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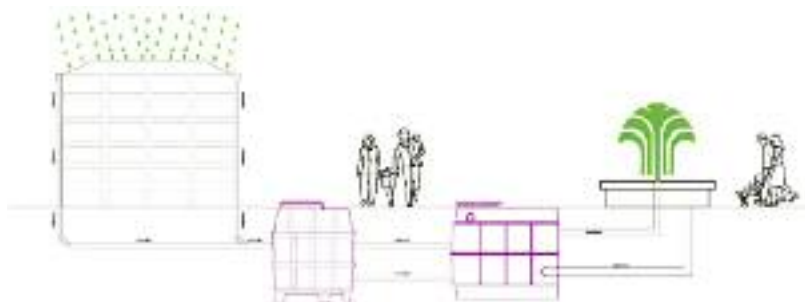
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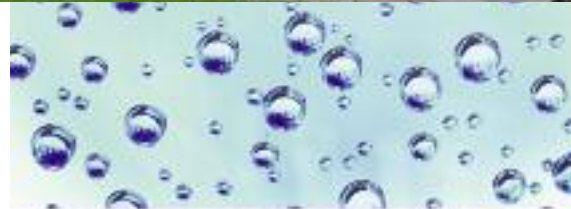
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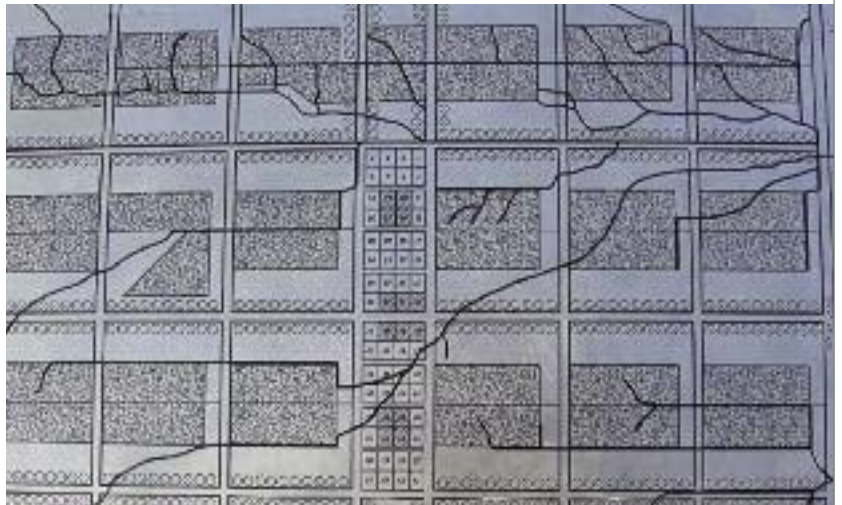


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Forward Motions

By Eric Herman

It's been almost a year since we announced that *WaterShapes* would be moving to a bimonthly publishing schedule. Ever since, we've been gratified by the number of people who have stepped up to express their appreciation for the magazine – and their hope that it would soon return to its familiar monthly appearances.

Unfortunately, the economy hasn't improved sufficiently to make that possible. We're confident things will eventually turn around and that marketers will once again have the resources to lift us to a point where we can fulfill our readers' desire for more issues, but until then, we'll keep on publishing the industry's favorite magazine every other month and keep upgrading our digital offerings.

On that latter point, if you haven't partaken of our twice-monthly e-newsletter *WaterShapes EXTRA!*, I urge you to go online and sign up at your earliest convenience (www.watershapes.com/newsletters). In the best spirit of the magazine, we've taken an open-ended, even experimental approach with our online content, treating recipients to a broad range of opinion pieces, Q&A sessions, technical pieces and more – basically anything we find interesting and would like to share. It's not as much a substitute for our rescheduled print products as it is an oddly creative extension of our mission.

We have, for example, taken advantage of this new forum to stir things up from time to time in ways we never would in print. Last fall, for example, our newsletter carried an opinion piece by Vance Gillette in which he urged everyone in the industry to cast off conventional thinking and look at the marketing of watershapes in all-new ways. Vance's piece drew a rich set of responses and set forth themes picked up in part in Brian Van Bower's January column on industry leadership – which by itself drew spirited responses.

In another newsletter feature, Mark Holden raised more than a few eyebrows (and occasional flashes of anger) when he dared to point out that Hearst Castle is an agglomeration of beautiful design vignettes but lacks appeal with respect to overall aesthetic continuity. What seemed like a fairly straightforward observation turned into a minor tempest, with responses both praising him and taking him to task.

As is true with most publications these days, we're contending with the challenge of bringing print and digital media together in ways that more fully serve readers' professional needs. The magazine is our flagship and as always demands our best, but I have to say we're having some fun in balancing it with lighter touches on the digital side. (All it takes is a quick look at the newsletter's *Ripples* section to see what I mean.) As we see it, the whole of our output is much greater than the sum of the various parts, and if you want the best we have to offer, it's time to sign up and start reading our online content as faithfully as you follow us in print.

And the best thing about the digital world is that you can immediately tell us what you think – a responsiveness we want to encourage while our newsletter is still in its formative stages.

So even though we're not planning on returning to a monthly schedule anytime soon, we're making the most of these peculiarly lean times by having some fun and following a variety of unusual paths online. So by all means, please come along for the ride and count on us to keep pushing for excellence, no matter what form we might take.



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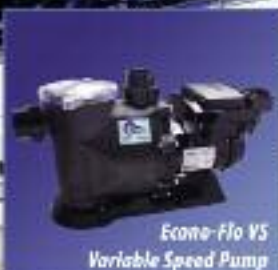
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In This Issue

March Writers

Fu-Tung Cheng is the principal designer for Cheng Design in Berkeley, Calif., as well as a licensed general contractor. From architectural design to construction, his custom-home projects, interior design work and pioneering explorations of the potential of kitchen countertops have earned him widespread recognition, including the 2010 Athenaeum Good Green Design Award; 2010 and 2009 Builder's Choice Merit Awards; a 2008 American Institute of Architects Honor Award; a 2007 International Interior Design Association Award; a 2004 Chicago Athenaeum Good Design Award; an Architectural Record Houses Award; and induction into the National Kitchen & Bath Hall of Fame in 2006. He has written three books published by Taunton

Press – *Concrete Countertops: Design, Forms and Finishes for the New Kitchen and Bath* (2002), *Concrete at Home* (2005) and *Concrete Countertops Made Simple* (2008). He has also launched Cheng Concrete Products, a complete line of concrete materials; and Cheng Concrete Training, which offers courses in creative concrete design. He is also an industrial designer, having served as the creative force behind the Cheng line of sinks by Elkay; the full line of Cheng Design by Zephyr kitchen hoods; and his own Elements by Tonusa, a complete line of cabinetry and accessories.

Mark Holden is a landscape architect, contractor, writer and educator specializing in watershapes and their envi-



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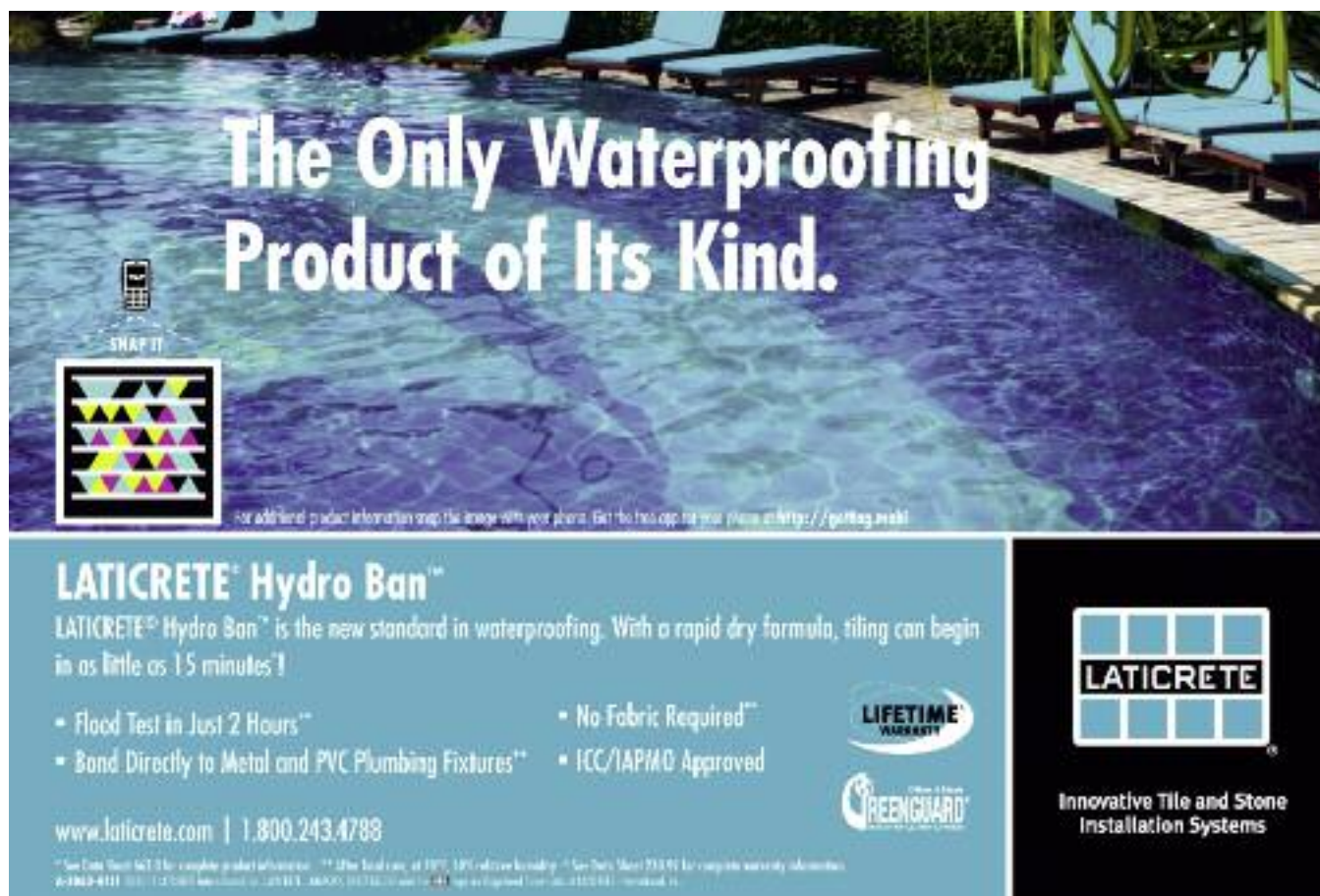
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ronments. He has been designing and building water-shapes for more than 20 years and currently owns several companies, including Fullerton, Calif.-based Holdenwater, which focuses on his passion for water. His own businesses combine his interests in architecture and construction, and he believes firmly that it is important to restore the age of Master Builders and thereby elevate the standards in both trades. One way he furthers that goal is as an instructor for Genesis 3 Design Schools and also as an instructor in landscape architecture at California State Polytechnic University in Pomona and for Cal Poly's Italy Program. He can be reached at mark@waterarchitecture.com.

John Carlson is the founder and principle of JDC Faux Rock Creations, an artificial rock design and fabrication firm based in St. George, Utah. Born in Venezuela and raised in Tucson, Ariz., Carlson was inspired by the spectacular geological formations of Arizona and childhood experiences in nature with his family and geologist father. For more than 25 years, he has created elaborate and complex faux rock structures around the world, including multiple large-scale projects in Japan, Portugal, Spain and Italy. His work is all carved and finished by hand and spans both residential and commercial settings – from subtle interior treatments and exterior pools and spas to zoological exhibits and massive public and commercial formations.



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Stoking the Mojo

By Brian Van Bower

By now, most of us have noticed or at least heard news of the onset of a much-anticipated rebound in the economy. Most watershapers I speak with confirm that it's true (although to widely varying degrees) and that they are indeed experiencing increases in business – both with new contacts and old leads that have come back into play.

I write those words knowing that you may or may not be convinced that this is the real thing. After all, we've learned some tough lessons during this recession, not the least of which is to be wary when pundits offer predictions that they seem perfectly willing to adjust from week to week.

At present, however, most of these economic gurus are suggesting that we are finally reaching a point where we can say that things really are improving – although they often caution that progress will be incremental and not nearly as swift as most of us would prefer.

To my mind, that's fine. As I see it, the superheated economy we experienced into the fall of 2008 was not based on real growth or wealth, but was instead heaped on the flimsiest footing of speculation. Yes, it felt

The way we present ourselves is a matter of self-fulfilling prophecy. If you act on a basis of confidence and optimism, you will exponentially increase your chances for positive results.

great at the time, and I suppose it was only natural to assume that the gravy train would keep on rolling despite the fact that everything in our rational minds should have told us there was trouble ahead.

mixed messages

What has happened is that we've gone from a time when we were told to spend at will (even if it meant buying real estate without sufficient down payments, a worthy credit history or even proof of employment) to a world in which, almost overnight, an enforced frugality became the new paradigm.

For a long while, weathering this storm was Job One in our businesses. Indeed, most of us have spent the past two or even three years talking about making the most of tough times by sharpening our skills, rethinking business models and looking inward at our personal value systems.

All of that turned out to be good advice. As we've seen, there have been winners and there have been losers in these hard circumstances, and with few exceptions, the ones who've made it were those who actively assessed and adjusted their approaches and left behind former colleagues who simply sat back and waited for things to improve.

For those of us who are still standing – which includes more than a few of us, thank goodness – it's abundantly clear that we are *still* not out of the woods. Nonetheless, we know that demand for our products has not gone away and that many people have simply postponed buying without ever losing their basic desire for watershapes of some kind.

On top of that – and I see increasing evidence of this everywhere I go – we've reached a point where people are simply tired of being frugal and are starting once again to seek the things they want. As a society, we haven't ever been good at deferring gratification, and those who have the wherewithal to invest in their homes are starting to behave with less of the caution that has dominated the past few years.

Yes, we offer things that are highly discretionary and for the most part nonessential, but products in our categories are also among the most attractive and appealing in the marketplace. People love water, love recreation, love luxury, love



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The Great Depression of the 1930s did not kill the market for luxury automobiles, nor has this Great Recession dimmed the desire for pools, spas and other watershapes. The reason is simple: Consumers want what they want. If anything, the absence

that comes in lean times only makes the heart grow fonder with respect to objects associated with luxury and self-indulgence.

mood swings?

For all of you out there who are tired of listening to the prognosticators and pundits and haven't yet seen enough ev-

idence to convince yourself that the tide is turning, I urge you to add the psychology of our current situation to your thought processes.

With something as massive and serious as the global economy, we tend to step back, check out and leave the ebbs and flows to the world's statisticians and analysts (and to governments and truly big businesses) to make decisions based on cold logic, careful risk assessment and detailed market analysis.

Again, if the past few years have taught us anything, it's that our institutions and the people that manage them are just as subject to the whims of mood as we are. Take a look at the stock market: It may be oversimplifying to say so, but the up-and-down swings we see are based entirely on *perceptions* about what's coming next.

When you boil it all down, I don't think anyone will vigorously counter the point that most people spend when they feel good about the future – and close up like clams when they see dark clouds ahead. By extension, I've come to believe that the economic swings we've been witnessing result in large part from the mood swings of human beings who make the buying and selling decisions at the highest levels of the economy.

This leads eventually to a chicken-or-the-egg conundrum: Does mood drive economic performance? Or does economic performance drive mood? I believe the answer to both those questions is "yes," which is exactly why, when things start to roll one way or the other, they tend to pick up speed in a hurry.

With the onset of our current recession in 2008, markets lost value and sent the entire financial world into a defensive tailspin that drew everyone and everything into a downward spiral. Not long before (when times were still good), we'd assumed things would be great forever and slid into a different sort of tailspin, with homeowners, banks, securities companies and the government all spending like drunken sailors.

Just as we thought the good times would never end, there are those among us now who think the dark times will never again lighten. Mood, be it bright or dark, is the nebulous X-factor in all of these equations.



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snap out of it!

With all of that as a backdrop, we reach the main point of this column: Given that things seem to be improving at long last and knowing that mood is extremely important, I believe it's time for all of us to wake up, stand tall and reclaim our swagger with force and determination.

Frankly, I'm tired of listening to people go on and on about the pitiable state of their businesses or their lives in general. It's not that I'm unsympathetic or that what's been going on hasn't affected me and people I know and respect, but it's time to move along and start talking instead about what we're doing about our predicaments, whatever they may be. It's time, in other words, to put on our game faces and get to it!

Look at it this way: If you're in a hole, bemoaning your fate isn't going to make your situation any better. Indeed, the only shot you have rests in your ability to get active and try something new or differ-

ent. Explore new marketing and sales approaches; reach out to colleagues in your own and related fields to establish connections that might lead to future business; change the focus of your business; maybe rename your company. Heck, go out and get a haircut, set your alarm an hour earlier, lose weight or quit smoking.

Whatever you do, practice ways to avoid indulging in negativity.

I realize it's cliché these days, but it certainly applies here: If insanity is doing the same thing over again and hoping for different results, then you should become maniacal about identifying and implementing change.

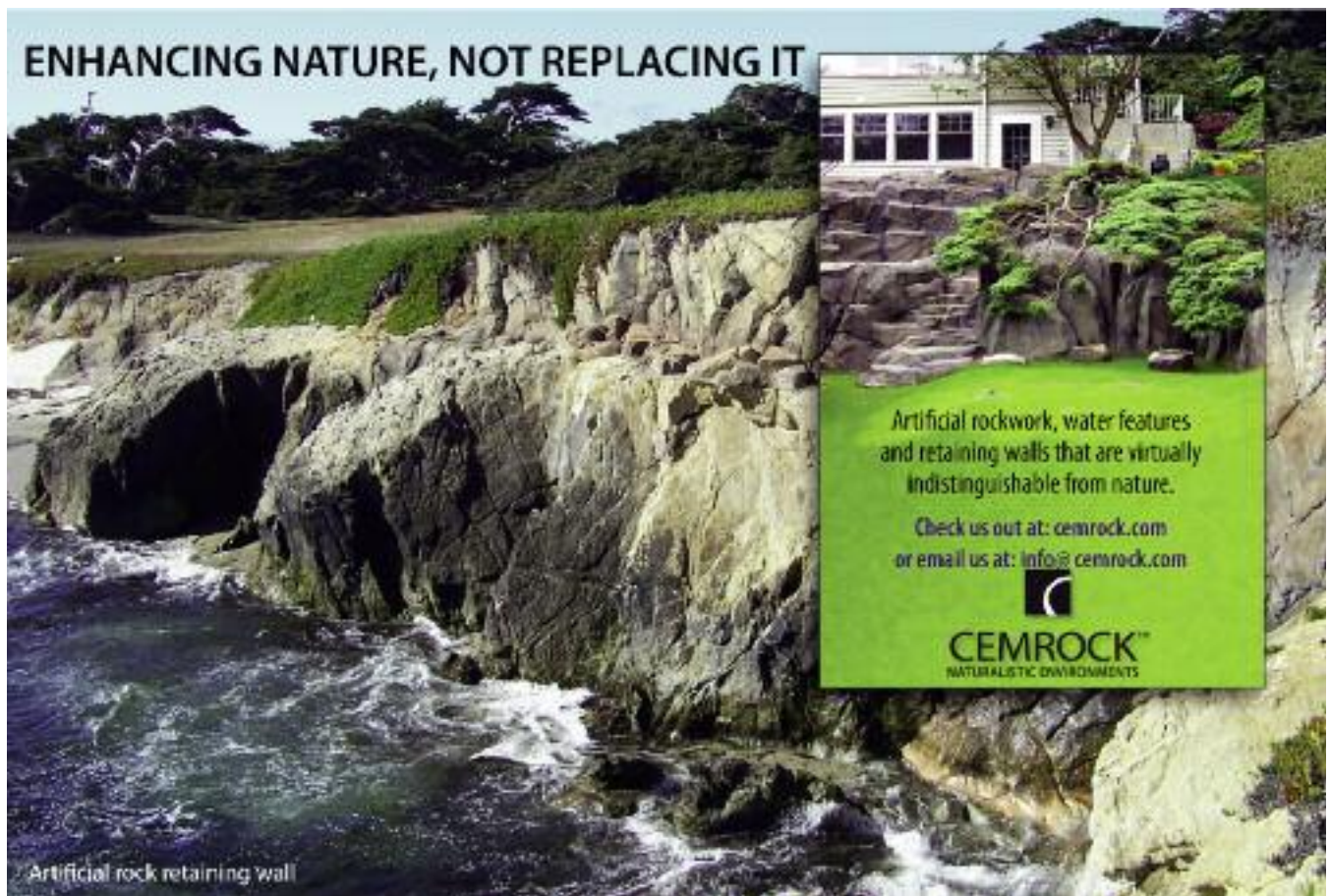
Yes, some of what's happening is beyond anyone's control, but do you really want your fate to be determined by those factors? I certainly don't, and I know in my case that the times in my life when I've felt most desperate are the times I've gotten busy and tried new ideas, sought new approaches and challenged my own

thought processes. Often, this has meant stepping way beyond my comfort zone, but I've found that putting fear aside and taking chances is the best way to go.

And by the way, when we talk about taking chances: Is there any greater risk than the one that comes with doing *nothing*?

Anybody can talk himself or herself out of acting in bold ways, and there will always be very good reasons you can muster to persuade yourself you can't afford to take chances. That's understandable, because taking risks is disquieting. By the same token, however, there's something beautifully empowering when you make bold moves and don't fall down or (even better) find yourself being rewarded. And I'm certain that failure from complacency is even less comfortable than taking risks!

The point is, you'll never know until you try. So why not make that exploratory phone call to a potential partner or investor, pick up that book about business strategy you've always meant to read, or



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screw up the courage to ask your employees about their ideas? It can't hurt – and it might help!

light your fire

What I'm talking about here is nothing less than the way you greet the world, the energy you bring to the process of moving from one place or conversation to the next. We all know that one of the most attractive of human traits is confidence – a quality that most definitely radiates from within.

The way we present ourselves is, in effect, a matter of self-fulfilling prophecy. If you present yourself as being desperate or beset by fear, then you're destined to obtain unsettling and negative results. If you act instead on a basis of confidence and optimism, you will exponentially increase your chances for positive results. This confidence keeps you going: Instead of being daunted by setbacks, your attitude lets you learn from experience and move on.

One of my favorites among all the seminars I teach is on the subject of *Chi* or *Ki*, an ancient Chinese concept that deals with energy flow and the life force of all living things and how it can be channeled in beneficial ways.

I bring it down to earth by explaining that the concept's underpinnings are all about human nature and the fact that we are self-determining entities who can foster positive energy or go in the other direction. This basic concept is present in all sorts of eastern philosophies as well as contemporary western psychology, but it all boils down to the same thing: We decide for ourselves what energies and attitudes we bring to the processes of living.

As I see it, many of those who've been driven down by the recession have had their inner fires doused: They've been robbed of their *Ki* and need to find ways to reclaim and rekindle it – and I would say they should do it now, before it's too late.

If things aren't going well, so be it: Nothing stays the same way forever, so why not prepare yourself and get ready to catch the next wave? We know it's coming, and we all know that luck smiles on those who happen to be the best prepared.

So let's quit talking about our woeful situations and attack the future with

everything we have. Light that fire in your belly, don't shy away from optimism, don't be afraid to take chances – and don't be afraid to tell your fears about the global economy to take a permanent hike as you take stock of your personal one.

In other words, it's time to reclaim your mojo and get busy inventing the future! **WS**

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



East and West

By Bruce Zaretsky

I've been a fanatical *WaterShapes* reader from the very beginning, drawn not only by the cool projects but also by its publication of columns and features written by people who actually had experience in the field. Sometimes I love those writers, sometimes they bug the daylights out of me – but always, I appreciate getting information right from the source.

And I can't recall ever having come away from reading *Watershapes* without being *inspired*: pushed to think outside my comfort zone and, more important, convinced it's always, *always* best to do things right the first time. What I saw also made me want to participate, which I did with an early article on retaining walls.

Beyond all of that, however, one of the first things that caught my attention was the fact that *Watershapes* had a columnist who focused in every issue on my own field of landscape design and installation. I enjoyed getting this other perspective, this other point of view, this added source of inspiration for my own work.

I'm a proud Bronxian, but I have frequently wondered why I couldn't have been born in southern California, where I would enjoy a million days of sunshine a year while rolling around in vast fields of lavender.

planting ideas

So every month, although I looked forward to everything the magazine ever had to offer, I particularly anticipated Stephanie Rose's column on the use of plants and gardens around water-features. And every month, after reading the column, I asked myself (or whoever was unlucky enough to be near me): "Doesn't she ever think about life beyond Southern California?"

As much as I loved her column and her work, it still bothered me that everything seemed to focus on plants that grew only in zones eight and above, pretty much leaving two-thirds of the country out of the picture.

At one point, I finally became so frustrated that I wrote a letter of complaint to the editor about what I considered to be a travesty, a mass-scale landscaping injustice. Where were columns on plants I use in the northeast? What about information on the use of stone indigenous to my area? What about my needs? *My* needs?

(Before I go on, I have to admit to more than my share of jealousy here: Even though I'm a proud Bronxian, I have frequently wondered why I couldn't have been born in southern California, where I would enjoy a million days of sunshine a year while rolling around in vast fields of lavender.)

And I didn't let up. Periodically after that first note, I'd write or call Eric Herman to demand broader plant representation and discussions of projects and materials from around the country. Eric would treat me like an errant (but ferocious) dog, speaking to me softly while backing away slowly – and then turn to run to safety in the distance.

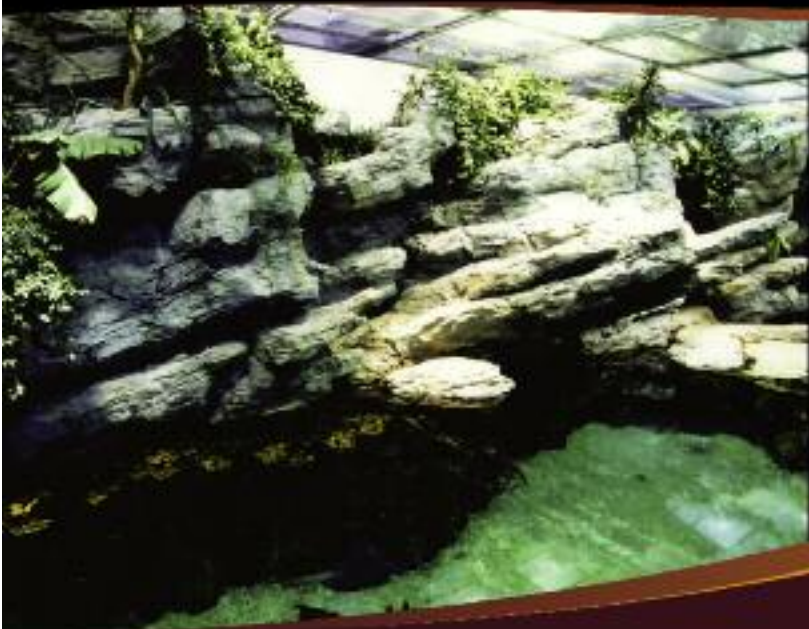
He let me write the occasional piece just to keep me at bay, but despite his earnest (and often accurate) protestations to the contrary, I still saw a distinct southwestern bias in the columns and articles. Yes, I know that you softies enjoy twelve months of beautiful weather followed by more beautiful weather and that your hot tubs can be placed a mile from the house and nobody ever gets cold on trips back to shelter. But I refused to resign myself to the fact that we usually have to place spas mere feet from the house, lest icicles form on your nose before you can reach shelter again.

And it wasn't just spas: Out in the southwest, your outdoor kitchens can be a mile from the house too because, one, you can eat outside twelve months a year and, two, even if you decide to



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On the Level

eat your grilled steak indoors, you know it won't freeze before you can get it to the dining table and, three, I *know* that you waterlogged west-coasters are spoiled by being able to swim year-round. Heck, where I am, people make a living doing not much more than closing and opening pools semiannually.

Doggedly, and only occasionally with seriously bared fangs, I kept reminding Eric that despite appearances, east-coasters are people, too!

going coastal

And so it came to pass that the powers behind *WaterShapes* decided to create a sister magazine called *LandShapes*.

To appease a principle pain in his neck, Eric approached me one day to propose that I should write a column of my own on landscape design and installation. I could see his cognitive wheels turning: "OK, buddy: You think you're so smart, try writing a column every month!" Even better from his perspective (or so I sus-

pected), Stephanie Rose of all people was going to be my editor!

Yes, the same Stephanie whose columns I'd complained about for years was going to be my boss! I signed on, but all of a sudden I saw that I was now the one on the spot, having to come up with a viable column that had no northeast bias – easier said than done, but I gave it a try.

After the dearly departed, much lamented *LandShapes* moved on to the great revolving magazine rack in the sky, Eric adroitly recognized that he would be better off if I kept writing – but now for *WaterShapes* – rather than having to listen to my complaining. While I can say it's been a challenge, it's also been great fun.

The challenge of coming up with new ideas and exploring them is definitely invigorating and keeps me going. I've always felt a great responsibility to do well for the magazine and, more selfishly, have always used these exercises to recharge my batteries. And I say so knowing that I get upwards of 20 trade publications:

They all have things to teach, but for me, *WaterShapes* has always been special.

It inspires through dynamic and unexpected designs (remember David Tisherman's amazing red pool?); through open and honest sharing of construction "secrets" (I have learned more about hydraulics and water from Skip Phillips than from all other sources *combined*); and through articles that take us all on journeys through projects from initial meetings to final cleanups.

While I still (sometimes) good-naturedly point out to Eric that where I live we don't have earthquakes, tornados, tsunamis, overpriced real estate, wildfires or man-eating sharks, I often think of him suffering on sun-drenched beaches, riding his surfboard while I'm scraping an inch of ice off my windshield in sub-freezing weather. And I do my best to overcome resentment and think about you southwesterners as I write my columns as well.

But I'm also a realist: After all my complaining, I know Eric would never let me *not* include you as I think about seasons and changing foliage and look out over my drafting table at a snowbound landscape. I am inspired by what I know and see, inspired by what nature has given me and how beautiful it can be when the flowers aren't around – and how amazing it is when they return.

It's reached a point where I'm hooked on this unusual internal dialogue and all of these strange and wonderfully interesting thoughts about geography, boundaries and potential.

warmth of the sun

It also set me up beautifully for a most interesting project.

I met not long ago with a couple who didn't want a typical northeastern garden. They spend a fair amount of time each year in the Caribbean, they told me, and love places like St. Lucia, St. John and St. Bart's so much that they wanted to simulate them *here*, in the Finger Lakes district of New York.

I don't recall exactly how hard I tried to talk them out of their fantasy before designing them a complete Caribbean backyard featuring a lagoon-style pool, a tiki hut, naturalistic "lava flow" stone

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features, an outdoor kitchen and, of course, “tropical” plants.

It was audacious, but here I was, working near Rochester, N.Y., doing my level best to create a tropical environment so convincing that my clients and their friends would think they’d stepped out into a tropical resort. And it wasn’t easy, as I had none of the arrows in my quiver that would have simplified things: No Bougainvilleas, no Oleanders, no Fan Palms, no Sea Grapes.

I had to think about each and every plant, going well beyond my tried-and-true selections and my personal favorites to consider options that would enable me to carry off the mood and ambiance they wanted me to create. Somewhere in the back of my mind, I had visions of Eric Herman laughing so loud that somehow Stephanie Rose and ultimately a whole region of the country was reveling in my agonies.

But truth be told, the project has been a complete blast. I found alternatives to Eucalyptus trees in Heptacodium (also known, colorfully, as Seven Sons Flower), to Bougainvilleas in Hibiscus and even to Century Plants in Yucca. I loved putting on my zinc oxide and designing the tiki-hut-style pool house. And I even included a nice fire/water effect along with a waterfall into the pool, used diving rocks rather than a diving board – and did everything I could think of to keep up tropical appearances.

I know I wasn’t working in Malibu, and I’ve used lots of these elements before (even fire, which is a tough one to get across to a conservative client base). But this combination, in this location, for these clients? It’s made them *extremely* happy and was heavenly for me – perhaps even more rewarding for me personally than had I done it in the Caribbean.

It was challenging, more dynamic and certainly unexpected and made me think of every minute detail and how everything was to come together.

And then it hit me: East coast or west, north or south, the important thing is to excel in the work. We should all embrace where we live and what works where we operate, but we should never, ever be afraid to go beyond the ordinary if we’re lucky enough to run into venturesome clients.

So while I’ll continue to rib Eric Herman every time I perceive any signs of editorial bias, with each passing day I approach a greater understanding that where I work isn’t as important as how I work and what drives me to do the best I can. And that’s true whether I hang out in central New York or join Eric on the beach in California. **MS**

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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Using Decorative Concrete in Swimming Pools & Water Features

By Paolo Benedetti, Friday 10:00am–11:50am

This course will explore decorative concrete decking, poured in place water features & pool coping, incorporating architectural details, concealing drains & utility access, water proofing techniques, controlling efflorescence, decking to pool interfaces (isolation joints) and meeting client expectations.

Fireplaces and Fire Features from Design to Completion

By Scott Cohen, Tuesday 1:00pm–2:50pm

In this highly visual seminar you will learn about key design considerations such as scale, placement and patio size, and explore the lingo involved in fireplace construction. Additionally, this course will touch on the different elements that make up outdoor fire features as well as basic construction tips.

Cashing in on Rainwater: Pervious Concrete

By Scott Erickson, Wednesday 10:00am–11:50am

Pervious concrete allows stormwater to flow directly through the pavement, providing passive filtration and detention, and groundwater recharge. Learn how pervious mix designs work so you can select the best mix for your product, and apply decorative techniques to create and sell architectural pervious concrete, by improving its appearance without sacrificing performance.

Decorative Effects with Stenciled Concrete

By Todd Rose

Wednesday 8:00am–9:50am/Thursday 8:00am–9:50am

This hands-on workshop will show students how to stencil concrete with multiple textures, borders, bands and finishes. It will cover exposed aggregate and the use of admixtures.

Concrete at Home: Anatomy of Designing and Building a Modern Concrete Home

By Fu-Tung Cheng, Thursday 10:00am–11:50am

This seminar is a visual presentation of the design and architectural process of Cheng Design. The emphasis will be on creative touch-points and the critical paths to creativity with a focus on concrete, from the smallest design details like concrete countertops and fireplace surrounds to the big picture structural requirements.

Understanding Sealers

By Scott Thome, Wednesday 3:00pm–4:50pm

This seminar will provide a comprehensive introduction to sealers for concrete. Attendees will learn about the different types of sealers, how sealers work, which type of sealer to use in specific applications, VOC issues and more.

A Comprehensive Guide to Staining Materials and Methods

By Shellie Rigsby & Randall Klassen, Friday 8:00am–9:50am

The course covers methods and materials used by advanced stain artisans for commercial and residential projects. The overview includes new developments and tried-and-true methods and materials, including acid stains, water-based stains, dyes, metallics and other coloration materials.

Panel Discussion:

Decorative Concrete and the Universal Solvent

Panelists—Scott Cohen, Paolo Benedetti, William Drakeley

Thursday 3:00pm–4:30pm

This panel of industry experts will discuss various applications of decorative concrete for use with still or moving water. Conversation topics include durability, waterproofing, Glass Fiber Reinforced Concrete versus steel-reinforced concrete, and aesthetic possibilities. Moderated by Eric Hernan and Jim McCloskey.



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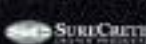
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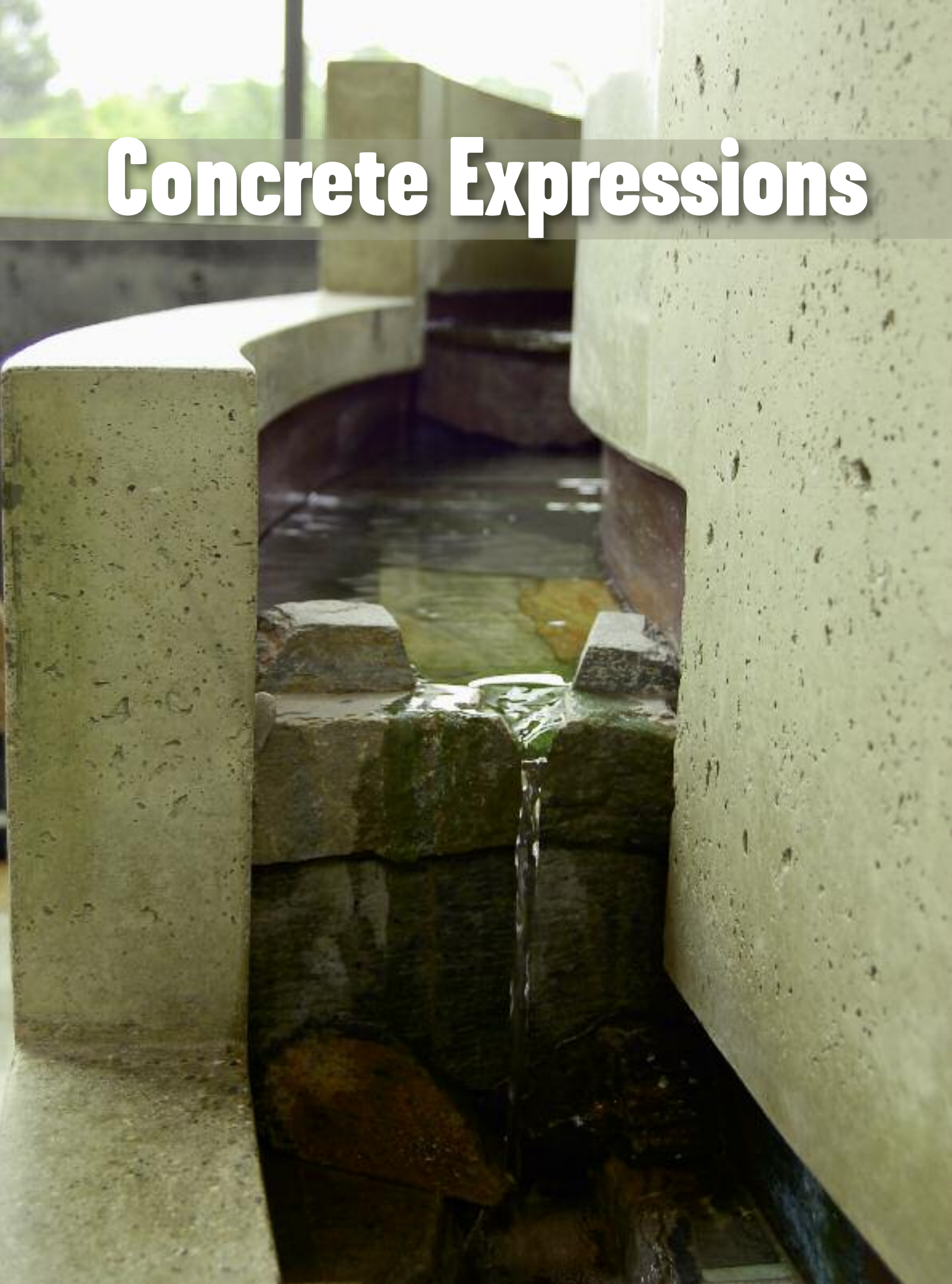
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Concrete Expressions



By Fu-Tung Cheng

Concrete is the primary building material used by most watershapers, but it seems to award-winning concrete artist/architectural designer Fu-Tung Cheng that designers and installers alike should be encouraged to exploit more of the material's flexibility and power when developing aesthetic elements in and around water. Here, he offers his perspective on creating interior and exterior water-features with this amazing potential in mind.

I've never been entirely comfortable with the term "decorative concrete." To me, the pairing of the words has always implied that one merely applies material over a substrate in the way a baker might apply icing to decorate a cake. Instead, I see concrete as inherently profound. More than appliqué, it is a medium that has long been used functionally as well as expressively.

In my own case, I feel far more creatively engaged in my work when I merge my thinking about those dual potentials of function and art. Historically, in fact, I believe that when the two become an inseparable one, we recognize and celebrate these works as rising to the level of great design.

In my own case, I began using concrete as an expressive medium a few decades back, when I was among the pioneers in designing and installing concrete countertops in contemporary kitchens. As both designer and builder, by the year 2000 I had worked many concrete countertops into my residential projects in ways that effectively altered the concept and paradigm of a kitchen.

No longer just rooms full of cabinet boxes topped with thin slabs of granite or fabricated materials, kitchens were now liberated to function *and* be expressive when the authenticity and mass of concrete was deftly combined with stainless steel, wood, and other materials appropriate to such spaces.

I have been very gratified that these explorations have inspired lots of other professionals and artists to begin pursuing cementitious visions that are carrying many of us well beyond the "decorative" label.

Concrete Place

I appreciate the fact that we need to categorize what we do for purposes of defining, discussing and marketing a product, and so I've made my peace with the term "decorative concrete." At the same time, however, I've sought a deeper understanding of this medium and have studied its history and application in order to put it to better use in the here and now.

Back in the early 20th Century, for example, designers came up with all sorts of amazing applications of concrete, placing it on the façades of buildings and using it in the landscape. At that time, nobody thought of concrete as just a decorative material, but instead saw it as a practical structural alternative to stone. Thus, concrete was molded to create balustrades, arches, finials and a host of other details previously associated with carved stone.

In other words, concrete was used dynamically as both a design tool and a building tool, and the two areas were seamlessly intertwined. In the generations since, concrete has become ubiquitous (it is, in fact, the most used of all manmade materials) and has found practical applications within just about every 20th-century design style.

But it truly began to emerge as a distinctive, distinguishing element in Modernist or Contemporary designs, where structural features are often considered aesthetic. Just as exposed timbers are used to make bold, aesthetic statements in Craftsman-style buildings, Modernist designs turn buildings inside out and use steel, glass and concrete as aesthetic elements, often celebrating structure by exposing concrete rather than hiding it.



Photos by Richard Barnes

My first water sculpture was simultaneously a very practical room divider as well as a distinctly aesthetic 22-foot-long water-shape. Every ten seconds, a half-inch wave pulses from a copper-lined sluice, rippling down a flagstone-lined aqueduct before ending at a reservoir from which the water is recirculated.

Today, another framework for concrete's expressive potential comes in the form of themed or literal designs, with artificial landscape rock and stamped-stone hardscape being the most common of these applications. I recognize that this has resulted in some fun results, but I still see them as representing only a small slice of the concrete design pie's possibilities.

Indeed, because concrete has the ability to be formed or molded to imitate almost *anything*, I tell students who attend my seminars on the creative use of concrete, "Don't imitate nature, be inspired by nature." I say this because, with very few exceptions, when we focus on mirroring the profound beauty of nature using concrete or any other material, we're doomed to a pale reflection: Nature's organic designs and complex synergies are simply beyond our reach.

It is my humble opinion that we humans, as rather arrogant creatures, constantly attempt to improve what we fail to appreciate as being quite perfect as is. As I see it, there is no simple way, using modern materials and production techniques, to recreate in days or weeks the work that nature takes eons to shape.

So when I see literal representations of cobblestone, flagstone or geological formations in concrete, I'm always aware of the ways the results don't quite look natural – and that it takes near-heroic gymnastics to reproduce the most commonplace natural effects, such as shoreline



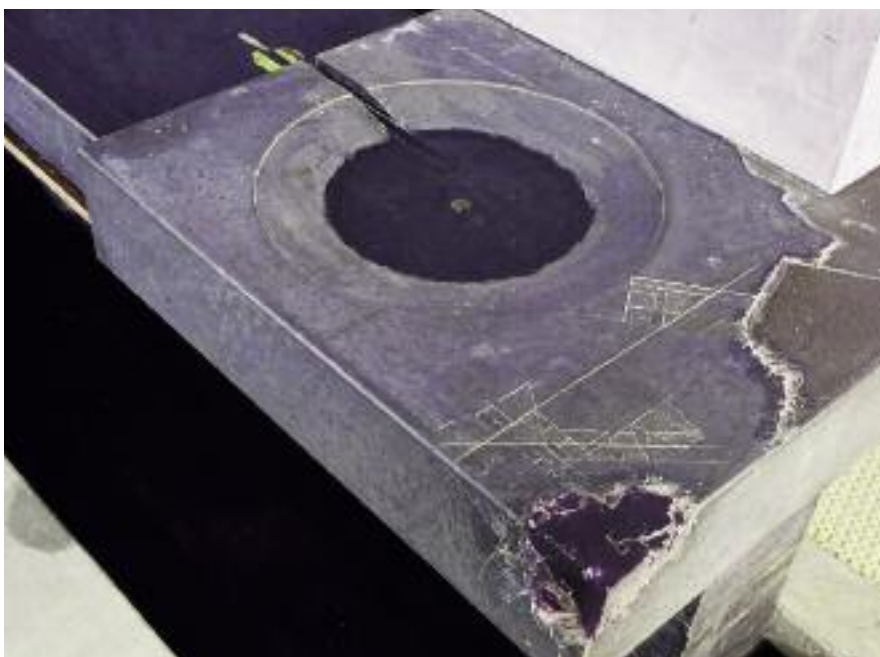
This kitchen sink was built in 1985 – the first of my concrete countertops – and began what has become my ongoing exploration of concrete as an expressive medium.



Photo by Richard Barnes



Photos by Matt Millman



sand, a creek bed or a stream's rapids. And there's the rub: Just because we *can* doesn't necessarily mean we *should*.

Timeless Designs

It's in looking beyond the literal, in my opinion, that we begin to see possibilities and create effects that haven't been seen before. Indeed, there is profound beauty to be discovered in the manmade when we translate what we see into work that forges bonds between built and natural environments.

Recently, for example, fabric-formed concrete, new lightweight types of fiber-reinforced concrete, self-compacting concrete, recycled/repurposed concrete-mix designs and many other exciting technical advances have been evolving rapidly in our industry. By experimenting with and taking advantage of these innovations, expressive concrete can further dissolve the boundaries between the structural and the aesthetic – and can even obscure distinctions between what is natural and what is manmade.

Happily, a growing number of today's designers, artists and craftspeople are getting more and more involved with concrete's new technologies and expressive potential. Just a brief tour of Internet sites shows that amazing things are being done – and what I love most about what I see is that lots of it defies being put into easy categories.

Take my own work as an example: It would be easy to file it in the Modernist category, but I don't see it that way because my designs step away from Modernism's tenets of pure patterns and geometry and display a naturalistic bent that in some ways conflicts with the Modernists' sense of boundary.

In this composition, a shelf cantilevers off a hollowed out plaster wall inside which water cascades down a riffle board to create mysterious sounds before emerging onto the flat 'estuary' surface of the shelf. Most of the water then flows down from the shelf to a pool set below floor level, but some moves into a shallow evaporation 'lake' where it leaves mineral deposits. Next to the lake, I imbedded a Florite crystal to represent the archeology of an ancient ruin on a plain marked by incised evidence of civilization.

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I designed this award-winning structure (House Six, completed in 2008) to include a waterfeature that originates with a stone in the landscape and flows along a sluice that feeds a small koi pond. The pond neatly straddles the barrier between the home's interior and exterior spaces adjacent to the front door. A glass panel reaches down a few inches into the water to divide the pond in two.

Instead, I like to think of my work as trying to seek a balance between innovation and convention. I strive for (but don't always achieve) timelessness – work that is as original as can be when I produce it – and believe that, more than any other material available to designers, artists and craftspeople, concrete provides a broad set of creative options and allows me to move in any number of entirely new and unique directions.

And as is true of most other arts and crafts, the creative possibilities with concrete expand as you become more familiar with the techniques required to control the material's aesthetic and technical potential. Part of that is learning how to control and manipulate shapes, which is where *forming* comes into the picture.

The forming can be something as simple as a box, but it can also involve sets of complex shapes that can challenge even skilled cabinetmakers. (It is because of the extensive mold-making required to do sophisticated work that I say some-

Idea Factory

The greatest evidence of the power and flexibility of concrete as an expressive medium comes in the volume of work being done by artists and professionals in the field.

To see examples of countertops, walls and fireplaces, please visit my Web site, www.chengconcrete.com. You'll find much to explore on the home page, from seminars to FAQs, but please click on

"Gallery" and then "Winners." What you'll see is a wonderful collection of award winners – highly creative designs executed by some of the best of the 3,000-plus graduates of our weeklong courses on designing and fabricating with concrete.

To see my design studio's architectural, interior and product-design work, visit my other web site: www.chengdesign.com.

I hope it all provides food for thought!

– F.T.C.

one who has advanced skills in carpentry would probably have an edge over one who knows all there is to know about finishing concrete flatwork.)

As mentioned above, I started in this vein by reimagining countertops as works of artistic design in concrete. I saw how forming the mold was a step

beyond the two-dimensional slab countertop into three dimensions in which I was creating sculptures in concrete. In the process, I took a fresh look at how people use countertops and, not incidentally, at the way that water moves through these working spaces beyond simply gathering in a sink.



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As it turned out, my work with the utilitarian details of kitchen countertops was a perfect means of demonstrating how concrete could be used as a design medium – and used with water as well. It also revealed how, in this way, ordinary objects could be transformed into works of art; from that point onward, as they say, the sky was the limit.

Concrete and Water

One of my all-time favorite projects happens to be one of my first water-wall pieces. A poured-on-site project completed about 15 years ago, it both challenged and excited me because of its inclusion of the action of the water flow and the fact that I was bringing water indoors.

The structure (seen on page 24) is 22 feet long and features a narrow water-course placed atop a low interior wall. The water is controlled by an electronic gate hidden under a natural stone that opens and closes, thereby creating a small, half-inch wave that quietly pulses down the narrow, copper-lined sluice every ten seconds or so before easing and gently flowing to a basin that recirculates the water.

I have always appreciated the fact that, although water can be the humblest of materials, it is also, for the designer and builder, the most *humbling* of materials. But when you figure out how to work with it, the effects are animated, almost mesmerizing, while the pieces that contain it can function as sculptural elements that either stand alone or can be integrated into other structures.

In this case, the waterfeature functions as a massive room divider *and* as a subtle focal point for the entire interior design. It was such a compelling effect that I adapted it for another project (completed last year) in which the same sort of water wall was executed in a curved version. (The latter project was featured in an article in the *Wall Street Journal* and is seen on this and the following spread).

For this project, an extensive rebar armature and plumbing were set on a curved grade beam for long-term stability. Great care was taken by Terry Walsh and Brian McLean of Park View Construction (San Francisco) to reinforce and brace the forms for minimal movement when it came time to pour the concrete.





Above is the mold for the riverbed canyon, which was carefully lined (as seen at left) with tile, slate and geodes before being stripped, cleaned and made ready for mounting into the monumental site-cast curved wall seen at the forming stage on the opposite page. Ultimately, the composition expresses the geological processes through which water has its erosive way with stone.



These days, I'm integrating water pieces directly into architectural designs starting in the conceptual design phase. A recent example is seen in a Northern California residence where water's positive feng shui flows into the house via the landscape rock at the entrance. This moves to a small pool that straddles both the interior and exterior sides of the entry (see page 26).

These and other projects make me proud to be part of a movement toward more creative uses of concrete, no matter *what* the industry surrounding what I do calls itself. I am especially proud of the fact that others have taken up the challenge and are now pushing the material to greater and greater aesthetic heights while also pushing our collective awareness of what is possible.

So far, it's been a wonderful journey – and my conviction is that the best is yet to come.

The resulting waterfeature is integrated into a structure that serves functionally as a room divider but also works as a dramatic, visually animated, intensely engaging transition for people moving from the entry down to the open living space on the home's lower level.



How Green?

I embrace the green movement's ideals, which justly emphasize (and perhaps someday soon, might legally require) that, to conserve resources, building materials must be sourced locally and have minimal carbon footprints. Few materials fill this bill better than concrete mixed and installed by local craftspeople.

While it is estimated that the actual production of cement powder contributes upward of eight percent of the total emissions involved in global warming (because of all of the gas-fired kilns used to manufacture Portland cement), it is also true that between 85 and 90 percent of the actual mix is made using locally quarried sand and rock. (In that respect, it's analogous to hybrid cars: They still use gas and oil, but they nonetheless represent a major improvement over blithely producing and driving old-style gas guzzlers.)

As I wrote in one of my books, *Concrete Countertops Made Simple*, "When you make a concrete countertop with your own hands, you are doing yourself and the earth a small favor. It's greener, more affordable, potentially healthier, and a lot more fun than buying mo-

notonous granite countertops that are mined, fabricated and shipped by boat from faraway countries.

"Other countertop choices, such as stone composites, are manufactured in factories from mineral particles and epoxies and trucked hundreds of miles to a fabrication shop, and then, finally, to you. Nothing is wrong with those other countertop materials. Each has benefits and limitations," I wrote, "but by making your own countertop, or having it done by a local contractor or fabricator, you have fun, create something unique, save lots of money, and shrink your carbon footprint to boot."

And because concrete is locally produced, it makes the most sense to form it locally with local craftspeople – and not just for making countertops! By using the material for houses, watershapes, furniture, wall tiles and the like, it keeps creative, fulfilling work within the community and helps local economies as well.

– F.T.C







Artful Education

By Mark Holden

As is true of many modern cities, the early development of Anaheim, Calif., was all about its approach to managing water. In the following text and images, watershaper and consultant Mark Holden discusses how this history led recently to the completion of a compact public park in which an unusual watershape graphically demonstrates the way water was harnessed and used in the 19th Century to fuel the region's agricultural and civic growth.

More than three years ago, I was approached by a talented landscape architect (and good friend) to look at a project with an interesting twist: the celebration of the agricultural history of a well-known California city.

I've long been fascinated by history and have taught the history of art and architecture in a variety of settings, so when Lance Walker (then principal at The Collaborative West, San Clemente, Calif.) called me, I was keenly motivated to hear more about his plan to pay homage to those who had jump-started a major modern community by harnessing a natural watercourse to meet its needs for potable and agricultural water.

That city, Anaheim, is better known today as the home to Disneyland and professional baseball and hockey teams. But long before all that, the city was established as an agricultural center focused originally on viticulture – that is, growing grapes for wine. Just as the Romans had often done 2,000 years earlier, citizens of Anaheim followed a pattern in which a remote water source was diverted and redistributed for purposes of irrigation.

My firm, Holdenwater of Fullerton, Calif., was brought in to consult on this unique project, which turned out to be a prime example of how modern water-shaping and landscape art can be used to express the abstract, the historical and the educational.

Following the Plan

The concept revolved around saluting the original water system conceived by the mostly German and Austrian settlers who came onto the local scene in the middle of the 19th Century.

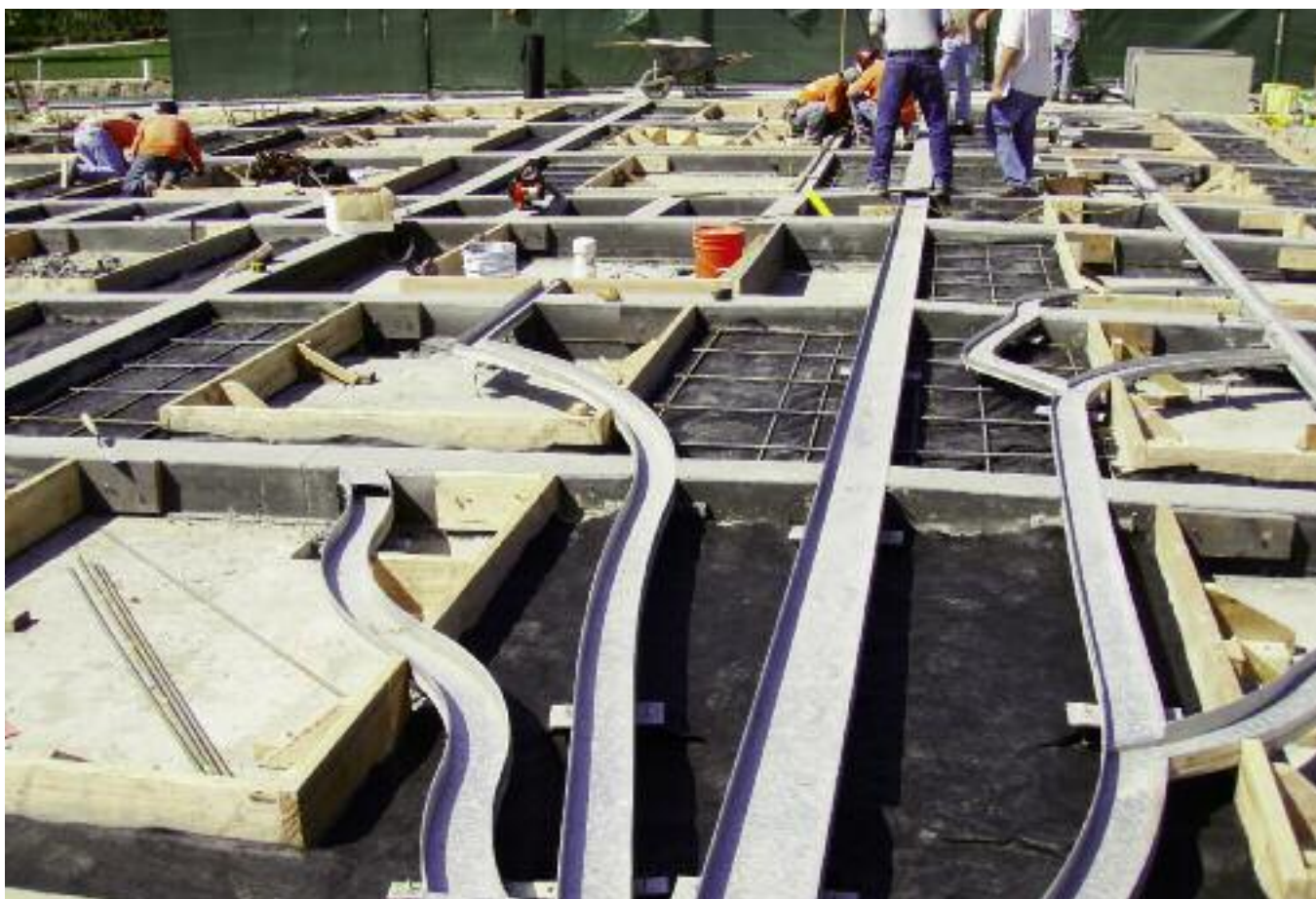
Everything about the project was based on records preserved in Anaheim's archives. Before I joined the design team, Walker had already brought in a pair of environmental artists – Tom Drugan and Laura Haddad of Haddad/Drugan in Seattle) – who dug up the documents and saw a way to represent this history diagrammatically.

All of this effort had to do with a new park to be located within a housing development known as Colony Park. It wasn't a large space (at about 200 by 400 feet), but to me it had the big advantage of being a watershape just off Water Street.

The area under development had originally played host to manufacturing and industrial operations. In fact, the entire housing tract was replacing just three or



Although allowance was made for the minor adjustments that we knew would be needed once everything was up and running, the gravity-driven runnels were put in place with a great deal of care and precision as we worked amid the concrete contractors preparing to apply their multi-colored flatwork.





The headwaters of the system is a rock meant to symbolize the San Geronio Mountains, whose snow-capped peaks are seen in the distance above the serpentine flow of the stream (see below) that meanders from the boulder over to the runnel system.

History's Course

Grapes never did particularly well for the German and Austrian farmers who settled Anaheim, Calif., and established its irrigation system, but before long citrus trees took hold and did so well that eventually the whole county of Orange was named after the region's leading cash crop.

Today, the vineyards are long gone and most of the orange groves have given way to urban development, and that's one of the reasons why the developers of Colony Park decided to fill its open space with a teaching watershape that will bring contemporary residents up to speed with their fading history.

This form of *education through environment* is a new trend in landscape design and development and is supplementing or even replacing lawns, swing sets and sandboxes with sources of education, entertainment and commerce. Ultimately, it may be that these projects will change what we think of when the word "park" comes to mind.

— M.H.



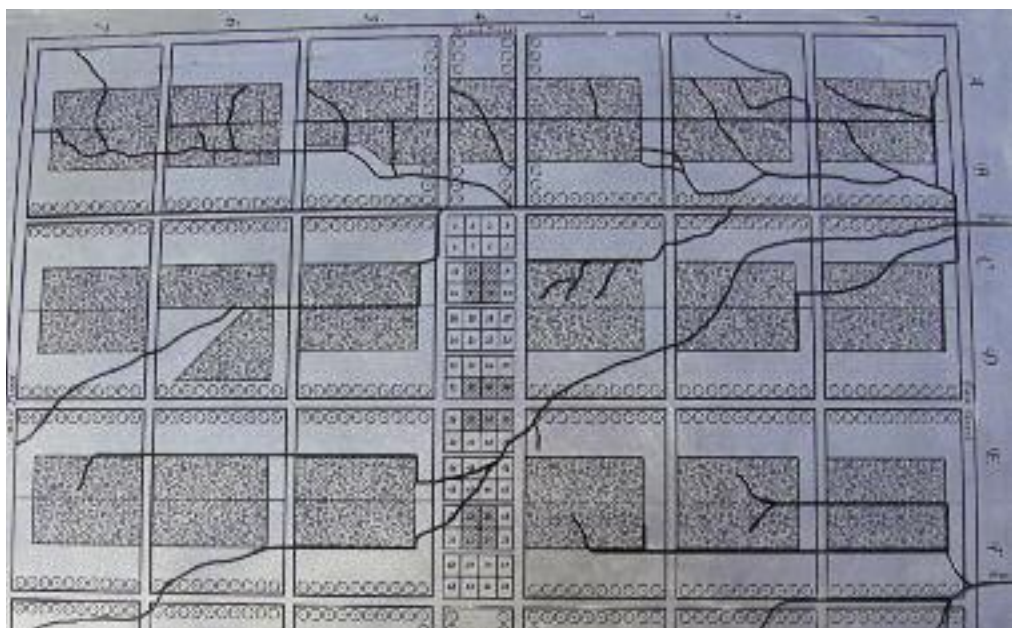
four multi-acre plants that had long since been shuttered. This form of redevelopment has long had both supporters as well as detractors, but in this case – in my humble opinion, at least – it was a welcome change for the neighborhood.

In the space set aside for the park, the trio had laid out a waterfeature that not only symbolized how the nearby Santa Ana River received its water, but also how the early settlers put it to use. Best of all, they'd found an old piece of parchment that showed the original layout of the city, including details of the irrigation channels and the organization of the vineyards. This ultimately served as a scale model for the new park's Water Court.

The watershed originates with the River Course and an abstract representation of the San Gorgonio Mountains that tower over the area and feed the Santa Ana River, which winds through San Bernardino and Riverside counties before reaching Orange County and the vicinity of Anaheim. This watercourse flows to a collection area reminiscent of the old trash-grate versions found in antiquated agricultural supply systems.

After this collection point, the watershed gets literal.

From that point on, in fact, the designers used the historical layout of old Anaheim gleaned from the parchment with just a very few twists. The old irrigation channels became either stainless



steel runnels or blue sections of decorative concrete; original buildings were represented by colored concrete blocks; and the fields to be flooded by irrigation water became sections of wet deck. This space was bordered by inscribed versions of Anaheim's North, South, West and East Streets, all of which still exist today.

It was at this point, where the concept was beginning to take real shape, that my firm was engaged to help the team develop practical approaches to the various water systems that would be needed to complete the project.

Based on a document found in the city archives, this map – reproduced in etched stainless steel – depicts the original layout of the irrigation system as well as the parcels included in the community envisioned by the German and Austrian farmers who settled in Anaheim. The new park and its amenities celebrate that history – and introduce it to citizens who might be unaware of their city's agricultural past.

Extended Time Frames

Through the past dozen years, I've become accustomed to working on projects that spend multiple years in development.

Some of these endeavors are so vast or sensitive or complex that immense amounts of time must be invested in satisfying municipalities or property owners and in figuring out all of the technical details in ways that will make the construction process as smooth and efficient as possible.

One of the primary goals in all of this preparatory work is to minimize change orders. In the case of the Colony Park project described in the accompanying text, those changes were minimal and were the result of municipal requirements that snapped into place while the park was under construction. For the watershapes, in fact, no more than a few hundred dollars was expended on such diversions during

the course of a \$500,000 project.

Happily, tight programs typically translate to quicker construction – essential in this case because we had a firm deadline for completion. This led construction manager Ken Pease (with Brookfield Homes, Costa Mesa, Calif.) to hold weekly status meetings with all design and construction professionals, effectively tying up loose ends and ensuring smooth progress.

This was all to the good for me, because from the outset I was a bit concerned that any of a hundred different details we were working with had the potential to derail or paralyze the entire program. To my great relief, Pease's approach created an environment in which distractions were absolutely minimized.

– M.H.



Careful Steps

To help ensure that everyone was always on the same page, Walker staged regular meetings of the entire project team, including landscape architects, engineers, builders, artists and representatives of Colony Park's developers.

One early concern with this project was a fear that the original design might be perceived as an interactive waterfeature by local health agencies – an impression we wanted to dispel. As a result, we communicated frequently with directors of

the county's environmental health department and finally were invited to make a formal presentation in which we were to define and explain the nature of our project.

With further discussion and some minor design adjustments, the project was finally deemed to be "non-interactive," which meant we could proceed outside their jurisdiction and without observing the legal constraints applied to interactive features. Even so (and for obvious reasons),

we followed the rules observed by interactive waterfeatures with respect to water circulation and treatment.

As designed, the park's water network drains by means of gravity to a subterranean, multi-thousand-gallon surge tank. Once there, the water is processed through a subterranean equipment vault before being returned to various feature points around the park.

Setting up the River Course was a simple matter, but the Water Court's cityscape proved to be a real challenge because of the precise volumes of water that needed to flow steadily through the runnels and the equally precise volumes of water that needed to spread out across the wet-deck areas.

For starters, I calculated the flow rate for a half inch of water in a five-inch wide runnel using tried-and-true civil engineering calculations. These formulas, however, had been conceived for use with open channels of *immense* size, so I recognized a need for flexibility and establishment of multiple control points.

I also knew that there would be hours' (if not days') worth of field adjustment needed before everything would flow smoothly. To make this possible, we worked with a number of variable-speed pumps (Pentair Water Pool & Spa, Sanford, N.C.) as well as metered dump lines leading to the surge tank – all to allow for fine tuning.

The work on site proved to be equally challenging. Early on, I had joked with the design and construction teams that what we were doing was like building a fifty-foot-long piano on a deadline with the help of just a couple dozen people. There were countless slight tweaks to be made with the runnel installation and plumbing as we went along, and at the same time we had to work closely with the concrete contractors to make certain they could make their numerous color pours (using material from Lithocrete, Costa Mesa, Calif.) in a safe manner.

Before long, what had been a joke about the piano became a somewhat nagging truth as we interwove and painstakingly pitched all of the runnels amid a network of forms and steel reinforcement. Even bonding was a challenge as we learned that *everything* had

to be evaluated and considered prior to placement.

Artisan Construction

When we finally initialized the pumps, we were happy to see that we were fairly close to targeted flows. As expected, there were adjustments to be made with the pumps, valves and grating system, but before long, everything performed as we'd envisioned, with water erupting from the headwaters stone, the river raging and the collection/distribution system working just as we desired to flood each piece of "land" in the layout.

As I have professed countless times in *WaterShapes* and in my Genesis 3 classrooms, this sort of artisanal building

produces results that I see as being far superior to product-based approaches to design and construction. Had we relied on product catalogs as our primary resources, this project would have never have come to such an artistic or reliable completion. Indeed, *everything* here involves unique, highly creative solutions to situations both simple and mightily complex.

Take, for example, the stainless steel runnels: Yes, we could have channeled the water through concrete, sections of stone or tile grooves, but the designers had determined that something more was needed: These symbolic arteries carried early Anaheim's life blood, and our watershape needed to reflect, emphasize

and celebrate their significance.

The environmental artists saw steel runnels as the best solution, so instead of buying components off the shelf or simply pouring some concrete, they had stainless steel etched and custom-fabricated in configurations that precisely duplicated the water system laid out in the plans.

Although expensive and labor intensive, pursuing this approach produced outstanding results: The highly reflective surfaces and the detailed etching make these utilitarian components the stars of the show and, as intended, brings home the message about the importance of these waterways.

Of course, not every visitor to the park

Considering Maintenance

Maintenance is a problem for most systems the caliber and complexity of the one at Colony Park. Even with detailed specifications, training and monitoring of systems, there are still ongoing issues that flow from budget cuts, for example, or from changes in staff.

In the case discussed in the accompanying article, there's the added fact that we installed a complex system set in a subterranean vault of the sort few people enjoy accessing. I also know from experience that the people to whom I'll turn the system over and to whom I have painstakingly explained the maintenance needs will eventually leave their positions or will be laid off – a situation ripe for sending the watershape into a spiral of disrepair.

There is nothing worse than doing a great job just to have the long-term management of a watershape force it to be turned off. Even worse is to see it decommissioned and converted into planters full of brightly colored annuals. As a result, I see these as issues that *must* be addressed as part of the design process.

In my professional life, I have found that there are many more people who understand how a swimming pool works than there are those who understand the workings of fountains and other watershapes. Also, pool-related products are more readily available than are those of the fountain industry. And finally, pool-scale plumbing is cheaper and easier to repair.

As a result, we generally attempt to design our waterfeatures to be more like swimming pools than fountains and do what we can to specify products that can be picked up at local pool-supply businesses or hardware stores and building centers. (In the specific case of the Colony Park project, for example, the key components of the equipment set came from Pentair Water Pool & Spa, Sanford, N.C.)

We do so especially when we know a developer or municipality is likely to subcontract the maintenance: There are many capable pool service technicians willing to do this work at competitive rates

for long periods. Even if budget cuts result in termination of those contracts, the systems are familiar enough that when a municipality or property manager decides to bring the work in house, the odds for the continued successful operation of the waterfeature are significantly increased.

Another approach we use is to hire regular maintenance crews or services for day-to-day or weekly visits, supplemented by our own visits or the intermittent (but regular) visits of some other highly trained professional, thus lowering the ongoing costs by supplementing regular care with less-frequent expert supervision.

As I see it, we all try to take care of ourselves physically, but a regular check up by a medical professional can alert us to a potentially life-threatening condition. Watershapes are really no different!

– M.H.



To ensure long-term serviceability, the watershapes at Colony Park were designed using readily available pool equipment.

will know Anaheim's history, so the designers developed some signage explaining the park's (and project's) story. This led to inclusion of an etched steel plaque explaining why such a complicated art piece has been installed for general public enjoyment. I have always favored use of this sort of signage, valuing them as roadmaps to understanding.

Art and watershapes can indeed be educational, and Lance Walker and his team have crafted a beautiful example of that concept here: Through careful design and coordination, every one of us participated in a process that will educate the community and entertain their senses for many years to come.



The runnels (and blue extensions in decorative concrete) represent the original system of irrigation canals laid out by farmers who hoped to turn Anaheim into a complex of vineyards but who ultimately found orange groves to be better suited to the area. The parcels set aside in the core of the 19th-century community are embodied in the park by structures made from concrete blocks



Powers of





Imagination

By John Carlson

Faux-rock specialist John Carlson has spent his career creating artificial structures that deftly fool the eye. Along the way, he's applied his skills in various settings, always pushing toward greater levels of complexity no matter whether he's working with swimming pools, aquariums, decorative features or home interiors. As he demonstrates here, what gets and keeps him going is the flexibility of a material that seems so rigid.

It's frequently tough to figure out how a person ever finds his or her way into a specific line of work. In my case, for example, I more or less fell into the faux-rock trade, never imagining that what seemed like a blind stumble would ultimately unlock my imagination in a whole range of unexpected ways.

It all started when I was working in the oil industry in Alaska in the 1980s. When petroleum prices dropped, I was out of work and moved back to my home town of Tucson, Ariz., where I was hired as a laborer by the Larson Company, which was among the trailblazing firms starting to work in faux rock.

I began by mixing concrete and did my fair share of grunt work. As luck would have it, I began showing some artistic promise and in a relatively short time found myself working on major projects and learning the process literally from the ground up. After a couple of hard years, I became a superintendent, a promotion that led to my involvement in major overseas projects, including aquariums in Tokyo and Osaka, Japan, as well as an extended stay in Italy.

These were wonderful, formative experiences, but eventually I struck out on my own and became a hired gun for a number of large companies – in one case in a seven-year engagement that brought me to St. George, Utah, where two years ago I started my own firm.

NATURAL SETTINGS

What I didn't recognize at first (but have since come to appreciate in a big way) is that growing up in Tucson subconsciously fueled my love of working with rock formations.

Arizona abounds with spectacular geological formations that clearly left strong impressions on my inquisitive mind. From sandstone to basalt, from the grandest of canyons to the most ascendant of mountains and mesas, the terrain inspired me to collect rocks and develop an interest in the natural world at a very young age.



Done well, artificial rockwork can look very much as though it has been there forever – an effect we compound by making certain our boulders, outcroppings and various other structures fit within the familiar contexts of local geology and topography. It's a harmony that's even more important when both our work and nature's will be in view simultaneously.

But there's more: My father was a mining engineer who was always involved with geology and often brought me along with him into the field, sharing his observations on natural history and nature's processes. So even though I never really meant to wind up in this business, it seems my life experiences were always pointing me in this direction – and I couldn't be happier about having finally accepted it.

What I've learned along the way is that faux rock is a wonderfully flexible medium that can be effectively applied across a broad range of settings, everything from home interiors and poolsapes to large commercial aquariums and zoological exhibits. No matter the setting, I find myself pushing to learn more of what it takes not only to replicate nature, but also to do it in such a way that it is worthy of being labeled as sculptural art.

While with Larson, I worked mostly with faux-rock panels – a major innovation at that time. Their level of detail was fantastic, and they offered us a great way to achieve realistic results fairly quickly. But I also found them to be fairly limiting, especially when it came to extremely large projects: Even with a wide array of available panels, there's an inevitable repetition of forms and patterns that eventually comes into play. So,

as much as I loved my panels, I increasingly found they just weren't for me.

Working with panels did, however, give me a great education in *natural* patterning and random variations. When I was introduced to what used to be called “free carving” (or, essentially, hand sculpting), that's when the medium opened up for me and my work took off in all sorts of creative directions I've pursued to this day.

I was so into what I was doing that I soon developed my own techniques for water and air sculpting as well as more traditional approaches using carving tools. I also explored a huge range of finishing techniques, experimenting with various acid stains and paints. And this sort of growth accelerated when I formed my own firm and began working with wonderful artisans who share both my curiosity as well as my determination for all of us to explore various means of achieving higher levels of detail and get better at what we do.

The upshot is that, today, I believe we've reached a point where we can replicate rock types by hand better than we ever could with panels. To be sure, the work is far more labor intensive than it would be if we used panels, but we've come to treasure the creative flexibility it gives us and, perhaps more important, the ability we have to go back and change

the look of things, which is difficult to do with panel-based systems.

PERFECT IMPERFECTION

As is true with any type of work where nature is the inspiration, faux rockwork springs from relentless study: You simply cannot do this work without intimate awareness of and familiarity with, for example, the way wind and water work on stone; the subtle variations attributable to rocks' chemical composition and the effects of oxidation; the influence of sedimentary and metamorphic activity; or the near-brutality of the way lava flows.

The amazing thing about nature is that whatever it does, the forms always fit the surroundings or, more to the point, are the *essence* of the surroundings. To step up and deliberately mimic formations that reflect thousands or even millions of years of natural processing therefore takes intuition, creativity and mental discipline, but it also takes a good bit of nerve – especially when large investments are on the line.

It's all so subtle: As we work, we seek to reconcile evident patterns with random inconsistencies. We know that if we follow patterns too closely (as with sedimentary layering, for example), the work



The framework underlying some of these faux-rock structures can get impressive. These substantial underpinnings allow us to create grand, dramatic effects as we add flesh to the underlying skeletons.

seems false because it's too consistent. So as we respect patterns, we must also find ways to disrupt them the way nature does through erosion, seismic activity or even root intrusion. As we do so, we're always aware if we randomly insert disruptive elements without having a narrative rationale for their presence, then we run the risk of ruining the illusion.

This is why study is so much a part of what we do. I've spent countless hours roaming in all sorts of environments, collecting untold thousands of photographs of an endless universe of details, both up close and in larger, panoramic views. By examining so many natural formations and, particularly, the interaction between stone and water, wind and plants, we're constantly running across new ideas and possibilities.

Indeed, keeping nature in mind drives everything we do, starting with the steel armatures we use to support our structures and reaching all the way through to the finish work. We work strictly with shotcrete, six to eight inches thick, to establish basic contours, then apply a rich sand/cement plaster mix as the topical medium in which all of the detailed sculpting and finishing takes place.

Other faux-rock artists of my acquaintance are now working with glass-fiber-

reinforced concrete – GFRC – to take advantage of its added structural strength, but I've always felt that our formations need proper structural engineering anyway, and we also find that the fibers interfere with our finishing techniques. All in all, one might say that I've gravitated to a "traditional" approach to faux rock.

As we see it, however, it's a traditional base upon which we've piled numerous

we'll be applying and the costs it entails. In others, we help them reach the conclusion that what we do is simply too much, at which point we guide them to more affordable, production-oriented shops.

We've been lucky through the years that we've always managed to find enough clients who understand the value of quality work and have the wherewithal to pay for it.

To step up and deliberately mimic formations that reflect thousands or even millions of years of natural processing takes intuition, creativity and mental discipline, but it also takes a good bit of nerve - especially when large investments are on the line.

innovations and a flexible set of skills and techniques that enable us to move in any number of ways. Sometimes we're handed a basic design by the client or an architect and flesh things out with respect to details. In other cases, we're given a blank canvas and asked to do what we think is best.

CASE BY CASE

Ultimately, of course, our focus is on our clients and their specific needs. In some cases, they know what we're about and are prepared for the level of detail

Once we're engaged, our presentations run the gamut. For some clients, we develop detailed scale models (especially true for large projects); for others, hand renderings, photographs and/or computer-generated images are what it takes. In all cases, our aim is to create formations that are, regardless of the setting, practically indistinguishable from nature.

As I mentioned at the outset, one of the great things about faux rock is how flexible it is with respect to the places and ways in which it can be applied. Each

project is different, and we've learned all about the hazards that come with generalizing and making broad characterizations. Even in that context, however, we've devised a set of guiding principles:

► In all projects, from large scale commercial environments through to intimate interior installations, it's the shapes that matter. This isn't to say that texturing and finishes aren't critical, but rather that we've found great shapes to be an ideal foundation that speeds the detailing and finish work.

This is why we spend so much time designing and rigging shapes with our support structures – often the most time-consuming part of our work. Bottom line, we know that no amount of great detailing or finishing can correct problems with a basic shape that is either unrealistic or out of sync with the setting.

► In most projects, the “human touch” is a key consideration in that we must be cognizant of the way the purely naturalistic elements of our work will interface with structures and details that are clearly part of the built environment.

Often, for example, we're asked to place outcroppings in entry courts or traffic circles, often for use as a form of signage. Our ambition in these cases is to give the rockwork enough of a sense of drama that it made sense for the developer to leave an “ancient” formation in place rather than leveling the area and starting from scratch.

In other projects, the effects are more subtle – as when, with residential projects, we've been asked to build a formation into the home's interior. In these situations, we work closely with the architect or home builder to be sure we can make

it seem as though the rockwork is part of an existing outcropping and that the house was then cleverly built around it.

► In all cases, we seek to create a context for the appearance of our rockwork. When we place an outcropping inside a home, for example, we create an illusion of continuity by placing similar outcroppings out in the exterior space – whatever it takes to avoid the impression that the interior feature is just a rock somebody hauled in for ornamental purposes.

► Along with shape, both scale and placement are all important – but it also helps if the texture and finish of the rockwork we create matches that of indigenous outcroppings that might be visible from (or within easy reach of) the property where we're working. Along similar lines having to do with avoiding obvious visual mistakes, we also make certain



Once the basic forms are in place, we begin elaborate processes of fine tuning and finishing, adding and shaping fresh concrete as needed and then, after the material has cured, going back and painstakingly staining, coloring and painting the surface – always striving for the most natural appearances we can achieve.

Artificial rockwork can take an almost limitless number of forms and be put to an incredible array of uses. In the projects shown here, for example, pieces have been integrated into a home's structure; been used as signage; and hosted animals in a zoo exhibit. There are essentially no limits to what can be imagined – or achieved.



When Faux is Faux

In all the years I've worked with faux rock, there's one big, counterintuitive lesson I've learned: As much as we might strive for naturalistic perfection, there are cases in which there's no avoiding the fact that a given structure is artificial and that we must count on people to suspend their disbelief.

Just recently, for example, we've been experimenting with placing fiberoptic lights in the tips of the branches of faux dead trees. We've also created a vanity that resembles a wind-blown tree with a basin. (When you push a branch up, water spills out of another branch – a bit kitschy, but fun, especially when, during a home show, I watched consumers try to figure things out. I loved their reactions when I would flip the branch and water spilled out of the other branch.)

Nobody, of course, is going to believe that dead trees actually twinkle or spill water from their branches, but the effects are so striking and the trees themselves so otherwise realistic that clients have no problem letting go of the impulse toward realism and easily accept the presence of what's become a purely artistic statement. And on days when, say, the lighting effect distracts them for whatever reason, they are quite free to turn off the power!

We run into this sort of physical compromise every time we work with aquariums or zoological exhibits: Nobody for a second believes that coral reefs form in Utah or that icy habitats for penguins and polar bears occur naturally in Arizona, but if the work is accurate enough, viewers delight in letting themselves go and imagining that they are seeing these creatures in the wild.

–J.C

there are no perspectives from which the casual viewer can catch *any* glimpse of a steel armature, lath or chicken wire.

► Depending on the situation, we don't shy away from revealing a human touch and occasionally design structures that appear to have been crafted from rough-hewn stone. We've done some fireplace surrounds, for example, that appear to be ancient structures that predate the home. Here, the narrative is that the current home was built over and around the ruins of a much older structure.

In purely practical terms, the beauty of faux rock in many of these settings is that it allows us to achieve effects that could never be accomplished with real stone. Whether it's the fact that faux rock is relatively light or that it makes it easier to manage plumbing, gas and electrical runs, the simple availability of the faux-

rock option makes things attainable that might not otherwise have appeared within the realm of creative possibilities.

In addition, the potential use of faux rock for functional purposes opens up a whole new realm of possibilities that have not been much explored in the industry. The ability to include seating areas, fireplaces, fire pits or even bathtubs and vanities — as well as to hide access and equipment areas — offers a host of intriguing options; it's also possible to restore the look of *natural* rock elements after a formation has been cut for installation of a roadway or in grading a building lot in a previously undisturbed natural area.

SPECIAL EFFECTS

Of all the projects we tackle, those that get us involved with working in and around various watershapes are among

the most satisfying and, often, the most challenging.

As mentioned just above, it is advantageous that faux rock offers a great deal of flexibility when it comes to hiding various pipe runs and concealing equipment. In purely aesthetic terms, however, there's something broadly appealing about juxtaposing the permanence of rock against the ephemeral qualities of water. As we see it, it's also a golden opportunity to revel in nature's own sculptural techniques.

Implicit in this, of course, is that we know how water and stone work together and have thoroughly studied how water erodes and reshapes different types of rock. We know enough, for example, to avoid flat weirs over which uniform sheets of water fall over suspiciously sharp curved or straight edges.



Many of our projects involve integrating our work with watershapes. The most dramatic effects are achieved when we make it seem as though the formations were there and the watershapes have been built with and around them, accommodating their presence. In other cases, as with the fiery, lava-encrusted spa seen at left and on the opposite page, the feature makes statements all on its own.

That might happen in spots on massive natural waterfalls, but most of the time falls express themselves through crevices or breaks in the stone forged by water following paths of least resistance.

Often in our work with pools and spas, we'll create springs or watercourses that are "there" as an incidental but permanent presence on the property. Now, the narrative goes, an opportunistic architect or builder has shrewdly taken advantage of the property's native endowments to create a stunning interface between the manufactured and the natural.

In other settings, we'll install outcroppings in conjunction with pools—something that works so long as the faux rock genuinely resembles an outcropping and is consistent with local geology.

In all of this, we are *keenly* aware of the effects water can have on concrete. You

don't generally see instances of efflorescence in nature, so we are careful to seal and waterproof our work—an entire subject unto itself that I will leave for a future discussion.

Fire is another natural "element" requiring some care in its use, basically because it doesn't usually emerge from rocks without some obvious necessitating context. That's why it's important to surround fire elements with human touches—as with the abovementioned fireplace, where rough-hewn "stones" were stacked to accommodate fire.

The one instance in which flames can appear in a purely natural context is in the re-creation of active lava flows. It's an attractive look, but it's a particularly tricky one because lava is, in my opinion, the hardest of all stone types to mimic: The textures and surfaces are tremen-

dously complex, and all I can recommend if you ever find yourself wanting to imitate it is that you should try it out in your own backyard before attempting it in someone else's.

It's sorely tempting to do just that: When lava is replicated correctly and combined with fire, it results in an almost otherworldly scene of primordial desolation. This isn't a look that suits everyone's tastes, but in the situations we've used lava and fire together, they create *startlingly* dramatic effects.

As I see it, that's the magic of faux rockwork as the craft is pursued on the highest levels: For clients, it's about creating great experiences and placing them in imagined, fully realized worlds. For us, it's about the ongoing adventure of bringing those imagined worlds into reality.



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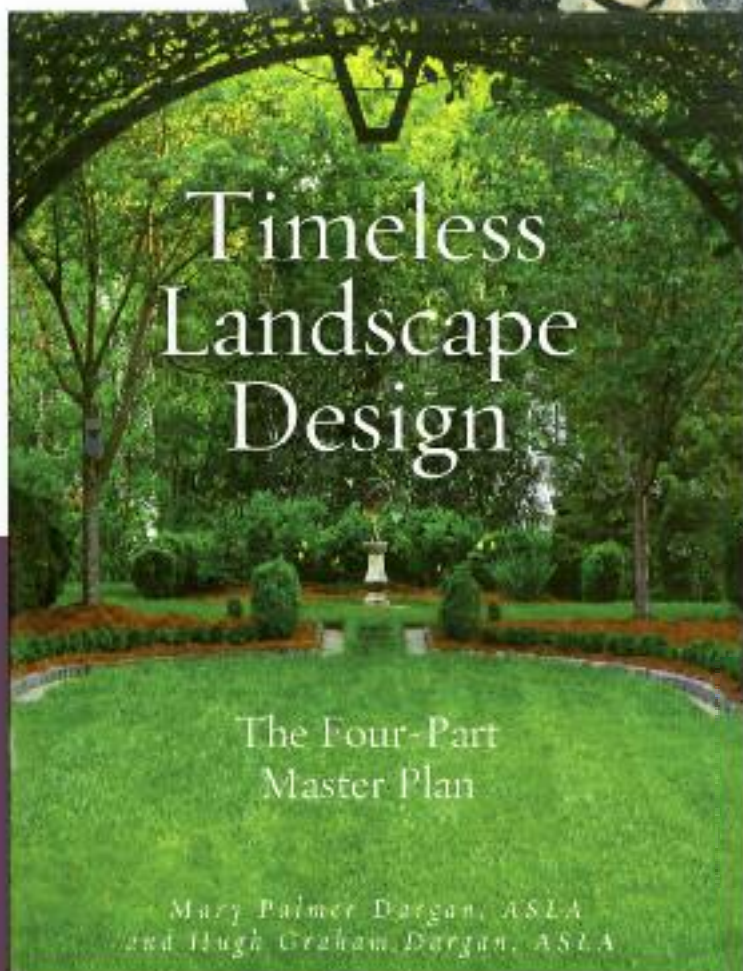
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WATER SHAPES THE STORE



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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.

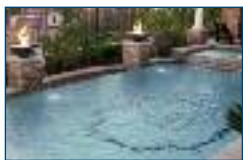
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In the Spotlight

Fire and Water Effects



GRAND EFFECTS (Irvine, CA) offers a line of fire-and-water bowls. Designed for safe, reliable elegance in any setting, the units are made from copper or concrete (in any of five different finishes) and can be run either manually or automatically using a range of pool- and home-control systems. All systems require water flows in the 10-to-12-gallon-per-minute range and come factory-tested and ready for installation.

Natural Pools



BIONOVA NATURAL POOLS (Hackettstown, NJ) offers consulting services to professional watershapers interested in designing natural pool systems. Once the design's aesthetic parameters are set, the organization provides the planning required to complete the project and also will provide either construction or project-management services to make certain the program is implemented to specification.

For live links to the companies featured here, go to www.watershapes.com/spotlight

Salt for Pools and Spas

AQUASALT (Houston, TX) offers salt for use in all saltwater chlorination systems. Made through evaporation in a food-grade salt production facility rather than relying on outdoor solar processing and the contaminants it includes, the material has a crystal size designed to produce the fastest dissolution rate available for pool and spa applications and a level of purity that minimizes any concerns about staining.



Automatic Pool Cover

AQUAMATIC COVER SYSTEMS (Gilroy, CA) offers the Hydramatic line of pool covers. Installed with a reliable, maintenance-free, all-fluid drive mechanism designed to last the lifetime of the pool, the system also includes walk-on lid components that blend into the hardscape while completely hiding the retracted cover. Several options for tracks and covers allow for use with pools of almost any configuration.



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Compact Excavators



BOBCAT (West Fargo, ND) has added the E42, E45 and E50 models to its M-Series of compact excavators. All three offer improved performance and operator comfort in the four-to-five-ton weight class. The E42 is a conventional tail-swing unit, while the E45 has zero tail swing and the E50 has minimal tail swing. All have redesigned hydraulics for improved, refined control of machine travel and operation.

Pump Strainers



PENTAIR WATER COMMERCIAL POOL & AQUATICS (Sanford, NC) has introduced the PS Series of in-line strainers for commercial pumps. Designed to maximize hydraulic efficiency in aquatic applications and simplify installation, the devices come in three standard sizes to fit almost any plumbing configuration and can be modified with reducers to provide great flexibility for specific applications.

Landscape Uplights



ORBIT/EVERGREEN (Los Angeles, CA) offers the Model B140SH, a 12-volt uplight for illuminating architectural and landscape features. The cast-brass fixture has a slim, telescoping shroud that can be extended from six-and-a-half to eight inches for precise directional lighting and comes in a variety of finishes, including polished natural brass, antique brass or bronze, architectural bronze or aged green.

Artificial-Rock Waterfeatures



REPLICATIONS UNLIMITED (St. Louis, MO) has introduced a manufactured waterfeature that is completely designed, built and colored in the shop before being shipped to the job site as complete sections. No training is needed to join the sections together and get the waterfeature up and running immediately. Made using a time-tested polymer plastic composite, the units are molded off real rocks.

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Watershape Coating



POLY SOLUTIONS (Gibsonia, PA) offers Ultra Poly One Coat for repainting or repairing pools or watergardens. Designed for easy one-coat application, the long-lasting, non-hazardous, algae- and stain-resistant material contains no VOCs, has a fast curing time, can be applied under a wide range of temperatures, is easy to clean and maintain and comes in black, white, pool blue and gray as well as custom colors.

Sanitizing System



ZODIAC POOL SYSTEMS (Vista, CA) offers Nature2 Fusion, a sanitizing system for inground pools with capacities up to 45,000 gallons that works by combining a trichlor erosion tablet feeder with a mineral sanitizing device to control algae and destroy bacteria while minimizing chlorine use and eliminating staining. The result is clear, clean, soft water with reduced odors as well as less eye and skin irritation.

Artificial Rockwork



JDC FAUX ROCK CREATIONS (St. George, UT) designs and installs artificial rock systems in a range of commercial and residential settings – aquariums and zoos as well as indoor gardens and backyard rock formations or waterfeatures. Inspired by the workings of wind, water, heat, cold and powerful geological upheavals, each project offers a high degree of detail in emulating both the beautiful and the unique.

Pool Safety Cover

COVER-POOLS (Salt Lake City, UT) offers the Save-T 3 automatic safety pool cover.



Designed to operate with the turn of a key or the press of a button, the systems include powerful mechanisms and motors and can be customized to meet the needs of any pool or budget. The cover fabrics can feature custom graphics and are available in nine standard colors as well as a range of special-order colors.

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Book Notes

Selling the Dream

By Mike Farley

One of the questions I always ask prospective clients is, “Why are you investing in a pool and not a recreational vehicle, boat or vacation home?” Obviously, I’m not interested in having them rethink the decision to purchase a watershape; rather, I’m trying to draw them more deeply into their commitment, identify what’s important to them and use the information as part of my sales effort and, later, the design process.

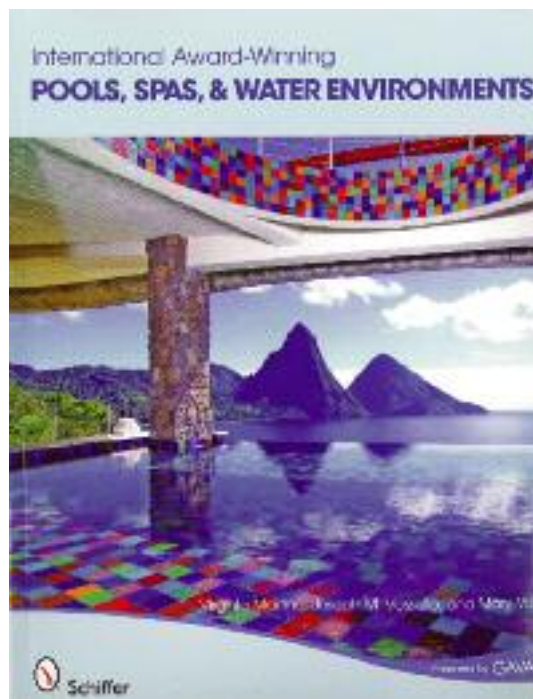
Although my clients will express themselves in different ways, their desires almost invariably boil down to wanting a place for family to gather and have fun, to share good times with friends and to enjoy measures of luxury and beauty. In essence, almost all of them want to take the wastelands that are most backyards and turn them into private resorts.

I thought about how I approach these issues a lot after attending a seminar led by Vance Gillette at last year’s International Pool|Spa|Patio Expo in Las Vegas – a presentation he later recapitulated in an excellent piece in *WaterShapes’* online newsletter, *WaterShapes EXTRA!* As an industry, he said, when we deal with the public and prospective clients, we need to promote the experience and excitement associated with our products instead of focusing on the nuts and bolts of design and construction.

I couldn’t agree more, which leads me to a couple of books I picked up with Gillette’s overall idea in mind. The first – *International Award-Winning Pools, Spas and Water Environments* by Virginia Martino, Joseph M. Vassallo and Mary Vail (Schiffer, 2010) – is a 176-page, beautifully illustrated book that records results of an annual awards program started by Vassallo, who owns Paragon Pools in Las Vegas. (It is apparently the first in a series of annual volumes to come.)

It’s clear in looking at the projects that this initial collection of projects was drawn mainly from a network of builders associated with Vassallo and his company in various ways. That might sound self-serving, but I don’t have the least problem with it. In fact, I think it’s a great idea – and of the 39 projects featured, all but a few are fine examples of good watershape and landscape design. One detail I particularly appreciate is the fact that credit is given to both designers and builders, the lack of which is a major shortcoming in most such awards programs.

The point here is that the book is clearly geared toward consumers and dedicated to getting them excited (in exactly



the way Gillette recommends) about our industry’s potential in positive and imaginative ways.

The second book I picked up – *Scott Cohen’s Poolscape: Refreshing Ideas for the Backyard Resort* (Schiffer 2011) – comes from an author who is known as one of the watershaping and landscape design world’s most effective self-promoters. Cohen has published several books along similar lines, maintains a family of websites and appears regularly on HGTV.

In this volume, he presents 25 of his best projects and throughout the book’s 150-plus pages reveals his ability to create highly expressive, personalized environments based on his clients’ desires for fun, luxury and a bit of self-indulgence. He makes no bones about the promotional nature of the book, and I see it as a wonderful, credibility-building tool that shows clients (and other professionals) just how elaborate and fun backyard environments can be.

Bottom line: Both Vassallo and Cohen are doing just what’s needed to prime the pump for themselves and for our industry. As I know from my own experience, clients have a very hard time wanting what they can’t visualize, and I see self-promotional tools such as these books (and websites and other programs that go along with them) as giving consumers much to consider as they survey the potential locked up in their drab backyards.

I congratulate these gentlemen for stepping forward and unashamedly showing off some truly wonderful work – and think more of us should take this sort of bold initiative. **WS**

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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