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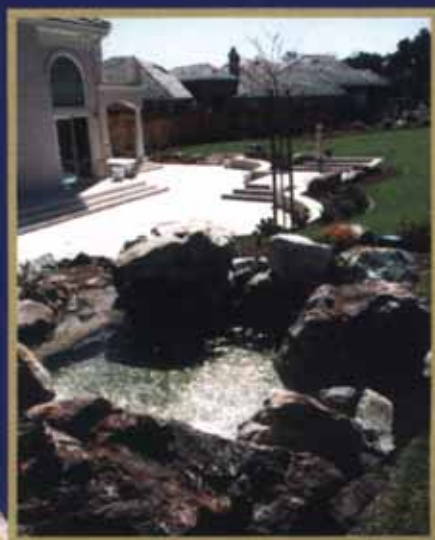
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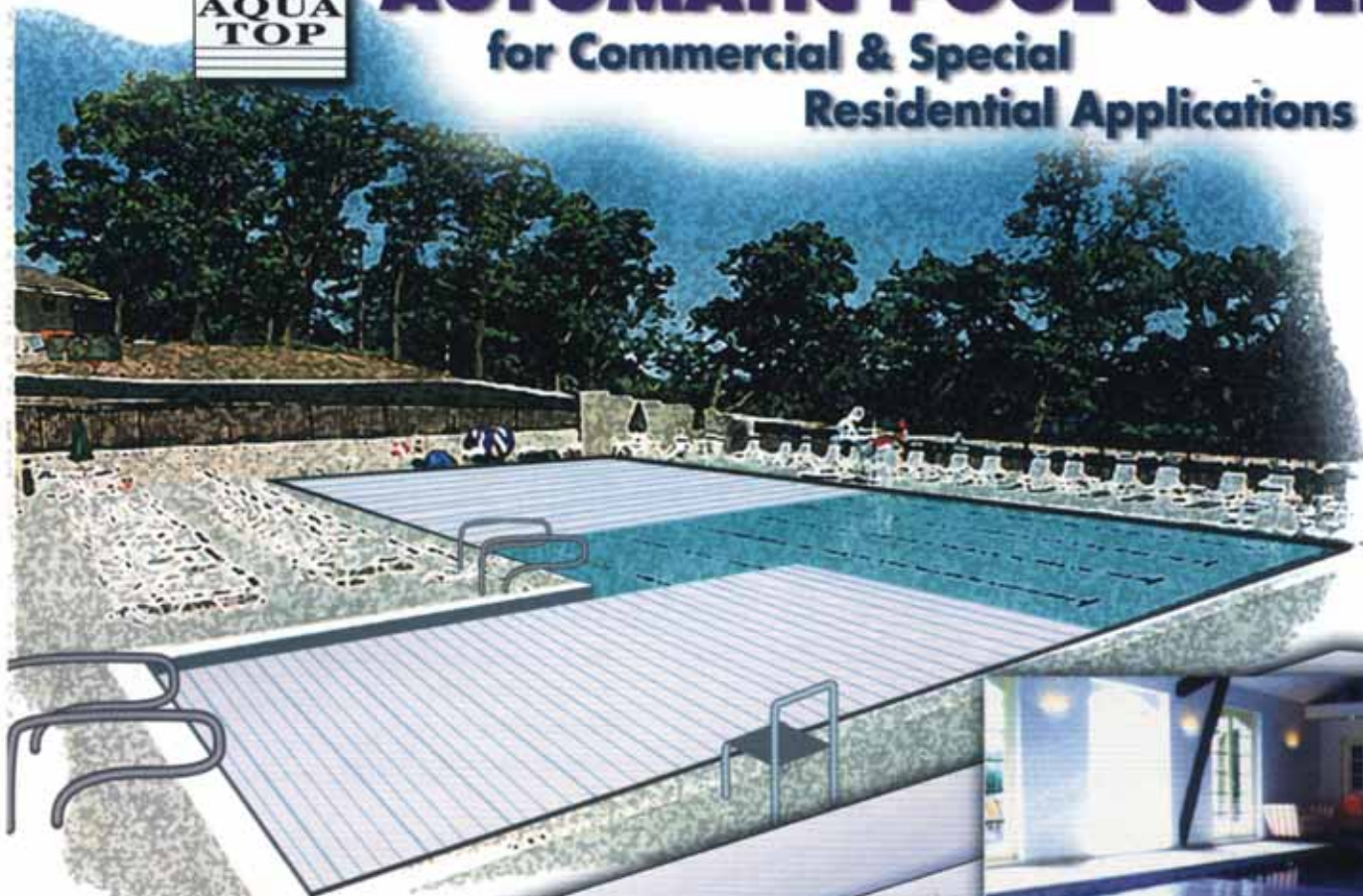
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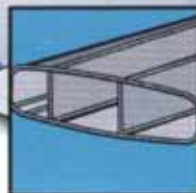
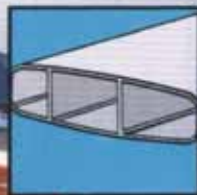
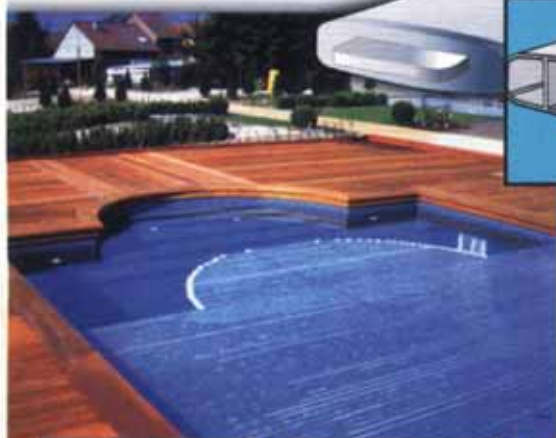


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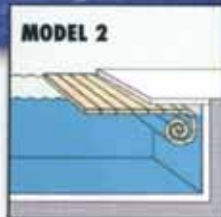


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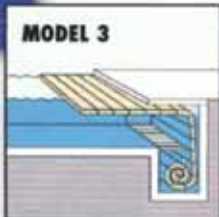
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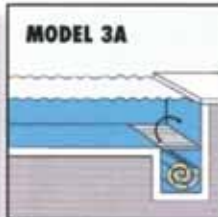
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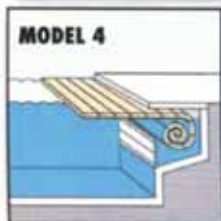
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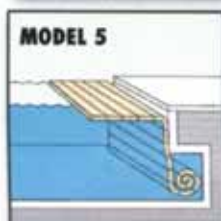
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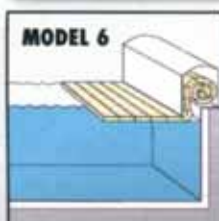
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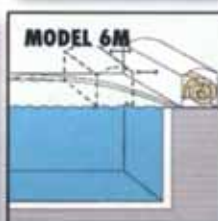
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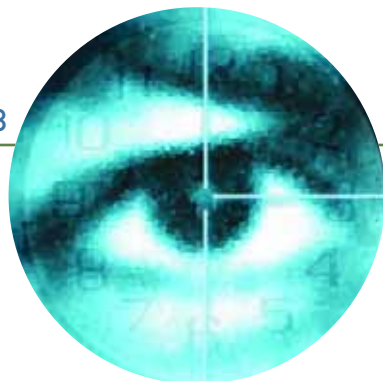
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Photo courtesy David Tisherman's Visuals,  
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WATERSHAPES (ISSN 1522-6581) is published monthly with combined issues January/February, July/August and November/December by McCloskey Communications, Inc. 6119 Lockhurst Dr., Woodland Hills, CA 91367. A controlled circulation publication, *WaterShapes* is distributed without charge to qualified subscribers. Non-qualified subscription rates in the U.S., \$30 per year; Canada and Mexico \$48 per year; all other countries \$64 per year, payable in U.S. funds. Single copies \$10 per issue in the U.S. and Canada. All other countries \$15 per issue. Subscription requests must include name, job title, business location, address information and a signature and date.

**POSTMASTER: Send address changes to *WaterShapes*, P.O. Box 1216, Lowell, MA 01853-9930.**

Periodicals postage rates paid at Woodland Hills, CA 91365 and additional mailing offices.



## All Around You

It's amazing what can happen when you begin to look at the world through open eyes and with an open heart. More often than not, things that were once taken for granted or that passed by virtually unseen will suddenly gain great significance and interest.

In this issue, for example, you'll find an article by Joe Nolan, a stone and masonry supplier. In "Flat-Out Gorgeous," which opens on page 38, he takes us on a tour of the range of options available in flat stone for use in decks, coping, walls and more. This might seem a pedestrian topic at first, but when you look more closely, an amazing spectrum of possibilities emerges.

While working with Joe on his article, I had my own moment of recognition.

In my own life, I've probably seen, sat on or walked across flat stonework many thousands of times without giving it much thought. Within the past few weeks, however, the situation has changed completely: I've begun to notice flat stones practically everywhere I look – the beautiful reddish and pink flagstone surfaces on the entryways, pathways and walls of my neighborhood's stock of Mediterranean-style homes, the beautiful bluestone pilaster on the corner of a small retaining wall in front of a nearby home, and the wonderful cream-colored limestone on the exterior walls of my bank branch.

With this single adjustment in my perception of the world around me, a tremendous beauty started jumping my way from all directions.

Now consider what might happen if you started looking at things like flat stone or architectural touches or watershape details in the world around you as fuel for creativity in your own work: What you might add to your store of design ideas is truly staggering. Certainly this explains why so many landscape architects and designers tell me how much time they spend looking at the way nature does things: Doing so feeds their creative fires and blazes across everything they do.

Take designers Suzanne Roe Dirsmith and Ron Dirsmith and the process that led them to write "Winter Delights" (page 32): In their article, they briefly describe how they create fountains that are designed to run right through Chicago's harsh winters as fascinating and ever-changing sculptures of ice and snow. Not surprisingly, the genesis of their winter fountains began with their observation of partially frozen mountain streams.

Had they walked by those streams inattentively, the delicate rivulets of water coursing through sheets of snow and ice would have gone unnoticed. But because the Dirsmiths were deliberate in their observations, an entirely new breed of design has entered their working lives.

My point here is that, whether you're perusing unusual or interesting or beautiful materials in a masonry yard, hiking in the great outdoors or flipping through the pages of a magazine, the seeds of inspiration are all around. As you open your eyes and mind, partake of these observations and figure out ways to apply what you've seen when you get back to your workbench, your personal store of ideas and possibilities becomes virtually limitless.

The great American poet Walt Whitman once wrote that curiosity is the most potent gift of the human mind. I think he's right: When we open up to the complexities and subtleties of the world around us, all that we encounter becomes an infinite banquet, a true feast of interest.



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# IN THIS ISSUE

## APRIL'S WRITERS



JAUREGUI

**Melanie Jauregui** is principal designer and founder of Biomirage Landscape & Garden Design in San Diego, Calif. She entered the landscape design business in 1980 while pursuing a career in the fine arts in Sedona, Ariz. She soon discovered great creative possibilities resulting from blending her background in the arts with the technical aspects of construction and horticulture. Returning to school to study landscape architecture, Jauregui accepted an internship at Wiley Group Landscape Architecture in San Diego, where she worked and studied for eight years. She started Biomirage in 1992, focusing her efforts on high-end, custom residential landscape and garden design.

**Ron Dirmsmith** is principal architect and co-founder of The Dirmsmith Group, an architec-

ture firm based in Highland Park, Ill., with operations worldwide. He and wife Suzanne established the firm in 1971 following employment with the prestigious firms Perkins and Will and Ed Dart Inc. He has a BS in Architectural Engineering and a Masters in Architecture and Design from the University of Illinois. He is also a Fellow in Architecture of the American Academy in Rome, which for more than 100 years has been a research and study center for America's most promising artists and scholars. Dirmsmith is one of only 172 architects to have been granted this honor.

**Suzanne Roe Dirmsmith**, president of the firm, holds a BS in Education from the University of Illinois and a Masters in Education from National-Louis University. She heads the education division of The Dirmsmith Group, an ef-

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fort dedicated to forwarding design and architecture education within the architectural community and to foster new thinking and raise awareness of architecture and landscape design as a blended whole.

**Joe Nolan** is vice president and co-founder of Malibu Stone & Masonry Supply in Malibu, Calif., a construction wholesaler specializing in decorative stone products. Following several years as a construction superintendent for a general contractor, Nolan began his career in the stone business in 1985 when he went to work in sales for a masonry retail and wholesale supplier. Recognizing a large void in the decorative stone supply business, Nolan and co-founder Scott Armstrong established Malibu Stone & Masonry Supply in 1997.

**David Tisherman** owns and operates David Tisherman's Visuals in Manhattan Beach, Calif. A designer and builder of high-end custom swimming pools since 1979, he is widely known in the pool and spa industry as an advocate for the highest possible standards of design, engineering and construction. He has degrees and credentials in industrial design, scientific illustration and architectural drawing from Harvard University and Art Center School of Design and has taught architectural rendering and presentation at UCLA. An award-winning designer, he serves as an industry expert for California's Contractor State License Board and has been a member of NSPI's Builders Council since 1994. Tisherman is a co-founder of and principal instructor for the Genesis 3 Design Group.

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# Finding the Garden Path

By Brian Van Bower

**T**his past January, I had the pleasure of traveling to Tucson, Ariz., to attend the annual conference of the Association of Professional Landscape Designers. The focus of this year's conference was the use of water in landscape design, and the program appropriately featured an interesting mix of experts on swimming pools, fountains and water gardening.

To be honest, I didn't know what to expect when I signed on. I'd only been to one landscape event before, and much of that trade and the people in it have been mostly unfamiliar to me. As it turned out, however, this conference was truly an eye-opening experience. I'll even go so far as to say that this event now represents a significant turning point in my watershaping career.

Along with my Genesis 3 partners, Skip Phillips and Dave Tisherman, I was asked by conference organizers to give a presentation on swimming pool design and construction. We were happy to oblige, and what we found was a gathering of landscape designers who were extremely interested in learning everything they could about how to design and build pools. Even those with some experience were interested in any information that would enable them to incorporate pools more effectively into their work.

## Working with Passion

I was impressed by the passion of those attending the conference and the richness of their ideas. I could only admire their willingness to expand their horizons.

What was so fascinating to me was the artistic and creative approaches these designers apply to the work they do – a very different sensibility than you find most of the time in the swimming pool trades. These are professionals who work hard to use nature as a guiding design inspiration and they are, for lack of a better term, de-




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**Now that I've begun to study water gardening in earnest, I've found that it fits neatly among paths of inquiry I've already explored.**

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cidedly "artistic" in the way they go about it. I liked what I heard and saw!

I was also a little surprised so many people from outside what I consider to be the mainstream of the swimming pool industry – especially people with such a different sensibility – would take so great an interest in expanding their understanding of pools. As I thought about it, however, it occurred to me that I shouldn't be surprised at all, because I've known for some time that the landscaping trades are both education-oriented and inherently creative.

I came away from the conference thinking that, as a designer and builder of custom concrete swimming pools, I, too, should look outside the confines of my world and develop my knowledge of landscape design and other parts of that world that are relevant to my work. As I sat and watched some of the presentations, it became clear to me that a natural place to begin is with ponds and water gardens.

As I sell my services to potential clients, I refer to myself as "an artist who works with water." In that sense, it's natural from the clients' point of view

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to assume that I would know about ponds as well as pools.

And through the past few years I've found that to be exactly the case: In ever-increasing numbers, my customers are asking for ponds and natural streams as part of a whole package. They've seen Japanese gardens and other beautifully designed garden spaces that include wa-

ter, and they're looking for that same beauty and tranquility in their own lives.

As I talked to people in Tucson and sat in on the seminars, it occurred to me that there is an entire field of valuable ideas waiting for those of us in the "pool industry" who are willing to take the journey beyond the concrete holes we build into a realm of pure, clear, multi-dimen-

sional watershaping. (In a very real sense, this kind of conceptual expansion is what *WaterShapes* is really all about.)

And now that I've begun to study water gardening in earnest, I've found that it fits neatly among paths of inquiry I've already explored, specifically *feng shui* and the concept of integration in exterior design. It's all interrelated, and this landscape-side sensibility about adhering to nature is something that is already resonating with many of my clients.

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### Natural Tranquility

There's a tremendous opportunity to harmonize within designs that use truly natural bodies of water. It's an approach to integration that landscape professionals seem to take in stride and understand as being essential to their approaches.

I don't think the same thing can be said of people who, like me, are coming at modern watershaping from the swimming-pool side of the equation. That's not to be negative about an industry that's been so much a part of my life, but rather to point out the fact that we have a real opportunity to grow and develop in what we do for a living.

The more I immerse myself in this new sensibility, the more liberating I find it — and the more I find that some of my preconceived notions about design and construction of bodies of water are being challenged.

On an extremely practical level, for example, ponds have forced me to think of vinyl liners in an entirely different way. Coming from the pool industry, I've long been accustomed to thinking of liners as a less expensive, less durable and much less flexible (in design terms) alternative to concrete construction.

I'll admit it: I've indulged in the opinion that "baggies" were inferior and that concrete is the only way to go. But now I've come to understand that the liners used in ponds and streams are entirely different from those used in pools. They're a heavier, more durable material that is meant to last indefinitely.

I'd also never considered the fact that in ponds you place gravel and soil on top of the liner and hide it from view completely. Nor had I stopped to think that when you develop a "living" system



in a liner, that liner really does need to be seen as permanent.

Thinking about ponds also has challenged me to think about water treatment and filtration in brand-new ways. I'm even learning to accept certain types of algae and bacteria as beneficial and desirable. And I look at water plants and the needs of fish in a whole new way, too.

Perhaps most significant of all, my study of the art of pond design has already led me to understand the importance of observing, appreciating and, yes, understanding nature to the fullest extent possible.

### Taking a Hike

One of the things heavily emphasized in the APLD program in Tucson was the importance of getting out and observing nature at first hand.

Landscape designers have always used the world around us as a grand sort of classroom or design laboratory. They look to nature for examples of the ways that rocks, plants and water co-exist naturally. And many of the things they see around them in nature serve to inspire and broaden their creativity at the design table.

I think I've always understood this on some level – and it's certainly something I've read about many times in past issues of *WaterShapes* – but I've never thought of it in such direct terms. For many years now, one of my favorite things to do has been to go on hikes in North Carolina on trails along numerous streams and rivers – many so secluded that I'm convinced I am the first person ever to do so. I've taken pictures and made sketches, but mostly I've just noticed how nature so often does surprising things – things you'd never think to apply in a design intended to mimic nature.

I once took photos of a set of boulders that were distributed in a sort of linear pattern, almost as though some drunken mason had put them there. In a natural design I did sometime later, I used that pattern of rockwork in a waterfall. Once construction was done but before any plantings had been added, I was sure this quasi-organized pile of rocks just wouldn't make the impression I wanted to make. But sure enough, when the whole

thing was finished, the effect was both striking and distinctly natural.

The lesson taught by the art and practice of landscape design is, I think, that we can trust nature as a source of inspiration – and that it's a tremendously creative resource. In landscapes we see an appreciation for subtle effects and thoughtful earthen structures. We see

the importance of the placement of rocks and plant materials and the careful use of earthen structures and elevations as opposed to hardscape structures. We see a willingness and desire to conceal the hand of man in the work and the courage to create areas that are meant to be as plainly "natural" as possible.

It's really a fun way of looking at the

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world – and a relatively new perspective for me.

I think I've instinctively been going in this direction for years. On a project a few years ago, for instance, I was building a concrete pond in conjunction with a landscape architect the homeowners had employed. In my typical pool-builder style, I wanted to conceal the bond beam with piles of rocks and some large waterfeatures.

The landscape architect had a different idea and asked me to contour the top of the bond beam so he could bring turf and landscaping right to the water's edge, quite capably concealing the concrete structure below (see the photo on this page). It looked great, but at that time, I would have never thought to treat an edge that way.

His approach was informed by a strong desire to make the work look natural; mine was biased by my skill in manipulating hardscapes to create edge treatments.



### Across the Water

Clearly, there are a great many things that pool designers and builders can pick up from landscape professionals, and vice versa. Regrettably, I think both trades have spent too much time working in isolation from one another without a full appreciation of what each other has to offer.

For my part, I know that I am now

going to take ponds, streams and the whole realm of water gardening far more seriously than I did before my experience in Tucson. I'm also going to look more closely at rock material, plantings and water in natural settings while I retool my thinking on filtration and learn as much as I can about the technology of ponds and the artistic sensibility that goes into their design.

Continued on page 16



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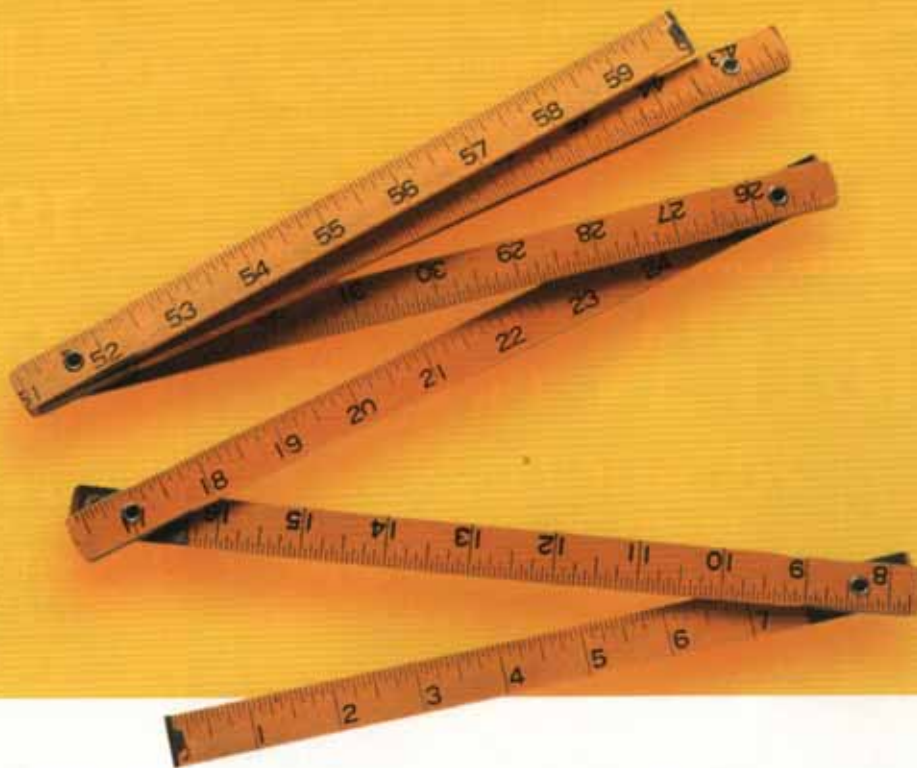
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It's very clear to me now that many people from the landscaping side of the watershaping industry are going through much the same set of transformations when it comes to pools.

Rather than view this as some sort of adversary relationship in which two trades are competing over the same turf, I view it as an exciting new opportunity

to forge strategic business alliances. In fact, I've already begun seeking out local landscape architects and designers I can bring into various projects to help me meet my clients' demand for natural tranquility in their backyards and homes.

In practical terms, I see three main benefits to this path of inquiry and discovery: First, expanding my range to encompass

ponds and streams gives me the chance to be artistic and to create something beautiful for my clients. Second, there's more freedom in ponds, both because they aren't as heavily regulated as pools and because the range of available rock and plant materials is absolutely huge.

Third (and this is the most intriguing part), executing natural bodies of water requires its own particular type of perfection. It's a perfection that relies not on hitting close tolerances in engineering and construction terms, but in refining the way you compose using a natural assortment of stones, plants and water.

Only now am I learning to view the world in a way that so many of our colleagues in the landscaping trades do. I feel as though I've taken the helicopter up another hundred feet to see a broader picture and calculate the impact of my designs in a greater and more significant context.

We all talk a lot about education, but where these discussions gain true meaning is when you venture into a new world of ideas and find things that are both exciting and useful. For those of us accustomed to building swimming pools, water gardening presents a wonderful learning opportunity. We already possess many of the needed skills, but we need to learn to look at things in an entirely different, natural and artistic way.

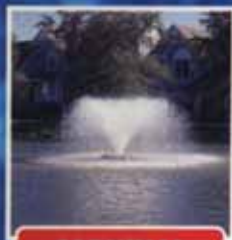
I'm sure the same point cuts the other way, because the enthusiasm I encountered in Tucson on the part of landscape designers wanting to expand their work to include engineered hardscape structures that contained water was nothing short of phenomenal. I applaud that brand of open-mindedness, and I welcome you to the discussion.

Your presence has already made my work more interesting and exciting.

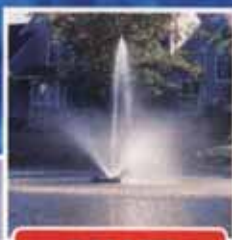
*Brian Van Bower runs Aquatic Consultants and is a partner in Van Bower & Wren, a pool-construction firm in Miami. He is also a co-founder of Genesis 3, A Design Group; dedicated to top-of-the-line performance in aquatic design and construction, this organization conducts schools for like-minded pool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

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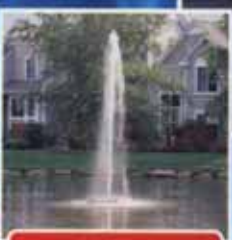
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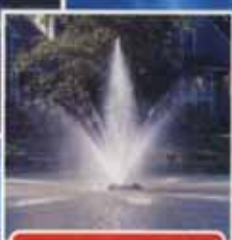
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# Super Vision

By David Tisherman

In the past few issues of *WaterShapes*, I've used this column to share some very specific construction techniques with you – each one a special detail that I've used to add value and interest to my work. Before I did the first in the series, however, I probably should have laid down an important ground rule: Everything that you've seen in this column – and in the other articles and columns I've written and will write in the future – requires both *constant* and *competent* on-site supervision.

It's a fact of life: The very best design feature in the world isn't worth anything if it isn't executed properly. And no matter how good your in-house staff or subcontractors are, they need guidance when it comes to the real work of getting the job done the way its designer intends. (Subcontractors may have superior knowledge of their specific trades, but they are *not* designers.)

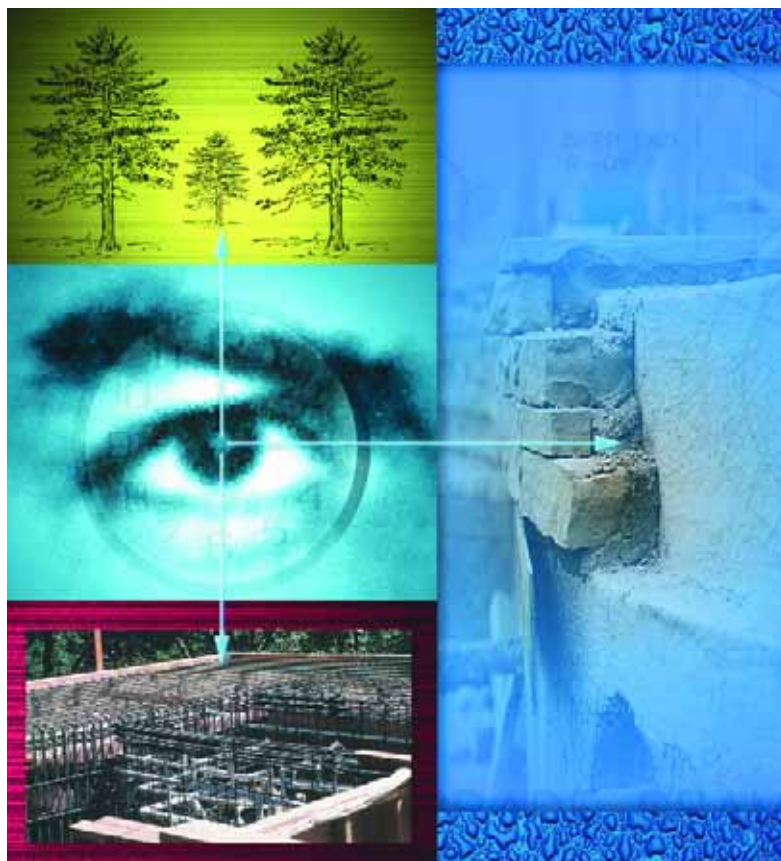
This challenge isn't isolated to watershaping: In any of the construction trades, problems arise through inadequate or inaccurate supervision and communication. You have salespeople who talk to sales expeditors who talk to field superintendents who talk to field supervisors who talk to foremen on the crews of workers. By the time the information is handed down, there's little or nothing there to go on.

But when you have good, tight supervision provided by a knowledgeable overseer working with good crews and a good set of plans, *anything* is possible. Without those fundamental elements, failure is, to some degree, almost certain. Supervision is all encompassing: It's the difference between building quality and building junk.

## On the Spot

Whether you're talking about high-rise buildings or swimming pools, weekly or even *daily* meetings are required to make certain something that was designed by one person and is being built by another is going to be consistent with the initial design.

Nature loves chaos, and an unsupervised construction project is going to fall off track some-



where along the line, sooner or later (or sooner *and* later). Problems will start to be built into the jobs in one phase and reinforced or accommodated at each subsequent step of the way. And this can happen when there's good documentation on a job (because not enough people can read the drawings) and with good crews (when they're left to make specific decisions about how to do things on their own).

When you compound all of this with initial designs that aren't all that specific or have been created by someone who doesn't know enough about what he or she is doing, consistency from design through to finished product is almost impossible to achieve.

Let me get brutally specific: I've worked at many levels in the construction business, but I'll single out the pool and spa trades here only because it's what I know best. All too often, what I've seen here is the desire to make a sale, install the pool quickly and get out as fast as possible – a chain of events that all too often leads to inadequate supervision.

In fact, good supervision *begins* with the sales process. Whether you



call him or her an architect, a sales engineer, a sales rep or a design artist, the person working to obtain customers' signatures on the dotted line should have detailed knowledge about the construction process. In many jobs, the breakdown in supervision intrudes right from the start, when a salesperson who knows nothing about construction sells a watershape based on unrealistic promises for a quoted price.

All over the map, you find people selling watershapes who have never worked on a construction job or participated in a builder-oriented class of any kind. But as much as anyone actually working on site, salespeople should know the specifics, such as how to run a gas line or what happens to its cost when you run it under the house. They need to know how differing soil conditions will affect costs or the plumbing required to set up a waterfeature or a vanishing edge.

Without observation, experience or education, what you find all too often is

a salesperson who doesn't know the first thing about how to plumb a 16-jet spa with proper hydraulics, for example – but is *more* than willing to include one on a job for the sake of closing the deal. It's crazy! I've seen classified ads in the industry's trade magazines that read, "Wanted: Pool Sales Rep. Will train in two weeks." What that person will learn in two weeks is how to get the customer to sign on the dotted line. It's *impossible* to know anything about construction until you've been educated on the job, in the classroom or both.

The point is, when plans are generated by informed sales professionals who have a realistic understanding of what it costs to do things right, then all of the oversight and supervision that follows can do some good. In fact, it sets things up so a project can come together *beautifully*.

### On-Site Oversight

In terms of what actually happens on site, there are two key requirements for

proper supervision: You have to plan for the time it takes and devote someone to the task; and you have to have someone with the know-how to do it. And by know-how, I don't mean anything superficial: The supervisor needs to know construction processes inside out, how each step influences the next and how every phase of the operation needs to come together.

In my company, that person is *me*. Almost every single day that I have a crew working on a job, I'm there checking some aspect of the construction and directing the crews in the details. In other companies, that responsibility may fall on a project manager. All too often, however, the person in charge on site has never even talked to the designer about the job – and that's where breakdowns can occur.

The first point in the process where physical supervision becomes crucial is before the tractors arrive. In my own business, the process actually starts at

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least a week before excavation in a meeting that includes everyone involved in the project: the landscaping contractor or designer, the irrigation contractor, the arborist, the geologist, the homeowner and anyone else who is involved in the project – each should provide input. This helps prevent problems right from the start.

If, for example, the excavation subcontractor comes out and just starts digging without proper inspection and planning, he or she might accidentally crush or tear out the roots of major trees or dig up a gas line or undermine or directly damage existing slabs. Coordination and pre-planning eliminate these fiascos.

Knowledge of available local resources and codes is essential. In Southern California, where I do most of my work, we have a public service known as Dig Alert, an organization that locates underground utility lines before construction begins to prevent disaster. Other parts of the country aren't so fortunate,

which means that knowing what's going on in your own area is crucial.

Again, it's common sense. If a tractor comes out and hits an irrigation line, no big deal, it can be fixed – but at what cost in terms of dollars and customer satisfaction? With proper supervision, the excavator doesn't hit the irrigation line, so the homeowner doesn't stand there watching a geyser. So before the surface is broken anywhere, locations of irrigation, gas and plumbing lines are staked out; the locations of the tree roots are identified and proper clearances set; and planning for the delivery and removal of heavy equipment has been choreographed.

A good supervisor thinks all of these things through and directs the action before any sort of damage can be done. During construction, he or she cannot focus on the things that are going right: The objective is to look for mistakes, inadequacies – things that aren't right. For this person, the satisfaction comes

with the end result, not with the little victories along the way.

As the hole is being dug, there should be someone on hand to ensure that the excavation occurs in the right place,

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I'd like to express my heartfelt thanks to mason Kenny Palmer; woodwork and framing specialist Rick Shevitt; excavator Juan Castanon; plumber Johnny Rodriguez; electricians Russ McFadden and Chuck Succa; steel man Jim Pope; tile specialist Willie Villanueva; gunite applicator Jim Manning; and my team of plaster and pebble specialists, Tony, John and Luis Marquez.

—D.T.

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with the correct shape, the right dimensions and the proper depths. Site grading for adjoining decks or waterfeatures should be checked for elevations and dimensions as well. Quality really is Job 1, but it's also Jobs 2 through 102.

### From Start to Finish

After excavation, the forming starts. Again, we're talking about nothing less than establishing the dimensions for the structure of the watershape. In my book, the forms *must* be set at the right elevations and *must* allow for the dimensions of a properly designed bond beam or raised spa or edge spillway or vanishing-edge trough.

If the forms are set too high, you'll see companies out there jack-hammering away yards of gunitite to hit the correct levels (provided they catch the mistake at all). And the vessel itself isn't the only problem here: Improper form elevations can lead to improper drainage on adjoining decks – and you may have a costly situation where water drains into a room of the house.

These elevations are critical: They must be represented properly on the plans, and they must be checked and rechecked in the field.

It's easier, of course, to fix any problem by shooting elevations before anything is built – but it's a living hell if you're answering angry homeowners' questions about why the runoff from a small rainstorm ruined their expensive carpets and furnishings (or washed out their neighbors' expensively landscaped slopes). Supervision prevents those problems; a lack of it invites them.

From start to finish, what all of this boils down to is communication – which generally means you need to work with people you trust. When I started my company, I looked for the very best subcontractors I could find. No matter how small the job was, I met them on site every day and paid them for the work that they did. Through the years, I've built incredible relationships with these people. I'm proud of the fact that most of them are like family to me. We work hard, laugh, do great work and enjoy the fruits of our labors.

Make no mistake: These subcontrac-

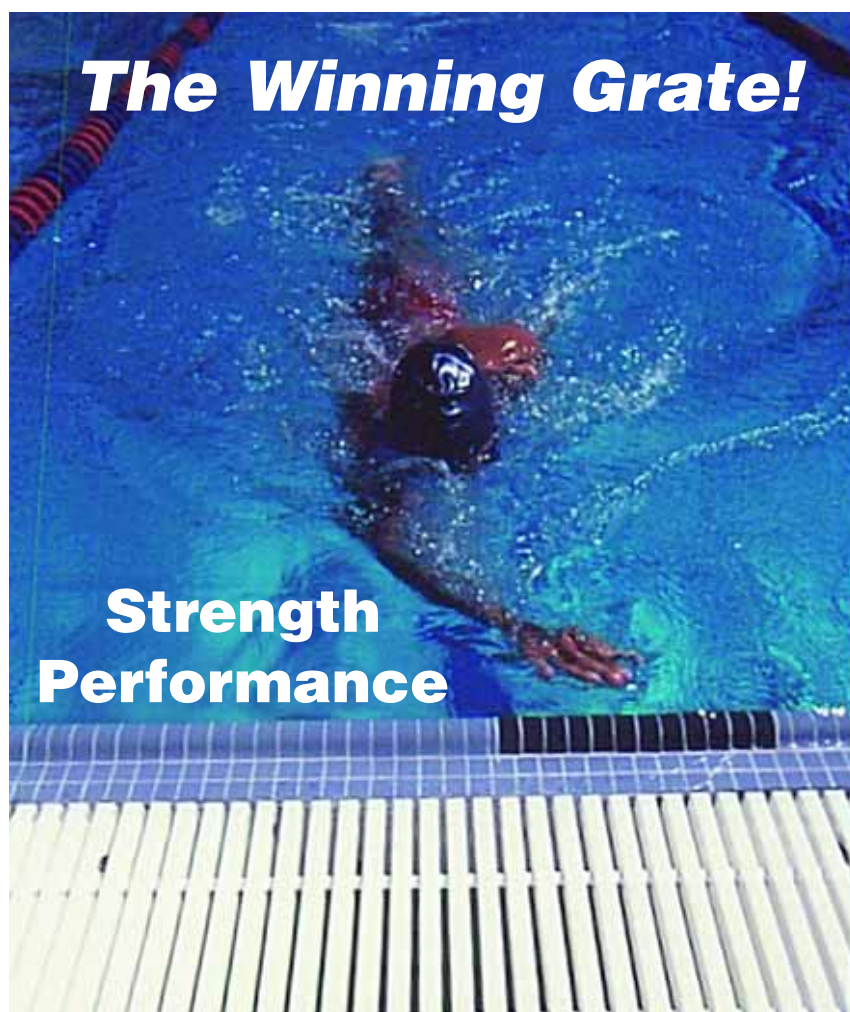
tors know what they're doing. Just the same, I need to supervise them because no matter how good they are, they still can't read my mind. They can build exactly what I tell them to, but if I don't tell them, they're going to use their own judgment – and if that judgment is wrong, it's my fault, not theirs.

I work with the best, but even my

subcontractors aren't geologists or structural engineers or architects or designers: They're craftspeople, and they need to be guided. When you let them make critical decisions of craft or construction, then you've lost control.

### Perfection in Steps

I could go on and offer hundreds of



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examples and anecdotes where supervision will make or break a project. I won't belabor the point; suffice it to say that excavating and forming are just two of the areas where hundreds of details can get off track if someone isn't there to control the process of making them happen.

For example, if the steel is set wrong, the vessel will have an incorrect shape

or one that is not as structurally sound as it should be for the site. Never make the mistake of thinking that the following trade will compensate properly for errors made upstream: You cannot assume, for example, that the gunite contractor will fix things!

Similarly, if the forms are set incorrectly or move a bit during steel work,

the shell could be shot to an incorrect thickness. If you're working in acidic soil and the pool is shot with Type 2 concrete when you should be using Type 5, then the structure is going to be vulnerable to chemical attack by the surrounding soil.

Without proper supervision, decks could be installed over inadequate or incomplete conduit runs needed for lighting, remote controls or an alarm system. In the finish phase, the transitions between different materials could be handled incorrectly, leaving gaps between things like pre-cast coping and stone decks.

By contrast, with proper, competent supervision, each phase of the process can unwind and flow smoothly, with no need for adjustment, alteration or reconstruction. And if things do crop up along the way, it helps everyone's morale and the bottom line if it's an isolated thing that doesn't give anyone a sense that the process is spiraling out of control.

To make this all work, a good supervisor is *always* asking questions. Have we left enough room for the deck, and is it at the right elevation? Is there proper waterproofing around those boulders and in places where different structures interface? Does the work meet local building-code requirements?

The questions that come up from job to job are always different. No two homes are identical, no two lots are exactly the same, every customer is different, the ground is different, the trees are different, the materials will probably be different, you may be working with different subcontractors and your luck will be different. Fact is, you must treat each project as an original—and supervise accordingly.

Call it quality control, attention to detail or perfectionism: There's no substitute for supervision. It has to be there, every time, all the time.

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

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Landscape designer Melanie Jauregui believes there's much more to good exterior design than an understanding of project parameters, sound engineering and tight planning and execution. That's why she takes time to uncover the aesthetic and thematic preferences as well as the emotional motivators of each client – a process that enables her to create landscapes and watershapes that not only function as desired, but speak to the heart as well.







# *The Power of Passion*

By Melanie Jauregui

*I*<sup>’s</sup> natural for me to wax poetic about my work. Gardening and garden designs are what I call my “magnificent obsession” – so much so that the other arts in which I have an interest and for which I even have talent will generally take a back seat.

After more than 19 years as a professional landscape designer, I am still driven and excited by the challenge of creating comprehensive landscapes for my clients. I thrive on the complexity of organizing the myriad elements required to create outdoor spaces that function properly, are beautiful and harmonious to the eye – and even touch the heart.

A garden design typically evolves from a practical and relatively impersonal list of needs. The client, for example, may want an outdoor barbecue, a terrace for dining, a lawn for play, an herb garden and, often, a beautiful watershape of some kind. What I’ve found through experience is that the way these elements are organized and applied can enrich and add deeper meaning to the work.



## *The Right Touch*

What I'm after here is a personal touch that means something to my clients. In some cases, it's an architectural element or pattern woven through the work that calls to mind a favorite architect or artist. Other times, it's setting up an arbor bedecked in sweet pea because grandmother had one just like it.

Through the years, I've found that the various elements in a garden — plants, trees, structures, furnishings or water — can carry great meaning for my clients. In a moonlit garden, my clients might want gardenias because the fragrance evokes memories of their long-ago honeymoon. In another, a client might want an oak tree because he or she climbed one as a child. Or someone of Scottish or Irish descent might crave a Celtic cross or a "knot garden" as a key part of the garden design.

When you consider these creative or decorative elements as part of the design, there is no end to the possibilities. Best of all, every situation with every client and site is *completely* different.

So, armed with sensitivity, creativity and a bit of detective skill, landscape designers and water-shapers can create spaces that absolutely resound with personal meaning. We can create designs that remind clients of their past and heritage, or we can reflect their spirit and embody their deepest interests and passions.

For me, this whole process begins in walking the site with my clients for the first time. On this occasion, I make a conscious effort to suspend my preconceptions. I listen and carefully observe my clients as we move through the property. I also ask for a detailed tour of the home, both to observe the views it offers to the outside and to look for clues in the art, photographs, mementos, awards, furnishings and even the architecture of their home.

This is where I gather many of the puzzle pieces I will fit together to gain a clear understanding of my clients and their personal style. I even ask each member of the family to show and tell me about their favorite photos, paintings, books or poems. I want to hear their stories — and I'm *always* looking for clues.

Quite often, this process relaxes my clients. They'll open up and begin answering even questions that seem personal. This is where barriers break down and where friendships and collaborations are born with bonds of trust, openness and communication. This, in essence, is the creative base from which my designs are conceived and developed.

As my prospects review my portfolio and sam-



*Sometimes* the clients' tastes lead you almost inevitably to a set of design ideas. Here, for example, my clients' love for the Orient and for Chinese and Japanese garden styles inspired my design. Of course, it's not enough just to drop in a stone lantern: The designer needs to consider shadow patterns, colors, textures, pavings and plantings in order to evoke just the right mood of serenity in clients and visitors.





*I enjoy working with a sense of mystery and discovery, and that shows in this project, where barriers and hidden areas and distant steps beckon the visitor to follow the path. Around the corner may be an ocean view, a meditative fountain or a swimming pool – and the steps one takes to get there for the ultimate view is a big part of the experience.*

ple plans, I list my impressions and ask more questions about the practical aspects of the design. I'll toss out a few ideas as bait to see whether they strike, nibble or swim past. At this point, I'm careful to be vague, because I don't want to get locked in to something I may (and probably will) want to reconsider. I note which pictures they linger over and why. Then, as we review various plan packages, I discuss the design and construction process and budgets to define the scope of the work and to assist me in preparing a proposal to suit their needs.

### *Good Groundings*

Following these client meetings – and while I am considering a huge array of aesthetic options – our firm's civil engineer, Michael Brown, performs a site reconnaissance. This happens *before* any actual design work begins.

For small sites located within subdivisions, he'll provide me with an accurate plot map and information on any issues he thinks might affect the direction of the design. For larger or more complex prop-

erties (or those with extensive grade changes or drainage issues), he'll generate complete topographical maps. And no matter what, he continues to provide his engineering expertise and support throughout the course of the design and construction processes.

While Brown maps out existing soil and geological conditions, I'm doing my homework: I review the clients' wish list, photos, any magazine articles they've given me and any other clues I've gathered. In many cases, I end up giving myself a refresher course in certain styles or reacquainting myself with a particular poet, artist or architect who came up in discussions or who I recognize as having influenced their lives, their style and their aesthetic choices.

I walk the larger, more complex properties again – alone this time. In some cases, I'll take a bag lunch and a camera and spend a good while on site. I find this time spent on the land to be invaluable, because it's the land itself that properly dictates so much of the design.

In producing my initial concept plan, I make a rough layout of the use areas, each of which I treat as an outdoor

"room" that relates to the other outdoor rooms and to the home itself. These rooms are what I call the "urban" areas of the garden. They are typically near the home, but not always.

By contrast, the further away I move from the house, the more wild and natural the design becomes until the work transitions into the natural landscape on the boundaries of the property or in the distant or borrowed views.

With older homes or homes with distinctive architecture, I will make direct references to the vernacular of the house in my designs. But this is not a hard and fast rule for me: In many cases, a design concept will grow independent of cues from the house itself. In fact, the more generic and repetitious the architecture (as with homes in planned developments) the less I allow it to influence my design.

### *Working for Feel*

As the design develops, I not only take into account how each area will be used, but how it should feel as well. Often, this





*The ordering* and arrangement of outdoor rooms is at the heart of the design challenge, particularly when it comes to large spaces or spaces complicated by dramatic changes in elevation. In this case (and in the photo seen on the opening pages of this article), the clients wanted a serenity garden – one that would be energizing in a subtle way. The heavy use of green sets the mood and tone. From there, we set about creating a swimming pool that would







**appear to be a small lake surrounded by enticing natural pathways and a bridge that draw visitors to a distant wilderness. To make the lake illusion work, we minimized the coping, ran a turf edge down one whole side, fed one end with a meandering, gently babbling brook and did all we could to soften and break down the watershed's perimeter.**



is managed by how different areas relate to each other and how the client will move either physically or visually through the space.

As an obvious example, it's usually not desirable to place a meditation garden right next to a children's play area. If that's the way it must be for some reason or other, I create a deeper-than-usual buffer and transition zone between these areas and fill it with dense plantings to attenuate sound.

By creating physical barriers and transition zones between use areas, movement is directed through the space: The mind becomes alert; curiosity is piqued; the visitor feels compelled to explore and discover what lies beyond. This is the element of mystery, and I think it's crucial to good design.

There are many ways to incorporate mystery into a project. Imagine, for example, the effect of an arbor or of a simple portal pruned through a tall hedge or of a path disappearing around a corner. These are all simple, effective and compelling ways to create transitions from one area to another. And when your designs include water, be it a small waterfeature or a good-sized swimming pool, this sense of discovery can be made even more dramatic.

Line of sight is another design tool upon which I heavily depend. When used sensitively and skillfully, I find that playing with the angles from which certain objects or areas can be seen is an effective and dramatic way to prompt exploration of a garden.

To be sure, line-of-sight management and manipulation is not new, and you see and find it in all styles of landscape design. From the formal alignments of old-world garden designs to the subtle natural landscapes of Japan, the use and alignment of sight lines and planning with focal points in mind is virtually universal, and the eye is captured along with the imagination as we are compelled to explore.

The important factor here is the designer's awareness not just of the superficial ways in which lines of sight are used and controlled. Rather, it's how a composite of these outdoor rooms and their lines of sight all relate to one another, how they work together, and how they serve to draw the observer through the garden rooms on a voyage of discovery.

Then, once these relationships between rooms are established, the design



*This is a case where management of lines of sight makes all the difference. The reflective quality of the water draws the eye across the pool to the native xeriscape in the middle ground. There, trimmed to mimic the distant mountain range, the free-form hedge of California holly provides a connection to the vista. In turn, that connection creates a sense of serene isolation for my clients – but the truth is, this garden sits in a subdivision and there are houses just beyond the hedge.*



## PROFESSIONAL POND PRODUCTS

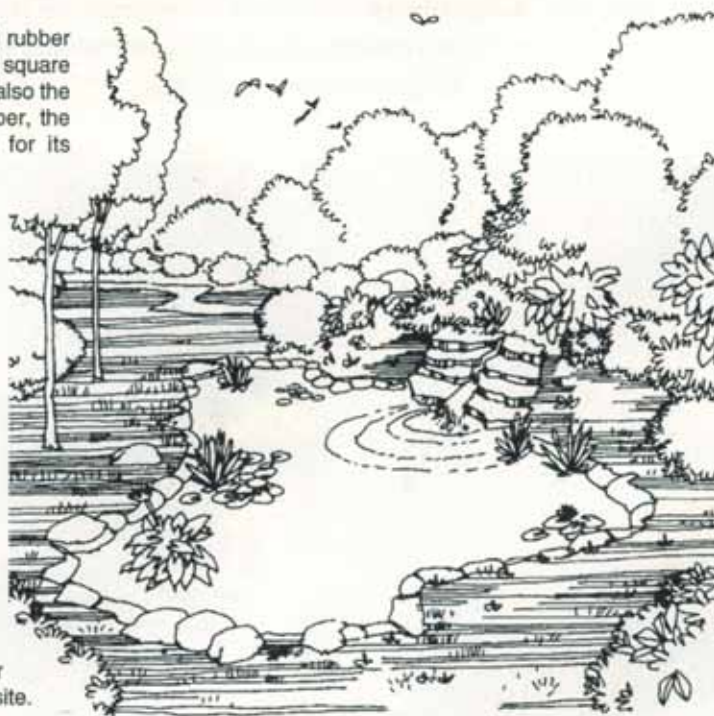
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process turns to decorating these spaces with personal elements – trees, plants, statuary and watershapes – that have deep meaning and evoke strong feelings in our clients.

### *Concept Acceptance*

As the hardscape plan emerges, I simultaneously determine the species and placement of many trees and shrubs.

Some of these decisions are significant because I am using these trees or shrubs as architectural elements; as such, they become married to the actual hardscape structures that serve as the skeleton upon which I later will hang the rest of the plantings or aesthetic touches.

These major structures and the “architectural” plantings are shown on my initial concept plan, which is then colored along with a few sketched renderings of important lines of sight – watershape elevations, for example, or the focal points associated with an allée or the view out

of an interior window.

When I’m done, I send this plan to the client for consideration along with a detailed letter explaining my ideas and overall design intent.

Then I let a week or so pass before we schedule a meeting. This gives them the opportunity to digest the ideas and walk the property themselves before we sit down. A good 95% of the time, my clients get right behind this initial concept: By spending the time up front in the “gumshoe phase” of the process, I’ve been able to put a great deal of heart and soul (mine and theirs) into this initial design. And if there *are* changes, they tend to be fairly minor most of the time.

Once my clients sign off on a plan, it’s a matter of putting in time at the drafting table. Many of my designs have unusual or unique elements that, once approved, require careful research and detailing. It’s during this phase of the design that I urge my clients to meet with the contractors with whom we’re plan-

ning to work. Likewise, this is the time for them to introduce me to contractors they’ve selected.

Either way, I feel it’s critical for the designer to establish a friendly and respectful relationship with the builder early in the process. I always depend on his or her expertise and craftsmanship to bring concepts to reality, so I want the builder to be excited by the concept and thoroughly involved with the development of the overall design as we near groundbreaking.

As an experienced, hands-on designer, I have confidence in my talent and creativity and in my ability to create a fine set of plans. But, a fine set of plans is not a garden built: The only way to bring the concept to reality is through establishing a common vision for the client, designer and builder as a team fully dedicated to excellence.

This synergy is essential if a project is to transcend the mediocre. When it works, the results very likely will exemplify the *real* power of passion.



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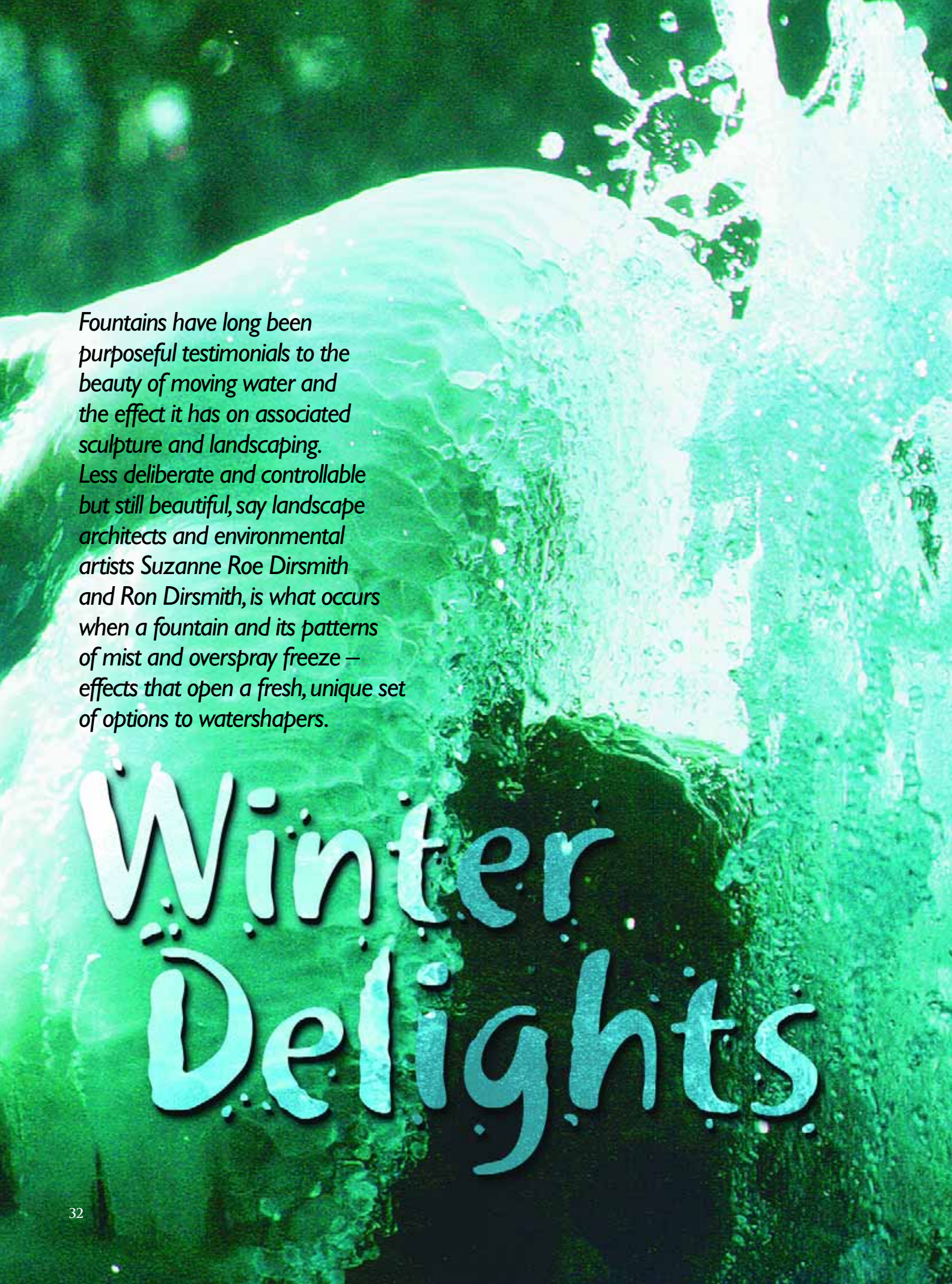
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Fountains have long been purposeful testimonials to the beauty of moving water and the effect it has on associated sculpture and landscaping. Less deliberate and controllable but still beautiful, say landscape architects and environmental artists Suzanne Roe Dirsmith and Ron Dirsmith, is what occurs when a fountain and its patterns of mist and overspray freeze — effects that open a fresh, unique set of options to watershapers.

# Winter Delights





By Suzanne Roe Dirsmith  
& Ron Dirsmith

An important part of creating a human environment in harmony with nature is planning for and designing with the cycle of the seasons in mind.

At our company, the Dirsmith Group, we operate with the belief that a blending of fine architecture and landscape design into our natural environment, in careful harmony with human beings, demonstrates both a reverence and a respect for nature. The result of this blended environment is that people feel good: They enjoy being in the space, and we believe it enriches the human spirit.

When it comes to working with the seasons specifically, that's easier said than done in some locations – such as Chicago, where we live and work. Watershapes here are not typically enjoyed year 'round: Swimming pools are drawn down and covered for the winter, for instance, and public fountains are de-commissioned for the season as well. Yet much to our surprise, we've found in recent years that the freezing cold of winter has become an environmental factor that is very much in play in certain of our fountain and waterfeature designs.

It happened by accident, as we were observing the icy shapes forming in and around natural streams and then soon thereafter in fountains we had designed. And it didn't take long before we saw that we could harmonize our work with winter's cold. The result is a new class of "winter fountain" highlighted in this article that is able not only to function during winter, but is able to play host to a glorious dance between the work of man and the imagination of nature.

#### INSPIRED BY NATURE

As is true in so many aspects of landscape design and environmental art, the inspiration for our freezing fountains and waterfeatures began with nature herself in the course of a wintertime walk along a mountain stream. We noticed that moving water found amazingly intricate and interesting courses through the ice and snow. Back home, we observed the same sort of interaction in a fountain at our Highland Park design studio.

On the simplest conceptual level, we came to appreciate the fact that moving water does not freeze – a simple observation of truth that enables a fountain to operate in the presence of ice if certain design and construction pre-conditions are in place (see the sidebars on pages 35 and 37 for details). After watching mountain streams and the forms that accumulated around



our own fountain, we began to think of this as something that could be done deliberately.

Of course, making an observation and convincing clients of the viability of an idea are two different things, and we're the first to admit that only a handful so far have embraced the notion of a fountain in winter. Nonetheless, manipulating the effects of snow and ice on water-shapes is now part of what we do and part of the discussions we have with clients looking to adorn or enhance the environments of their homes or offices with aquatic forms.

None of our prospects so far has ever heard of or considered such a thing before, so it's always unexpected – but some of our more open-minded clients have latched onto the concept with real excitement.

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*To our surprise, we've found in recent years that the freezing cold of winter has become an environmental factor that is very much in play in certain of our fountain and waterfeature designs.*

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What we and this forward-thinking group of clients can see is that as winter progresses, a winter fountain does its own, ongoing sort of "sculpting." Day by day, the forms change as water freezes, melts slightly and then re-freezes. There's also a delicate, wonderful interplay with light and wind and drifting snow as icicles, drifts and plumes of frozen spray are interlaced with channels and contours made by the flow of the moving liquid.

And although we've only just begun to witness and learn about all of this, we have a sense that we're coming to know some of the forms that will emerge and are now becoming attuned to some of their secrets.







## Managing the Cold

The almost magical aesthetic quality described in the accompanying text and seen in the photos can only exist in the presence of specific technical characteristics of the watershape.

The most critical key is to be sure that the fountain or basin does not allow water to freeze inside the system itself. All freezing that occurs must take place outside the circulation system and only on parts of the fountain or the water's surface and the periphery of the basin. If water freezes where it shouldn't, the vessel and/or the plumbing will be destroyed by the expansion of the water as it turns to ice.

If you miss the mark on this critical aspect of the design, you're going to have damage on your hands sooner or later. And it's likely to be serious in nature.

So the primary design consideration becomes one of keeping the water from freezing, or controlling and limiting where and how it does freeze. We've seen systems in which anti-freeze chemicals are added to the water, but this creates a toxic, discolored liquid that will harm animals that may drink from the fountain. Not a good choice. You also might heat the water, but it seems to us that heating a fountain solely for the purpose of allowing it to become sculptural art in the winter is not going to be worth it in terms of cost to most clients.

We use a third option, using motion as the key. This means two things: First, in most cases the system has to run all the time; second, the circulation system must provide for *complete* movement within the vessel and plumbing. Dead spots in a basin exposed to freezing conditions can wreak havoc on things like the float valves for automatic fill systems. As a result, we spend a lot of time thinking through details of spray dispersion and return and suction patterns.

It's important to note that a system does not have to run all of the time if certain design, engineering and site conditions exist that would allow for intermittent usage. As an example, we installed a waterfall fountain where the pumps were located at the bottom of a pond and featured a single poly-insulated pipe outfall, properly pitched always to drain back down to the pond; this allowed the system to be shut down without risk of freeze-related damage.

On jobs where this constant motion is required, it's critical to provide power back-up in case of a loss of utility service. In many cases, our commercial and high-end residential customers already have emergency power generators on hand, so it's easy to tie in the circuitry of the watershape's circulation system. Without that broad resource, you may have to insist on your clients' buying a dedicated generator.

It's more work all the way around, but the dazzling results are, it seems, well worth it.

— S.R.D. & R.D



## PLANNING EFFECTS

So far, we've found a good bit of fun in designing aesthetic effects with freezing in mind. Naturally, you can't anticipate everything that will happen or what forms will emerge as cold weather advances through the season, but we're convinced already that you truly can guide the process.

The most spectacular forms occur with mist and overspray. During times of extreme cold, these airborne water droplets and particles coalesce to form a range of veils, hoods and eruptions.

So far, we've learned that smaller water effects lend themselves to the most reliable dramatic results. Large jets of water, though they have a drama all their own, tend to send their spray over large areas and do not freeze readily, especially not

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*The translucent ice reveals fascinating textures, surfaces and contours, and the effects are intensified as the ice interacts with whirling snow to create unusual drifts.*

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in windy areas like ours. By contrast, modest jets sending small amounts of spray and droplets into the frigid air will create interesting and shifting forms.

We've found as well that lighting and sunlight take on whole new dimensions as they interplay with our frozen structures. The translucent ice reveals fascinating textures, surfaces and contours, and the effects are intensified as the ice interacts with whirling snow to create unusual drifts. As circumstances change (a warming trend or a change in wind direction, for example), the moving water that originally formed the ice will carve it in new patterns with interlaced rivulets and channels.







## Enduring Structures

As with a great many forms of construction in areas with freeze/thaw conditions, the structural elements of our “winter fountains” must be designed to withstand the pressures of expanding and contracting soils. This is no more complicated than for a standard outdoor swimming pool built in the Midwest or any other cold weather environs.

In cases where a liner is the primary watertight structure, there's not much need to worry. But in systems made with poured-in-place, pre-cast or pneumatically applied concrete, it is crucial that the system be designed to match prevailing geological conditions. In freezing environments, that means extending the physical structure below grade to the frost line. (In our area, that's typically 42 inches. We surpass that to 48 inches to ensure structural integrity.)


The structural characteristics of every vessel will differ from job to job, but it's not unusual for our basins to include 10-inch walls with 1/2- to 3/8-inch steel on 6-inch centers. In deciding how much concrete and steel to use, we are invariably guided by our structural engineers. And if there's ever any doubt about the depth of the frost line or other soil conditions, we bring in a geologist.

In our work around the country and internationally, we rely to an extent on our own experience and expertise, but we also rely heavily on the experience and recommendations of good local contractors and builders who have constructed such projects in their areas.

We sometimes will end up insulating our underground plumbing. In one recent case, for example, we installed a stream with an extended underground plumbing run. Because the customer wanted to be able to shut off the system from time to time (there was no threat of structural damage because the system used a liner), we had to insulate portions of the buried plumbing with neoprene wrappings – and use heating cables around portions of the plumbing where water would tend to settle with the system turned off.

– S.R.D. & R.D.





THE UNITED STATES IS ONE OF THE WORLD'S RICHEST COUNTRIES WHEN IT COMES TO GEOLOGICAL DIVERSITY. BUT UNTIL RECENTLY, SAYS STONE SUPPLIER JOE NOLAN, ONLY PART OF THE RAINBOW OF NATURAL STONE BUILDING MATERIALS WAS BEING EXTRACTED FROM THE GROUND. THAT'S CHANGING, HE SAYS, AS INCREASING CONSUMER DEMAND IS SENDING DESIGNERS AND BUILDERS TO VENDORS IN SEARCH OF CREATIVE INSPIRATION — AND NEW OR UNUSUAL MATERIALS, COLORS AND VISUAL TEXTURES.

# FLAT-OUT

There's never been much of a tradition in this country when it comes to beautiful stonework, especially when it comes to flat stone surfaces. What you usually see is the same few stone types used over and over again in much the same sorts of applications.

To see a contrasting heritage, just travel in Europe and some parts of Asia, where you'll see a far greater variety of flat stone used in creative ways to create pathways, walls, decks, patios and a host of architectural features, including pilasters and finials. Of course, the Old World had a long head start on us, but even so, we've been slow here in the New World to catch up with the masonry and quarrying trades as they've been practiced abroad for centuries.

Fortunately, that's starting to change. My firm, Malibu Stone & Masonry of Malibu, Calif., now supplies stone (flat and otherwise) to a host of contractors, landscape architects and designers. What we're seeing is a two-stage process: Professionals are surprised when they see the variety of stone materials available these days; they're also pleased to learn that their clients are willing to pay more — sometimes *much* more — for striking or unusual stone once the full range of their options is revealed to them.

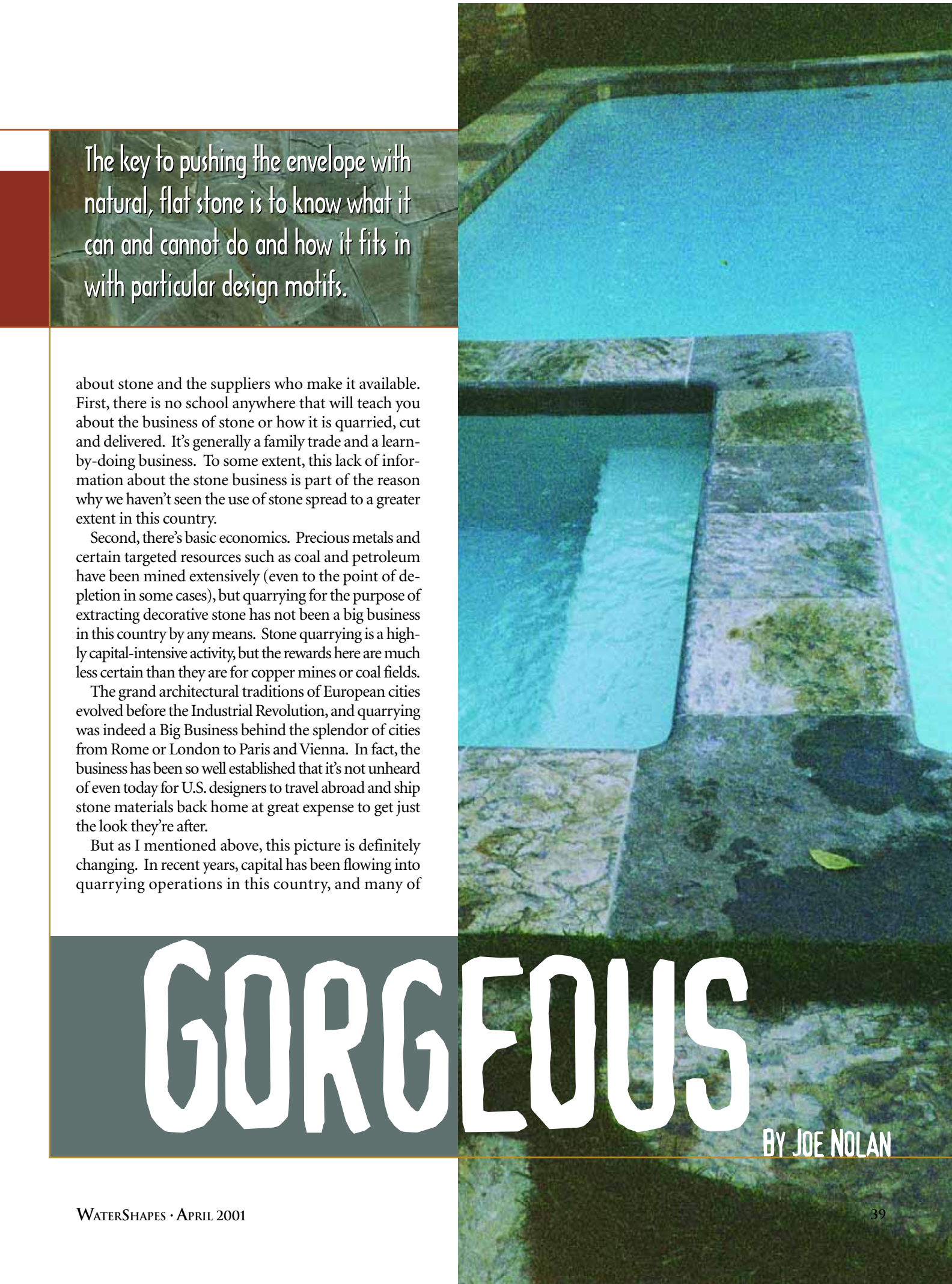
Beyond that practical component of supply and demand, architects, watershapers and other designers are also discovering the spectacular extent to which these products can blend with, highlight or enhance a particular look. This has brought on a definite trend toward pushing the design envelope.

## A HIDDEN PALETTE

The key to pushing the envelope with natural, flat stone is to know what it can and cannot do and how it fits in with particular design motifs. Some of the products we sell are very dramatic in their appearance and work well when used appropriately; by the same token, they can really look out of place when misapplied. In addition, there are workmanship and maintenance issues that can lead to long-term success — or sudden failure.

That in mind, there are a few useful things to know





The key to pushing the envelope with natural, flat stone is to know what it can and cannot do and how it fits in with particular design motifs.

about stone and the suppliers who make it available. First, there is no school anywhere that will teach you about the business of stone or how it is quarried, cut and delivered. It's generally a family trade and a learn-by-doing business. To some extent, this lack of information about the stone business is part of the reason why we haven't seen the use of stone spread to a greater extent in this country.

Second, there's basic economics. Precious metals and certain targeted resources such as coal and petroleum have been mined extensively (even to the point of depletion in some cases), but quarrying for the purpose of extracting decorative stone has not been a big business in this country by any means. Stone quarrying is a highly capital-intensive activity, but the rewards here are much less certain than they are for copper mines or coal fields.

The grand architectural traditions of European cities evolved before the Industrial Revolution, and quarrying was indeed a Big Business behind the splendor of cities from Rome or London to Paris and Vienna. In fact, the business has been so well established that it's not unheard of even today for U.S. designers to travel abroad and ship stone materials back home at great expense to get just the look they're after.

But as I mentioned above, this picture is definitely changing. In recent years, capital has been flowing into quarrying operations in this country, and many of

# GORGEOUS

BY JOE NOLAN



those new businesses are thriving. (Interestingly, some of these businesses developed through the attrition of family farms: In fact, several quarrying operations in this country are now owned and operated by people who were once involved in agriculture.)

In states including Nevada, California, Colorado and Montana, quarrying operations have grown by several hundred percent in recent years. This increase in exploration has yielded a broad array of stone types that were not available even a few years ago. As our hot economy has fueled spending on new construction, home improvement and indoor and outdoor decoration, this increased supply and variety of natural stone has met a real demand head on.

been able to watch certain trends emerge in very specific regions. In the eastern United States, for example, designers have leaned toward dark gray, green and blue stones to support Victorian, Tudor and Cape Cod architecture. Across the country in California, by contrast, stone is often used as a transition material between inside and outside areas, and this has led to a strong trend toward what are known as Hacienda colors – tans, sands, caramels and light browns.

We've also seen some trends quickly run their courses. We've noticed, for example, a definite drop in the demand for pinks and pastel colors, a sure sign that an early-'90s indulgence in Mediterranean design has run its course. And we've witnessed micro-trends, such as up-

hard reality is that many of these stone types are difficult, either with respect to being cut to shape or because of differences in their adhesion qualities. This points to the fact that the designer and installer need to know what they're getting into and must select stones that can be worked according to plan along with the right setting materials and sealants (see the sidebar on page 41 for details).

In addition, there are differences in the way stones can and should be used that come into play. Some are well suited to high-use, high-traffic areas; others will break down in rapid order. Likewise, some stones can be used underwater; others should never be submerged – particularly not into chemically treated pool or spa water.



ARIZONA FLAGSTONE



CANADIAN CHOCOLATE FLAGSTONE



CARIBBEAN BLUE/GREY FLAGSTONE

The result has been some very distinct tendencies in the use of flat stone as a stylistic element. From where I sit, it's been a fun and fruitful set of trends to watch.

#### COLORFUL CAPACITY

Color is the key to all of this growth in interest in quarried stone: The greater the range of stone types available, the greater the variety of colors that designers have at their disposal. And this is especially important with flat stone when the material is used to cover large surface areas. Here, the selection of a stone color becomes similar in nature to the selection of paint or plaster.

Our firm sells to professionals all over the country, with the result that we've

wellings of interest in certain areas in Moroccan or Islamic styles.

More than anything, today's market is one of expansion and experimentation without any specific style or trend in mind. We're seeing a great many designers who are blending stones to create whole new looks or who are combining flat stones with ledgers for architectural elements such as walls and columns. We also see lots of use of dramatically colored stones to create strong accents in fields of subtly colored stones.

These explorations into new looks often yield great results, especially when design fundamentals such as balance and color theory are properly applied.

This free-wheeling experimentation has also led to some bold failures. The

In other words, while natural stone materials are beautiful and exciting, you must do your homework and learn about the technical realities of the specific materials you propose to use. Otherwise, you could be cutting into a whole mountain of trouble.

#### MATERIAL FACTS

There's the rub: All of these discussions of color, style, workability and durability boil down to the specific stones you want to use.

It would be impossible here to offer a detailed catalogue of available stone types and their characteristics, but allow me to walk through a sampling – some popular, some unusual – with an eye toward understanding the key character-



istics of each. In this way, I hope to arm each of you with enough information to begin asking the right questions of your stone suppliers.

❑ **Arizona Flagstone:** This is a fairly broad category of common stone materials found and used quite often in California and the Southwest. The colors range from tans to reds and tend to vary according to the region from which they were quarried. At our firm, for instance, we sell varieties with names such as Arizona buckskin, buff, cinnamon, oak, rose and Sedona red.

Very soft and easy to quarry, Arizona flagstones are sedimentary rocks that are both abundant and among the most affordable stone materials available. They fit well within a broad range of styles that

it a material of choice for bold accents in crisp architectural designs. There's also a great deal of variation in this stone, so careful selection can yield some interesting individual pieces and truly unusual or outstanding highlights.

❑ **Caribbean Blue/Gray Flagstone:** Here's yet another completely different look found in the broad grouping of "flagstones," a word that has to do with how the stone is cut at the quarry rather than the stone's physical nature. This one, for instance, is a quartiletic stone, which means it's a mixture of quartz and sand.

Found in many of the older quarries in the eastern United States, this stone is very hard and is consistent in color and texture. It lends itself well to a couple of

## THE MAINTENANCE FACTOR

Stone surfaces, especially stone decks or pathways, are not maintenance-free items.

Failure to consider this fact all too often leads designers and contractors into the mistake of not discussing upkeep with their clients. That spells trouble because, depending on the conditions of wear to which the stone is exposed, the material can degrade and leave clients unhappy with the deck's or pathway's appearance.

There are no "rules" here, but it's important to be aware of wear and tear as an issue when discussing stone selection with clients. The fact is that different stone species wear better than others. The more durable stones, such as quartzite and granite, are often the best choice for high-use areas, while softer stones are perhaps better chosen for more decorative applications.

Fortunately, sealers are available that can work to protect your clients' investments, and we offer them on three levels at three price points. Our most durable sealers are designed for use with material that sees everyday traffic or comes into constant contact with water. The medium range is good for areas that receive occasional use. On the low end, we offer products that provide a protective finish for purely decorative materials.

When you combine a good choice of stone with a proper sealer, your clients will most likely be pleased with the performance of the stone surface over the long haul.

—J.N.



CATALINA COVE FIELDSTONE



CHEYENNE AUTUMN FLAGSTONE & LEDGER

call for subtle colors and soft textures, including Hacienda, Mediterranean and Spanish Colonial. They also look good with woods and soft plasters. This stone contains a lot of silica and gypsum, however, so it is not good for use underwater.

❑ **Canadian Chocolate Flagstone:** Here's where stone names can be deceiving. One might assume that this stone is similar in nature to Arizona flagstones, the difference being that it comes from a different place. Nothing could be further from the truth: This stone is actually a slate material, which gives you a whole different look with bold reds and rusts, contrasted by deep grays and gray/blues.

This isn't a stone you see everywhere. It is extremely hard and can be used to create very precise cuts, which has made

specific looks, working well in Cape Cod and English Cottage motifs. It's very flat and dark, and it also tends to become *extremely* hot when the sun pounds on it in summer.

❑ **Catalina Cove Fieldstone:** This material is from a class known as granite schist. Very hard with a consistently gray coloration, this material comes more in boulder form rather than flat stock. But because the material is so hard, it can be broken along very distinct facets and flat surfaces, which makes it a wonderful choice for walls and walkways.

❑ **Cheyenne Autumn Flagstone and Ledger:** To me, this is a truly beautiful stone material – a metamorphic quartz stone that comes from the upper

While natural stone materials are beautiful and exciting, you must do your homework and learn about the technical realities of the specific materials you propose to use.





**IDAHO & NEVADA QUARTZITES**



**KENNESAW MOUNTAIN MOSS VENEER**



**NEW YORK BLUESTONE**

Midwest, Wyoming, Montana and the Upper Rockies. It offers a wide range of color variation within a rich range of golds, creams, sands and caramels.

This is an expensive stone (depending on supply), but it's a favorite for architects and designers who are looking for beautiful accents in this color palette. And because this stone comes in both flag and ledger forms, it works equally well for flat surfaces or for elevation

transitions on steps and walls.

**Idaho and Nevada Quartzites:** There's a saying in the stone business that if you're looking for a quarry, you'll find it at the end of the road. That's particularly true if you seek specimens from this family of remarkable stone materials, which is found in some of the most remote regions of our country.

Quartzites are metamorphic rocks that are very hard and durable and dif-

ficult to cut. They feature particles of quartz blended in varying patterns with a variety of silica and other mineral constituents. The result is a range of bold colors leaning toward the cool side of the palette along with shades of green and soft gold – all with an internal luminescence. The stone literally twinkles in sunlight or when showcased in landscape lighting and is truly glorious when wet.



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WYOMING VALLEY FLAGSTONE & LEDGER

It's tough to peg this stone to a specific style, other than to say it's bold and even ostentatious. It's not for every taste, but those who love quartzite *really* love it.

❑ **Kennesaw Mountain Moss Veneer and Ledger:** This is a dark granite material from the Ozark region. Very hard and smooth and offering a rich range of deep greens and grays, much of this stone is found on the surface and, as the name implies, it's often covered with a patina of



## PRIMA CREMA

moss and lichen. This is a fairly "new" stone and has only become available in recent years.

❑ **New York Bluestone:** This extremely popular quartiletic sandstone is very hard and comes in distinctive grays that are especially beautiful when used alongside the white plaster and trim of the Cape Cod or Victorian styles.

**□ Wyoming Valley Flagstone and Ledger:** This metamorphic stone is ex-

## WET AND DRY

One of the most important issues for watersheders with respect to flat, natural stone material is whether or not that material will hold up when permanently submerged in water. Fortunately, there are some clear guidelines to follow:

**Wet Use:** Granites, schists and quartzite stones are good for use in water. Their looks will change when wet, but they won't deteriorate as a result of prolonged exposure to water treated within normal water-chemistry parameters.

❑ **Dry Use:** Steer clear of materials from the sandstone or limestone families in water. These contain relatively soluble minerals and will not last when submerged.

-J.N.

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More than anything, today's market is one of expansion and experimentation without any specific style or trend in mind. We're seeing a great many designers who are blending stones to create whole new looks or who are combining flat stones with ledgers for architectural elements such as walls and columns.

tremely high in iron content, which lends it deep, distinctive red, brown and rust color variations. This is one of those stones that is not terribly versatile in terms of appearance, but designers we know have used it on projects as diverse as mountain cabins and Moroccan-style homes.

❑ **Prima Crema:** One of my favorites, this is a brilliant cream and straw-colored limestone, very soft and very expensive. I've seen this material used to spectacular effect in a variety of settings and styles – and it goes really well with greens, which makes it a per-

fect, natural companion to landscaping.

#### GO LOOKING

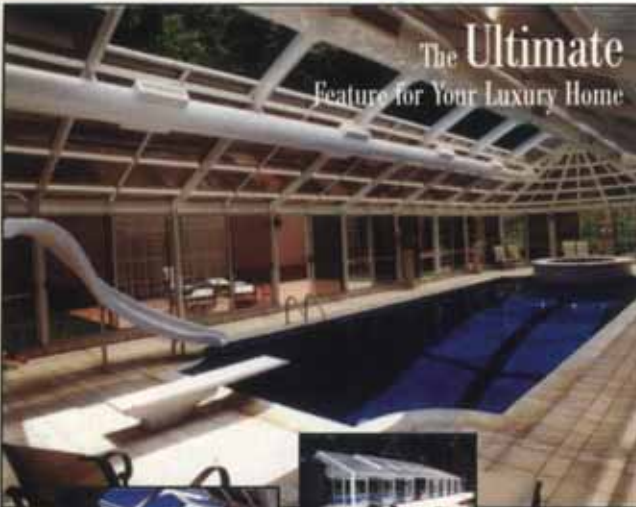



The list above ran on a bit longer than I initially thought it would; even so, it only scratches the surface. Although you'll find variations in available supplies from region to region, chances are better than good that the selection of flat, decorative stones available to you wherever you are is far better and broader today than it has ever been.

So get out and explore local stone and masonry supply yards. Ask questions about the varieties they stock – and al-

ways, always look for vendors who can offer support about critical workmanship and maintenance issues. In addition, you should think about stretching your reach beyond convenient local suppliers, because what you can obtain out there might represent a mind-boggling expansion of your stone options.

Odds are, the time you spend surveying your options on this front will be well spent as the aesthetic possibilities available to you expand – and as your clients' expectations about what you can deliver expands right along with your design options, inspiration and creativity.

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## KEY CHARACTERISTICS

When selecting stones, it's useful to be aware of the ways in which materials differ and to ask specific questions about these characteristics:

❑ **Color and color variation:** If a particular type of stone you're after has a lot of color variation, you want to be familiar with the range you're buying. In other words, don't base a purchase on just one or two samples if a precise coloration is what you're after. While variable colorations can be wonderful in naturalistic settings, you'll probably want greater consistency if you're working with a more formal style or architecture.

❑ **Strength:** There's a huge range in just how tough these materials can be. As mentioned in the accompanying feature and in the sidebar on page 41, selection depends on intended use: If the stone will be placed in a high-traffic area, it makes sense to select materials (and sealers) that are strong enough to take it. If the application is purely decorative, however, softer materials may do just fine.

❑ **Texture:** This is an issue that is not often considered in much detail, but it can be critical depending on the application. Natural stones offer a variety of textures from smooth to rough and soft to hard. If the stone is to be used in a seating area or in a place where people will be barefoot (such as near a pool or spa or in a children's play area), the way the material feels to the touch may be extremely important.

❑ **Workability:** As quarrying operations have proliferated around the country, we've seen an increase in the variety of ways in which stones

are cut. It's a great savings when you can use the stone right off the pallet, but in many cases, designs call for cutting the stone to fit specific patterns or visual textures. This cutting can be surprisingly costly, so it pays to take the hardness and general workability of the material into account.

❑ **Adhesion:** Some stones just won't stick to certain types of bonding materials. That's not really a problem so long as you know what you're working with and plan on using an appropriate admixture in your mortar beds and grouts. The key here is to ask questions and know the characteristics of the material you've selected. After all, nobody wants to see chunks of stone falling off of vertical surfaces or coming loose on steps.

❑ **Size and scale:** Quarrying techniques are the key here: Some operations cut stone materials with consistent size, while others let size vary greatly – and you need to know which way your quarry of choice works. Size distribution can be a critical design and construction issue. If your design accommodates a variety of sizes, materials that come in a range will fill the bill. But if you're after uniformity, you may wind up with a lot of waste in a material that varies tremendously in size.

❑ **Cost:** In our business, we sell product that range from a dollar per square foot up to \$20 per square. Contractors and designers know the ropes in terms of cost and budget, but what we've found consistently is that when clients are cued into the beauty of the stone materials available to them, they are often willing to devote more money to purchasing a material they truly love.

—J.N.

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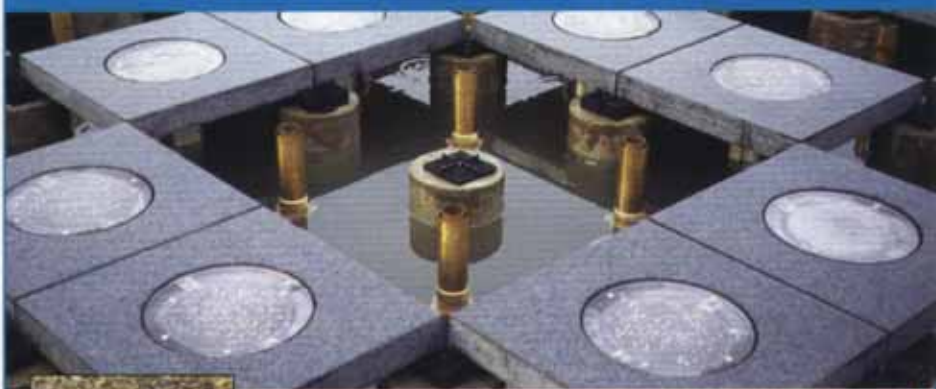


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# Picture Perfect

By David Tisherman

*In February 1999, the cover photo on the premiere issue of WaterShapes showed a steel cage for a subgrade piling being lowered into the ground. That image was taken from a feature article by designer/builder David Tisherman, the first of many that he has contributed to the magazine. In that article and in another that followed in April 1999, he detailed the design and construction of an elaborate residential swimming pool project that he believed reflected his best work.*

*The final article on the project, originally scheduled for the summer of 1999, was to cover the project in its finished state. A series of unexpected factors, including the storms of El Niño and extensive travel on the part of the homeowner, stalled completion of the project until December 2000. What no one knew, not even Tisherman, was just how truly stunning the finished work would be. In the pictorial that follows, Tisherman describes in words and images why this project stands among his finest.*

To me, this project is an example of what *elegance* is all about.

There's balance and harmony of line, shape and scale. There's balance and harmony in the use of color and texture – even in the use of the sound of moving water. There's beautiful tile and natural rock. There's fascinating art and lush landscaping. There's a delicate interplay of light and shadow and a lovely combination of distant views and intimate reflections of the surrounding greenery.

This all works in keeping with my belief that all good design happens on site. It's this balance of visual elements, aural elements, colors, textures and views. It's this creation of an experience and a sense of discovery (and even mystery). These things don't happen



by accident, yet there's always something unexpected and even a little miraculous when you see how it all comes together.

That was certainly the case here.

### SHAPING SPACE

This design exists solely to maximize the setting. Because the homeowners love contemporary art, the idea was to set up a sculpture garden. They wanted to be able to meander through an environment where you would encounter individual works of art within a space that is itself a work of art.

And so there is sculpture, a select palette of colors, interesting shapes and a sense of spaciousness and connectedness between everything. There are distinct shapes, sweeping architectural lines, soft textures. The materials are warm, the colors are warm, the textures are warm, and there's warmth and softness in the way the light plays over surfaces. The shadows are mesmerizing, and the reflections off the surface of the watershapes pull in and transform the silhouettes of the trees.

The balance between these elements creates an overall sense of tranquility in the space. What's special is how everything in the space and beyond is now connected: What had seemed a large, unintegrated space is now intimate, possessed of a sensuality that's easy to feel but almost impossible to capture in words or even images.

In any work of art, it's the relationships between parts of the composition that generate the aesthetic achievement. These parts are equal in value; together they create the art. This project is an example of what can happen when the right combination of location, concept and client come together in a special way.

Ultimately, this job was not about how much money there was to be made or how quickly it could be done: As this walking tour of the yard and some of its details shows, it really was about doing something *beautiful*.

*Special thanks to my friends Steve Gutai and Ron Soto of Waterpik Technologies/ Laars and Jandy Pool Products for their assistance and care in designing the equipment set and the hydraulic and control systems for this project.*

### ■ ■ Harmony in Hues

In this design, the first thing that strikes the observer upon entering the yard is how colors are used to soften the modern lines and shapes of the pool, spa and John Gilbert Luebtow's amazing sculpture. (For more on Luebtow's work, see *WaterShapes*, January 2001, page 58.)

Color has an incredible power to create a mood. If you take a white room and fill it with a blue chair, a green couch and a yellow table, the room will be cold and unbalanced because these primary and secondary colors will pull against each other, fighting and bouncing. It's just not soothing.

In this design, by contrast, the greens, creams and grays that fill the yard create a sense of balance: They harmonize, and the overall effect is remarkably soothing.







## Matters of Scale

One of the keys to achieving a sense of design balance is sizing the components of the composition so they're appropriate in scale with respect to the environment.

Too many pools are far too big for the spaces they occupy. But proper scale is important, because it enables you to establish a comfortable relationship and connection between all of the elements you've designed into the work. Those relationships just won't work if the elements aren't properly scaled.

It all works in this backyard: The components are visually balanced, the spaces between them allow them to co-exist comfortably within their surroundings. There is no tension, no sense that one element is more important than the rest or that any one element overpowers another.





## Guiding Lines

The lines of the pool are directional, leading your eye into the landscaping, the surrounding trees and the distant views. I guess I'd call it a modified arrowhead: It's almost rectilinear, but it features obtuse angles that create an elegant shape and form.

The pool is beautiful, but it's off to the side and you don't really "see" it right away, even though it's in plain view. As you approach it, the reflections of the trees in the water and the blend of materials and colors draw your interest even further into the environment. And even though the pool is beautiful and interesting, it's *not* the focal point of the yard. Instead, it's *another* design element, one among many of equal importance.

As you move down the deck and past the spa, you see 21 spillways flowing from the spa into the pool, extending its circular geometry and connecting the shapes while softening the transition from space to space.











## A Hidden Brook

As you move past the pool and its long vanishing edge, you'll find beautiful landscaping and sculptures – and this little running brook. It's part of the pool's detailing and works on the simple premise that the back of the pool is just as important as the front.

We changed the grade of the yard back here to create pathways and destinations related specifically to enjoying what would usually be seen (and dismissed) as the trough of the vanishing edge. We built up the grade to create gentle slopes that focus the experience of the splashing cascade and small stream.

This transition from the tile work on the edge to the rockwork in the stream is unusual – and might even seem ridiculous without a careful balancing of the visual and aural elements. It's a particular kind of look, and the important thing here was finding materials that complemented each other enough to ease the transition.





## ■ A Sweeping Deck

The decking is very much a part of the overall composition, particularly in the way the edge of deck interfaces with the grass: Their union distorts the sweeping line of the deck, softening its look and keeping it from dominating the space. By keying one into the other, it almost seems as though the stone and the grass are embracing each other.

In effect, this arced pathway from the house to the pool and beyond leads the observer without providing a direct line. There's freedom in the space, and as you move your eyes or your feet the entire yard becomes part of an experience.

## The Power of Sound

In addition to manipulating colors, textures, shapes and lines, we also played with sound on this project to complement the sense of discovery.

In the area around the barbecue up near the house, it's very quiet. As you move through the entertainment area and toward the pool, you first hear the delicate sound of water provided by 21 one-inch radial spokes of water falling as the spa's overflow. This detail is visually very gentle, symmetrical and controlled – and basically pretty quiet.

As you move further away from the house, you move toward a more rustic environment and begin to hear a more prominent sound of moving water – although its source isn't visible – and the entire feeling changes. Now, as you turn the corner at the vanishing edge, you see more greenery and trees and a running brook. The entire feeling changes again.

In each case, you pick up the sounds and are drawn to the source, first as you approach the spa, then as you reach the vanishing edge. Each step effectively draws you more deeply into an increasingly serene experience – an experience set up by intricate construction detail, a knowledge of materials and how everything works together in the overall context of the design.

– D.T.









## ■ Framing Art

John Gilbert Luebtow's sculpture is infinitely fascinating. The glass reflects light and distorts views in a way that interprets the space around it. It has a bold language of its own, yet the statements it makes are balanced against the other elements in the yard.

The sculpture can easily be seen from the home's entrance. As you move through the art collection inside, you're drawn outside to see more. When you finally do reach the backyard, its verticality makes it the first thing you see.

The placement is ideal, but the sculpture itself is quite as powerful as its location in making an impression. The elegantly contoured glass panels and their intricate geometric etchings change as you move around the sculpture. And as light changes during the day and is variously filtered by the long row of eucalyptus trees, this piece becomes even more intriguing.

The black absolute granite pedestal with its beveled edge provides a smooth transition to the lawn. With water flowing over the entire perimeter, the pedestal offers its own stirring reflections – a beautiful work of art made all the more beautiful by its placement in this beautiful setting.



## Elements of Surprise

On 90% of my jobs, I'll tuck the pool off on one side of the available space. I do this because in most cases this is the best way to use and maximize the space and create some sense of discovery and surprise. I see no reason whatsoever to throw everything at the observer at once. I prefer to set up views and textures that are waiting there to be discovered, over and over again.

Forgive a bit of gender bias, but to me it's like a beautiful woman: It's always so much more intriguing when there's something left to

the imagination. To leave something to be discovered, something that's mysterious, is much more exciting on all levels. That's why lingerie is so wonderful. It's why we wrap birthday gifts.

This sense of discovery is at the heart of the artistic experience: There's great joy in discovering something beautiful. And most of the time, it's not something you really think about so much as it's something you *feel*.

– D.T.





## Stealing Beauty

The obtuse angle of the pool draws your eye to the vanishing edge and to the view beyond. By guiding the eye in this way, we've essentially borrowed the view and made it part of *this* environment, part of the experience of moving through *this* yard. It's a matter of using reflection and shadow and color.

To be sure, you try to think of everything when it comes to designing a project such as this one, but even when you visualize things from every conceivable angle, it's tough to anticipate everything – every possible position of the sun throughout the year, for example, and the effect it will have on each detail. When you have a good design and it's well thought out, however, you're not leaving much to chance – and what *does* happen by chance will often be as wonderful as it is surprising.





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Continued on page 62

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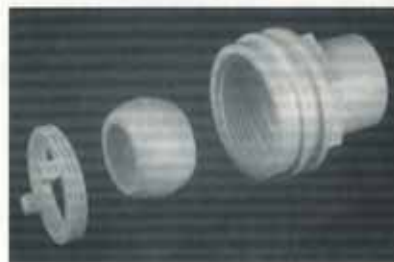
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## February 1999 (Vol. 1, No. 1)

Featuring **David Tisherman** on working in difficult soils; **Peter White** on edge treatments; **Ron Lacher** on preventing damage from expansive soils.

## April 1999 (Vol. 1, No. 2)

Featuring **Roger Hopkins** on designing with large rocks; **Fred Hare** on basic hydraulics; **Curt Straub** on the importance of shell curing.

## June 1999 (Vol. 1, No. 3)

Featuring **Skip Phillips** on water and decks; **Parmelee & Schick** on soils and geology; **Rick Anderson** on using the sounds of moving water.

## August 1999 (Vol. 1, No. 4)

Featuring **Rick Anderson** on resources for stream design; **Holli Adams** on designing community waterparks; **Steve Gutai** on spa hydraulics.

## October 1999 (Vol. 1, No. 5)

Featuring **Mark Holden** on the history of aquatic design; **Jon Mitovich** on dry-deck fountains; **David Tisherman** on site geometry and lines of sight.

## December 1999 (Vol. 1, No. 6)

Featuring **Elizabeth Navas Finley** on Japanese garden design; a roundtable on pools and landscape design; **Clint West** on color rendering.

## January 2000 (Vol. 2, No. 1)

Featuring **Ken Hart** on designing for upscale model homes; **Bruce Zaretsky** on retaining walls; **Kirk Chapman** on hydrid pool finishes.

## February 2000 (Vol. 2, No. 2)

Featuring **Mike Hersman** on lighting design for watershapes; **Ken Macaire** on faux-rock installations; **Dan Andrews** on glass mosaics.

## March 2000 (Vol. 2, No. 3)

Featuring **Paul L'Heureux** on project management; **Larry Long** on setting up steel cages; **George Forni** on installing and maintaining lakes.

## April/May 2000 (Vol. 2, No. 4)

Featuring **Bobbie Schwartz** on controlling garden access; **Rick Anderson** on streambeds; **Mike Nantz** on integrating watershapes into architecture.

## June/July 2000 (Vol. 2, No. 5)

Featuring **Mark Holden** on the history of fountain design; **Rick Bibbero** on large stones; **Rick Anderson** on making streams work.

## August 2000 (Vol. 2, No. 6)

Featuring **David Tisherman** on basic shapes; **Steve Lucas** on watershapes for wildlife; **Paul Ryan** and **E.C. Medley** on designing along the vertical axis.

## September 2000 (Vol. 2, No. 7)

Featuring **Keith Davitt** on designing for small spaces; **Erich Altwater** on the importance of aeration; **Maria Hetzner** on sheet falls.

## October 2000 (Vol. 2, No. 8)

Featuring **Jim Lampl** on natural design; **Barton Rubenstein** on water in kinetic sculpture; **Rick Anderson** on applying finishing touches to streams.

## November/December 2000 (Vol. 2, No. 9)

Featuring **Helena Arahuete** on the watershapes of John Lautner; **Paul L'Heureux** on stretching laminar flows; **Paul Benedetti** on satellite surveying.

## January/February 2001 (Vol. 3, No. 1)

Featuring **Mark Holden** on retro-look watershape designs; **Kevin Fleming** on taking upscale approaches; **Steve Gutai** on pump technology.

## March 2001 (Vol. 3, No. 2)

Featuring **Tom Moneta & Mike Farley** on site-specific design; **Paul Benedetti** on fiberoptics; **Ken Alperstein** on golf-course watershaping.

NOTE: Each listing offers only partial contents of these issues!

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## ONE-UNIT RETAINING-WALL SYSTEM

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ROCKWOOD RETAINING WALLS offers the Classic line, a retaining-wall system that allows the installer to create many features from the same basic unit. With the exception of the cap stones, both 6- and 8-in. units can be modified – either split in half or cut to create a 90-degree corner – to set up inside and outside corners, steps and variable setbacks in straight, curved and terraced walls. **Rockwood Retaining Walls**, Rochester, MN.

## SAFETY COVERS FOR POOLS

Circle 108 on Reader Service Card

CANTAR/POLYAIR offers a packet of information on its Secur-a-Pool and Secur&Clean safety covers for swimming pools. Included are a measuring form, installation and maintenance instructions, warranty information and details on stock sizes and custom ordering. Also included is a brochure highlighting characteristics of both systems and their design features. **Cantar/Polyair**, Youngstown, OH.



## ELECTRIC GATE VALVE

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VALTERRA PRODUCTS offers electric gate valves that open at the push of a button. The PVC units come in 1-1/2-, 2- and 3-in. sizes and feature a low-profile design. They install quickly, as no plumbing modifications are required, and the control system provides smoother, consistent power to the valve, extending its life. An optional on/off key switch is available. **Valterra**

**Products**, Mission Hills, CA.

## PORCELAIN-TILE MOSAICS

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MOSAICAD manufactures a new line of glazed, porcelain-tile mosaics for use in residential designs. The company offers a range of stock murals, borders, medallions and insets in looks that range from Victorian to the most contemporary as well as full capabilities in developing mosaics for custom designs. Tiles come in 80 colors with three finish types – one for indoor use, two for indoor/outdoor use. **Mosaicad**, Worcester, MA.



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## EXCAVATION EQUIPMENT CATALOG

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BOBCAT has published a catalog covering its full line of compact earth-moving equipment. Products include skid-steer loaders in eight models, each of which works in conjunction with more than a dozen bucket styles and accessories; a track loader for grading projects; and eight models of compact excavators available with attachments from augers and compactors to trenching buckets. **Bobcat**, West Fargo, ND.

## OZONE TECHNOLOGY BROCHURE

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DEL INDUSTRIES offers a brochure highlighting the company's capabilities in ozone technology. Included is information on how ozone works in water purification along with complete information on the company's line of UV and corona-discharge ozone generators for residential and commercial spas and swimming pools as well as waterparks, theme parks and more. **Del Industries**, San Luis Obispo, CA.

## SMOOTHER PEBBLE POOL FINISHES

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AQUAVATIONS offers Sunstone Pearl, a finish made with blends of specially selected pearl-pebble aggregates and fortified white Portland cement that combines the durability of standard pebble finishes with the increased smoothness of smaller pebble aggregates. The product comes in six standard colors: Sage, Black, Blue, White, Aqua and Mesa. **Aquavations**, Coral Gables, FL.



## TEXTURED-CONCRETE SYSTEMS

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SULLIVAN CONCRETE TEXTURES specializes in stamped concrete finishes for architects, landscape architects and other designers. The company works with a large variety of standard stamps – cobblestone, flagstone, granite, tile, river rock, cedar plank, brick, slate and much more – and also develops custom patterns and colors for pool decks, courtyards and patios. **Sullivan Concrete Textures**, Costa Mesa, CA.



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## DRAIN COVER TO PREVENT ENTRAPMENT

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TRIODYNE SAFETY SYSTEMS offers Anti-Hair Snare Plus, a pool and spa main-drain cover that eliminates hair entanglement and minimizes the risk of entrapment. The unit's comb-tooth design rejects intruding objects

such as hair and small fingers, and its high/low contours make vacuum-sealing the drain virtually impossible for a child and difficult even for a large adult. The cover retrofits easily on most main drains. **Triodyne Safety Systems**, Lake Worth, FL.

## FOUNTAINS AND WATERFALLS

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INTER-FAB offers the Echoes of Nature line of faux-rock fountains and waterfalls. Available in four colors (slate gray, sandstone, sunset red and light granite), all products are designed to enrich the serenity and natural harmony of personal environments by adding both the sight and sound of moving water. Also available is a complementary line of accent boulders. **Inter-Fab**, Tucson, AZ.

## LABOR-SAVING POOL FILTER

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STA-RITE INDUSTRIES makes System 3 Mod Media filters that minimize maintenance by maximizing dirt-handling capacity. The filters feature high-density composite resin construction and a modular, two-sided filtering system that takes advantage of the tank's balanced-flow design. Available with 300 or 450 sq. ft. filter areas, the filters come with ten-year tank and three-year internal-component warranties. **Sta-Rite Industries**, Delavan, WI.

## BIO-AUGMENTATION SYSTEM

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AQUASCAPE BY AEROMIX introduces Bioforce, a bio-augmentation system that dramatically inhibits algae and plant growth for better water quality in ponds, streams and lakes. Optimum when used in conjunction with an aerating system, the product uses safe, all-natural bacteria and enzymes to reduce odor, discoloration, turbidity, surface films, algae and bottom sludge. **Aquascape by Aeromix**, Minneapolis, MN.

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## LED LIGHTING SYSTEMS

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COLOR KINETICS introduces Chromacore, a lighting system capable of generating 16.7 million colors and color-changing effects via microprocessor-controlled red, green and blue LEDs. Characterized by long emitter life (rated at 11.4 years) and low energy consumption, the easy-to-install lighting has no moving parts, generates little heat and requires little maintenance. **Color Kinetics**, Boston, MA.

## BUILDING AND LANDSCAPE STONE

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DELAWARE QUARRIES offers a wide range of stone products for use in conjunction with watershapes. Native Pennsylvanian and Appalachian stepping stones, boulders, flagstones and ledger stones in various colors and sizes are available in bulk and on pallets – and select stone batches can be mixed and matched on full truckloads. **Delaware Quarries**, New Hope, PA.

## POOL EQUIPMENT AND ACCESSORIES

Circle 120 on Reader Service Card



PENTAIR POOL PRODUCTS has published a portfolio of its products for use by builders and other professionals in residential and commercial markets for pools, spas and waterfeatures. The 28-page brochure highlights the company's full lines of sand, cartridge and DE filters, pumps, natural-gas heaters, automatic cleaners, lighting systems, control systems and maintenance products. **Pentair Pool Products**, Sanford, NC.

## AUTOMATIC CHEMICAL CONTROL

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ROLA-CHEM manufactures systems that automatically control ORP and pH levels for swimming pools and spas. Just set desired standards and the systems automatically hold the water to those pH and sanitizer levels using peristaltic pumps to administer finely measured doses of chemicals to water that is constantly being monitored for its sanitizing power. **Rola-Chem**, St. Paul, MN.

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## POOL- AND DECK-FINISHING MATERIALS

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**CONTOUR** has published a 12-page, full-color brochure highlighting the full range of finishes it supplies for pool interiors and decks. Sample sheets show the spectrum of available looks available with the company's Beadcrete, Cercoso, Pool Pebble, Pool Gems and Ceramacolor aggregates – each available in a wide range of colors – as well as its Pool Cement and Shell Coat plasters for whiter whites. **Contour**, Houston, TX.

## FIBEROPTIC LIGHTING SYSTEMS

### Circle 125 on Reader Service Card



**FIBERSTARS** offers a full line of fiber optic lighting systems for use in and around watershapes and landscapes. In-pool options include perimeter and spot lighting as well as other systems developed for use with fountains and sheet waterfalls. The company also manu-

factures fiber optic wall sconces, step lighting, path lighting and Star-Glo, a small, bendable light fixture for illumination of landscapes. **Fiberstars**, Fremont, CA.

## POOL ENCLOSURE FOR SAFETY

### Circle 127 on Reader Service Card



**CCSI INTERNATIONAL** manufactures Garden Prairie pool and spa enclosures. The enclosures feature lockable entry doors, which add an extra measure of safety by keeping children from entering an unprotected pool area. Designs and materials, including color-coated aluminum frames and rafters, minimize maintenance and maximize durability in both residential and commercial settings. **CCSI International**, Garden Prairie, IL.

## FLORAL POOL LINER PATTERN

### Circle 129 on Reader Service Card



**PLASTIMAYD** offers Celtic Garden, a new pool liner pattern that features interwoven vines with beautiful floral accents. This exclusive pattern uses rich hues of earth-tone amber and purple to make a unique design statement. This premium pattern is available in 20-mil as well as the Maxi-Wall 30/20 system. Samples are available on request. **Plastimayd**, Clackamas, OR.

## POND-EDGING SYSTEM

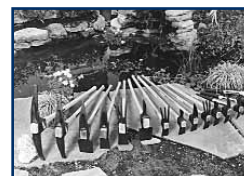
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**OLY-OLA SALES** offers Edg-Keeper, a pond edging system that holds liners permanently in place and can be used for edge treatments that run right up to the water, including plants, turf, pavers or flagstone. It also sets up a barrier that keeps out gravel, mulch and bark – and helps prevent boulders from sliding into the water. The easily installed edging is secured with steel anchoring stakes. **Oly-Ola Sales**, Villa Park, IL.

## LANDSCAPING TOOLS

### Circle 126 on Reader Service Card



**V & B MFG.** has expanded its line of Groundbreaker dual-headed landscaping tools to 15 models. Offered with five heads mounted on 16-, 26- or 36-inch handles, the tools serve purposes from the most rugged groundbreaking to the finest finish details in garden beds. The patented rectangular fit of the corrosion-resistant tool heads onto the handles assures years of use without twisting or loosening on impact. **V & B Mfg.**, Walnut Ridge, AR.

## ORNAMENTAL ALUMINUM FENCING

### Circle 128 on Reader Service Card



**MASTER-HALCO** offers the Colonial Aluminum line of ornamental aluminum fencing. Design options include the Imperial (without pickets) and three Estate styles (with flat-top, pressed-point or finial pickets). The line also includes systems developed for use with pools to meet most local code requirements. All fencing components are powder-coated for durability and long-lasting good looks. **Master-Halco**, Baltimore, MD.

## NEW TEST-STRIP PACKAGING

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**LAMOTTE CO.** offers PopTop vials to make using its Insta-Test Strips both quick and easy. The container gives a high degree of moisture protection to the test strips through a molded dessicant liner that can't fall out of the container. The strips test for bromine and chlorine on one strip, increasing their convenience, and are available with other combinations of tests for pH, total alkalinity and hardness. **LaMotte Co.**, Chestertown, MD.



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root anchors, are strong enough to dislodge concrete and even perhaps steel structures over time. They have absolutely no regard for what you ultimately want to achieve.

There are also roots systems that be-

root issues in everyday life as backed up drains in our homes. Don't you wish someone had told you about this potential before that big tree was planted on your front lawn? Don't you think as well that this is something that deserves

---

### The rule of thumb is that a tree's roots reach as far as its canopy.

---

have as *water seekers*. These roots seek out water sources, attempting (and often succeeding) to infiltrate the source. Some will reach for underground pipes and will actually send small roots inside the pipes; over time, these roots grow larger and completely block or break the pipe. These are usually root hairs and storage roots, but if the situation goes far enough, root anchors may also get involved.

Most of us have experienced these

some consideration as you install plants around large, ready sources of water?

#### What To Do?

There are a couple of routes you can take to prevent any of these water-shape-threatening scenarios from happening in your clients' yards. A little planning up front can go a long way toward keeping your reputation intact.

☐ **Plant smart.** Many plants will not cause any damage to a watershape;

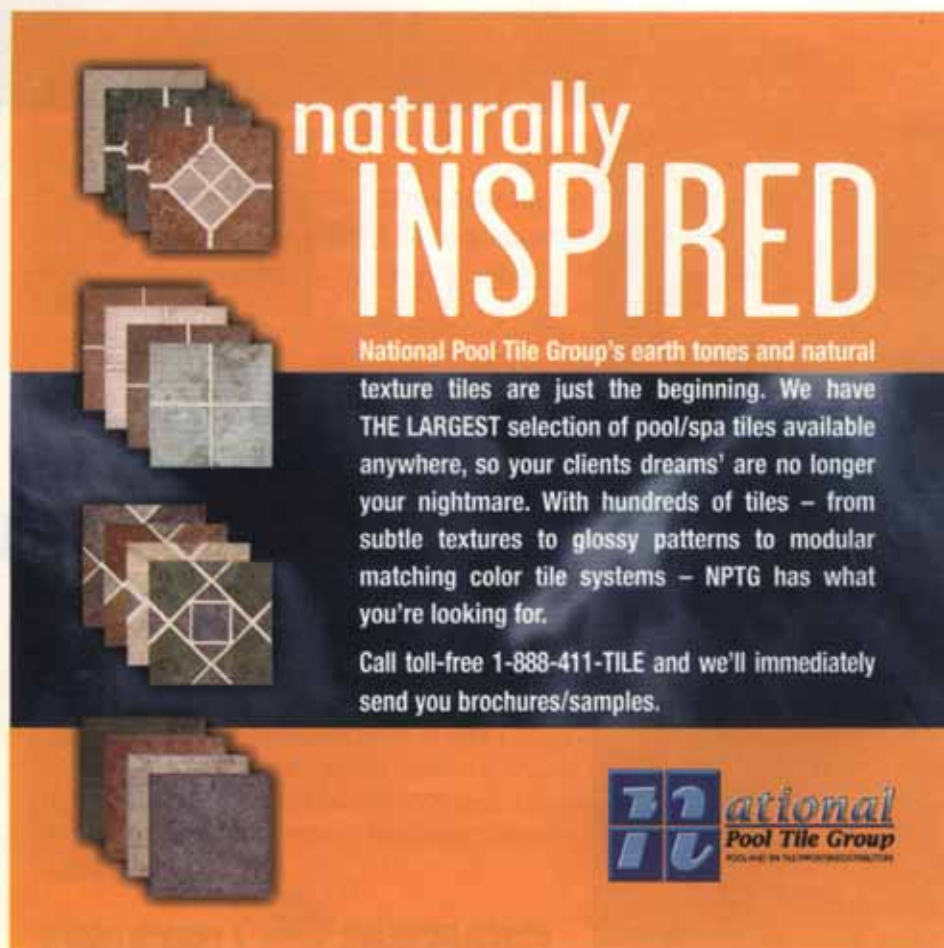
#### No Relief

While the use of the word "destructive" to describe certain roots makes them seem infinitely more threatening than the mildly named "water seekers," the fact of the matter is that both root types should be of concern to watershapers.

Both types of roots can be brutal on watershapes, either to the plumbing or the shell. Not to make you feel too helpless, but if you make the wrong choice, there's no shell or plumbing system tough enough to ward off a determined horde of roots that's after that nice pool of water you've set up for them.

—S.R.


unfortunately, the ones that *will* cause damage tend to ride high on the list of people's favorite trees. But that still leaves a wide variety of palms, for instance, which are usually considered good choices for planting next to watershapes both because of limited leaf



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drop and compact root structures.

As a rule of thumb, I'd suggest consulting your regional plant guide and selecting trees and shrubs classified as coexisting easily with other plants. But ask questions and investigate thoroughly: A guide may not come out and say a plant has invasive roots, but that doesn't necessarily mean it's safe to place one next to your watershapes.

**□ Think location, location, location.** Placing plants known to have invasive roots at a safe distance from any hardscape will help curb the problem. If you're not sure what kind of space a tree might need, consult a plant guide to determine the mature width of the plant.

The rule of thumb is that a tree's roots reach as far as its canopy. Thus, if the plant guide says the tree will have a spread of 20 feet, you should place the trunk of the tree at least 10 feet – that is, half the span of the mature tree – away from any hardscape or watershape.

**□ Use root barriers.** There are many different types of these barriers, ranging from PVC to concrete. The most common are PVC and reach from two to four feet into the ground. When placed between the tree and any hardscape, they can often stop and deflect (or at least slow down) the horizontal spread of the roots.

Over time, however, no PVC barrier can be guaranteed to hold back larger roots. For plants that are more invasive, consider investing in poured-in-place concrete barriers that can reach any depth you need. The tree may eventually break up even this massive a barrier, but it will likely be less expensive to replace a concrete barrier than it is to replace a watershape!

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



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# Survival of the Fittest

By Stephanie Rose

**T**he project is complete. You've put the last touches on the landscaping, the swimming pool and spa are up and running, the pond and its water lilies are ready to be joined by some colorful fish, and the expanse of stone decking has been tailor-made for your clients' entertaining pleasure.

You've managed to achieve exactly the look they originally imagined, and now they can sit back and enjoy it – or can they?

The answer will be a resounding “yes” only if you took the time to consider the longer-term effects their beautiful new plants might have on the watershapes and decks. Partly, the concern over long-term effects is about what certain types of plants can do by dropping their leaves and what that can mean with respect to maintenance. Partly, too, it's about future growth, how much space you allowed for these botanical beauties and the effects their mature size may have on the ability of the sun to warm the space below.

But the real issue here is roots: Have you really investigated the potential underground destruction the plantings you've selected might wreak upon this new and expensive environment?

## All About Roots

It seems weird, but there are actually some trees that seek out hard structures and purposely push against them.

By now, for example, most people in the water-shaping trades have learned that Ficus trees will destroy any type of hardscape in their path (although some varieties are not quite as destructive as others). It doesn't matter whether the hardscape is wood, masonry or concrete, the root structures of these thirsty plants are about as aggressive as they come.

Ficus trees are unusually rough on hardscape, but they share three basic features with all other trees when it comes to root structure:

❑ **Root hairs.** These develop on the ends of the roots and are called hairs because that's about how big they are. These are a main source of a tree's nu-




---

**The real issue here is roots: Have you really investigated the potential underground destruction the plantings you've selected might wreak upon this new and expensive environment?**

---

trient intake, particularly in shallow soil areas. They are particularly well suited to wriggling their way into pipes of all sorts.

❑ **Storage roots.** These store reserve food for times when the plants can't pull nutrients from the soil, as during the winter months.

❑ **Root anchors.** These are the roots that keep the plant from falling over. They are larger than the other two root types and are the ones that have the potential to cause the greatest long-term damage.

Root systems are further classified by the general effect they have on areas around them. Some, for instance, have *destructive roots* that seek out and destroy anything in their paths. These roots, typically

Continued on page 68





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