary value system provoked a restlessness in me that I felt had to be indulged. I knew that water quality stood at the heart of what we were now doing and that there was no point in our clients' owning pools or spas unless the water itself was inviting and delivered an experience worth the price.

My brothers left the business after a few years, leaving me in charge of the field work.





It was never lost on me that, as with cooking, there was a great deal of basic chemistry involved. So, in effect, I began to relearn how to bake a cake.

As I had done in my previous career, I took it upon myself to unearth as much information about water chemistry as I possibly could (a commitment, by the way, that I maintain to this day). That effort was clouded at first, however, by the fact that back in the 1980s and well into the '90s, the industry was caught up in quick fixes and miracle cures.

Wonder clarifiers, sanitizers and treatment devices meant to solve all of our water-treatment problems besieged us on all sides. From magic magnets to special enzymes, it seemed that everyone – even a reputable company or two – was selling some shortcut or other to producing quality water. And even though the mainstream industry was virtually addicted to chlorine, pathways to being "chlorine free" dominated the agenda despite the fact nobody I ever encountered had a satisfactory explanation of how it was possible.

Through all of the marketing hype and pseudoscience, through all of the clang and clatter of confusing and misleading messages, I stuck with it and gradually, with study as well as a tremendous amount of trial and error, increased my understanding of water chemistry and its dynamics in the watershapes I'd been hired to maintain.

Moving Forward

The first concept I embraced – and one I steadfastly adhere to now – is the Langelier Saturation Index. This demonstrates in clear, scientific terms that for any treatment regimen to be effective, you must start by bringing the water into balance – meaning that pH, total alkalinity and calcium hardness (among other factors) must settle into prescribed ranges to create water that is neither excessively corrosive or scaling.

In a sense, balanced water in these terms is analogous to the foundation of a house: Without good, manageable water balance, everything else you might try will be unreliable. Or put another way I understood even better, trying to maintain water without balancing it was like trying to bake bread without understanding how leavening works.

As is true of many people who start out in pool service, I eventually found myself in my own business doing repairs and renovations and ultimately branched out into new construction. That was in 2007, when we at SRK Pool Services of Wainscott, N.Y., entered pool construction with a focus on custom residential pools and spas. (I still have a service unit, however, because I saw early on that the combination enabled me to control my clients' treatment programs.)

In building pools, I work hard to apply a variety of lessons I've learned not only by servicing pools, but also in repairing and renovating them. As an example, I've come to believe that the basic scheme of two skimmers, two return lines and a main drain – a common hydraulic setup where I operate – was completely inadequate because of the way it virtually assured creation of massive dead spots where water didn't circulate properly.

In one instance, these problems with circulation prompted me to try a new approach – a turning point that has driven my business ever since.

It was several years ago: I heard from a client with a pool whose return lines both leaked profusely. Rather than repair or replace them, I decided to return the water through the main drain and rely on the skimmer for suction. Although that was admittedly a primitive solution I wouldn't endorse today, I was able to see that in making this one adjustment, I had succeeded in *dramatically* improving the pool's water quality and had simultaneously made it much easier to manage.

Jumping ahead to my current work, I currently design and install pools with multiple floor returns and skimmers. Depending on a variety of design specifics, a typical 40,000-gallon pool will, for example, have from six to eight floor returns down the center and up to eight skimmers – but no main drains, thereby eliminating any concerns about entrapment.

What this basic arrangement does for water circulation is amazing. We're able to turn pools over rapidly with amaz-





ingly low line velocities – often four feet per second or even lower. We use variable-speed pumps and large plumbing sizes for energy efficiency, and heating becomes more efficient as well by virtue of even distribution across the bottom of the pool and taking advantage of the fact that heat rises through the entire water column.

And by putting all of this in context with our adherence to the Langelier Saturation Index, we've set the table for what can only be described as truly superior results.

The Big Idea

As mentioned above, I came of age in this industry in an era when the notion of going "chlorine free" was the motivating force behind an entire segment of the water-treatment industry.

I recognized the range of reasons why so many consumers were interested in making this change, including the desire to get away from unpleasantly familiar chemical odors; the bleaching of bathing suits; worries about possible health effects; and the widely popular belief that chlorine is bad for the environment.

At times I found this a bit hard to take, because I'm not personally opposed to the use of chlorine and know that most problems associated with it are the result of improper use. In fact, once I mastered basic water chemistry and understood the advantages of working with balanced



water, for years I was able to maintain beautiful water using chlorine.

Achieving that mastery really made the difference for me. I understood how, depending upon the situation, to make use of the different types of chlorine; had figured out how pH characteristics can influence water balance; knew the right way to use shock treatments; and had come to see that if all of these factors were held in balance, chlorine was no longer a problem for most of my clients.

I was on a roll, confident and comfortable, until 2008 – when my understanding of both hydraulic design and water treatment were put to a major test: This is when I was asked to participate in a project spon-

There aren't huge technical differences between building pools with multiple floor returns and skimmers and building them in the conventional way, but it does involve extra piping, forming and fittings – and an enhanced need to keep everything organized. sored by *Hamptons Cottages & Gardens*, a Long Island publication that covers highend residential living in our area.

The project was called "The Idea House" and was intended as a showplace for state-of-the-art design and amenities with a special focus on environmental sustainability. The goal was to see how many LEED points the project could earn through creation of a beautiful contemporary environment.

My part of the project was about building a chlorine-free pool using the latest in water-treatment technology. I enjoyed the irony, because I had never tackled that sort of approach before. So as excited as I was by the opportunity to participate in such a high-profile project, I was also intimidated, knowing that if I failed, the damage to my company's reputation could be significant and long lasting.

Despite those early misgivings, I jumped in and decided to replace the oxidizing action of chlorine with that of ozone, one of the most powerful oxidizers known to science. To that end, I chose a commercialgrade corona discharge system by Del Ozone (San Luis Obispo, Ca.) that produced about seven grams of ozone per hour. For sterilization, I turned to a highflow ultraviolet system made by Emperor Aquatics (Pottstown, Pa.)

We completed the system with an ORP controller (also from Del Ozone) as well as a high-flow contact chamber and degassing system I fabricated to eliminate any concerns about contact times or off-gassing. We also split the circulation system into two sub-systems – one for the ozone, the other for the ultraviolet unit and the heating system. For additional energy efficiency, we installed LED lights and finished the pool's interior with a dark exposed aggregate to absorb some heat from the sun.

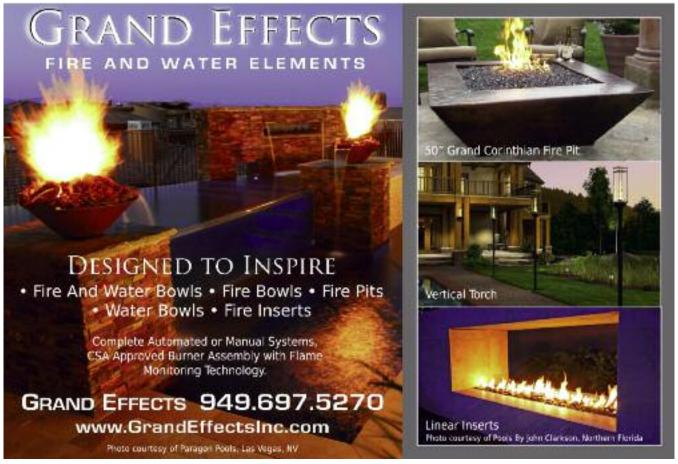
The New Phase

With a bit of luck in scheduling, we finished the pool late in spring – a couple of months before work on the house was



complete. As a result, the pool was available for near-daily use by the construction crews, and it turned out to be a great test run for overall system performance.

At times, it seemed, the watershape was basically a public bath: Every day, numerous dirty, sweaty construction



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workers took advantage of the opportunity to cool off and clean up – as I carefully monitored the water chemistry.

I've worked with pools for 25 years, and I have to say that I was literally stunned to see how the system I'd installed simply seemed to take care of it-

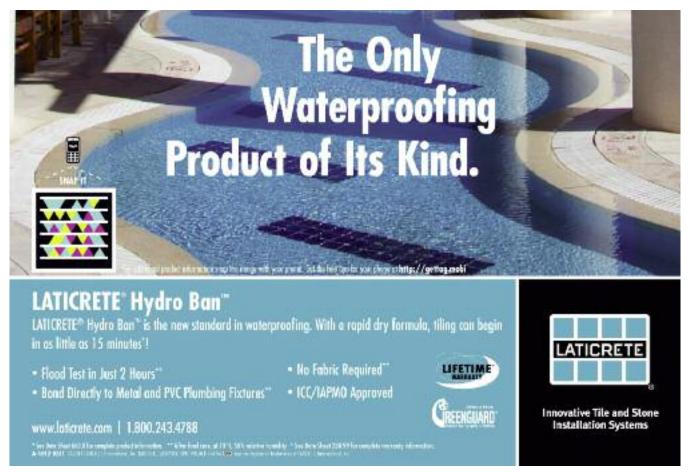
self. Without much intervention on my part at all, the water stayed clear and in perfect balance and seemed to me to be very close to self-sustaining.

The Idea House itself was a smashing success, and the pool was on display for hundreds of tours spread over several Good organization at the pool pays dividends when everything is carried back to the equipment room, where all of the systems, manifolds and plumbing loops need to come together in understandable, workable and serviceable ways.

months – giving me tremendous local notoriety and ultimately propelling my pool construction career. I immediately seized on the ozone/ultraviolet combination and began marketing the systems as "Hydrozone 3."

Since that summer, I've designed and built 28 custom pools using the concept and have others in the pipeline. The configurations change, of course, depending on the design of the pool and what the client wants and is, of course, able to afford.

At a minimum now, all of my pools use multiple floor returns and skimmers. Some still include chlorine as a primary sanitizer; some others use ozone with a small chlorine residual; but most, I'm



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happy to say, go all the way and take full advantage of the combined ozone/ultraviolet package.

Not willing to sit still, we've kept tinkering with system configurations. We're intrigued, for example, by the fact that when you run ozone-treated water directly through an ultraviolet chamber, it results in production of hydroxyl free radicals — an extremely unstable form of oxygen that acts as a powerful sanitizer. This adds a third phase to our chemical treatment program and generates the cleanest, most manageable water I've ever encountered.

The beauty of all this is that we didn't invent any of it. All we've done is combine established circulation-system designs with existing water-treatment technologies and found a potent set of synergies – not the least of which is the saving that comes when variable-speed pumps are used. That step alone more than offsets the additional draws required to run the paired sanitizing systems.

And there's more, including no offgassing from the surface, which means among other things that solid pool covers can be used and will enhance energy efficiency even further. In fact, those savings have prompted some clients to spend more on heating to extend the swimming season – and one has even chosen to leave the pool open year 'round as a result.

One final note on system evolution: I don't make these pools entirely chlorine-free unless specifically asked to do so. When given the option, I choose to work with a tiny chlorine residual as a safety measure for immediate bather-to-water contact. But with the main load of oxidation and sanitation taken care of by the main systems, I'm happy to say that these pools rarely require shocking and always stay ahead of whatever burdens bather loads might have to deliver.

Consumer Demand

All of the benefits of these systems, of course, come at a cost. Given the times, I had no expectation, even with the success of The Idea House, that these projects would catch on, no matter how affluent Long Islanders might be. In fact, I spent a good part of 2008 bolstering up







my service division to keep things rolling through the looming recession.

Much to my surprise and delight, however, a significant number of people we've talked with about new pools or renovations are extremely excited by the ozone/ultraviolet concept. Some just don't warm to it or understand it and others can't stretch to cover the cost, but we've been impressed by the count of people who see this approach as an investment in their lives and in the way they'll enjoy the swimming experience. It's been tremendous.

Even the willing, of course, need an explanation of the chemistry involved and want to know that the benefits are both long-term and sustainable with respect to both operating costs and water quality. It bears mentioning that these

same clients also want quality when it comes to aesthetics, and it's clear that I owe a great deal to the Genesis 3 program for elevating my awareness and abilities on that front.

It's also true that we have a big advantage in servicing most of the pools we build. Not only does this give us the ability to address any minor issues that might arise, but it's also given us the opportunity to analyze how our systems perform – observations that have helped us tweak other installations and enabled all of my clients to benefit from what we keep learning as we move along.

We might have entered into this process encumbered by ignorance, but through the years we've systematically pushed beyond those limitations and are humbled by the progress we've made as we've passed along what's been a very long and at times bumpy road.

It's not lost on me when one of my clients tells me that the water in our pools is *delicious*. Given my culinary background, that might be the best possible compliment I could ever receive because now I know I'm serving my clients the very best "meal" possible!

Some might see all of these extra skimmer ports as visual disruptions in a pool's appearance, but we've found that, by arranging them with an eye to symmetry and balance, they're not any sort of issue – especially when we succeed in blending the skimmer lids into the surrounding decks.





Just about every watershaper knows that concrete is a great material: strong, resilient, formable and capable of long service. But judging by usual practice, says past concrete forensic examiner Jerry Werner, not all watershapers seem to be fully aware of the basic permeability of the material or recognize the fact that almost all concrete structures will benefit from the use of waterproofing agents – a point, he says, that should be considered in the design process.

've come to the world of watershaping from a different perspective.

Back in the 1960s, I worked for a company that built poured-in-place concrete homes in Florida. Right from the beginning, I couldn't help noticing the importance of waterproofing in the performance of these structures – or the consequences of not taking the potential for water intrusion seriously.

My interest in this subject took on new significance in 1989, when I formed a Florida firm that conducted forensic analyses in all manner of structural failures as a service to condominium associations, the highway department and the insurance industry. As part of that work, I saw the countless ways in which moisture could intrude into concrete structures and cause them to deteriorate. And I observed that these issues were particularly problematic around the Florida coast, where salt and water combined to compromise concrete-encased structural steel.

Although my career has taken a number of twists and turns in the past 50 years, I've always stayed involved with concrete and water and eventually began

working on a consulting basis with Aquron, the Rockwell, Texas-based manufacturer of a family of waterproofing products. Eventually, my involvement with this firm led me to my current special interest in watershaping.

I immediately recognized, of course, that at the most basic level, all pools, spas and other types of watershapes exist to contain water. But I also soon learned that, as a rule, many industry professionals had only a limited understanding of concrete's basic permeability and the fact that *all* concrete allows moisture to intrude to one degree or another.

INTO POOLS

I began focusing on waterproofing issues related to watershapes in 2005, and to say that I was surprised by the initial reactions I met in approaching industry professionals about waterproofing would be an understatement. Indeed, it was like hitting a brick wall over and over again: Nearly everyone I dealt with was convinced that the plaster lining of the typical pool or spa or fountain was a perfect waterproofing measure and that nothing else was needed.

It didn't even seem to be a conscious decision: Most simply assumed that the approaches that had been used for generations were perfectly valid, and so they had never even given things a second thought.

Yes, they mostly knew that shotcrete, gunite and poured concrete were all somewhat permeable, but even if they were able to grasp the fact that plaster was imperfect as a barrier to water intrusion, *very* few saw the groundwater that surrounded their shells as any source of concern. As time passed, I came to see that just about everyone was operating with the same mindset.

This was something of a shock to me. Here were structures that contain water on one side but are generally built below grade and exposed to moisture and groundwater on the other. Professionally, I couldn't think of a situation where waterproofing would be more beneficial to a structure's long-term performance, but I increasingly developed a sense that because moisture intrusion with an inground concrete pool is essentially invisible, the industry had accepted an out-of-sight, out-of-mind mentality about the issue.





Moreover, I found that the level of understanding was so limited that even the term "waterproofing" was problematic. (Truth be told, I have my issues with that word as well, and I personally prefer to discuss "moisture intrusion prevention." This is why, in seminars, I poke fun at the terminology and point out that other terms - including "watertight," "water-repellent" and "water-resistant" - only make things more confusing and that what we're really talking about is preventing moisture from entering the concrete. For convention's sake, however, I'll stick with "waterproofing" here.)

Things began to improve, however, when I began having regular conversations about the efflorescence that affects so many concrete structures. This gave me the opportunity to explain that efflorescence is essentially the result of water penetrating the concrete matrix, reacting with the soluble salts it encounters in passing through the matrix. Ultimately, internal pressure from these reactions forces the moisture that now carries those salts out of the matrix and out onto the surface, where the moisture evaporates and the salts remain.

This discussion, I've found, has helped many a watershaper see that solving the

problem primarily boils down to preventing moisture from entering the concrete in the first place.

BIGGER UNIVERSE

I've also learned through the years that people who are unfamiliar with these issues will better understand what's happening if I put things in a broader context.

That's easy, because in my investigations of concrete problems and failures (some of them truly catastrophic), I saw the damaging effects of moisture intrusion on structures that were built to much higher standards and that had been designed for far more critical applications than almost anything I've seen in watershaping.

I've seen moisture intrusion cause significant damage, for example, to parking garages, high-rise balconies, bridge abutments, tunnels and a host of other significant structures. Each scenario is different, of course, but I can confidently say that my experience shows that *all* concrete structures are susceptible to moisture intrusion on one level or other.

This is not unknown to the concrete industry at large: During my time as a forensic investigator, we based certain evaluations on information available through the American Concrete Institute's Standard 318 – a set of recommendations for design engineers that defines issues such as compressive strength for various applications. Based on ACI 318.08, in 2009 the American Shotcrete Association adopted a compressive strength of 4,000 psi as a minimum standard for swimming pools.

For this reason, I was puzzled to learn that, for concrete pools and spas, ACI recommendations were not seen as the standard by many in the pool industry. And that was true despite the fact that nobody questions the standard with other types of structures and that it's not something those who build highway bridges or tunnels, for example, would ever choose to dispute.

In the residential pool industry, however, concrete strength seems to be an enduring subject of discussion, with some standing by a 2,500 psi level as the acceptable norm. Personally, I would agree with those who say that, when properly mixed and applied, that level is so low that it's almost impossible to achieve – in other words, that those who strive to install 2,500 psi shotcrete are actually (if unknowingly) applying 4,000 psi concrete as a matter of course. So to my mind, the "debate" really isn't a debate after all.





What intrigues me, however, are those who contend that by reaching a 4,000 psi concrete strength, they are effectively making the matrix so dense that no moisture can penetrate it. Although I would strongly agree that denser concrete has a greater ability to withstand moisture intrusion, my experience outside the industry with structures made with concrete of far greater compressive strength still reveal damage resulting from moisture intrusion.

This is why I contend that all concrete structures – even those built to the 4,000 psi standard or better – still benefit from *some* form of waterproofing, even if it is only as an extra layer of protection.

BUILT TO LAST

That said, it's important to bear in mind that the foremost preventive measures when it comes to waterproofing are proper engineering and sound construction. It's simple: If a structure fractures, it doesn't matter what type of waterproofing agent you use, because the structure in question will immediately become susceptible to moisture intrusion.

That's why I join those who advocate the use of proper structural engineering relative to soil conditions and other forces that influence a given structure. It's also why I so strongly recommend sound concrete-application practices, especially when it comes to proper coverage of structural steel that is meant to be encased in concrete. Without these fundamentals in place, waterproofing becomes irrelevant.

Returning to ACI 318.08: The document defines three categories of concern with respect to compressive strength, calling on engineers to look at each and define which most critically applies to their situation and the design process: The first has to do with prevention of moisture intrusion in structures intended to hold water. Here, the standard calls for 4,000 psi, again supporting those who call for that as a minimum standard in pool structures.

The second deals with freeze/thaw conditions and includes a recommended strength of 4,500 psi. The third considers coastal areas where chloride intrusion can be a problem and recommends a strength of 5,000 psi. (There's a fourth category dealing with sulfur attacks, but its occurrence is not relevant most of the time.)

Looking at these recommendations, one might argue that compressive strength alone addresses the issue of wa-

Water's ability to penetrate concrete is an issue even in critical applications – as seen here with this parking structure (A) and bridge abutment (B). If concrete structures made to the highest applicable standards are subject to this level of deterioration, it's highly unlikely that, say, the exposed undersides of a pool deck (C) will not display similar challenges.

terproofing. But again, there are numerous examples of concrete applied at levels as high as 7,000 psi – properly engineered and capably installed – that show clear signs of moisture intrusion. So while I certainly recommend strict adherence to ACI standards, prudence also asserts that all critical concrete structures (including pools, spas, fountains and other watershapes) should be installed with additional waterproofing measures in place.

If that position needs support, please consider that the International Concrete Repair Institute has estimated that the total cost for repairing, rehabilitating, strengthening and protecting of concrete structures (including waterproofing) amounts to \$18 to \$21 billion annually in the United States. There's no reasonable way to see concrete watershapes as being somehow immune from these challenges. On that level, it's not so

much a workmanship issue as it is the nature of the concrete beast combined with the characteristics of water and the deterioration it causes.

As for plaster, the National Plasterers Council has adopted the position – rightly so, I believe – that even though plaster retards the intrusion of water into a concrete substrate, it is neither a perfect nor infallible barrier nor a guarantor of a vessel's watertightness.

BETTER THAN THE REST

Given all of this history and the basic natures of concrete, water and watershape shells, I believe strongly that watershape designers and contractors should all be more aware of and in tune with waterproofing issues – perhaps to an even greater degree than other concrete-construction professionals.

Consider water's position (literally) in all of this: It's present inside the pool and, despite plaster's helpful role, does everything it can to find ways out. In fact, it is *always* ready to take advantage of any opportunity to penetrate any lining or find its way around it via the tile line or the various fittings that penetrate a shell.

It's also present *outside* the shell, sometimes as incidental water from rainfall or irrigation, other times as groundwater that flows through a given piece of property. Whatever the source, water comes in direct contact with the back of a shell that has no plaster lining or protection of any kind. And where you might be able to see where it might intrude on the *inside* of a watershape, there is simply no way to know what's happening on the *outside* of the structure because it's buried or otherwise hidden from view.

Where outer walls are exposed, as with vanishing-edge walls or raised spa walls, efflorescence resulting from moisture transmission is quite frequently an issue. Also, water in transit over the face of, say,

In many cases, even carefully crafted pools will fall victim to a degree of moisture penetration that manifests itself as efflorescence (A & B). In others, poor construction will be unmasked by water's ability to work its way through any flaws it finds in a shell (C).







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a tile finish can pull out soluble salts from the grout as well as the mortar bed. On smaller scales, there are concerns about rainwater falling on decks or, in some cases, consideration of splash-out and the possibility that this water might offer opportunities for moisture intrusion. Saltwater chlorination has been blamed for deterioration as well.

It's a tough environment, in other words, and even temperature fluctuations play an important role. In my forensic work, I've found numerous instances in which sudden changes in temperature have caused expansion and contraction that led to tile cracking or pop-offs – thereby giving water direct access to the concrete substrate. Proper waterproofing can reduce the effects of these extremes.

And if you factor in other features – grout, coping, deck material, artificial rock structures, natural rock features and more – virtually everything in and around a pool, spa or other watershape will present situations in which waterproofing might offer a much-needed layer of protection.

At that point, the questions are all about what you need to protect. Are you willing to take the chance of efflorescence building up behind tile on a vanishing edge wall and eventually causing popoffs? Is it worth risking groundwater intrusion into a shotcrete shell that might eventually corrode its structural steel? Do you want to protect your perimeter-overflow gutter system?

Given a clear, understood choice, my sense is that most professionals (and their clients) will answer yes to these and a host of other questions. But if you ask those same professionals if they've factored all of this into their previous projects, the honest among them would mostly say no. And this is so despite the fact that waterproofing should be part of the design process, not an afterthought.

Preparation of deck and pool surfaces can involve the use of a single waterproofing approach (A), but in some cases – as with the preparation of the pool in B for an all-tile finish – it warrants use of waterproofing schedules that use multiple treatments, sometimes from multiple suppliers.

YOU CHOOSE

Of course, saying *yes* would be a lot simpler if waterproofing was a one-solution-fits-all proposition – but it's not. There are instead a whole range of possibilities and all sorts of products, and doing the job correctly means selecting the right approach for the application and following the waterproofing supplier's instructions to the letter.

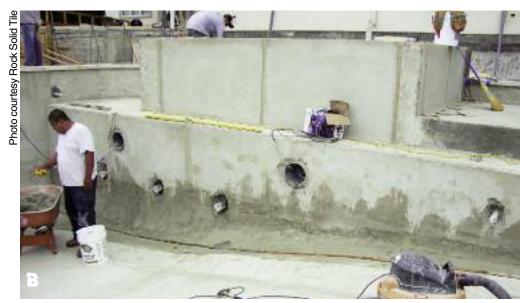
That means doing some research and asking lots of questions, which is more than some watershapers prefer to do. But if you leave waterproofing to guesswork or even to assumptions based on experience, it's likely you may go to a lot of trouble and not achieve the elim-

ination of moisture intrusion you seek.

Explaining all of the nuances of available waterproofing products and options would take a discussion several times the length of this article, but for starters, it is useful to know that they come in three basic forms: coatings that are applied to the surface to create a membrane; admixtures that are intrinsic to the concrete and are added at the mix plant; and penetrating spray-on products that are applied topically and migrate into the concrete matrix.

Each of these has its place, and in the spirit of keeping things generic here I won't make any specific recommendations. I won't even pitch the products we offer at Aquron, because as good as they





may be, they only have true merit if chosen for the right application and properly applied. And that's true of many products in the marketplace, no matter the supplier.

As I see it, my competition isn't other waterproofing companies; rather, it's the watershaping industry's general lack of acceptance of the need for waterproofing – an information gap I hope I have remedied to some extent with this article.

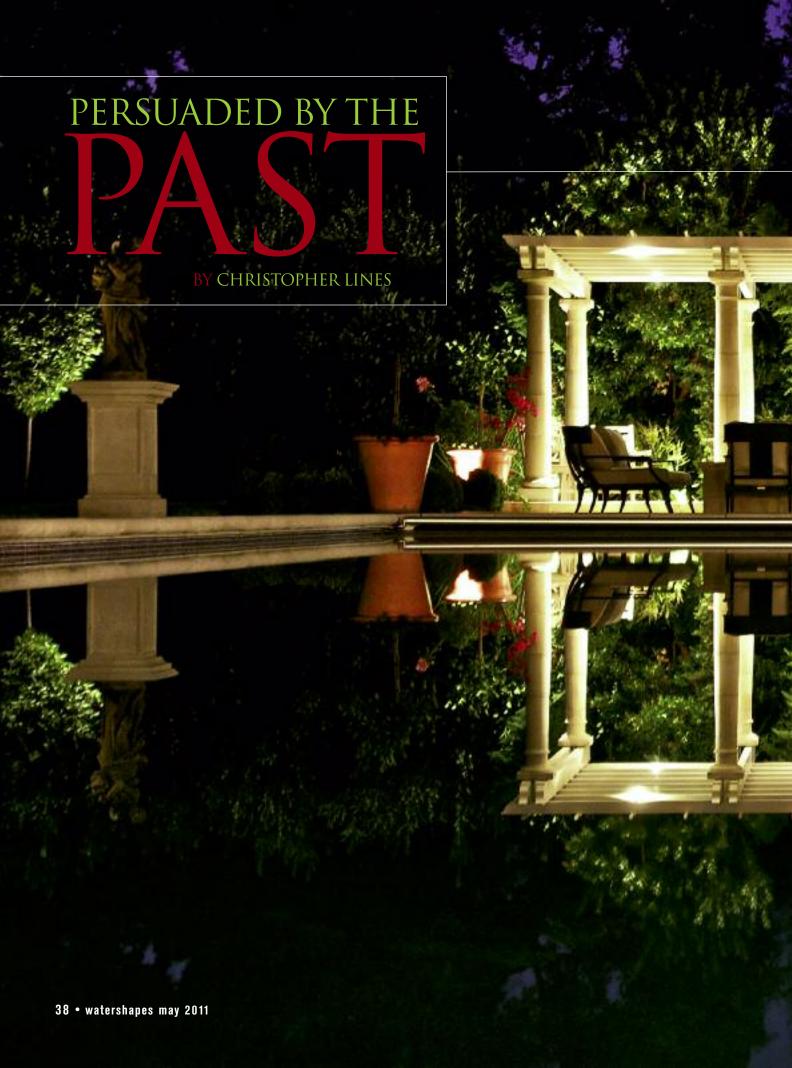
It's also important to note that no waterproofing system is flawless: Water is called the "universal solvent" for good reason, and all of us in this business know that, given enough time, water may find its way into and through almost any material to which it is

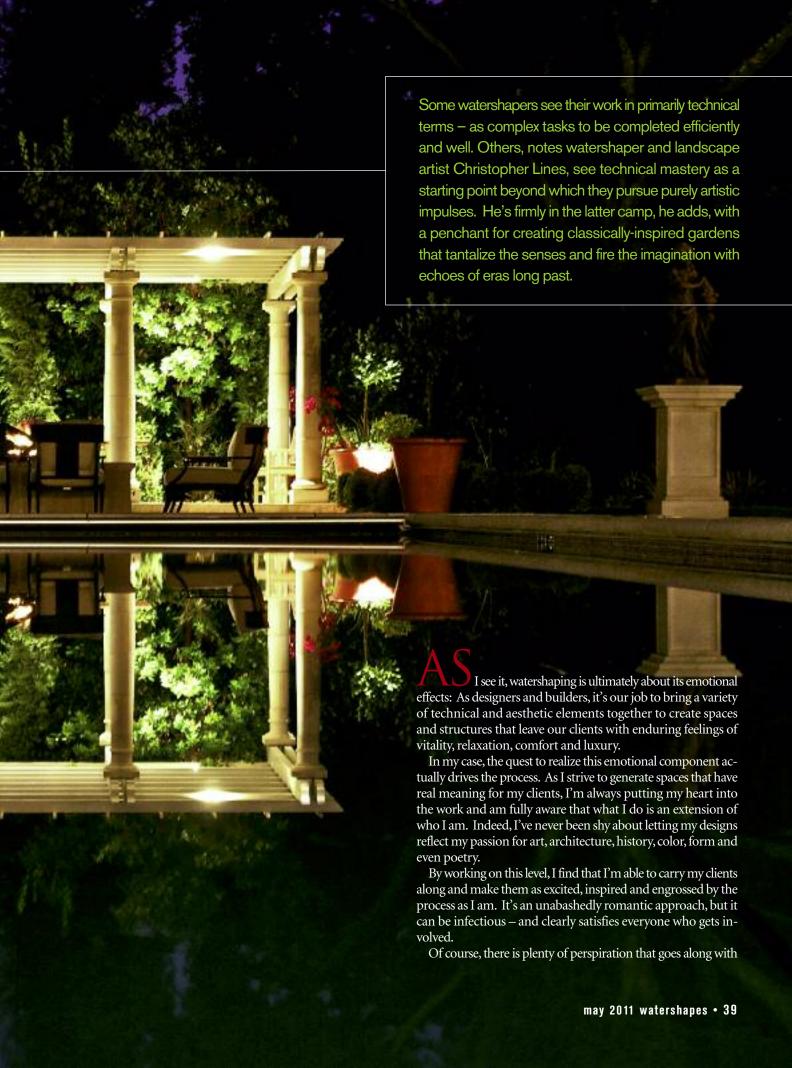
steadily exposed. As I see it, what watershapers need to do is stack the deck in their favor as best they can – which makes waterproofing a smart and affordable form of insurance.

I've long heard it said that watershapers have to be good at (or at least familiar with) disciplines ranging from masonry, hydraulics and structural engineering to water chemistry, material and equipment selection and design aesthetics, among others. With so much going on in today's watershapes, with so much required to get the job done right, it only makes sense to try to make sure the primary element we all work with – that is, water – stays right where it belongs.

Waterproofing is a concern well beyond the shell itself – as here, where the coping, deck, natural stone and rock waterfall will all benefit by being protected from moisture intrusion.







the inspiration. For all of my enthusiasm, I spend a tremendous amount of time designing these spaces and selecting elements that will populate them, from the largest waterfeature to the smallest plant. I also closely manage the construction process, never relinquishing control because with each and every project, I'm expressing my own belief in the concept of creating highly personalized paradises.

The key, I've found, is careful selection of a *style* that works for the property, for the clients and for me as the designer.

REACHING BACK

If I had to declare a stylistic preference (or even a speciality), I'd have to say that I'm a huge proponent of Classic looks and have spent much of my adult life educating myself about Classicism and a number of related design traditions.

What you discover through study of this sort is that just about every stylistic compartment you consider includes long lists of variations, sub-movements and quirks. In fact, what we even mean by the term "Classic" is quite varied and vast. That's why, when I'm working with clients, I find that I need to narrow the focus and get as specific as I can with them as early in the process as possible.

Let me define why that's important: When my clients and I talk about, say, Classic design, the reference might be to forms of Greek, Etruscan, Roman, Islamic or Asian architectural design – or even to details of High Renaissance, Baroque or Rococo art. There are even references to "Classic Contemporary" – all of which can confuse my clients if I'm not careful with the terminology and how we share it.

Recently, for example, I finished an elaborate project for clients who had relocated to the United States from Italy and had distinctly European frames of

Not only do these historic fountain forms display the evolution of these special watershapes, but they also represent a variety of looks that can be used today with specific clients, settings and projects. Sometimes, depending on the stylistic target, a simple wellhead or waterspout will be a perfect fit, while other times only an elaborate tiered structure or leaping jets of water will do.















reference. But once we started talking about their desire for a "Classic" project, it took us some time to work through all of the possibilities before settling on forms of the Renaissance from the 15th and early 16th centuries.

To get there, we had to run through all sorts of precursor and successor styles, explore Moorish Spain and get past the French and German and Italian influences woven into the design fabric of that era. In this case, we soon boiled things down to a rather specific moment early in the 16th Century and a period known as the Italian High Renaissance.

This was the great period of Leonardo da Vinci, Raphael and Michelangelo as well as Bramante, the great architect of that time and place – and we used it as a filter in assessing the elements we were considering for use in our own project.

The art and architecture of that time is all easily accessible in books, of course, which is one of the reasons why I've amassed a collection of nearly 2,000 such volumes covering just about every type of architectural and landscape style and tradition to share with my clients.

But I am also a firm believer in the value of travel and of seeing these objects with my own eyes, and I've been very fortunate to have spent a great deal of time traveling throughout Europe and especially in Italy, where I've absorbed everything I can from the streets and galleries of Florence and Rome and visited such places as the Villa d'Este and the Vatican among many others.

Those experiences (and more) are on display in the columns, steps, pilasters and colonnades I selected for these Italian expatriates. In one way or another, everything within the package qualifies not only as Classic, but as Classic of a very specific sub-type.

PART OF LIFE

Of course, the Italians had no monop-

Spaces designed in classic styles are almost always governed by axial symmetry – a compulsively formal grid that organizes primary viewpoints, pathways and placement of objects within these compositions. Experience shows that getting this right is often the most direct way to please classically oriented clients.







oly on Classicism. There are Classics in the German style, for example, and in French, British and Spanish styles as well. I've spent my career figuring out and working with the distinctions, in each case responding to some particular quality desired by my clients as expressions of *their* passions, backgrounds and romantic impulses.

At this stage of my career, this doubtless means that I'm attracted to projects of a certain type – and very likely that clients come to me because I'm known for my fascination with the Western traditions of art and design. Whether it's about culture, royalty, governance, travel, resources or vernacular structures, I pursue timeless links to the romance, struggles and triumphs of the past.

In short, I seek connections in my own work and do what I can to link my clients to traditions that have defined all of us through important stretches of human history.

That's all heady stuff, but it's only worth indulging because it also has a practical side: As part of the design process, I *always* encourage my clients to purchase some genuine artifact (or artifacts) from the past (if they can in any way afford it) so that these new watershapes and landscapes have something of our subject period as part of the composition. Even if it's no more than a single reclaimed brick, its presence creates a distinct tie to the past that lends signif-

icance, meaning and emotional connectivity to the project.

And if that artifact is a wall fountain or a sculpture or some other object of substance, all the better!

As mentioned above, these elements carry narratives that clients will value themselves and will share with family and friends. Let's say they traveled to Rome to purchase them and had side adventures along the way: Through these objects, the new spaces are vested with stories that reflect ages long past as well as current personal history. They are infused with life in ways that cannot be achieved with replicas, no matter their quality.

In design terms, these artifacts become wonderfully powerful focal points or accents within a given space, serving as destinations, setting up vignettes and establishing tone that will pervade and enhance their surroundings.

And this works even if the artifact is encompassed by new materials and objects created to render the illusion of age and tradition. In that sense, the designer is using education and life experience to channel the works of artists and artisans of the past, using insights drawn from their styles and approaches to devise spaces that bring them to life once again.

Happily for those of us who work in these styles, there are good resources at hand including several suppliers who offer products that replicate works of antiquity. The availability of these statues, fountains, columns, finials, and assorted other details enable us to work more or less as set designers and significantly enhance our ability to transport our clients to other times and places.

But again, this is not a casual exercise: To make the illusion work, you must understand the details, know the vernacular and nuances of the particular style and, most of all, know how the various elements all fit together. There are no shortcuts. You have to be sure of yourself, know what you're pursuing – and figure out a way, of course, to bring your client along on the journey.

FOLLOWING LINES

When working in one form or another of a classic style, there is always going to be some sort of framework or grid or pattern or array of elements that define the look you seek to invoke.

That may seem confining, and I've observed with some projects that it can lead to conventional or even humdrum results. For my part, however, I find the conventions of these forms to be liberating. As in jazz music or improvisational theater, the structure is what propels and shades the creative decisions the artist makes.

Once you hit certain notes or echo a distinctive delivery, you're on your way. If you're working in French Gothic, for example, once you've accommodated







No matter whether my clients are after spaces reminiscent of Classical Rome, Renaissance Italy or Baroque Spain, I know I can find accessories that will mentally transport them to just the right time and place. These include everything from window brackets, wall fixtures and urns to iron gates, garden statuary and architectural fixtures – all available in modern reproductions.

the sensations created by Gothic arches, flying buttresses and ribbed vaults – and defined distinctions between what you're doing and the contours of, say, Islamic arches or Roman barrel vaults – then you've paid the necessary homages and can move along creatively.

It also helps that precision isn't always necessary, basically because there are few sharp lines to be drawn among classical forms. The designers of the High Renaissance worked with a design vocabulary dictated largely by the Romans and by the Greeks before them, with each subsequent movement picking and choosing among elements and using them as seemed appropriate.

The colonnades and domes of Roman architecture, in other words, were reborn (literally) during the Renaissance, but they also existed in the more recent context of Moorish influences from Spain and Gothic influences from France. Knowing these lineages makes it possible to work with and across styles so long as



what you're doing doesn't violate the spirit of what you're after and you and your client have developed a vocabulary that lets you discuss these nuances and crosscurrents.

In my experience, navigating these waters means adhering to a few core values. With Classic landscape designs, for example, spatial organization is critical, and I know I must observe certain principles related to symmetry, rectilinear

geometry and development of axial sight lines. And this is true no matter the project's scope, whether I'm working with a grand estate the size of Versailles or on a private residence with a constricted suburban yard.

As a result, every Classic design I do starts with some form of axially defined layout, which can mean centering a fountain or statue in view of a key window or doorway and using it as a focal point to govern pathways and placement of other structures, no matter the size of the space.

From there, I work with additional stylistic elements, planning an English garden, for example, with crisp, orderly rows of hedges or a Spanish Colonial quadrangle with wonderful garden gates. This flexibility is what I love about digging into the Classics.

And you can even break the rules if you really know what you're doing. In fact, asymmetrical balances can be extremely stimulating: If you have a good reason for doing so, a bit of imbalance that would typically be objectionable can work within these spaces.

WATER'S PRESENCE

Beyond design traditions, I'm also passionate about using water in my projects. Whether it's a wall fountain, a runnel system, a tiered fountain, a swimming pool or a pond, these features can be the key to almost any design in any style.

Whether it's quiet and reflective or an-

imated and turbulent, water is always a dynamic design element. Designers of days long gone knew this, of course, and it would be interesting to meet the first artists who figured out that simple well-heads could be transformed into majestic fountains serving triumphal civic purposes in town squares and hear what drove their designs.

As time passed and whatever specific paths were taken, water-as-utility eventually became water-for-display. In some cases, water that was used for drinking or for air conditioning became water used to demonstrate wealth and power or artistic ambition. In fact, the modest wellheads of Rome's past *did* eventually evolve into grand, water-driven fountains of great beauty.

Fortunately, my clients typically share my love of water, so it's not very difficult to convince them to invest in some type of watershape – or several watershapes, as the case may be. Examples of fountains abound, but I am also well aware

that Bramante didn't specify a single swimming pool with any of his projects.

Water of swimming depth is indeed a modern anachronism in a Classic setting, but there were many gardens that included reflecting pools or even rain-collection basins that are not out of place. It's not much of a reach beyond either one of those to consider a vessel suitable for human immersion.

Beyond basic shapes (and depths), it's all about the details with pools. They must be adorned appropriately – meaning mosaics rather than fields of glass or ceramic tile, for example – using materials the way builders of the Renaissance would have inherited from their Roman forbears. An air of authenticity is the key, which is why I often accent these pools with statues and small fountains.

And always, surrounding these vessels appropriately is of crucial importance. Architectural details, statuary and plants are all vital, and they all must be placed in the space using the governing princi-

MATTERS OF STYLE

When I begin working with clients, style is a topic from the start – both underlying and expressed.

From the first second of my first site visit, I'm all eyes and ears, noting the home's architecture, spotting any art on the walls, sizing up the furnishings and even thinking about the neighborhood in which they've chosen to live. From the outset, I'll do all I can to pick up cues that will guide the design process.

My clients are very important in this process, of course, but I'm always aware that I am the one who is guiding the work, using my own thoughts and ideas to stimulate theirs as we develop wish lists and put some flesh on the skeletons of their ideas.

During our discussions – all of them, but especially the early ones – I'm drawing them out, getting them to relate experiences and memories and developing a language we will share through the entirety of the process. It's also about references and helping them develop a visual vocabulary we'll have in common as well, which is why I will share books and magazines with them and lead them to explore key web sites.

As we communicate along these lines, this educational process typically grabs hold and my clients almost always become excited and inspired. I guess it's just human nature to want to be knowledgeable, and I see what I'm doing as helping them expand their frames of reference and classify past experiences with greater clarity and vibrancy.

Those mental connections also set the stage for their sustained emotional involvement with the project once it's complete.

Taken together, all of this groundwork generates momentum as we move forward. From the earliest stages, I'm choosing materials and objects to inhabit their spaces – items that have both physical form and some sort of function but that also have certain narratives attached to them.

If a client can look at the material chosen for the decking (let's say it's a nice Travertine or marble) and recall conversations we've had about the material's origins and historic uses, they will not only take pleasure in sharing what they know with others, but will also have an emotional attachment to it as a familiar, understood part of their own personalized space.

From my perspective, the more specific these key discussions are with the clients, the more freedom I have to respond creatively while simultaneously guiding their expectations. As I mention in the accompanying text, my design work is extremely detailed, and following along as the process unfolds places certain responsibilities on my clients to keep up and understand what's happening.

And I have found this to be true no matter the style in which I'm working. Whether it's Contemporary, Prairie Style or European Classical, it all works best when their involvement is both emotional and all-encompassing.

-C.L

ples of axial organization. Doing this well is of special concern around watershapes, because they can draw too much attention and ultimately become disruptive.

This is why I like using aged or distressed materials as coping for these waterfeatures: It gives the impression that the rest of the space was planned around a much older structure at the core.

MAGICAL ROMANCE

This text is meant to illustrate my belief that, far from being confining, working within established design styles and traditions is actually liberating. Yes, these designs require a disciplined approach, but there's room for great creativity here.

For me, the factor that helps me move easily under the Classic umbrella is the fact that I bring a sense of romance to the table. It's the X factor that keeps me moving and makes it possible for me to forge the kind of connections that must be there if I'm to satisfy my clients.

No matter how organized the space, within each of my landscapes I make certain to include something stirring and emotionally evocative that will pull my clients into the space over and over again – something that will get them so fired up that they'll never tire of telling the umpteenth guest the story of how they went to a shop just outside Rome and found the old horse trough that now feeds water to their swimming pool.

That sort of linkage will make family afternoons, garden parties and quiet evenings all that much more special: the food will taste better; the wine will be superb, and everyone there will be enveloped by a sense of timeless beauty not only in visual terms, but also in smells, sounds and tastes.

And if the tomatoes in the salad and the herbs in the sauce were grown in part of the garden; if the fragrant flowers floating in the table's bowls came from vines tracing their way up the loggia; if beautiful music accompanies the gentle sounds of moving water, then this is a space that will link my clients and their guests to moments long past, half a world away from their daily routines.

You can spend a lifetime chasing the ages in this way. If you do so with passion and romance, I can think of few better ways to spend your time.







When I develop a project in a particular style, I know that the results I achieve will be measured against my clients' understanding of the features of that style and their perception of how I've organized the space, dealt with its symmetries, used appropriate materials and included objects and details that attach them emotionally to what we've achieved together. If it all works, the fact that I've altered the program by using, for example, a sweeping vanishing edge is less a disruption than it is a welcome variation on a theme.





ack in 1949, a prominent couple living in Litchfield County, Conn., decided they wanted to build a contemporary-style home that would stand out among the classically styled residences that marked the area. After conducting extensive research, they retained the renowned Bauhaus architect and Modernist artist Marcel Breuer.

The home Breuer eventually designed for Leslie and Rufus Stillman pays testimony to the stark beauty of minimalism: The daring, box-shaped, two-level structure featured an array of contemporary elements and appointments, not least of which is a large, rectilinear swimming pool accessed by a dramatic, cantilevered staircase from the home's upper level. (Things worked out so well here, by the way, that this was just the first of three Breuer homes commissioned by the Stillmans.)

The couple avidly collected modern art, so the home became a showplace for a number of original pieces by several of the mid-century period's greatest artists, including Alexander Calder. Although perhaps best remembered today for inventing the mobile, Calder was asked in this case to paint an original mural on a large block wall set above the deep end of the pool. The results were, in a word, *spectacular*.

But let's fast-forward 60 years: By 2010, the Stillman House was in need of restoration, and even the vivid Calder mural had cracked and eroded from exposure to the elements. Happily, this

proved a turning point, as the property's new owners announced their intention to completely restore the house and return it and all of its features to original condition.

A RARE OPPORTUDITY

We at Drakeley Swimming Pool Co. (Bethlehem, Conn.) were contacted by the homeowners at the recommendation of a mutual friend at some point after the Stillman House restoration project had begun. They told us that they had been working with a local plastering company who offered the suggestion that all the pool really needed was a new plaster finish.

They wanted a second opinion, and we were happy to oblige. What we found on site was a raw concrete structure that had been treated with no more than a cement-based sealer – no plaster at all, no waterline tile, no coping and no more than an unusual rolled-edge detail at the top of the pool. The plastering company had recommended a white, exposed-aggregate finish, and the homeowners were rightly concerned that this wouldn't look at all like the original, especially at and above the waterline.

And anyway, our site review indicated that this project needed to be about much more than a replastering job: We saw the need for a new equipment set, revised plumbing and attention to a host of other details – but nothing much out of the ordinary for a pool that had its original cast-iron plumbing, fittings and bronze fixtures. We noted that at some point a heater had been added, but beyond that, we saw no signs that anything had been touched in a serious way since 1950.

The pool itself had been dry-gunned and measured 18 feet wide by 36 feet long, with the deep end at eight feet (next to the mural wall) then rising sharply to a shallow end, where we found an unusual 18-inch depth. The structure sits on a terrace overlooking a beautiful wooded valley that stretches out beyond the mural wall, and perhaps the most interesting feature in a simple design was the cantilevered landing that offered access to the pool. (This was, by the way, a design detail Breuer revisted 15 years





When we arrived on the scene, the pool still held water and was structurally sound, but it had suffered in other ways through its 60 years of service and was clearly in need of aesthetic and mechanical attention.

later in creating the entryway to the Whitney Museum in New York.)

The pool's shape was clearly simple, but this was a progressive watershape for its day and bears witness to an early application of dry shotcrete in pool construction (including the rounded floor-to-wall transitions).

We also had to work with the fact that the homeowners initially thought that all the pool needed was some cleaning up to become operational again. As we dug deeper, we had to inform them otherwise: The pool needed complete renovation and updating, we said, and restoring it to its original appearance would take the same kind of care that was being applied to the home itself.

ORIGIZAL IZTEZT

At the initial meeting with the client, it was unclear to us that the project was about *restoration* rather than *renovation*. As a result, we had been considering a number of ideas that would have altered (and, we thought, enhanced) the general appearance while staying close to the original program.

We also talked with some colleagues about the project – including, for one, David Tisherman of David Tisherman's Visuals, Manhattan Beach, Calif., who suggested extending the pool around and past the mural wall to create the impression that the artwork was floating on the water.

I actually proposed this idea to the homeowners, who politely redirected The pool needed complete renovation and updating, and restoring it to its original appearance would take the same kind of care that was being applied to the home itself.

my thinking and made it clear that the work being done throughout the entire property was aimed at bringing things back to original condition to the greatest extent possible – pool and mural wall included. This meant we had to shift gears, but it did nothing to dampen our enthusiasm for the tasks at hand.

But before we could get involved with the mural, we had to set things right with the pool, which needed all sorts of attention and carried its own challenges. First, for example, we had to assess its basic structural integrity. It hadn't been used for several seasons and had been blackened by dirt and debris. Once we cleaned it up, we found some surface cracks, but otherwise and overall, it was structurally sound.

The plumbing was another story: It all had to be updated while avoiding new penetrations or other structural rework-

ing. The same was true of the equipment set, which needed upgrading with energy efficient pumps, modern filtration, a new heater and a control system.

One of our first challenges had to do with the skimmer. What we found was an old-style, no-niche fitting that extended from the wall and connected to a bobbing-style unit (once common but rarely seen these days) supplied by Aladdin Equipment Co. of Sarasota, Fla. Given the rolled edge, we knew we wouldn't be able to use a modern substitute without completely disrupting the original appearance.

This meant that we'd either have to fabricate an exact replica of the original skimmer or find one on some supplier's back shelf. Playing a hunch, I contacted a friend at Paddock Pool Equipment (Rock Hill, S.C.), which was in business back in the '50s and, I hoped, might have some useful





It helped significantly that the early history of the house had been well documented and thoroughly photographed. This rich background answered many questions and sped the process of deciding just what needed to be done.

information in its archives. I described what I was looking for and asked if they might know of such a product or, better still, might have it in stock somewhere.

My friend said he'd look into it and soon called me back with a report that there were two on the shelf. I purchased both, knowing that they might be the only two such skimmers of their kind available anywhere. One was in mint condition; the other had become discolored through the years. We decided to use the pristine unit and kept the other as a backup.

REOREATING A OLASSIO

Luck was on our side, it seemed, and stayed around for the rest of the project.

We knew, for example, that local building codes would not allow the skimmer to be the only suction source, so we had to rework and split the main drain to bring things up to current safety standards. This would mean either digging under the pool or coring out the original drain – and probably both.

As we started pulling things apart, however, we noticed that at some point someone had inserted a run of black polyethylene piping down to the main



Finish Question

As mentioned in the accompanying text, the historic pool seen here was originally finished with a white, cementitious sealer – very common in the New England area in 1950.

When it came time for us to resurface it, we stuck to the spirit of restroration that guided the project and selected a similar sort of sealer – in this case a Thoroseal product made by BASF Corp. of Shakopee, Minn. Even though this choice made sense in physical and aesthetic terms, we all saw it as a near-barbaric way to finish the pool as it does not compare favorably with today's surfacing products.

It was so rough, in fact, that we felt compelled to make sample boards to make absolutely certain the homeowners knew what they were getting and also to test out a variety of possible application methods. The product is typically applied over large surfaces with thicknapped rollers that create very rough textures. For comparison, we also prepared boards onto which we'd brushed or sprayed the material, giving us a representative range of textures.

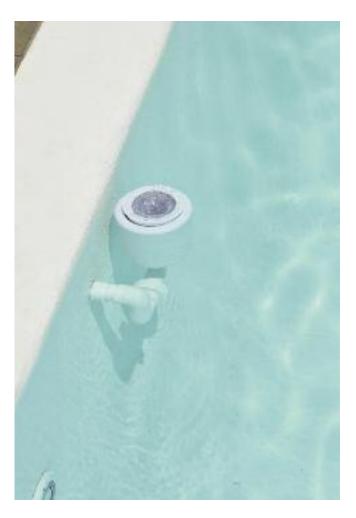
Ultimately, we worked with the rollers, largely because we had a sense that was how the work had originally been done in 1950. The resulting surface has lots of texture, but as best we can tell it most closely aligns with the original intent.



- **J.B.**

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With exact restoration in mind, we proceeded with extraordinary care in selecting materials and finishes to get the job done. This included preparation of various sample boards for the gleaming interior finish and sourcing a replacement for the old-style skimmer, but it also involved finding appropriately sleek lighting fixtures — an amenity not originally included in the pool.



drain, using the original cast-iron pipes as a sleeve. We pressure-tested the poly line: It held up well, so we were able to use it and, as a result, all we had to do was cut into the shell to create the split main drain. We also used a variable-speed/variable-flow pump (made by Pentair Water Pool & Spa, Sanford, N.C.) that includes an onboard SVRS device as another safety layer.

(In removing the old main drain we made what was, at least to us, a truly amazing personal discovery: Inside we found a bronze Paddock fixture that made it certain the pool had originally been built by the grandfather of Bill Drakeley, our company's president. He was the only custom builder in the area at that time and was the only one in the region who used Paddock equipment.)

From that point on, replacing the plumbing was a simple matter of opening up the ground behind the bond beam and running a new plumbing loop. We had to make a few new

penetrations to add some return lines, concealing them as best we could as white, flush-mounted fittings, but by and large what we did was minimally intrusive both in physical and especially in visual terms.

The only true alteration to the original design had to do with adding a pool light on the house side of the watershape to give the setting some added drama at night. We core drilled the niche and powder coated the entire assembly in white so it would blend in with the surface. The light came from Hayward Pool Products (Elizabeth, N.J.) and was chosen for the style of the lens, which seemed to fit best as part of the contemporary design and may well have been something the architect and artist might have used if it had been available when the watershape was constructed.

As all of this basic restoration work moved along, we began to get increasingly excited by the prospect of the project's main event and the reconstruction of the wall and restoration of the Calder mural.

The mural had been painted on a block wall 12 feet, six inches tall and 22 feet wide. The wall's footing, unfortunately, had been set in gravel and had gone out of level by about four inches in the course of 60 years. As a consequence of this general decline, water had entered the block structure at the top of the wall and had penetrated through the block, lifting the paint and substantially destroying the mural's surface.

STEP BY STEP

The painstaking restoration process was undertaken with the help of the Calder Foundation and with the aid of contemporary photographs as well as information on the original dimensions and even on the paints the artist had used.

Indeed, the design and construction of the house had been documented in great detail (including photographs I found on a visit to the Litchfield Historical Society of a mock-up and full-scale rendition made by Calder for the Stillmans' approval)—and in general we followed every lead: The current homeowner's passion for Breuer and Calder was so great that there would literally be *no* unanswered questions.

Our part in this was advising on rebuilding the wall, which was upgraded with 48-inch deep footing designed to do a much better job than the original of withstanding local freeze/thaw conditions. The area was also graded and a proper drainage system installed to protect this base before every one of the carefully marked blocks was put back in its exact, original position.

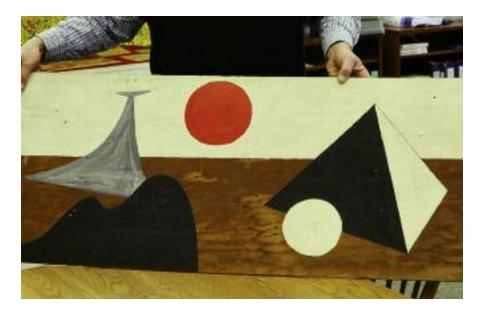
Once the wall was up and we'd sealed it with base coatings to create a proper texture for application of the mural, the homeowner set about recreating the bold yet simple geometric forms Calder had used to link his work to views of the valley beyond.

The wall actually obstructs a large portion of a wonderfully scenic view of forest-covered hillsides – an incredibly bold step on Breuer's part, but one that Calder eased by incorporating representations of distant contours into his composition in a way that effectively comments on, extends and engages the view.

There's an orange sphere, for example, that represents the sun hanging in a roll of the hills, along with a lower sphere that represents the moon, a triangle that represents the mountainous terrain and a conical shape that suggests a volcano (a truly exotic touch, as there are none in the region).

In other words, the mural is both a representation and a part of the land-scape view—a pioneering work of environmental art that fits perfectly within the context of Calder's exploration of more mobile forms that participate in their settings.

Before painting the mural in 1950, Alexander Calder prepared a full-scale mockup for client approval. We gained access to that plywood panel through the local historical society, and it was amazing to see how meticulously the artist had recorded measurements and so clearly defined the various spatial relationships.









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n the Spotlight

Paver Jointing Sand



TECHNISEAL (Candiac, Quebec, Canada) has introduced HP2 Polymeric Sand for use with pavers. Fast-setting and formulated for the toughest applications, the material offers optimal strength and durability even in high-humidity locations and becomes waterproof in only 90 minutes. It also can be used with joints up to four inches wide, which makes it ideally suited for use with natural stone.

Dehumidifier



EBAC INDUSTRIAL PRODUCTS (Newport News. VA) offers the Model WM80 dehumidifier for use with indoor pools and spas in residential or commercial applications. Equipped with a high-efficiency rotary compressor for low amp draw and high capacity, the 360-cfm airflow unit can be wall-

mounted or freestanding and also features an inlet air filter, a cross-flow fan and an internal humidistat.

Robotic Pool Cleaner

ZODIAC POOL SYSTEMS (Vista. CA) has introduced the Polaris

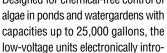
9300xi Sport, a robotic cleaner for inground pools. Designed with a high-capacity filter canister, the



unit features a powerful vacuum system that picks up larger debris quickly while maintaining maximum suction throughout the cleaning cycle. It can be operated in an automated cleaning mode or as directed by a hand-held remote control.

Ionizing System

ATLANTIC WATER GARDENS (Mantua, OH) has introduced the Triton Ionizer. Designed for chemical-free control of





duce copper, silver and zinc ions into the water to keep it crystal clear. They are also safe for use with fish and plants and actually promote healthy living conditions in ponds.



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Glass Tile Collection



LIGHTSTREAMS GLASS TILE (Santa Clara, CA) offers the Renaissance Collection of glass tile. Designed for use at the waterline or on the interiors of pools, spas and fountains, the tiles can be used in hot or freezing climates: are thick and substantial; feature permanent. transparent color within the glass; and have edges and corners that are finished, shiny and smooth to the touch.

Rain Trees

KENNETH LYNCH & SONS (Oxford, CT) offers a range of sculptural fountains for use as centerpieces or accents in landscape designs. These products include Rain Trees. which are made by hand in copper and bronze and feature copper leaves plumbed as waterfeatures. These sculptures are intended to stand within basins made using the com-



pany's pool curbing and can be customized to suit any setting.

Planting Systems



TUBE PLANTERS (Garden Grove, CA) offers flexible geotextile fabric planters designed for use with new or existing watershapes and rockscapes. The fabric sleeves are four to nine inches in diameter and are machine-filled with uniform-density soil mixes. They can be at-

tached to rock structures where plant life would grow naturally between boulders, in crevices and along stream or pond edges.

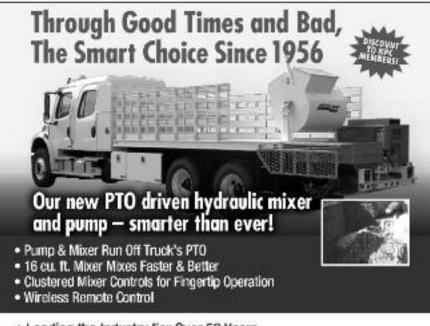
Drain Renovation System

QUAKER PLASTICS (Schuylkill Haven, PA) has introduced Paver Drain Overlay in white, tan and gray colors. Designed for use in the renovation of old drains and decks, the product installs easily over old drains, fits



flush with one-inch paver blocks and has a notched side panel that can be snapped off so the product will fit flush against walls - no need to dig up old drains or work with replacement caps.

Continued on page 58



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In the Spotlight

Natural Public Pools



BIONOVA NATURAL POOLS (Hackettstown, NJ) offers literature on the installation of natural swimming pools in public settings. The four-page, full-color brochure defines how these water-

shapes mimic the proven natural processes that keep wetland waters clean – and do so with smaller carbon footprint, no chemical usage, less maintenance and lower operating costs than conventional public pools.

Variable-Frequency Drive



PENTAIR WATER COMMERCIAL POOL & AQUATICS (Sanford, NC) offers the Acu Drive XS Variable Frequency Drive. Designed specifically to save energy costs while optimizing pump-room operation, the compact unit enhances hydraulic performance, can be used indoors or out and has a payback schedule so minimal that the control panel displays the time remaining until the unit pays for itself.

Concrete Products Catalog

LEGACY DECORATIVE CONCRETE SYSTEMS

(Springfield, IL) has published a catalog on its line of concrete colorants, finishing products, tools and sealers. The 24-page, full-color booklet includes product descriptions; color charts for a wide array of coloring systems and resurfacing products; finishing aids; surface protec-



tants; and a collection of tooling mats and accessories for concrete texturing.

LED Lighting

kichler Lighting (Cleveland, OH) offers the Design Pro LED lighting series. The line includes compact accent lights for underwater use in ponds, fountains and other waterfeatures or in applications beyond the water's edge. It also features hardscape lights



for illuminating retaining walls, columns, steps and other outdoor areas; and path lights in a wide range of materials and finishes for every landscape.

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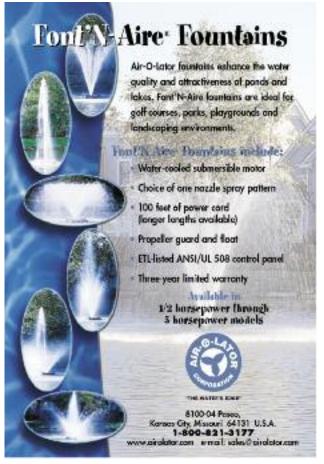
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Big Butterfly Valves



GF PIPING SYSTEMS (Tustin, CA) has extended its line of large-diameter butterfly valves to include sizes from 14 to 24 inches. Each wafer-style, polypropylene unit has complete modularity for easy interchangeability, excellent corrosion re-

sistance and a unique design that allows the disc to completely disengage from the disc seal (even when partially open) for long service life and reduced time in maintenance.

Rebar Cutter



BOSCH (Mount Prospect, IL) has added a straight-shank rebar cutter to its line of tools for use with hammer and rotary drills. The bit lasts

up to twice as long as other rebar cutters and drills through rebar up to 36 percent faster using a unique flute geometry and steep spiral design to remove debris quickly. There's also a relief hole incorporated into the cutting surface to dissipate heat and facilitate slug removal.

Interactive Water Play

VORTEX AQUATIC STRUCTURES INT'L (Montreal, Quebec, Canada) has introduced the Scorpion and the Spider – interactive play modules for use with its Splashpads and by waterparks and aquatic facilities. The imposing new creatures are designed to encourage collaborative play and cooperation, with children learning cause and effect as they control the creatures' water effects from various appendages.



Deck-Design Software

TREX (Winchester, VA) has introduced DeckWorks, a versatile deck-design program for designers and contractors. Designed for superior speed, ease of use and design flexibility using a variety of woods and the company's own wood-alternative products, the system operates on the Vectorworks platform, allowing professionals to



output photo-realistic, three-dimensional renderings of outdoor living spaces.

Continued on page 60



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In the Spotlight

Fountain Services



HYDRO DRAMATICS (St. Louis, MO) offers assistance in the mechanical and electrical design and post-installation service of fountains. Working with architects, designers,

engineers, contractors and others who need technical support for fountains small or large and from simple to one-of-a-kind complex, its projects range from public parks and gardens to corporate sites and high-end residences.

Landscape Stone



DECORATIVE STONE SOLUTIONS (Rancho Cucamonga, CA) offers landscape stone in a wide range of forms and styles – boulders, cobbles, crushed gravels, rubble/rip-rap, round pebbles, colored decomposed granite and more. The products are intended for

use in creating low-water/sustainable landscapes, dry streambeds, decorative groundcovers, pathways, stormwater-infiltration areas and waterfeatures.

Spillway System



EASYPRO POND PRODUCTS (Grant, MI) has introduced a copper attachment for its waterfall diffusers. Ideal for use with formal waterfeatures mounted in walls built with eightor 12-inch-thick blocks, the 23-inch-wide spillway attaches to the diffuser and generates

great sounds in a compact space. The spillway comes in a kit with reservoir cubes, a liner and underlayment, pipe, a check valve and a pump.

Strip Drains



WATERWAY PLASTICS (Oxnard, CA) offers 32-inch Ultra Strip Drains. Compliant with provisions of the Virginia Graeme Baker Pool & Spa Safety Act, these units can be used with concrete, vinyl or fiberglass pools and have been NSF-certified for floor and wall applications using either a center port or two side ports. With their length ensuring unblocka-

bility, the units come in a wide variety of colors.

Manual Pool Cover

AQUAMATIC COVER SYSTEMS (Gilroy, CA) offers an eight-page, full-color booklet on EZ Cover, which looks and moves like an automatic safety cover but does so manually without the hydraulic mechanism. Designed to open or close in about 70 seconds, the systems can be mounted in boxes above or hidden below deck level and can be converted to automatic operation at any point after installation.



Commercial Gas Heaters

HAYWARD COMMERCIAL POOL PRO-

DUCTS (Elizabeth, NJ) has introduced Universal H-Series line of natural gas/propane heaters. Designed for either new or existing commercial applications, the units come in low-profile 250,000- or



400,000-Btu models that combine optimized hydraulics, exceptional performance, energy efficiency, reliability and cupronickel heat exchangers with low NOx emissions.

Noise-Reduction Baffles

PINTA ACOUSTIC (Minneapolis, MN) has introduced the Rondo line of baffles. Designed for exceptional sound absorption across all frequencies with a high noise reduction coefficient, the compact, visually appealing, easy-to-



install units are intended for use in large, open spaces – including aquatic centers – and are made of a fire-rated foam available in custom lengths in natural white and light grey.

Loader Series

CATERPILLAR (Peoria, IL) has introduced the B-Series 3 line of loaders. Designed for safety, reliability and convenience with more



power, the line's five skid-steer loaders (SSLs) and two multiterrain loaders (MTLs) feature larger engines and more powerful hydraulic systems to go along with excellent maneuverability, compact size — and safety should a machine run out of fuel or stall with the lift arm raised.



WATERSHAPES **THE STORE**

Mary Palmer Dargon, ASLA and Hugh Graham Dargon, ASLA

-arn-

WaterShapes book reviewer Mike Farley has long been a strong proponent of personal and professional enrichment through reading.

For ten years, he's used his 'Book Notes' column to show how the information in the titles he picks can be applied to designing, engineering and building quality watershapes and the landscaping that surrounds them.

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Book Notes

All in My Head

By Mike Farley

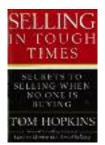
ast year was the worst I've endured since I was a novice in the pool and spa industry. At the time, I found myself taking comfort in the fact that I wasn't alone, that the recession was to blame for my ebbing sales and that we were all in the same boat. Misery, it seems, loved company.

But I snapped out of it late last year. I now believe (as I should have last year) that when you constantly tell yourself things are bad, you almost ensure that they will be that way and *stay* that way. What I did to escape the trap was to convince myself that, even in bad times, I am solely responsible for shaping my mental outlook.

In the first quarter of 2011, things turned completely around for me professionally and I had my best period *ever* – absolutely gangbusters, and there's no sign of things letting up. I've been *told* we're in a recovery, but I don't see evidence that things have improved enough to explain my numbers – and certainly nothing that accounts for my going from the pits to my best quarter ever, just like flicking a switch.

On top of that, the increase I've seen hasn't been in the high-end marketplace where it might be expected; rather, I'm selling what could be considered mid-range pool-andgarden designs – despite the fact that everything I hear and read tells me that the mid-range market is comatose and will be that way for a long time to come.

What has changed, I believe, is my own thinking and approach to the business, a shift I attribute to three books I've read repeatedly in the past seven months. The unifying thread: All of them discuss how you approach your own thinking and do so in ways that reach way beyond typical self-help books.



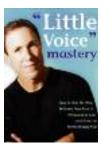
▶ Selling in Tough Times by Tom Hopkins (Hachette Book Group, 2010) offers a wonderful primer on returning to service-based selling. He emphasizes building customer loyalty by providing potential clients with what they actually need rather than with what you only *think* they need. Hopkins is a well-known sales guru and burnishes his reputation here by offering wonderful

advice on positive thinking and the value of projecting confidence and pride in what you offer.



▶ Aspire by Kevin Hall (Harper Collins, 2009) looks at the world as it revolves around an interesting cluster of eleven key words, one of which is the book's title. Others include passion, humility, integrity and some both familiar and very unusual, such as *ollin*, an Aztec word. In each case, he digs deep to find the deepest levels of meaning and shares his perspective with personal, real-life scenarios. It's

a quick, easy reading experience, but one that imparts a surprising level of useful insight.



Deltitle Voice Mastery by Blair Singer (Excel Press, 2007) carries a wonderful, down-to-earth discussion on how to manage what Singer calls the "little voice" inside your head. It's all about controlling how you think and the way you respond to challenges, mistakes and successes. I've read other books on this topic, but none matches the grounded, sensible assurances offered here. I sincerely be-

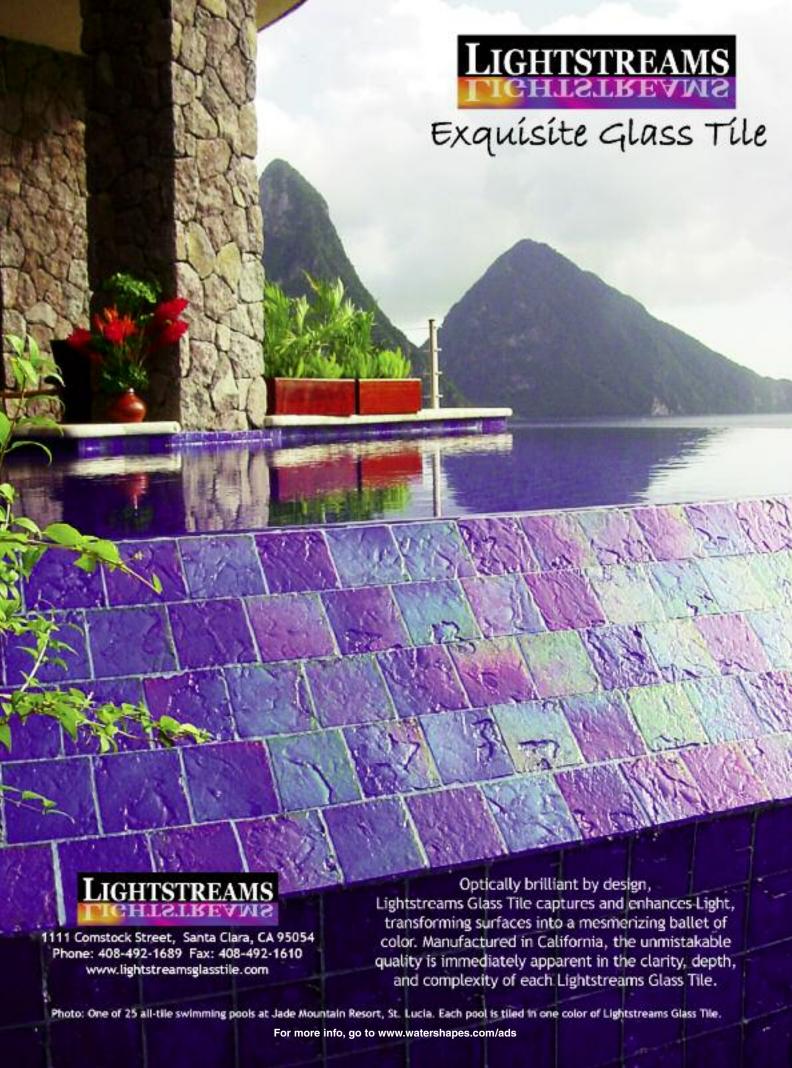
lieve that it has helped me reshape the way I think.

The bottom line is, these days, that there is no cure-all, no magic bullet to turn sales around. Based on my own experience, however, I have a hunch that if you delve into these three brilliantly insightful little books, you'll at least see things with fresh eyes and I dare say an elevated spirit – improvements that might just yield positive results this season and beyond.

Mike Farley is a landscape designer with more than 20 years of experience and is currently a designer/project manager for Claffey Pools in Southlake, Texas. A graduate of Genesis 3's Level I Design School, 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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