

Inside: Brian Van Bower on Rethinking Roles

# WATER SHAPES

Design • Engineering • Construction

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Number 3  
March 2005  
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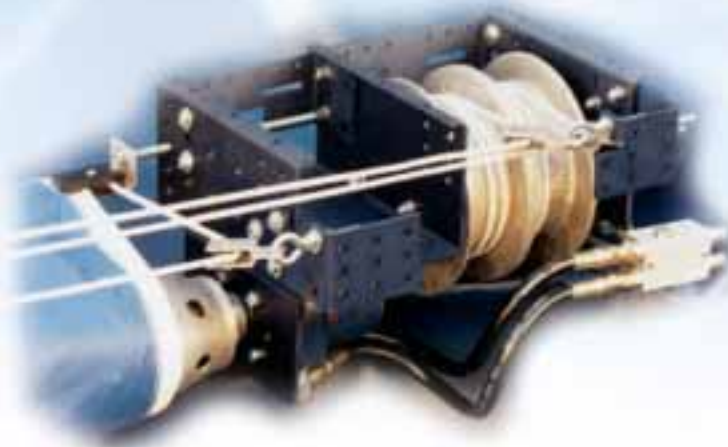
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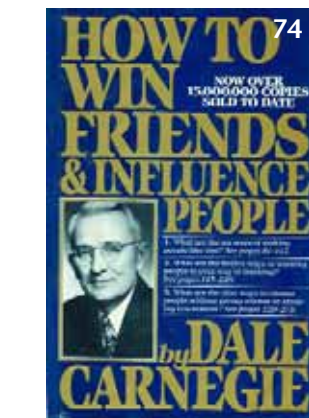
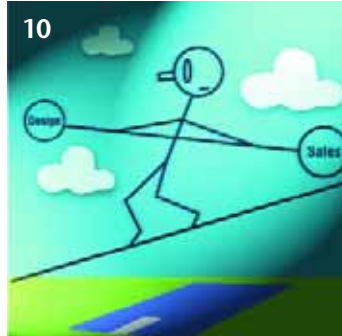
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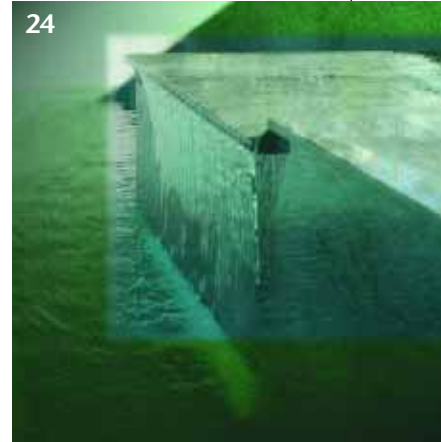
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# Echoing Green

The combination of water and plant material is so pervasive and obvious in natural and man-made settings that it's easy to take it for granted. In urban parks, rural settings and countless backyards, where one finds the blue, one also finds the green – and we all seem pre-wired to feel at ease in finding ourselves in their interlocked presence.

That was why, when we started *WaterShapes* some seven years ago, I was surprised by the dearth of information dealing specifically with combinations of plants and water. There was plenty of information about garden design and lots of coverage of pools and spas, but the sublime and protean possibilities to be found in thinking about blue and green simultaneously were all but ignored.

Through these past few years, much has come along to fill that void, and some of garden texts in particular have focused on the use of water in landscapes. And I've noticed more and more designers who are deliberately working with both hues of this eternal tandem – people in the emergent watergardening sector, landscape designers who've fully embraced water and pool professionals who've moved beyond the water's edge and on into the green.

Time and time again, we've published work by watershapers and landscape artists who've made a life's work of mastering the combination. In every issue we've ever published, our landscape columnist, Stephanie Rose, has sought to define the power and beauty of plant materials in aquatic settings.

As Spring approaches and the green reasserts itself, we've gathered a special set of three feature articles that lend Stephanie some unusually significant and direct support in approaching the blue/green connection from decidedly green perspectives:

**w** First, on page 30, frequent *WaterShapes* contributor George Forni profiles an expansive pond system set on an estate in the hills of California's wine country. As discussed in "A Crystal-Clear Mandate," three lovely ponds and their streams and waterfalls are completely interwoven with landscaping amid a native stand of live oaks. A point of interest is that, even with the heavy bio-burden imposed by all the plants and without the use of chemicals, Forni was able to create ponds that boast swimming-pool-quality water.

**w** Next, on page 40, master landscape-lighting designer Janet Lennox Moyer tackles the immense subject of the lighting trees and foliage in "Shaping the Night." In doing so, she opens our eyes to a distinct and largely unknown realm of client-pleasing possibilities and describes specific techniques she uses to define and maximize the beauty of plant material after the sun goes down. It's a challenge, she says, that requires an understanding not only of lighting techniques, but also the physical characteristics of individual plant species.

**w** Finally, on page 52, you'll find "A New American Garden" by legendary landscape architect, author and artist James van Sweden. Renowned worldwide for his sustainable meadow landscapes and for his striking use of water in garden settings, in this article he profiles one of the most significant of his recent projects, the renovation of the Grand Basin at the Chicago Botanic Garden. It's a design that focuses on unfolding perspectives, beautiful materials and edge treatments that highlight the beauty and variety found on natural Midwestern shorelines.

There's something special about this combination of articles, just as there's something magical in the relationship between the blue and the green.

*Eric Herman*

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**George Forni** is president of Aquatic Environments, an Alamo, Calif.-based design, installation and service firm specializing in lakes, ponds and other large waterfeatures. He started his career in the waste- and reclaimed-water industry in the mid 1980s. Before long, he became project manager for an aquatic service firm, for which he managed a number of projects in conjunction with the U.S. Army Corps of Engineers as well as in other regulatory agency-controlled jobs. His company now focuses mostly on the needs of large commercial clients in the Western United States.

**Janet Lennox Moyer** is founder and principle designer for MSH Visual Planners, a landscape-lighting-design firm in Brunswick, N.Y. She started her career as an interior designer for commercial and residential clients before shifting her focus exclusively to landscape lighting in 1983. Since then, she has designed a broad array of highly prestigious projects worldwide. In 1991, she wrote *The Landscape Lighting Book* (John Wiley & Sons, Inc.), the second edition of which will be published in 2005. Moyer has lectured extensively and is widely considered one of the

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**James van Sweden** is a founding principal of Oehme, van Sweden and Associates, a landscape architecture firm based in Washington, D.C. He earned his Bachelor of Architecture degree from the University of Michigan in 1960, then studied landscape architecture at the University at Delft in the Netherlands before serving as Assistant Town Planner for Amsterdam. Upon returning to the United States in 1963, he became partner

in charge of urban design and landscape architecture for Marcou, O'Leary and Associates in Washington, practicing there until forming his partnership with Wolfgang Oehme in 1977. Van Sweden's multidisciplinary design talents encompass architecture, landscape architecture and urban design. He is the author of several eminent books about gardening and maintains an active schedule of related lectures. He is a Fellow of the American Society of Landscape Architects and the recipient of many prestigious awards.

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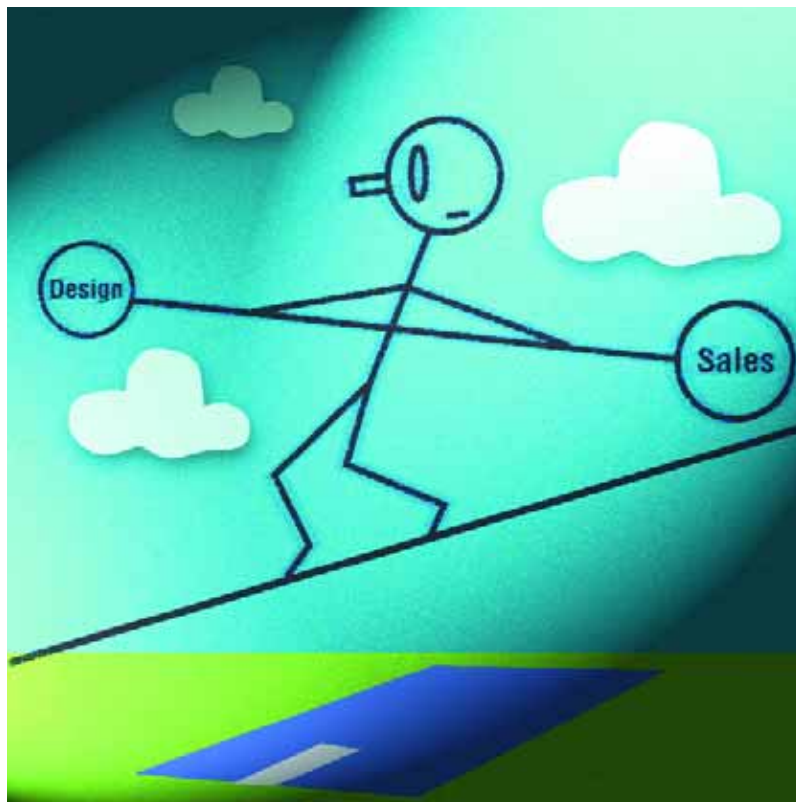
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By Brian Van Bower

## A Question of Balance



**R**eader Chris Walton asked a great question in response to comments I've made in a couple of recent columns about the value of detailed plans: "Why do we in the pool industry lump sales, design and project assessment into one job description?"

In the message surrounding his question, he explained in some detail that his firm, PoolDizine, Inc., of Jacksonville, Fla., takes basic plans and proposals for swimming pools and other watershapes and turns them into complete and extremely detailed sets of construction documents and plan drawings that can be used in generating accurate bids and that also provide detailed specifications for the construction process.

To be sure, he has an interest in altering perceptions of the sales, design and project-assessment functions as a matter of building his business, but I could see right away in reviewing the information he sent me that competent contractors could easily take his plans, generate good cost estimates and then precisely execute a project. All the more reason, I say, to take his question seriously.

Few people think of swimming pools and spas as being so complex that selling and designing them should be separate jobs. Speaking for myself, I believe such thinking is obsolete.

As Walton points out in his e-mail, "Project planning consistently happens *after* the project has already been contracted. The two results are that the contractor loses money and client expectations are not reached. Even when a project has been 'professionally' designed by an architect, there are often gaps within the project planning that create logistical nightmares for the pool contractor."

### sales and design

Part of any answer to Walton's question must be historical. For years, sales representatives trained and/or (to widely varying degrees) knowledgeable in the construction process have sold swimming pools to clients who simply don't know that they have other options. It occurs to me that it's like sitting down with a car salesperson and expecting him or her to design the car you're about to purchase.

With cars, however, we all know that people working in dealerships are sales specialists, not designers or engineers. Our expectation is that other, more qualified people do the creative work and we have no problem at all seeing the selling and designing of cars as being two separate tasks.

By contrast and for whatever reason, I can say without fear of contradiction that few people think of swimming pools and spas as being so complex that selling and designing them should be separate jobs. There are exceptions, of course, but for generations the pool industry has accepted a system in which the two jobs are seen as one.

Speaking for myself, I believe such thinking is obsolete because, as Walton points out, watershape construction has become so much more complex in recent years that it is now unreasonable to expect salespeople, often hired for their marketing backgrounds, to become swimming pool designers and engineers. Instead, he

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suggests, "Swimming pool representatives should be selling the abilities of a pool contractor to complete a sound project."

Lay these observations over a marketplace in which too many times I've seen clients shortchanged because they had the misfortune of working with a salesperson who either offered too limited a menu of options or was simply incom-

petent. The results are projects lacking in aesthetic dimension and/or technical expertise, and what gets me is that these salespeople are often overwhelmingly confident in their abilities as designers. What also gets me is that consumers so often fail to do their homework and will simply assume that the wonderful salesperson is also a brilliant designer.

Yes, there are those who excel in both arenas, but I agree with Walton that it's not often the case. Indeed, I think the time has come when the industry should see sales, design and project assessment as equally important and entirely separate jobs. A system that may have made sense historically when projects were simple and choices were made among a few templates makes no sense at all in a time when even modest projects can be quite challenging in aesthetic and/or technical terms.

## the design pie

The current expanse of potential watershaping elements has indeed reached mind-boggling proportions. I've been at it for longer than I care to think, but it is probably beyond my own ability to consider and work with every single possibility that now comes into play.

I do know, however, that a great many watershaping projects are now going way beyond the water itself. Even this basic shift, which has many of our projects encompassing entire landscapes, means that there are literally dozens of new elements to consider.

On the broadest level, exterior designs including water challenge us to consider, for example, views of our vessels from primary as well as many secondary focal points, broader color palettes and grander consideration of the overall allotment and use of space. A specific issue such as the physical and visual transitions from the house to the pool may lead the project into an range of critical decisions about everything from hardscape design, pathway distribution and shade structures to plantings, garden ornaments, lighting, fire elements, outdoor kitchens, dining areas, sound systems and more.

If that's not enough, watershapes are becoming ever more complex on their own. With interior pool finishes, for example, the big choice was once between white and colored plaster. Now we consider pebbles, polished finishes, colored aggregates, polymer finishes and tile in ceramic, glass, relief and hand-painted forms. Or look at pool lighting: Where once we plopped a single incandescent light in almost every project, we now have multiple fixtures in combinations of colors in fiberoptic,

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I could go on to water treatment, heating, safety systems and control technology (but won't). The point is, everything is conceptually vast today – something that certainly wasn't true 20 years ago.

What we do with the water itself has exploded, too, so much so that the term "watershapes" has been incredibly help-

ful since it was coined by this magazine a few years back. Every custom project worth its salt now calls for consideration of associated waterfeatures, fountains or displays, living water systems, advanced spa and therapy configurations, great edge treatments, water-in-transit systems, landscape treatments, quality materials and more. Understanding how to apply all of

these elements across a range of projects can and should be the work of a career.

All of this leads to my direct response to Walton's original question, which is itself a question: Is the typical swimming pool salesperson/designer really capable of effectively handling all of these complexities? Can they make everything work seamlessly during the sales process as well as through the design and construction processes, as so many are asked to do?

For the most part, I'd say, the answer is clearly an emphatic, "No!"

## a better way

The key to addressing this current unsettled state of affairs in our industry involves, I believe, thinking positively and seriously about separating the sales and design tasks. Of course, there are unique individuals who really can do it all, but the mainstream of the industry should head in the direction of having salespeople who focus on marketing the output of a design shop or an individual designer instead of handling both tasks at once.

The design shop may be within the salesperson's company, but in some cases, an outside service may fit the bill. And project assessment may involve the salesperson with yet another entity, as there are now many firms that specialize in building the designs of others.

I bring up this third party – the design-savvy, competent contractor – because it brings me around to what I believe is something of a missing link in this discussion: the estimator.

Design issues aside, I think the industry would benefit *immediately* if sales and marketing people were all required to work with estimators whose principle occupation was examining sets of plans, doing "take offs" and creating accurate bids. This would push the industry towards better plans and create a class of watershapers who do work similar to what's being done by Walton's firm. I see this as a key to improving the entire environment for project management during construction and actually making the salesperson's commitments come to fruition.

Yes, I'm making broad generalizations here, but one only needs to look to other construction trades to see models for our own future. How many general housing

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contractors design homes themselves? Some do, of course, but in reality it's a small percentage – practically zero, in fact. Instead, they receive plans from architects who create plans that are detailed to the *n*th degree – so detailed that they can count screws and hinges in generating accurate estimates and bids.

As Walton points out, however, when

architects or landscape architects roll over into the swimming-pool arena, their documents don't tend to be so complete. A trained estimator could fill the gaps, identifying inadequacies and making certain the information is fleshed out so anyone who looks at the plans knows what's going on. This would, I think, be of tremendous value to a great many firms.

As it stands in the watershaping trades, consumers have no idea how much detail actually goes into establishing a bid – but learn all about it as the project unfolds and discover that the bid that came in 40 or 50 percent below the top bid wasn't such a bargain after all. As I see it, this sort of situation is the result of lumping the sales, design and project-assessment tasks together in an arrangement that should no longer be the model used in our businesses.

## better for sales

Separating tasks based on expertise rather than linking them out of some perception of competitive necessity would also be a real benefit to salespeople.

I've always viewed salespeople as being on the front line when it comes to building client relationships, understanding their needs and representing the company's ability to give them what they want. It's challenging work, and relieving them of design responsibilities and project-assessment tasks will enable them to focus on what they do best.

Whether the salesperson transmits clients' desires to in-house designers and estimators or works with outside firms, he or she would no longer be put in the position of designing or assessing complex projects that are very likely to be beyond his or her level of true expertise. This is the way it is in other construction businesses, so why not here?

Cutting back to Walton's question once again, pool-related sales, design and project assessment tasks should not be handled by one person. What the industry needs to do is identify and rally behind talented salespeople, designers, project managers and estimators – and I agree with Walton when he suggests that the time has already come for such a sensible division of responsibilities to occur. **WS**

**Brian Van Bower** runs Aquatic Consultants, a design firm based in Miami, Fla., and is 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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By Stephanie Rose

## Staying Current



**W**ith a busy schedule, it's too easy to use the same tools repeatedly in project designs.

Yes, you can mitigate the repetition to a certain extent by using those tools differently each time, but the fact remains that many of us tend to design over and over again with the same plants, hardscape materials and structural approaches because it's what we know and trust.

But let's face it: Most clients don't want exactly what someone else has; instead, they want one element from this garden and a special plant from that one.

From a design perspective, selecting new plants every time is a risky prospect, but nothing ventured, nothing gained: If you don't take those risks and try new things, you'll *really* end up in a rut. You may stay busy and keep pleasing your clients, but your own level of satisfaction will eventually diminish and you'll find that clients simply won't be as enthusiastic about what you've created because they sense that your spark is gone.

For all these reasons, I'd propose that we need to continuously elevate our performance and profession by constantly creating new and exciting landscapes. We must consciously step beyond what we currently know –

We need to continuously  
elevate our performance  
and profession by  
constantly creating new  
and exciting landscapes.

the “tried and true” – and focus on generating designs that use new plants and hardscape materials in ways that keep the creative spark burning.

### finding motivation

One easy step in the right direction is not all that risky and simply involves speaking with (and listening to) other landscape designers and architects.

Whenever I meet or get together with other landscape professionals, it seems that at least part of the conversation centers on our favorite plants. *Everyone* has their special selections, and while it can be humbling to speak with someone who rattles off the names of ten plants you've never heard of (let alone seen), I console myself with the thought that he or she probably has much the same reaction when I run through my own list.

I enjoy these discussions immensely: All at once they can make you feel completely incompetent and yet, if you're smart, will motivate you to learn more.

Given my competitive nature, I leave these conversations with a strong desire to see photographs of these new plants, find them in the nursery or see them planted in someone's garden. Then I decide if I'm as excited about the plant as the person who first told me about it. Thinking things through, I'll then decide whether or not I can fit the plant into one of my designs – or decide it has so much potential that I want to create something special around this new specimen.

In other words, I'm constantly trying, as someone who likes change and variety, to make sure my palette of favorite plants is constantly growing and evolving. The thought of letting this process get tedious and dull offends me – as I'm sure it does most professional designers.

Bottom line: You can't operate successfully in a vacuum.

Continued on page 20



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### opening the lines

Many of you are like me: We have well-established lines of communication with colleagues. What I'd like to suggest here is that there's more to be done to expand the scope of your contact base:

w **Go to meetings and conferences.**

As I stated in last month's column, there's a wealth of relevant information out there from a variety of sources. I strongly recommend finding conferences, meetings or workshops featuring landscape professionals at the very top of their field. Learning from them and seeing how they function may

spark new ideas for your business and keep you competitive. I'd also take a look at events that aren't directly about landscape design (as was the case with the Aqua Show I discussed last month). I find that absorbing outsiders' views of what I do is challenging as well as engaging and informative.

w **Read magazines, journals and newsletters.**

In many fields, professionals need to read to stay current on research and development to maintain licensing or accreditation. I'm not aware of any such requirements in the landscape professions, but I still find that reading *Garden Design*, *Landscape Architecture* and "The Designer" (the newsletter of the Association of Professional Landscape Designers) are vital to keeping up with current thinking. *WaterShapes*, of course, is a prime example of the value of looking beyond our immediate field to expand our knowledge. Whether you ever design or build watershapes, its coverage lets you in on developments that may affect your work as a landscape professional. At the same time, it may inspire a new design style that incorporates water (or plants and water) in a different way or unique manner.

w **Hit the books.** I'm addicted to looking around in the gardening sections of bookstores. If I'm feeling stale, a fresh look at some of these volumes often inspires me to think differently about a design. New layouts, new plants, new containers and new accessories often trigger my thought processes and rally me around a new design concept. Look at it this way: Books are the authors' way of communicating their ideas to you, and if they've been published, chances are better than good that they have something interesting to say.

w **Work the Web.** When I spot a plant in a nursery or garden guide or even identify a general need, I always check things out on the Internet. If a design calls for grasses, for example, I'll run a Google search on specific types of

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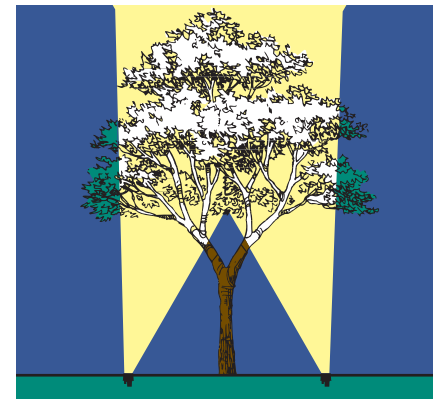
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## natural companions

grasses and read everything I can. That information prepares me to have informed conversations with local nurseries and has led to the addition of many gems to my planting plans.

**w Turn on the television.** I didn't feel like a pioneer at the time, but "The Surprise Gardener" was among the first

of what has become a legion of garden-makeover shows. Some are too much focused on entertainment to be very helpful, but I find those produced by the British Broadcasting Company (BBC) to be particularly innovative and informative – and well worth recording for future reference. Again, a single, small idea from a show can blossom into a whole

new niche for your company.

**w Set aside competitive fears.** There's huge value in getting to know other professionals in your area. Indeed, the exchange of ideas among landscape professionals can be *the* most valuable tool you have at your disposal. The best place to meet others is at conferences and seminars, where a dash of open-mindedness and the ability to listen can lead to great things. And even if you feel the competition is too tight or rancorous and you can't bring yourself to step across the lines of rivalry, that's no reason you can't hook up with contractors and ask them what those other designers are doing.

### nursery news

In addition to a near-continuous dialogue with other professionals in the industry, I also place high value on staying current with what's happening in the nursery trade. I find that meandering among the rows at nurseries is among the easiest ways to gain inspiration – but there's more to it than a bit of exercise.

**w Carry a digital camera at all times.** You never know when you're going to see something unfamiliar in an unexpected setting, and a small digital camera lets you take a quick snapshot that can then be taken to your nursery for identification and information. Once you have a botanical name, you can also research the plant on the web or in your garden guides.

**w Visit arboretums and botanical gardens.** Most of these facilities have readily accessible plant plaques so that you can conduct a self-guided tour, take notes and, later on, review new or unfamiliar selections in plant guides or on the Internet. I recommend taking these excursions during different times of the year so you can track a plant through all its seasonal forms. Something you like in the spring may look ghastly in the summer or fall. Pomegranates, for example, have beautiful flowers and foliage in the spring and early summer but look quite dead during the late fall and winter.

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**w Keep your eyes open.** Take walks and hikes, go on garden tours, talk to others and just look around to see how different plant combinations are put together in front yards and public spaces. Watching for new installations is a great way to review a particular designer's style and favorites. To be sure, you may not like everything you see, but something as simple as seeing two plants side by side that you never thought of pairing before may launch a whole set of great ideas.

**w Get nosy.** Ask your nursery what other professionals are buying or asking for – or take a walk through the “hold” areas, which will tell you what everyone else is ordering. And of course, if I don't know what something is, I ask lots of questions. As a rule, the more you know, the more the nursery believes you will order. This translates to more sales for them, so they will most likely be very informative. (If they're not, you might want to find another nursery.)

**w Shop around.** For lots of reasons, not all nurseries carry the same plants, so it pays to ask where someone acquired what is to you an unfamiliar plant they've just mentioned. That can save lots of time, as retail nurseries carry a totally different stock from wholesale nurseries – and each wholesale nursery carries something different from the next one. If you're on your own, expect to stop at several sources before you'll find what you want.

**w Play detective.** I've found Plant Information Online ([plantinfo.umn.edu](http://plantinfo.umn.edu)) from the Andersen Horticultural Library in Minnesota to be a great resource if you can't find what you want anywhere else. There's an annual subscription fee, but it gives you access to information on thousands of plants as well as their growers. Through the growers, it's generally possible to find local wholesalers and retailers in your area. (By the way, I found out about this great service through *Garden Design* magazine.)

There's a saying that there are no orig-

inal thoughts and that all new ideas are built on old ones. If that's true, what we need to do most as landscape designers and watershapers is to look around and be inspired by what we see created by other landscape professionals, garden lovers, hobbyists and Mother Nature.

Open up: You **W**ater know how it may change your life!

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

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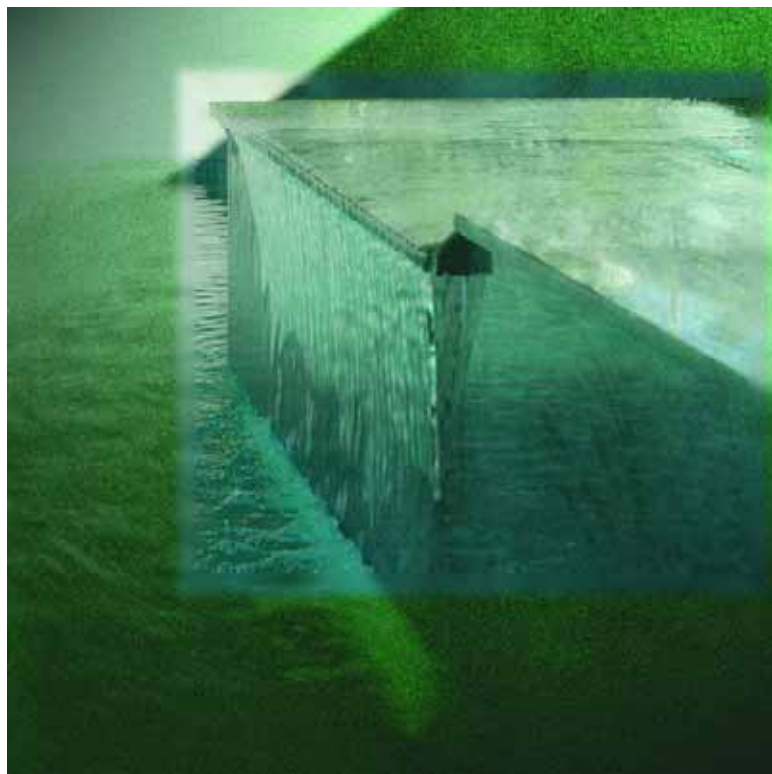
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By David Tisherman

## Simple Green



**U**nderstanding the client is frequently the most important factor in creating a successful design.

In the case of the project highlighted here, for example, it was a given that the clients were highly educated and knowledgeable with respect to design, style and materials: He's a top-flight graphic designer with an amazing grasp of color, line, architectural details, presentation materials and techniques; she's a degreed interior designer with a wonderful artistic flair.

They're also two of my best friends: He and I taught together at UCLA and have known each other for more years than I care to admit.

They've known about the focus of my business for years and said they hadn't wanted to call me because their project was relatively small compared to those I normally tackle. Instead, they'd called in a couple of other builders to develop plans and offer estimates. One night after dinner, I took a look at the proposals and offered my honest opinion that the designs were, in a word, terrible.

They had already reached the same conclusion. After a few more minutes of looking through the plans, he asked me point blank, "What would you do?" So I went to work.

The original pool, with its rounded corners, modest pre-cast coping, drab gray plaster and boring waterline tile, needed complete reworking along with the drainage system and the hardscape.

### soft and rich

The project involved renovation of a (basically) rectangular backyard pool, its decking and its landscaping along with the addition of a spa – nothing very tricky in technical terms but very important with respect to the space and its visual impact.

The home was typical of its surroundings in an upscale neighborhood of Thousand Oaks, Calif., and featured (as might be expected) tasteful interior décor. The backyard was fairly small, however, and clearly needed help: The original pool, with its rounded corners, modest pre-cast coping, drab gray plaster and boring waterline tile, needed complete reworking along with the drainage system and the hardscape.

I drew up a set of plans that leaned toward contemporary styling with a narrow color palette. Basically, the plan called for squaring the pool's corners and changing its color scheme while adding strong architectural touches and hints of Asian style to the overall space. The new hardscape was to be in concrete with clean lines, stepping pads and rich (yet subtle) organic colors – all greens, grays and blacks to maximize the visual impression made by the space and tie everything together.

When my friends saw the plans, they knew we were on the right track and we began the process of transforming the backyard environment from bland to gorgeous, beginning with the pool itself.

Once the structural work of updating the pool and adding the spa was done, we set about matching the new green plaster to the waterline tile so the tile would, in effect, disappear.

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Experience has taught me to appreciate those times when you want to draw attention to the tile line as well as those when it's best to make it disappear for simplicity's sake. In this case, the green one-by-one ceramic tile was nothing special, so I worked with my friends at Marquez Pool Plastering (Sylmar, Calif.) to create a custom plaster color to match the tile *exactly* and make it go away.

I've said it for more than 20 years now: The idea is not have someone walk into a backyard and be dazzled by the waterline tile. Rather, it's about striving to establish overall environments that make fuller, well-rounded impressions. In this case, we were looking for a beautiful, Zen-like look in which all of the visuals worked together.

To complement the pool's interior, we widened the bond beam to accommodate the simple, two-foot-wide, natural-concrete coping. We also raised a section of the beam by 18 inches to handle some grading problems in the



The soft-green color of the one-inch glass tile at the waterline is carefully matched by the soft-green plaster, effectively blending them together and making the waterline tile 'disappear.' Note the newly squared corner and the step detail.

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sloping yard and finished it with a beautiful, steel-troweled gray stucco. (We wanted it to mottle to go along with the rest of the natural-concrete hardscape, which we'd sponge-finished to expose the sand particles for a roughened texture.)

This decision to go with a two-foot coping detail was crucial with respect to scale. While not needed from a structural standpoint, in visual terms it was essential in making everything work together.

The clients picked the materials for the square spa themselves. It's all done in green and black granite and is perched above one end of the pool. We also changed the step configuration in the pool, put rectilinear benches in the corners and set up a seating area in the corner of the yard.

### arbor time

One of the unique details on the project is a metal arbor off to one side of the pool.

In our conversations, the clients indicated that they wanted a structure that made an artistic statement but that wouldn't obstruct views from inside the house. The problem with a conventional wood structure was the 20-foot space that needed coverage: If we'd gone in the usual direction, we would've been forced to use multiple posts. Ultimately, we moved in another direction and made the




The new spa features an unusually wide seating area all around the perimeter, with water flowing across about a third of the green-and-black granite's surface area before sheeting into the pool.


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## tisherman: detail 49

With its tubular steel elements, the metal arbor is a wonderfully simple structure that offers a good bit of shade along with a distinctive appearance.

overhang out of steel.

The resulting nine-foot-tall structure is built with structural steel, primed and painted black and done up with wonderful details that brace the structure effectively without turning it into a solid cover. The key is that using steel enabled us to support the entire structure with only four posts, and the shadow patterns on the decking pads and in the pool are now truly fantastic.

As with the hardscape, we stuck to a simple planting palette. The entire yard is landscaped with grasses, bamboo and kangaroo palms selected by my frequent collaborator, Pat Kirk of Prestige Landscape (Northridge, Calif.). Again, nothing jumps out at you when you enter the space. Instead, there's an impression of harmony and tranquility – exactly what the clients wanted.

As designers, both of them knew the role color would play in conjuring that fundamental response and knew the greens I was using took us in the right direction. Yes, there are times when I've used colors to make extremely strong statements and tell stories about particular sets of clients. For a project such as this one, however, the space was modest, the materials we were using were basic and I was working with savvy clients who wanted elegant simplicity.

To make it work, we used colors that worked with the colors within colors to minimize visual stress. That's not to say the palette isn't rich: We applied our greens and grays in ways that make even a simple project take on a great deal of elegance, depth and richness. By the same token, this setting isn't extravagant by any stretch of the word: It's all a tasteful reflection of the clients and

The best thing about the metal arbor is that fact that it spans a full 20 feet with just four posts, meaning views across the yard are only slightly obstructed for those sitting either in the spa or inside the house.



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their design sensibilities.

Working with a defined color palette led us to some very specific technical decisions. In designing the plaster mix, for instance, we knew that if we used white concrete with green oxide dyes, we would get a pastel green that wouldn't match either the flat gray-green of the tiles or the natural greenery of the plantings. Instead, we used a mix that started with gray Portland cement to knock some of the yellow tint out of the green dye.

Not only did this make the tile disappear, it also blended it in with the grays of the surrounding concrete and the black of the steel arbor and the spa's granite.

### verdant veracity

Truth be told, I'm encouraged that some progress has been made through the years when it comes to use of colors in pool and spa design.

It wasn't too long ago when I was greeted by jeers and near-uniform revulsion

when I told participants in an NSPI Builders Council meeting that my favorite colors for pool interiors were greens – gray-green, blue-green, yellow-green and more in dozens of possible variations. Their thinking apparently ran to the thought that green in a pool would remind consumers of algae and that there was no way anyone would swim in a green-colored pool.

I've thought since then that what they lacked most at the time was any sort of grounding in color theory and that they simply didn't know that blending soft greens with the reflective qualities of water makes for pools that are visually inviting with an irresistibly refreshing appearance. But times are changing: Not only is green accepted nowadays, it's among the most popular of all colors for pool interiors.

In the case of my friends' pool and entire backyard, any approach that didn't take colors and color theory into full account would have left them dissatisfied,

which is why they ultimately brought me in on the process. There's simply no way that turquoise tile on white plaster with red-brick coping would've made the grade for them.

The thing that amazes me is that color theory isn't inaccessible or unattainable and that it's quite possible for most anyone to learn how to use it in basic and effective ways. When you take the time and make an investment in developing your own abilities with color, you'll find that understanding and delivering on your clients' desires is much more easily within reach. **WS**

**David Tisherman** is the principal in two design/construction firms: David Tisherman's Visuals of Manhattan Beach, Calif., and Liquid Design of Cherry Hill, N.J. He is also co-founder and principal 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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# A Crystal-

As ponds and lakes become more common amenities for large estates and commercial properties, says George Forni, increasing numbers of clients are demanding water quality more akin to that of swimming pools than to natural bodies of water – and very often, he adds, they want cleanliness and clarity to be attained without any chemicals. Here, he shows how this can be accomplished, in this case in a system of large ponds on a 100-acre estate.

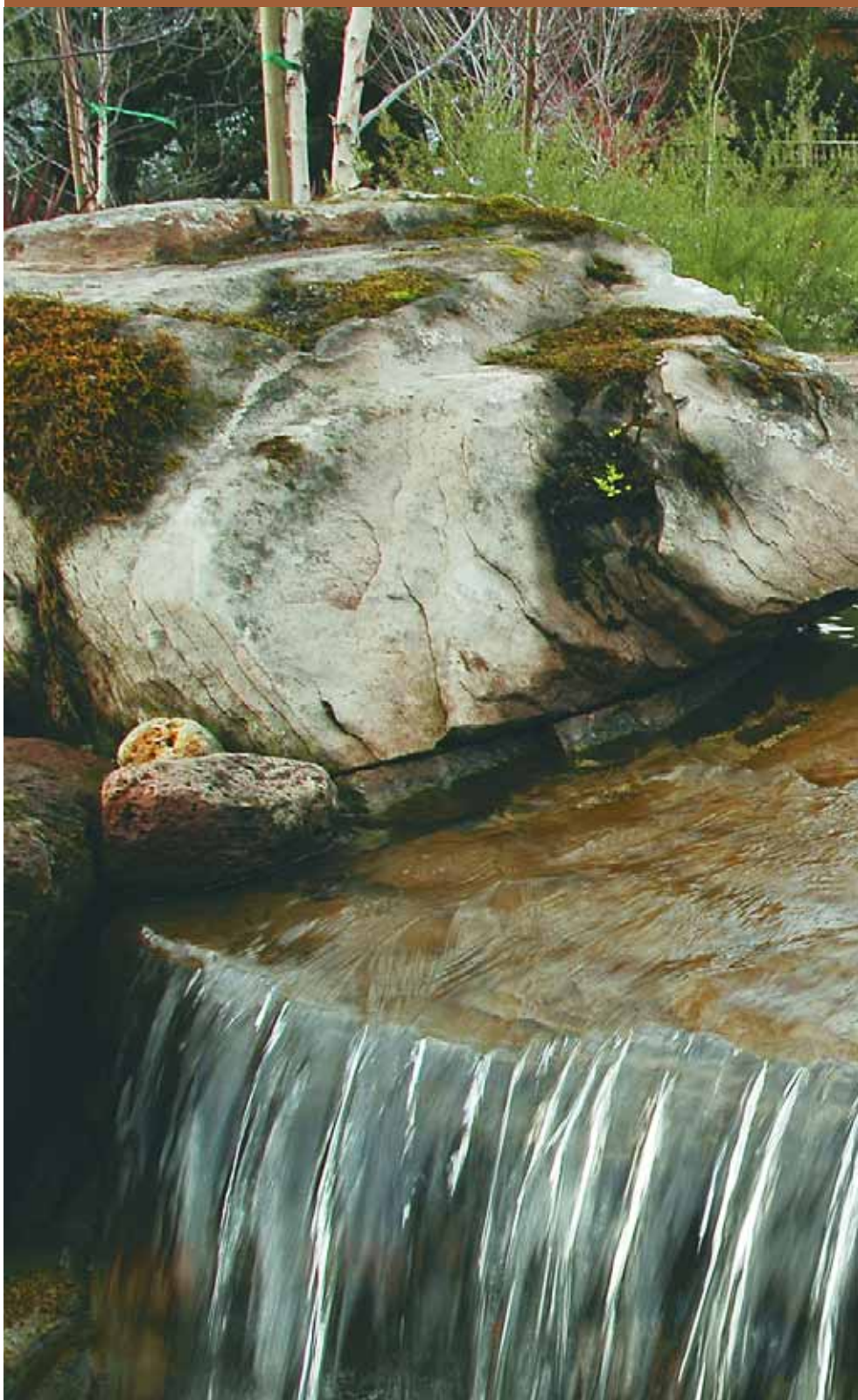
*By George Forni*

Our projects generally take two forms.

On the one hand, we're called upon to "heal" ailing bodies of water that have been set up with inadequate or improperly functioning circulation and filtration systems. Although other people's mistakes mean good business for us, I won't say that we ever look forward to seeing potentially beautiful ponds or lakes cursed by unappealing or even unhealthy water conditions.

On the other hand, we often have the opportunity to join a project at the design phase and handle the installation as well, applying what we know about water quality from the first conceptualization of the watershape. That's always a welcome prospect: Not only is it exciting to build things from the ground up, but it also gives us the capacity to ensure beautiful water and a satisfied client.

The project to be covered here is of the latter category: Our involvement began when we received a call from the proper-



# -Clear Mandate





Photos by Michael Weiser, Michael Weiser Photography, San Jose, Calif.

As you enter the property, you're treated to a view of the ponds through the oak trees. In all, the water covers a surface area of an acre and a quarter adjacent to two estate homes.

ty's developer, an upscale builder in California's beautiful Sonoma County. It was a unique situation in which two large ponds were to be located on a 100-acre site that was to host two grand estates.

The main requirement: The developer wanted the ponds to have extremely high water quality without the use of any chemicals.

### site lines

From the start, we at Aquatic Environments (Alamo, Calif.) worked hand in glove with a terrific landscape architect, Peter Wurtz of Landesign Group (Sebastopol, Calif.) He'd shown the owners photographs of beautiful ponds he'd seen in Arizona, a process that had given them a good idea of what they wanted.

We put our reputation on the line, declaring that we could deliver systems that would meet (or exceed) both the water-

quality and aesthetic goals defined for the project and went to work. The basic idea was that the two ponds were to operate separately but would appear as though they were part of a single system lain between the two homes on the property.

The site featured rolling hills, stands of live oak and a landscape strewn with boulders and beautifully weathered fieldstone. We knew immediately that the rock material would simplify the process of blending the ponds into their natural surroundings; we also knew that we wouldn't need to go far to get all the stone we needed.

The basic design also called for use of a tremendous amount of plant material right down to the water's edge – easy to do, but also a major potential challenge to the water-clarity goal.

The first step in the installation phase involved creation of a large earthen dam. The ponds were to be located on a sloped

area, so the downhill side of the slope had to be built up both to stabilize the slope and to provide a flat area for the water-shapes. The nature of this contouring led us to use a vinyl liner rather than a clay liner: We needed to prevent any water seepage that might compromise the dam.

Use of the vinyl liner had some other advantages as well. For one, the landscape design called for locating a number of trees close to the water's edge, and the liner provides a level of projection from root intrusion. For another, topping the liner with gunite at the waterline would enable us to create a distinctive edge treatment that would easily support boulders and other stone material.

The developer used detailed geology reports to conduct the rough grading and compaction of the earthen dam in advance of our arrival. We finished the task as part of our initial excavation of the site, working with the civil-engineering plan



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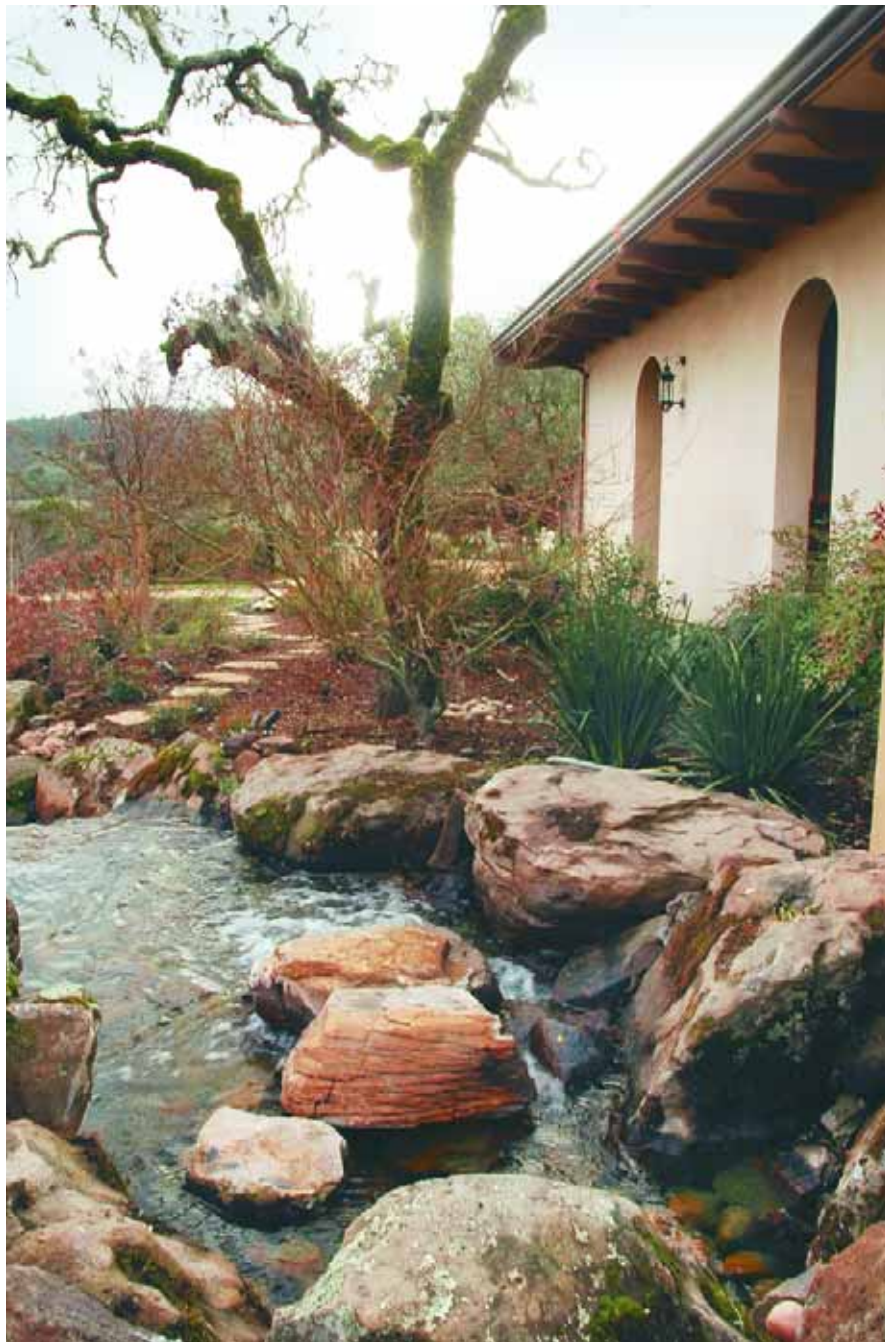
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to determine plumbing penetrations and set equipment locations in two sub-grade vaults on the down-slope side of the dam structure.

## separate and equal

The ponds themselves encompass a total of an acre and a quarter of water surface. There are two large, main ponds and a separate, smaller pond that essentially works as a catch basin at the bottom of the system. All three watershapes are visually linked, but there are actually two separate systems:

- an upper system fed by a stream that rises near one of the homes, flows beneath a concrete and cobblestone bridge and cascades into the top lake
- a lower system beginning with waterfalls that *appear* to flow out of the upper lake, but are actually the separate headwaters of the second system, with water falling into the lower lake and before cascading again into the small third pond below.

Because we committed right from the start to a high level of water quality, we over-engineered everything having to do with water quality in the design, starting with the massive bio-filters installed in the floors of two of the ponds. In the upper system, bio-filters take up a good part of the area of the pond; in the lower system, almost the entire floor of the third, lowest pond is covered by a bio-filter.

Our preferred method of setting up a bio-filtration system includes a grid of well-screened suction piping laid beneath a washed-rock medium – an approach that enables us to recreate what occurs in many natural lakes in a built environment.

In essence, what we're trying to emulate is a modern fish tank, only on a much larger scale. In those tanks, there's an intake grate on the bottom that is separated from open water by a rock medium.



The stream feeding the upper pond has its headwaters in small stilling ponds adjacent to one of the homes. The water flows over a rocky streambed and under a bridge before falling through a short cascade and into the upper pond.

Bacterial colonies build up in the nooks and crannies found among the rocks. As the water column is pulled down through the medium, the bacteria strip the water of nutrients (primarily nitrogen and phosphates) that give rise to algae and other water-quality challenges.

In a situation such as this project's, where we knew we'd have heavy loads of organic material falling into the water, we had an ideal situation for making organic processes work in favor of water quality rather than against it.

Of course, even when you strip nutrients from the water, there will still be residual material in the form of silt and other organic debris. With that in mind, we also pass the water through a separate sand-filtration system, using swimming-pool equipment to polish the water.

We could achieve good water quality without this second system, but in a project such as this one where the demand was for extremely high water quality, secondary filtration successfully enhances the water's aesthetics to the desired level.

A system of large skimmers also plays a key role in the water quality picture for these ponds, as does the aeration provided by the cascading waterfalls and by a subsurface bubbling system. Clearly, each of these measures – bio-filters, sand filters, skimmers and aeration techniques – had to be included in the hydraulic design from the project's earliest phases.

## **making it work**

In this case, we approached the hydraulic challenge by setting up the entire system for 24-hour turnover. To make sure we'd hit the mark at all times, we actually engineered the system for a turnover rate of 1.25 times per day.

The bio-filters were oversized by about 15 percent, which came out to about 2,500 square feet of filtering area consisting of six-inch intake lines that split off into grid manifolds consisting of 2-1/2-inch perforated (and well-screened!) piping.

This need for a large filter field offered a real challenge in the lowest pond, where we ended up installing a two-tier system with offset plumbing grids to get the action we needed. Thus, in the upper lake we installed 18 inches of rock medium,



The view from the bridge offers a magnificent prospect on the property. The grass-covered knoll seen just beyond the water's edge is part of the earthen dam the general contractor set up to stabilize the slope and create a level area for the ponds.



## The Cake Effect

The bio-filters we use on large ponds and lakes are made like a layer cake.

First we lay down a layer of filter fabric on top of the liner, then apply a six-inch layer of gravel. On top of that, we place the plumbing grid, usually spaced at 12-inch intervals. This grid is served by suction lines that draw on both ends of the manifold to balance flow within the system.

On top of the grids, we place 18 additional inches of gravel. At one time, we used pea gravel, but we found through the years that its small size led to undesirable levels of clogging and binding in the filtration bed. As a result, we changed to a 3/4-inch washed gravel. Atop that, we add decorative river cobble in two courses across the entire surface of the liner.

— G.F

while in the lower system's catch pool we installed 36 inches of rock medium.

Again, all of these issues had to be considered from the very start of the design process so the excavations could be performed to accommodate the eventual depth of the filter medium.

The equipment set consists of Triton sand filters and 7-1/2 horsepower C-Series pumps (all made by Pentair, Sanford, N.C.). We selected these high-head pump models because we had to move the water uphill a minimum of 20 feet to reach the headwaters of each system.

With the grading and excavation complete and the penetrations plotted, we fine-graded and hand-raked the site to remove as much rock material from the soil as possible. We then prepared for laying out a 30-mil vinyl liner (from SGS of Sparks, Nev.).

The first step here involved laying down 16-ounce nylon filter fabric to give

the liner a measure of protection from the coarse soil. (See the sidebar at left for more details.) Then we brought in the liners in 200-by-100-foot pieces, seaming the pieces together with two-foot overlaps and carefully inspecting every inch of the glue joints to ensure a water-tight seal.

As we were installing the liner, we also took care of the plumbing penetrations. We always design our pond-circulation systems so that they have a minimum number of penetrations, the thought being that the fewer places you punch through the liner, the less potential there is for leakage later on. In this system, our penetrations were limited to the skimmers and the suction lines and returns.

The returns were handled differently for the two systems. With the upper pond, the water is added via three returns concealed by rocks in the 40-foot streambed. For the lower system, we created multiple

Plants were integrated in our thinking about the ponds from the earliest stages of the project. Trees and other plants line the shores, and large, shallow shelves were designed to accommodate aquatic plants. The flat-stone edge treatment was designed to allow for easy entry and egress from the water – and to supply a flat, stable platform for fishing or relaxing at water's edge.



welling pools in the upper section of the waterfalls set up between the two large ponds.

There are four large skimmers in each pond, each with 36-inch baskets set inside the liner. The openings for such large skimmers are hard to conceal, but we had a great deal of flat rockwork and boulders on the edges that allowed us to do a reasonable job of hiding the skimmer openings from view.

## **aesthetic aspects**

As mentioned above, the edges of the liner are anchored in gunite around most of the shoreline. This offers two advantages: First, it protects the liner from UV degradation at the waterline; second, it serves to support the flat stonework and boulders that line most of the shore.

In areas where we knew we would be adding large numbers of boulders – particularly in the waterfalls and streams – we notched the soil to create large pads that were lined and then gunited to provide adequate structural support.

The shoreline also includes several large, flat, shallow areas for aquatic plants. In these spaces, planting pockets consisting of hydro-soil material contained by filter fabric and surrounded by large, partially submerged boulders. We wrapped the filter fabric completely over the top of the soil and then went back and cut holes to plant irises, clover, spike rush and water lilies.

Most of our work to this point was well within our comfort zone as water-quality specialists and went both smoothly and quickly, and we knew that any adjustments that might be needed could be accommodated down the line. But things slowed down considerably when it came to placing the many tons of rocks and boulders we'd selected from the property's boulder fields.

We knew the aesthetic decisions to be made here were of a grander and more permanent nature than many others, so we often ended up being part of a committee made up of the general contractor, the landscape architect and the homeowners when key stones were being placed. This occasionally led to lengthy discussions, and in some cases



We had the great advantage of having a generous supply of field stones on site and put large numbers of them to good use in and out of the water.

we really had to plead our case.

In visualizing stone placement, we'd selected a handful of boulders we wanted to serve as interesting focal points. Sometimes when these stones were set, they'd stand out so prominently that those without much experience in stone setting would be taken aback to the point of resisting our choices. We'd explain that once the water and plant material were added, the stones would look great in context.

This approach usually worked, but on more than one occasion, we had to lay it on the line and ask the homeowners to trust us. At one spot in the lower waterfall, for instance, we'd chosen a three-ton boulder with an interesting, pointed profile that offered a dramatic transition as well as moss, lichen and a beautiful patina. We thought it would look great with water flowing around it, but the homeowners weren't sold on the idea.

With full assurance from the landscape architect, they decided to go with our decision and, as it turned out by the time we'd gone through two weeks of moving boulders around with a 30-foot crane, were completely happy with the result.



A large cascade makes it seem as though water flows from the upper pond to the lower pond, but the systems are actually separate. This transitional area is a focus of special attention – and one in which we paid particular attention to the integration of stone, plants and water in setting up views across the expansive (and crystal clear) lower pond.

## always learning

One of the most interesting and challenging aspects of working with large ponds and lakes is that each system is different. Every location's source-water quality is different, each bio-load is unique, and we've learned that when you start up these systems, there's a break-in period of unpredictable duration in which bio-filtration establishes itself and water quality settles into balance.

In this case, we fired up the system in January and had water quality right where we wanted it before the warm summer months arrived and any problems with the water's quality might be magnified. Overall, we're extremely happy with the results, as are the clients and the rest of the project team.

The finished work now stands as testimonial to the aesthetic heights to be achieved in combining top-notch water quality with thoughtful design in a gorgeous setting. For us, this is the kind of project that makes the hard work of watershaping on such a large scale more than worth the effort.

## *The Maintenance Agreement*

Our firm differs from many in that we offer not only installation and remediation services for large bodies of natural or naturalistic water, but also ongoing care of those big bodies of water. As a result, one of the things we push for with our large pond and lake installations or remodels is a one-year maintenance agreement.

In installations such as the one described in the accompanying text, we know there are going to be maintenance issues that will crop up, especially during the first few months. A service role enables us to make various adjustments to the system as necessary, and our ongoing contact enables us to observe what's happening and figure out the characteristics of each body of water to keep everything in line.

At the end of the year, we either continue with maintenance or turn the watershape over to another firm or property staff with a detailed set of recommendations and a maintenance regimen already firmly in place.

This is a big selling point for us: Clients are reassured knowing that the firm that designed and built the system will be there during the crucial first few months of operation to keep everything on track.

— G. E.



# Shaping

Effective landscape-lighting design requires a careful balance of several key elements, explains Janet Lennox Moyer, the chief among them being the fine art of lighting plant material. In this feature, one of the world's leading authorities on the subject of exterior lighting describes the way she approaches this part of her projects, revealing the thought processes and practicalities involved in making greenery come alive when the sun sets.

We all know that plants are beautiful in daylight. Perhaps less well known is the vast visual potential they possess when carefully and thoughtfully lit at night.

It's no small challenge. Indeed, maximizing the beauty of most any landscape while also ensuring that your lighting design works well throughout the lifetime of the landscape requires a keen understanding of both plant materials and the lighting techniques that will bring them to life when the sun goes down. Furthermore, surrounding watershapes with well-lit spaces and foliage will add a distinctive aesthetic dimension to the overall design.

To my mind, there's no substitute for paying attention to *every* plant in the plan, because overlooking any of them or ignoring the role each has to play in the overall landscape will almost invariably detract from the effectiveness of the lighting design. You can't overlook technology, either, or the need to sort through the variety of techniques that can be used to light plants while keeping an eye on a wide range of practical, creative and aesthetic issues.

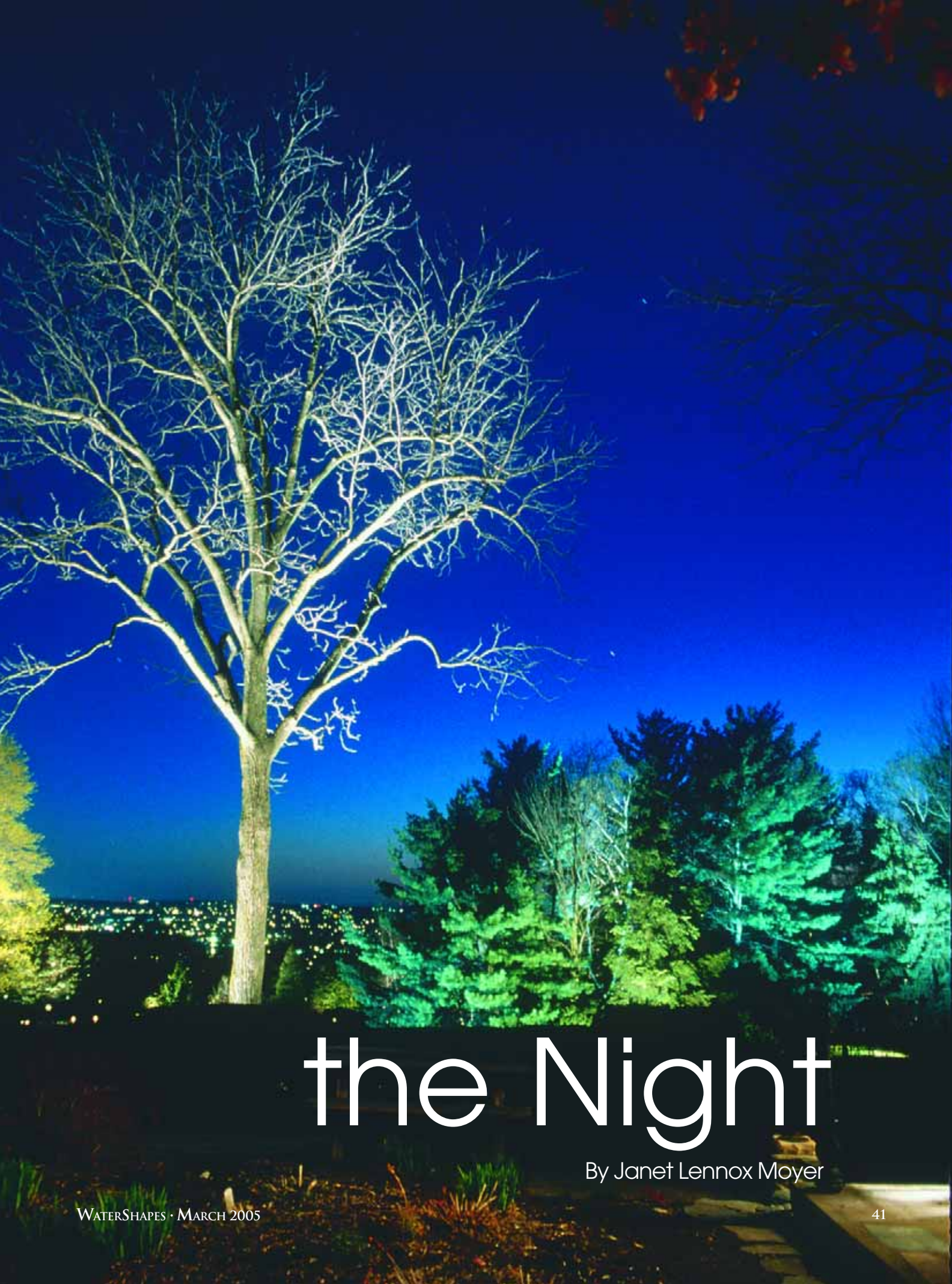
When you encompass all of this successfully, the results will often redefine a landscape during dark hours and lend a whole new dimension of interest and excitement to the space – an achievement that absolutely increases the clients' enjoyment and appreciation of their landscape.

## basic techniques

Determining the right approach to lighting a specific plant is a matter of considering that plant's role in the overall lighting composition, evaluating its structural or "architectural" characteristics and then creating the desired visual effect. Again, that's no small task, as there are many variables to consider in making such determinations. These include:

**w The direction of the light**, which can be broken down to choices among uplighting, downlighting or sidelighting. The path you take greatly influences the plant's appearance: The key here is assessing the availability of fixture locations and accepting the fact that sometimes a desired location does not exist.





# the Night

By Janet Lennox Moyer

To downlight a tree, for example, you need either another tree or a structure that is taller than the tree you want to light. Similarly, uplighting might not work in a space where a pathway or perhaps a watershape is too close to the base of the tree.

In designing a lighting system, you also must decide whether the plant should retain its daytime appearance or make a new statement at night. In that context, downlighting produces shadows on the underside of the leaves, just as sunlight does, while uplighting typically will change the plant's appearance by lending a glow to the foliage as the light shines upwards through it. This produces shadows over the *tops* of the leaves in a way that emphasizes the form or texture of the foliage.

**w Fixture location** requires consideration of the luminaire's position relative to the plant, be it in front, to the side or behind – or some combination. This decision further affects the shape, color, detail, three-dimensionality and texture of the plant being lit.

**w The quantity of light** is mostly about finding the right level of illumination for a plant based upon its importance in the overall design. As a rule, the more important the plant, the more illumination it should receive. The characteristics of the plant also come into play here: The human eye sees reflected light, and you generally will need to adjust how much light you shine on the plant based on its role in the landscape *and* on its reflective characteristics.

## seeing plants

The point – and it can't be stressed enough – is that the effective lighting of a landscape is about the plants rather than being strictly about the technology you use to light them at night. There is no "standard" approach, and you must determine the relative importance each plant plays in the landscape composition to plan any decent sort of lighting scheme, whether simple or complex.

There's always some sort of visual hierarchy, and some plants will end up being featured elements while others will play secondary roles. Some will need to be lit to create visual focal points, while others will serve as background and a few will remain unlit.

It's absolutely essential to consider each and every element of the planting plan with those sorts of considerations in mind. Just as an interior designer considers the role of a piece of furniture relative to the visual roles of complementary accessories, a lighting designer will process all of this information about the planting plan and fit it into an image, an overall lighting composition.

This careful process of examination is invaluable in helping you understand each plant's role as well as its relationships to others. You'll spot useful relationships as well as potential conflicts between plants and lighting equipment. A plant, for example, may be positioned in one case to conceal a lighting fixture; in another spot in the same garden, that plant's position may interfere with a desired lighting location.



Lighting designs (unless otherwise indicated) by Janet Lermox Moyer. Photo by Kevin Simonson.

**It's all about composition:** Here, the lighting draws attention to three focal points – the stone sculpture on the left, the horse at middle back and the maple on the right – and fills in the gaps with softer up- and downlighting on other elements, including a soft layer of stair/path lighting to ensure safe travel through the space. The location, aiming and shielding of fixtures is critical in this sort of installation because of the many fixtures and viewing locations.





A well-considered lighting scheme can highlight the differences between a plant's daytime and nighttime appearance and can bring a level of drama to the nightscape that forever alters a client's perception of what landscape lighting is all about. In the daytime shot, you can see the location of two uplighting fixtures; there's also a downlight that provides "ground plane" lighting of the plantings to make the space more understandable and light the edge of the driveway for safety.



Photo by Kenneth Rice, [www.kenricephoto.com](http://www.kenricephoto.com).



Photo by Kenneth Rice.

It's also about setting a stage: Here, the location, aiming and shielding of the fixtures establishes a three-dimensional view to the orchid greenhouse and provides enough light to allow for a comfortable walk along the arbor. Lighting down onto and from within the greenhouse creates a visual destination that helps people feel at ease inside the arbor.



Knowing the genus, species and variety of each plant is critical to developing an effective lighting plan. In this case, for example, the mature *Betula nigra* (left) is profoundly different from the mature *Betula nigra* 'Trosts dwarf' (right). You don't want to be surprised when you see the tree on site, and you would certainly light these two trees in different ways.



Leaves seen backlit from the top (above) and the bottom (below) show the kinds of contrasts that occur – and define a need to pay attention to both sides of any leaves in deciding how best to illuminate a plant.



Photos by Kenneth Rice.

You also have to consider the obvious fact that plants *grow*. In an immature garden, a particular plant may have no influence on the distribution of light from a given fixture. As it grows, however, it may well block the light from reaching the intended target plant.

This is why, in studying a planting plan, it's critical to consider the overall shape, growth rate and mature size of all the plants. You can learn this from experience, of course, but it's also possible to compile information on plant material by speaking with nursery personnel or consulting reference books (of which there are many).

Finally, studying the characteristics of each plant allows the lighting designer to factor in the specific visual effects that are

possible. With some plants, for instance, the structure or leaf characteristics may well limit how light should be applied, while the characteristics of other plants may open out to a variety of possibilities.

Consider a tree with deeply furrowed bark, a dense canopy of foliage that's impenetrable by light and branches starting at roughly ten feet above the ground: In this case, locating a fixture near the base of the tree will highlight the texture of bark and will create a visual link between canopy and ground. With the same tree, locating a fixture farther away from the base will have the entirely different effect of washing the canopy with light.

### physical characteristics


The challenge with this sort of analy-

sis is that almost every plant presents a different profile. This means there are no shortcuts, no alternatives to studying various plant species to understand their physicality as it relates to lighting.

To organize your thinking amid this garden of variables, it's helpful to break things down into a couple of broad, physical characteristics:

**w Texture:** This requires a somewhat subjective overview of a range of features, including leaf size and form, branching patterns, overall scale and the openness of leaf overlapping.

**w Leaf type:** Here, you consider shape, color, size, patterns of overlapping, density, translucency and opacity. Leaves may



At the same time lighting can be used to play up differences of leaf color and texture in even a small garden space, in this case uplighting from a fixture located at ground level in front of the *Acer palmatum dissectum* 'Crimson Queen' casts shadows on the wall, visually linking together two areas of the composition along an otherwise plain surface.

be thick and leathery or thin and diaphanous. They may have a dull or shiny “finish” on one or both sides. To a large extent, these particular characteristics are prime factors in the choice of lighting techniques.

w **Branching patterns:** The plant may have dense branching or open branching, a pattern that, in either case, may be inherently beautiful (again a subjective determination) or a tangled mess that should not have attention brought to it. Branching patterns should be considered equally for both evergreen and deciduous plants – and for deciduous plants in both the dormant and “leafed out” states.

w **Foliage color:** This translates in lighting terms to reflectance characteristics and is all about ways you can enhance colors. To do so, it’s important to find out whether or not the color changes with the seasons or stays basically the same. Some foliage also changes dramatically as it transitions from fresh growth to mature growth and when it moves into dormancy or goes through a flowering period.

Some plants will vary in color from one side of the leaf to the other. Several varieties of Southern Magnolia, for example, have a tan-colored, wooly growth on the underside of the leaf, and uplighting makes them look dead. By contrast, other species, including the Silver Maple and some Birches and Poplars, have a silvery underside to their leaves that makes the plants almost sparkle when uplit.

w **Branch/trunk characteristics:** The woody parts of some trees have colors, patterns or formations that offer a great deal of visual interest and beauty – especially when lit. A trunk may be striped, or its bark may be peeling, flaking, furrowed or cracked. When lighting deciduous plants in particular, emphasizing these characteristics with lighting is a wonderful way to add interest to a landscape during dormant periods.

w **Flowering characteristics:** It’s important to consider when a given plant flowers during the year, for how long and the color and shape of the flower. Ask yourself, “Is the flower striking or inconspicuous?” This information will help you determine the light source to use and the nature of the emphasis, if any, that the flowers should be given in the lighting composition.

w **Growth rate:** Determine how quickly and by how much the plant will vary in size and shape over its lifetime. Some plants will grow only a few inches each year, while others will grow by several feet. Some may start out at three feet and only increase to four to five feet, while others may shoot up from a modest start to attain heights of 100 feet or more. Whatever it is, this growth rate is something you need to know and consider in shaping a lighting design.

w **Dormancy characteristics:** Some plants will go dormant in fall and lose their leaves, while others die out completely. Some in their dormant state will look spectacular, while oth-





This sequence of images shows the same tree in daylight (A) and lit in summer (B), fall (C), winter (D), covered by snow (E) and in spring (F). It's all the same lighting of the same tree, but when captured at night the seasonal distinctions take on a new immediacy – and value for clients.



Lighting design by C. Brooke Carter, Dan Dyer, Eve Quellman and Kami Wilwol. Photos by Kenneth Rice, Dan Dyer, Kevin Simonson and Janet Lennox Moyer.



Photos by Kenneth Rice.

The quantity of light focused on an object is affected by the reflectance of the object and has a direct effect on our perception of brightness – a factor that complicates lighting plans in which plants have widely differing colors and textures. That’s the case here, where the design team created a framework for a willow they used as the focal point from this viewing angle. The framing is achieved by lighting the two conifers on either side and then filling in between by lighting the hedge.

ers do not. When working with annuals, perennials or biennials, bare dirt may well be the norm for many months – a fact that may influence your control strategy to such an extent that you might deactivate portions of the lighting system during these periods.

**w Shape:** The basic shape of a plant also provides hints on lighting technique. Tree shapes, for example, can vary significantly from young form to mature state. Some are quite inconspicuous when young but will develop dazzling shapes as they grow. Others will shift from one distinct shape to a completely different one at maturity.

### physical appearance

All of the important characteristics de-

scribed just above will determine how a plant should be lit. If a particular plant has dense, overlapping leaves, for instance, this suggests that fixtures be located outside the tree canopy to wash the foliage in light. By contrast, when a tree has translucent leaves, lights mounted below the canopy will make the plant glow.

Likewise, the mature size and shape of a plant will significantly influence the choice of lighting technique. Plants with narrow, upright shapes and dense branching will best “express” their shape when lit by grazing light.

Some Yews, for example, have an extremely stiff, upright shape. When they are pruned to maintain that shape, lighting fixtures placed close to the edge of the tree will bring out their rough texture. The upright shape also allows the light to

reach the treetop, although this requires careful fixture location and aiming to scrape or graze the form without oversaturating the plant with too much light. (This is true for most upright trees, especially tall Palms.)

By contrast, trees with pyramidal shapes, including many conifers, look their best when fixtures are moved back from the edge of the tree. The optimum distance will vary anywhere from a few feet to ten or even 20 feet away, depending on the angles in the tree’s overall shape and its height.

For their parts, plants exhibiting a rounded form with a dense leaf overlap and thick foliage can benefit from a “wall wash” technique. Moving the lighting fixtures away from the canopy will accentuate the shape of the tree (but dimin-



Photos by Kenneth Rice.

**When seen in leaf through the window, the color and fullness of the foliage dominates, appearing like a framed photograph or painting. In the winter with no leaves, it assumes a more sculptural appearance and reveals its branching structure. Note that the view has significantly more depth with the snow on the ground.**

ish the sense of its texture), while lights placed beneath the canopy will create a wash of light only on the bottom of the canopy because the light won't penetrate the branches.

As mentioned above, trees with translucent leaves and open branching will glow when lit from underneath their canopies. The light filters up through the branches, accentuating the tree's shape and three-dimensional qualities and creating a particularly sensational effect in a garden where the tree is a key focal point.

An exception to this rule is found with rounded, open trees that have interesting characteristics at the outer edge of their canopies. Crape Myrtles, for example, produce long, cone-shaped flowers at the end of their branches. The tree's open form and its somewhat

translucent leaves might suggest up-lighting, but in this case locating fixtures outside the canopy will provide light for the flowers while also filtering some light through the canopy.

As a rule, when a tree produces branches close to the ground, fixtures should be placed away from the canopy to light the tree from bottom to top. In this case, the aiming angle can be relatively flat because the tree itself will block glare.

### roles in the garden

While the approach outlined here includes a long list of considerations and suggests that you need to keep an awesome amount of information in mind as you develop a landscape-lighting program, the most significant determinations you must make have to do with

considering the role each plant plays in the overall garden.

How each is used in the composition will determine beyond any other factor the amount of light that it should receive. Will it be a major focal point? A minor focal point? A transition element? A background element? Is the beautiful tree that forms the heart of a daytime view best suited after dark to blend into the background and lead the eye to another location in the landscape? Answering these questions calls on you to know the characteristics of the tree, its location in the landscape and the requirements of the composition (day *and* night).

Trees that appear as major focal points should be lit so that they appear brighter than less-important elements that surround them. How far you go is a matter

of determining what it will take to put the tree in that role. Plants with dark leaves, for instance, will require more light than will trees with light-colored leaves. Conversely, to avoid distracting a viewer's eye from a dark tree, use restraint in selecting the wattage to light secondary plants if they have lighter-colored leaves.

The location and how a plant will be viewed also bear consideration. If a tree will be seen from only one viewing direction, you can place fixtures in front of that portion of the canopy that will be visible from that perspective. If people will view all sides of the tree, then fixtures should be placed around the entire canopy.

You also need to think about whether you want to show the plant naturally or work with lighting to create a new artistic appearance. As a rule, it's best to show focal-point trees as naturally as possible and leave the artistic touches to secondary plants. Again, this will be dictated to a large extent by fixture location.

Front-lighting will show or create shape, tie areas together and provide detail and color. Back-lighting lends more visual interest to a scene, adding depth by separating a plant from the background, completing the shape established by the front lighting or emphasizing the shape of the plant using the "halo" technique. For its part, sidelighting will bring texture to the plant and create shadows on its opposite side.

Keep shadows in mind, too. They can distract from the composition if used carelessly, but when used well they will add interest by filling in to tie focal points together or create interesting patterns on the plain surfaces of walls, lawns or paving.

Additionally, whether the plant is uplit or downlit can have a huge influence on appearance. You can create a variety of effects with either technique, setting up a wash, grazing, texture highlighting, halos and silhouetting. Creating a glow in foliage can be achieved with uplighting, while casting shadows on the ground can be achieved with downlighting. Accentuating detail and color is best accomplished with downlighting.

## careful decisions

I've offered this brief list of possibilities by way of illustrating the point that a huge variety of effects are dictated by a simple choice between uplighting and downlighting of a single plant in an expanse of landscape. The list is by no means exhaustive, and further particulars run well beyond the scope of this discussion.

We haven't considered, for example, the range of issues having to do with big decisions about fixture placement and the concealment of electrical wires; these will be taken up in future articles with a more practical focus.

What I've tried to do this time is open you to the near-limitless possibilities that arise when you take a serious look at the way your landscapes present themselves to your clients. As with most design tasks, visual compositions often incorporate several effects and techniques, and in almost every case, the "answer" to the design challenge will be individualized to the setting, the clients and, above all, the planting plan.

Even so and for all of its complexity and range of considerations, the lighting of plant material is still only one element in the landscape and must be integrated with the rest of the composition.

If you consider how people will view the plants, when the plants will be seen (and from which locations) and how the plants look from different points of view, areas or even elevations, you're on the right track. If you keep your attention focused on enhancing the appearance of the plant material while keeping it in balance with the rest of the surroundings, you're on the right track.

Finally, and as is the case with good watershape design, you're *really* on the right track if what you do increases your clients' enjoyment and the value of



Photo by Kenneth Rice.

The uplighting of this Oak serves as a visual destination from a backyard patio, so the lighting levels are soft and point to the bench as a focal point in the composition. Note how the dense canopy of the *Quercus agrifolia* stops light inside the canopy: This is important, as it means that there will be no spillover of lighting into the neighbor's yard.



Photo by Kenneth Rice.

Lighting can be used to define spaces, lead the eye, create a sense of direction and point out destinations while calling the viewer into the distance. These settings look great in daylight, but something truly special is happening at night, mainly because of the dappling effects of the downlighting. There's also some uplighting, too: It accents selected specimen trees to create a sense of direction.



It's a tall order, but familiarizing yourself with the lists of factors and considerations defined in the accompanying text is the key to developing lighting programs that reward close attention, engage the viewer on aesthetic levels not found in daylight and introduce clients to a new and distinctive form of art.



# a new American Garden

By James van Sweden



**The** gardens of James van Sweden have influenced an entire generation of landscape architects and designers, and his firm – Oehme, van Sweden and Associates – has designed scores of renowned public and private spaces in the United States and around the world. Here, he profiles the recently completed Chicago Botanic Garden and its Great Basin, describing what it's like to approach, bid and execute design projects at the very highest level.

The Chicago Botanic Garden is located, oddly enough, a good 40 miles from that city in the suburb of Glencoe, Ill. And although it is specifically named for the Midwest's greatest city and might seem a municipal endeavor, it is actually maintained by private donations and serves to display the entire region's rich flora and scenic beauty.

The garden is organized around a large body of water known as the Great Basin, which was created some 60 years ago by dredging the area and diverting the Skokie River to create a series of islands and lagoons. The largest island, known as Evening Island, was the initial focus of our work in re-designing the space.

My firm, Oehme, van Sweden and Associates of Washington, D.C., became involved in the project about six years ago, when we were invited with three other firms to compete for what was clearly a prestigious landscape-design contract. After a lengthy, juried selection process, we were fortunate to be chosen and then proceeded with an extremely detailed design that maximized the setting by creating a place where visitors can stroll, meditate and, above all, learn about the area's rich palette of plant species and, of course, the water.

In all, the project took about five years to design and build. Evening Island was where we started, but as often happens in our work, we soon expanded our efforts beyond its five acres to include the entire basin's shoreline, which encompassed about four additional acres.

### careful steps

Landscape-design work at this level is an *extremely* methodical process. Each step takes a great deal of effort and dedication, and we habitually work in a systematic way to ensure that every detail and every step is thoroughly considered – both with respect to our own design philosophy and preferences and with careful regard for the desires, priorities and ideas of our clients.

We started the project by creating a master plan and imagining a variety of ideas and details. By the time we were to make our presentation, we

Photos © Richard Feilber, New York

had developed three main alternative visions of the project to demonstrate possible site treatments.

This phase works along the same lines as a Chinese menu, where diners are asked to choose “one from column A, two from column B.” With our clients’ feedback, we picked and chose among the possibilities to construct study models that would enable us to get the topography down and develop a clear understanding of the contours of the landscape and the way the spaces would eventually all work together.

Once completed, the three-dimensional models served two purposes: In our office, designers used them as visualization tools as the work progressed; in off-site meetings, they enabled clients and their representatives to “see” the ideas we were presenting.

For this project, our presentation team also included associates Sheila Brady and Lisa Delplace, both of whom spent a great deal of time at the site visualizing the design and developing a broad range of ideas. We assembled 20 images for the jury and presented our various concepts. Through it all, we had the advantage of knowing that the panel was familiar with our work and that, moreover, they were anxious to have the site include an example of the “New American Garden.”

### an evening view

The day before we made our initial presentation to the jury, I had passed the afternoon at the site on what would become Evening Island, at that point merely a heap of earth, gravel, and rock dredged from the bottom of the adjacent lake.

Pleasant Rowland, the creator of the American Girl Doll, had donated \$12 million to the Chicago Botanic Garden to turn this five-acre space into an “evening garden,” a sanctuary in which visitors would be encouraged to enjoy the view west toward the sunset.

Sheila Brady was with me, and we discussed the site’s potential together as we watched the shadows lengthen and the sun drop toward the horizon.

At the presentation, we’d have an hour to make our case and share our vision, our principal tool being the 20 slides we had pulled from our files before leaving Washington, D.C. In selecting these images, we concentrated, naturally, on gardens we had designed for public spaces. Above all, we had looked for definitive photographs that epitomized our firm’s style.

That’s when I remembered a slide I had kept of a Helen Frankenthaler painting, a huge work titled, appropriately, “Nature Abhors a Vacuum.”

When I first saw this painting years ago, I had been struck with the warm hues so like the russets and golds of our meadow-inspired landscapes and by its energy: the way masses of color swept across the canvas, melting into one another where they intersected. This controlled sensuality and passion struck me as identical to what I aim for in my own designs, and I had kept the slide as a sort of talisman. On a whim, I slipped it into the carousel.

Almost the minute I finished my presentation to the jury, I knew we had the job.

### defining style

Pleasant Rowland was the first person to approach me. Her manner was eager, and she said she couldn’t believe I had shown a Helen Frankenthaler painting. She was just crazy about Frankenthaler’s work, she said, and had been riveted by that slide.

Clearly, the painting had spoken to her more powerfully than words

‘Landscape-design work at this level is an *extremely* methodical process. Each step takes a great deal of effort and dedication, and we habitually work in a systematic way to ensure that every detail and every step is thoroughly considered.’





## Japanese Inspiration

I can easily say that touring the gardens of Japan changed my design life.

In fact, the serpentine bridge in the Chicago Botanic Garden is based largely on my study of Japanese design, in which two points are never connected by a straight line. The meandering form makes it more likely that visitors will come in greater visual contact with their surroundings. Moreover, the shape of the bridge itself provides a sculptural form that adds to the tranquility and beauty of the space.

I draw on my familiarity with the work of Japanese masters mostly in my designs for hardscape, in the use of wood and stone, in integration of all constructed elements and, of course, in working with water – the ways it is crossed, the edge treatments, the way water flows and the use of stones, mosses and grasses.

For all that, I don't design plantings the way the Japanese do, with their tight-sheared pruning. Our designs with regard to plants are much looser, but I must say that I am still moved by the way they did things in the great gardens of Kyoto and elsewhere and that there's so much to be gained from understanding their sense of space, proportion, the layering of views and asymmetrical balance.

That's why I return to Japan again and again – and never stop learning.

–J.v.S.

ever could. For a minute, with the Frankenthaler before us, she and I and, I suppose, everyone in that room had shared the same vision of the color, energy and grace that could be that garden. They had actually seen and felt what existed, as yet, only in my mind.

This type of garden – something for which our firm is particularly well known – is based on developing garden spaces as metaphors for the American meadow. It's not all about using plants that are indigenous (although they play a role); rather, it has to do with using perennials that remind visitors in this case of the American landscape of the vast Midwest.

Gardens of this type are generally large in scale, although they don't have to be. We use plantings that require no chemicals beyond initial soil amendments, and we also select those that use water efficiently once established. These spaces have very loose, soft, natural looks and change dramatically with the seasons. They're also characterized by beautiful hardscape that is used to establish the "bones" of the garden – a key to designs in this style.

The island had two knobs of exactly the same height before our work began, and we had the sense it really needed topographical relief. This was one of the first points we addressed in our presentation to the jury, when we spoke of the way the site would be sculpted to create a number of subtle elevation changes.

## water on edge

We knew in approaching the site that the water was the true centerpiece of the garden, so we spent a great deal of time thinking about the way the water and the land would interface and how visitors would interact with the shoreline spaces. That is, after all, what botanic gardens are all about: It's really an interactive exhibit, and you want people to spend time regarding the spaces around them.

Because the margins are so crucial visually, we used the edges of the island and the opposite shoreline space as a showcase to demonstrate the full range of plants that can be planted next to ponds in this region of Illinois.

This project is so expansive that one of our associates, Lisa Delplace, spent a full three years just researching the plantings

‘Botanic gardens are really an interactive exhibit, and you want people to spend time regarding the spaces around them.’





for the edge treatments with the goal of creating a seamless, flowing line. (For more information on these edges, see her sidebar on page 61.)

The plants we came up with – lotuses, arrow leaves, water lilies, cannas, water irises, assorted other water plants and a wide range of grasses – show the extraordinary range of species that can be used in this climate zone in association with water.

We also planted a great collection of trees, including crab apples, weeping willows (right by the water), alders, maples and many other species as well. The fa-

cility employs a horticulturist and an expert on water plants, and we worked hand in hand with them as we developed our detailed planting plan to make certain we were all on the same page.

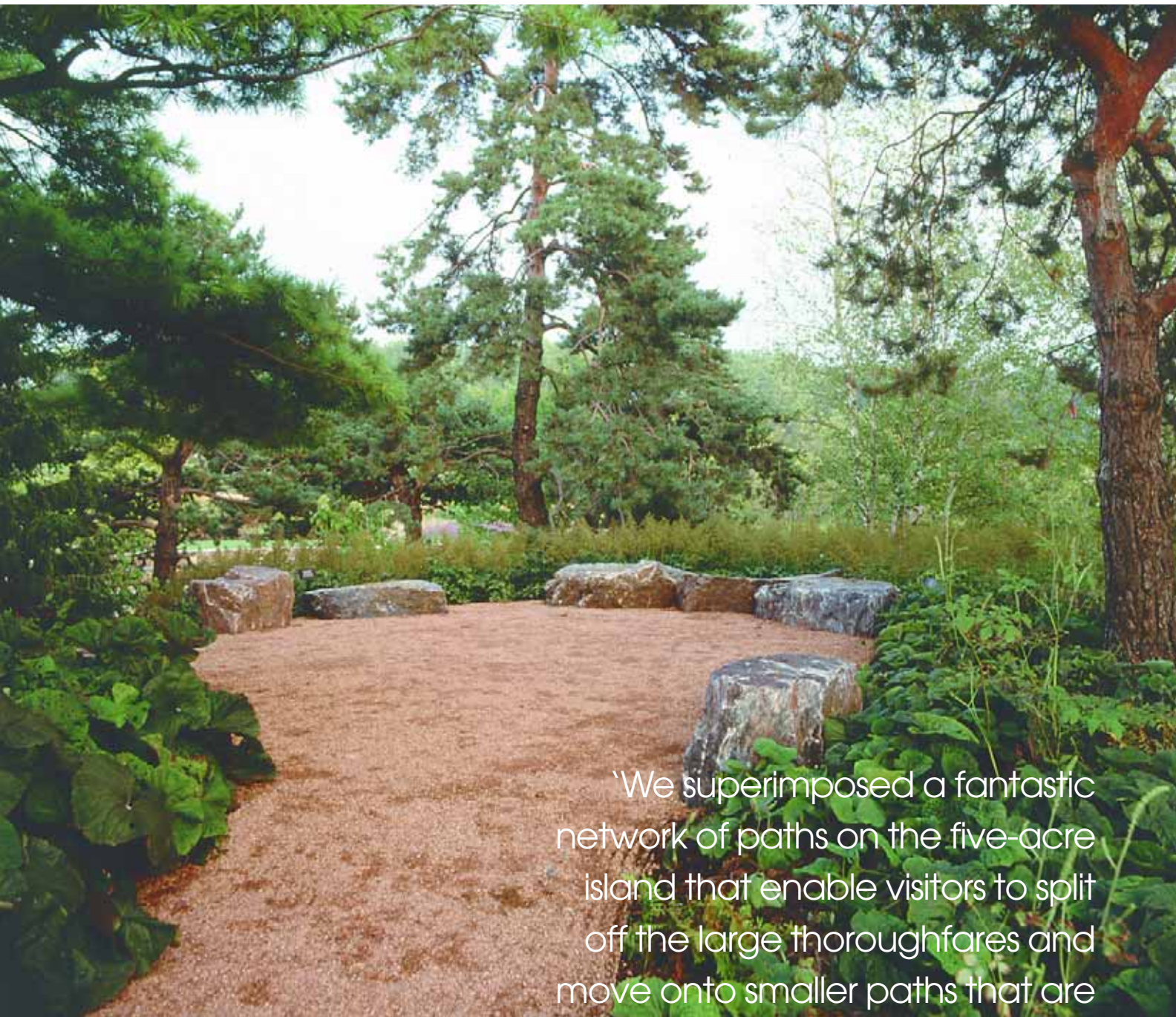
While keeping one eye on variety, we kept the other on repetition as a critical design principle and teaching device. In fact, we *emphasized* repetition by planting a series of crab apple trees at regular intervals around the basin in a way reminiscent of the use of cherry trees around the Tidal Basin in Washington, D.C.

Our thought was to place the same plants in various locations around the

basin so that if someone didn't happen to see a particular type of plant in one place, he or she would be likely to spot it someplace else. We also wanted to avoid the sense that there was one section of the space devoted to one type of plant, always focusing on the garden as a fully integrated whole.

### bridging details

With all these fundamental design concepts settled to a great degree, we built detailed models of features including the bridges, the landings and Evening Island's main terrace, which is in the shape of a



'We superimposed a fantastic network of paths on the five-acre island that enable visitors to split off the large thoroughfares and move onto smaller paths that are reduced to steppingstones in some spaces. Many of these smaller paths lead to intimate spaces where people can stop and meditate or commune with nature.'

nautilus. We used splendid, organic curves to create paths that would encourage visitors to wander slowly through the space and carefully regard their surroundings – once again, a major goal in a botanic garden where learning is a key function.

In addition to the main sweep of the walkways, we superimposed a fantastic network of paths on the five-acre island that enable people to split off the large thoroughfares and move onto smaller paths that are reduced to steppingstones in some spaces. Many of these smaller paths lead to intimate spaces where visitors can stop and meditate or commune with nature.

At every step of the process, we carefully considered the way people would move through all of the spaces under our control and designed our hardscape features accordingly. In this case, the surfaces consist mainly of Illinois limestone accented by Pennsylvania blue-stone to create stripes on the terraces. The bridges have wooden decks, and the paths have rich, reddish/brown colorations – everything intended to be warm and welcoming.

We also invited Argentinian architect Salo Levinas to design the restrooms and storage areas. These structures double as garden walls and have been so wonderfully disguised that visitors wouldn't even know they were there without the necessary signage.

This sort of concealment reinforces the observation that we almost always design in layers so that not everything can be seen at once. I've always seen the element of surprise as being very important in almost all forms of garden design, so throughout this garden are a variety of intimate spaces that you don't see until you come upon them.

Most significant in this respect, we established two destinations on Evening Island, treating one of the knobs with seating boulders while the other is set up as a sort of council ring – a partial circle of stone where a class or tour group can sit, look and listen. These were both major design elements and have been set up to maximize their views. In both cases, however, you don't know what's there until you arrive.

And surprise isn't always about an un-





## Composing Edges



One of the defining elements of the redesign of the Chicago Botanic Gardens was the complex set of treatments used on the shoreline edges of the Great Basin.

We had an image of how we wanted the watergarden to appear, with the same beautiful qualities of the terrestrial plantings carrying over into the water. As a consequence, our basic design scheme called for

a sculptural treatment of the shoreline, complete with intricate plantings that in many places blurred the transitions between land and water.

Once the basin was drained, we used five distinct edge treatments to achieve different looks. This variety served two purposes: First, it lent variety to the design; second, it gave us an opportunity to test out the various treatments to see how they performed over time.

As mentioned in the accompanying text, the site had been bedeviled by fairly severe erosion problems on the often-steep shore. As built 60-odd years ago, the Great Basin was intended to contain runoff, so no consideration was given to maintaining the edge along a three-to-one slope. Basically, wave action and wind undercut the slopes at the water line and the earth would simply fall away.

To some extent, the need to solve this problem gave initial momentum to the concept of repurposing the basin as a watergarden.

As mentioned in the feature, we used partially submerged boulders in several places (to reduce the velocity of the waves), staked mesh into the soil (to allow root penetration as another measure of stabilization) and packed the soil quite tightly in several spots with emergent aquatic plants.

The key to all of this was the grading we did once the basin was drained. We took the opportunity to dredge out the silt and rebuild the bottom, making the water shallower along the shore to accommodate more intensive plantings on a broad shelf.

The bulk of the basin sits atop hard-packed clay, so we were able to achieve the compaction rates we needed with relative ease. In areas where we couldn't raise the bottom, we inserted sheet-steel pilings or, in areas experiencing severe erosion, backfilled the top layer of soil with river rock to reduce wave action and secure the plants more firmly.

Finally, we did a great deal of work in contouring the shore. Before we arrived, the Great Basin was pretty much a circle. We sculpted the edges to create irregular ruffles along the basin – another feature that allowed us to create very specific “moments” along the edge in which there's a strong sense the garden extends right into the water.

– Lisa Delplace

folding perspective: In the case of the island's terrace, for example, the thrill of discovery and sense of satisfaction come when the visitor gets a full view of the nautilus-inspired paving and perceives its uniqueness.

### the leading edge

During construction, the basin was drained to simplify access to the entire work area. (The only thing the crew found, oddly enough, was a formerly submerged car with a set of golf clubs in the trunk.)

Our first major task was stabilizing the edges to accept new plantings – no small challenge, as historically there'd been a great deal of difficulty holding the edges together for any extended period. (Again, see Lisa Delplace's sidebar on page 61.)

We implemented multiple strategies here, using rockwork in the water and near the edge, setting up a large shelf of mesh extending into the water to hold the plants and placing rock structures in the water to stabilize the bottom while encouraging fish to spawn. There are also large boulders that poke above the waterline, and we set up special sheet-metal planters to contain the lotuses because they're so invasive.

Suffice to say, the entire design was quite elaborate and installing it was a matter of great care, astute professionalism and tremendous dedication.

When you work for so long on a project of such great scope, it can be tough to step back and consider the overall impression it makes. Since we completed our work in 2002, a great deal has been said and written about the garden, and we've been gratified that so many people seem to appreciate and understand what we were trying to accomplish.

Will Hagenah, chairman of the board of the Chicago Horticultural Society, put it this way: "The cumulative experience of this new complex of gardens, terraces and bridges is one of heightened sensory pleasure. It encourages each of us to go slowly, to linger, to allow nature to nourish the human spirit."

If we can achieve all that with a landscape design, then the designers and everyone involved with the project can feel that they've done the job very well indeed.

'The design was quite elaborate and installing it was a matter of great care, astute professionalism and tremendous dedication.'





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## AQUA International Conference November 16-18, 2005

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## Landscape Lighting Program

December 10-16, 2005

Scottsdale, Arizona

Come spend five days and nights with lighting designer Janet Lennox Moyer and associates to learn all about the art of exterior lighting. The intensive program will include design and technical information specific to landscape lighting, design workshops and five nights of hands-on exploration of lighting techniques. Designed to familiarize participants with what's needed to create a variety of lighting effects, the workshops will feature lighting fixtures from all leading manufacturers.

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## COMMERCIAL CHLORINE GENERATORS

Circle 139 on Reader Service Card



**BIOLAB COMMERCIAL POOL CARE** has become the exclusive North American distributor for the ChlorKing line of commercial chlorine generators. The salt chlorinators are available in various sizes with chlorine outputs ranging from 1.5 to 25 pounds per day and are sized to accommodate everything from small apartment pools to heavy-duty waterpark applications. **Biolab Commercial Pool Care**, Lawrenceville, GA.

## MOSAIC DESIGN SOFTWARE

Circle 140 on Reader Service Card

**ARTISTRY IN MOSAICS** offers a "Design Your Own Pool Layout" link on its web site. The system allows designers as well as homeowners to personalize pools. Once the layout work is complete, the system generates documentation, complete with a bill of materials, for use by the installer. Users have access to the company's complete library of standard mosaics in ceramic tile. **Artistry in Mosaics**, Fort Pierce, FL.



## POOL PRODUCTS CATALOG

Circle 141 on Reader Service Card



**CANTAR POOL PRODUCTS** has published its 2005 catalog of pool equipment and accessories. Encompassing both the Jacuzzi and Cantar lines, the 148-page book covers pumps, filters, lighting systems, controls, skimmers, main drains, fittings, jets, spa covers, solar blankets, automatic covers, safety fences, winter covers and more. Complete technical specifications are provided.

**Cantar Pool Products**, Youngstown, OH.

## POOL/SPA IONIZER

Circle 142 on Reader Service Card

**ECOSMARTE** offers a chlorine- and salt-free alternative to pool-water treatment with an ionization/oxidization system that uses copper and titanium electrodes to kill bacteria and other organics and oxidize the water to burn up organic material. Easy to install, the electrode chamber replaces 12 inches of exposed pressure line. Weekly mode reversal from oxidizing to ionizing can be manual or automatic. **ECOsarte**, Richfield, MN.



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Circle 143 on Reader Service Card



HADCO has released its "2005 Landscape Lighting Specification Guide" with more than 200 pages of outdoor lighting fixtures, tips and techniques, fixtures and idea galleries. More than 100 new fixture designs are showcased with various color, size, shape and lamp options, including low- and line-voltage models with xenon, halogen, incandescent, fluorescent, HID and LED technology. **Hadco**, Littlestown, PA.

Circle 144 on Reader Service Card



OCEANSIDE GLASSTILE has introduced the new Terrain series of glass-tile relief decos and liners in 25 colors. The natural motifs show the influence of Art Deco while highlighting the natural beauty and translucence of hand-made glass in stylized forms of water, foliage and rock shapes – an ideal complement to other materials, including stone, wood, metal, porcelain and ceramic tiles. **Oceanside Glasstile**, Carlsbad, CA.

Continued on page 70



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## LAMINAR-JET PULSE CONTROLLER

Circle 145 on Reader Service Card



JANDY announces the availability of its new Laminar Jet Pulse Controller LPC4. Designed to create programmable bursts of color in fiberoptic light transferred into the laminar jet stream, each controller can accommodate up to four individual jets and includes a control panel and two solenoid actuators. The multiple settings include timed bursts of light, random operation and custom patterns. **Jandy**, Petaluma, CA.

## SKID-STEER LOADER

Circle 147 on Reader Service Card



BOBCAT has introduced the S205 skid-steer loader. The vertical-lift-path machine is just 66 inches wide (or 60 inches wide with optional offset rims) and has a 2,050-pound rated operating capacity – good power in a compact package. The loader also offers great reach, a low-profile and good operating visibility, and more than 50 different attachments are available for the easy-to-operate machine. **Bobcat**, West Fargo, ND.

## POOL TIMERS

Circle 146 on Reader Service Card



ALLEN CONCEPTS offers TightWatt, a line of energy-saving pool timers. The timers self-adjust how long they run depending upon the time of year, automatically running the circulation system for shorter periods during the colder months. The device can be set to run at off-peak hours for additional savings, and it features a battery backup to maintain correct time during power outages. **Allen Concepts**, Chandler, AZ.

## COBALT PASTER COLORANT

Circle 148 on Reader Service Card



CONCRETE CHEMICALS OF CALIFORNIA introduces a liquid cobalt plaster colorant designed to withstand harsh swimming pool environments. Available in three shades – medium blue, Tahoe (blue-gray) and Aqua (blue-green) – the colorant offers high resistance to UV exposure, complies with ASTM standards and allows for quick and easy plaster tinting. **Concrete Chemicals of California**, Redwood City, CA.

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Circle 29 on Postage Free Card

## COBBLESTONE GLASS TILE

### Circle 149 on Reader Service Card



**HAKATAI ENTERPRISES** introduces the Cobblestone series in glass tile. Reminiscent of wet and dry river rocks in a streambed, the material lends a contemporary look to commercial or residential applications. Available in polished and tumbled white or gray, the tiles come on mesh-back mounted sheets that are curved on either side to allow for tight, seamless fits. **Hakatai Enterprises**, Ashland, OR.

## VIBRATORY CONCRETE SCREED

### Circle 150 on Reader Service Card

**MULTIQUIP** offers the retooled DuoScreed for concrete finishing. Featuring a lighter blade that enables just one person to strike off concrete surfaces, the device offers greater maneuverability and faster finishes with less effort. Designed for finishing sidewalks, driveways, pathways and decks, the unit's vibratory action embeds aggregate and reduces air voids to produce a denser slab. **Multiquip**, Carson, CA.



## POND-CARE PRODUCTS

### Circle 151 on Reader Service Card



**JUNGLE LABORATORIES** offers a full line of pond-care products, including water-testing kits, start-up kits, water-adjusting chemicals (for chlorine removal, pH adjustment and more), fish

treatments, plant-care additives, plant food and a range of other products designed to fight algae, break down waste products, prevent water discoloration, reduce foam and clear cloudy water. **Jungle Laboratories**, Cibolo, TX.

## MODULAR D.E. FILTERS

### Circle 152 on Reader Service Card

**STA-RITE** has introduced a larger version of its System:2 modular D.E. filter. The fully backwashable unit has 48 square feet of filter area in a small footprint and features a single, replaceable grid for easy assembly and service. It also offers System:2's balanced-flow design for outstanding dirt-holding capability and long cleaning cycles as well as information panels positioned for easy reading. **Sta-Rite**, Delavan, WI.



Continued on page 72

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## LIGHTING CATALOG

Circle 153 on Reader Service Card



**RUUD LIGHTING** has published its 2005 full-line catalog to assist in the selection of fixtures best suited to individual lighting projects. Featuring new products and extensive collections of landscape, security, flood, area and specialty lighting fixtures, the 300-page, full-color catalog offers detailed product descriptions and photos, performance photometrics and application photography. **Ruud**

**Lighting**, Racine, WI.

## BACKYARD-POOL SLIDE

Circle 155 on Reader Service Card



**S.R. SMITH** announces the new Rogue slide for residential pools. Designed for maximum value and fun, the slide is 6 feet, 6 inches tall at the top of the slide (8 feet tall at the top of the handrails) and features the company's high-volume water-delivery system, which pumps 20 gallons of water per minute to speed the ride. The slide is available in a variety of designer colors to match any design need. **S.R. Smith**, Canby, OR.



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## BIO-FILTERS

Circle 154 on Reader Service Card

**CAL PUMP** has added bio-filters to its Torpedo line of pond products. The two models, sized for ponds of 2,000 or 4,000 gallons, respectively, offer both mechanical and biological filtration. They can be backwashed within minutes without turning off the pump and feature a rotating cartridge filled with bioballs that are swept by a brushing action to aid in flushing away organic material. **Cal Pump**, Valencia, CA.



## POOL/SPA VALVES

Circle 156 on Reader Service Card

**VALTERRA PRODUCTS** offers a gate and three-way valves specifically designed for pool and spa applications. The gate valves are available with a variety of connection modes in 1-1/2- and 2-inch interior diameters, and several types are available in either PVC or ABS. The three-way valves come in 1-1/2- and 2-inch sizes and are made of a chemical-resistant, high-temperature black PVC. **Valterra Products**, Mission Hills, CA.



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## FOUNTAINS AND POOLS

Circle 157 on Reader Service Card



**DURA ART STONE** offers cast-stone fountain bowls and pools in a range of colors and decorative configurations. The bowls can be placed individually or in tiered arrangements and are designed for placement within poured-in-place pools or the company's standard or custom pool walls. Pedestal extensions, finials and figurines can be used to attain greater heights, and copings are available. **Dura Art Stone**, Fontana, CA.

## FILTER MEDIA

Circle 158 on Reader Service Card



**BBA FIBERWEB** has introduced Reemay Freedom, a cartridge-filtration medium that has built-in Microban protection. This technology protects the filter by inhibiting the growth of bacteria that can cause odors and reduce the service life of a cartridge filter. The membrane also has a quick-release surface for easier cleaning and is available in a variety of weights, depending upon need. **BBA Fiberweb**, Old Hickory, TN.

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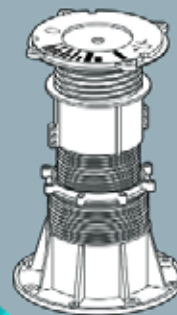
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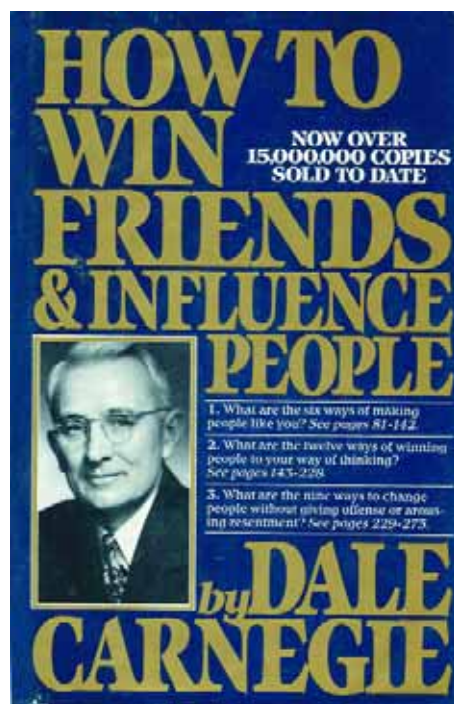
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By Mike Farley

# The Art of Influence



In this business, there's no avoiding the fact that you have to be able to work with people.

That may seem an obvious point, but if you're like me and tend toward the shy side, stepping out of your shell to work with others is not always easy. I've always admired those with easygoing social skills, but I've never been one of them – and I know in this industry that I'm far from alone.

In my case, I've found my way around my basic tendencies by taking advice I've found to be incredibly helpful in my work with clients as well as in my relationships with sub-contractors and fellow employees. That advice comes from one of the true classics of 20th-century American publishing: Dale Carnegie's *How to Win Friends and Influence People*.

If you're not familiar with this volume beyond its name, you might be impressed by the fact that Carnegie's seminal self-help book was first published in 1936 and has been available and in print ever since. My copy was published in 1981 (the revised edition from Simon & Schuster), and by that time, more than 15 million copies had been sold worldwide.

Carnegie's work is the basis for courses that have been taught for decades, and countless business leaders and politicians have cited his ideas about how to work effectively with people as major personal influences.

There's a reason this material has been so enduring despite its age: Carnegie had an incredible knack for highlighting the profound importance of some of the simplest of social skills – things we all should (and probably do) know

but all too often forget to apply as we make our way through our daily lives.

The book has 30 short chapters, each about 10 pages in length. Each chapter can be read in just a few minutes, and I like to read them one at a time so I'm sure to absorb the ideas and advice he shares on each and every page. The chapters are divided into four sections: one on the fundamentals of handling other people; another on ways to make people like you; a third on how to turn people to your way of thinking; and, finally, one on how to be a leader without giving offense or arousing resentment. Each features terrific examples and vignettes mixed in with phenomenally sage advice.

Most often, that advice comes in extremely simple forms, as in his discussion of the power of the sincere compliment or of the importance of remembering to smile when dealing with others. One of my favorites is his discussion of "giving people a high reputation to live up to." This is something I've found particularly useful in all sorts of ways in all parts of my life: When you set a high standard for others and let them know that you expect great things from them, it's amazing how consistently they will work to live up to that reputation.

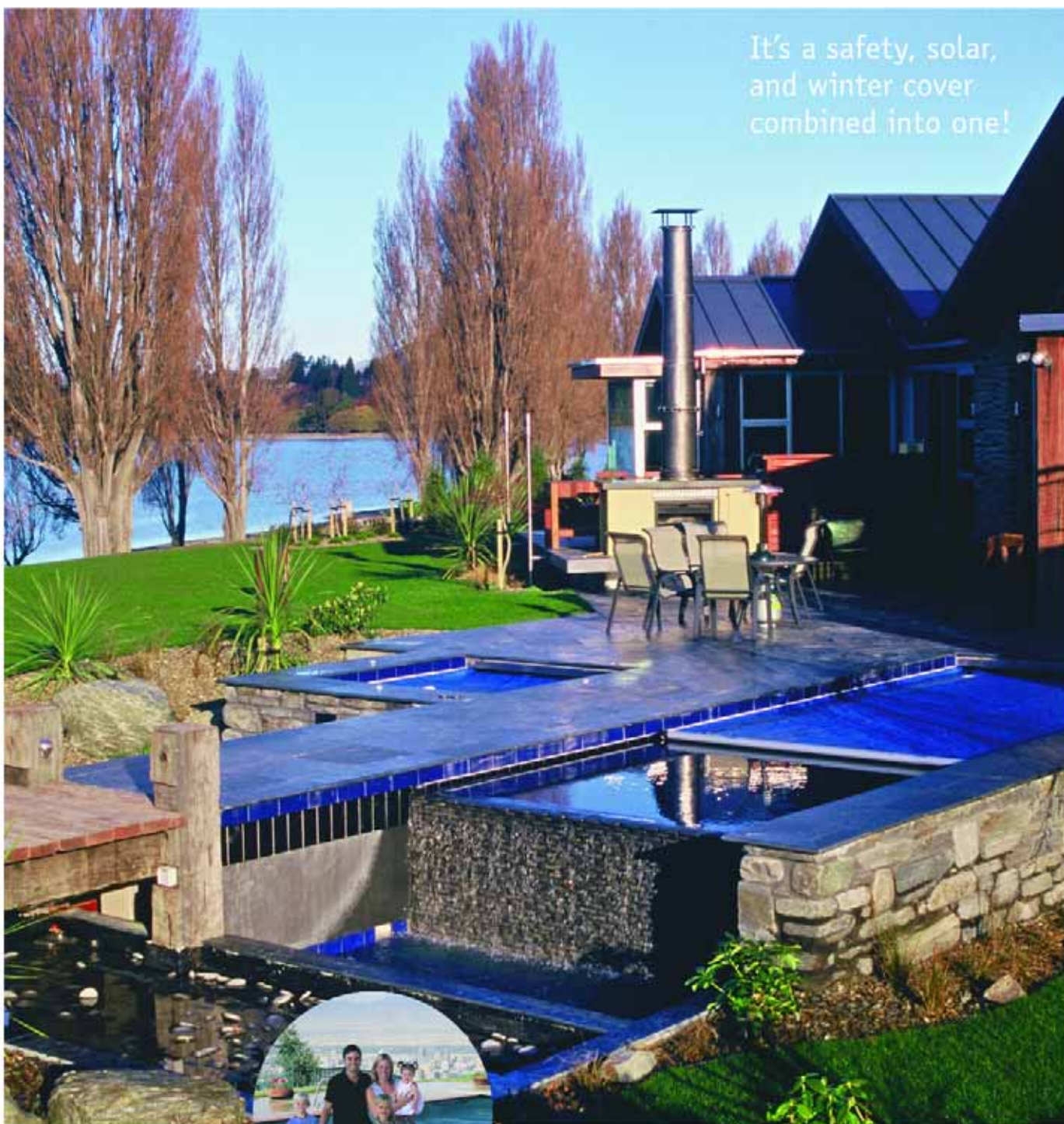
There are so many great little thoughts and ideas in Carnegie's book that I keep coming back to it again and again – at times on a daily basis. The material is *that* integral to building effective business (and personal) relationships, and it's critical not only to read what Carnegie says, but also to spend time reflecting on it and then to take steps to apply it.

Fortunately, applying these ideas is mostly about reminding ourselves about basic truths of human nature – in other words, things we already know. If you find yourself challenged by the thought of working with customers and others in the industry, you might just find this classic to be well worth a permanent spot on your bookshelf, just as I have. **WS**

**Mike Farley** is a landscape architect with more than 20 years of experience and is currently a designer/project manager for Gohlke Pools in Denton, Texas. A graduate of Genesis 3's Level I Design School, he holds a degree in landscape architecture from Texas Tech University and has worked as a watershaper in both California and Texas.

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