



www.landscapeonline.com

LANDSCAPE ARCHITECT

AND SPECIFIER NEWS

THE INDUSTRY TRADE MAGAZINE FOR COMMERCIAL LANDSCAPE SPECIFIERS NATIONWIDE!



岩
 水清
 松の枝
 松の枝
 松の枝



Five Falls Presented by:

kane  brothers

water features

www.kanebros.com

Five FALLS

O'ER THE FOX RIVER

By Stephen Kelly, managing editor



The Kraft residence is in Barrington, Illinois, 35 miles northwest of downtown Chicago.

The home is directly off the Fox River, a waterway that travels some 70 miles in Wisconsin before

entering Illinois, where it wanders a little over 100 more miles before it merges into the Illinois River. The Potawatomi, Mascouten, Sac, and Fox Indians made their homes on its shores, as did the pioneers. The village of Barrington was chartered in 1865.



Left: This sheer, seven foot fall incorporates an easily accessible spot for visitors to cool off in the waterfall.

Below: Rising from the water, the Kichler accent light fixtures showcase the blooms on the tropical night-blooming water lily varieties that grow along the bank edge.

Bottom: The stonework below is a pathway across the pools from the decking, a key interactive feature. The aquatic plantings include penny wort, sedge, forget-me-not, umbrella palm, red stemmed thalia, canna, ogon and lilies.

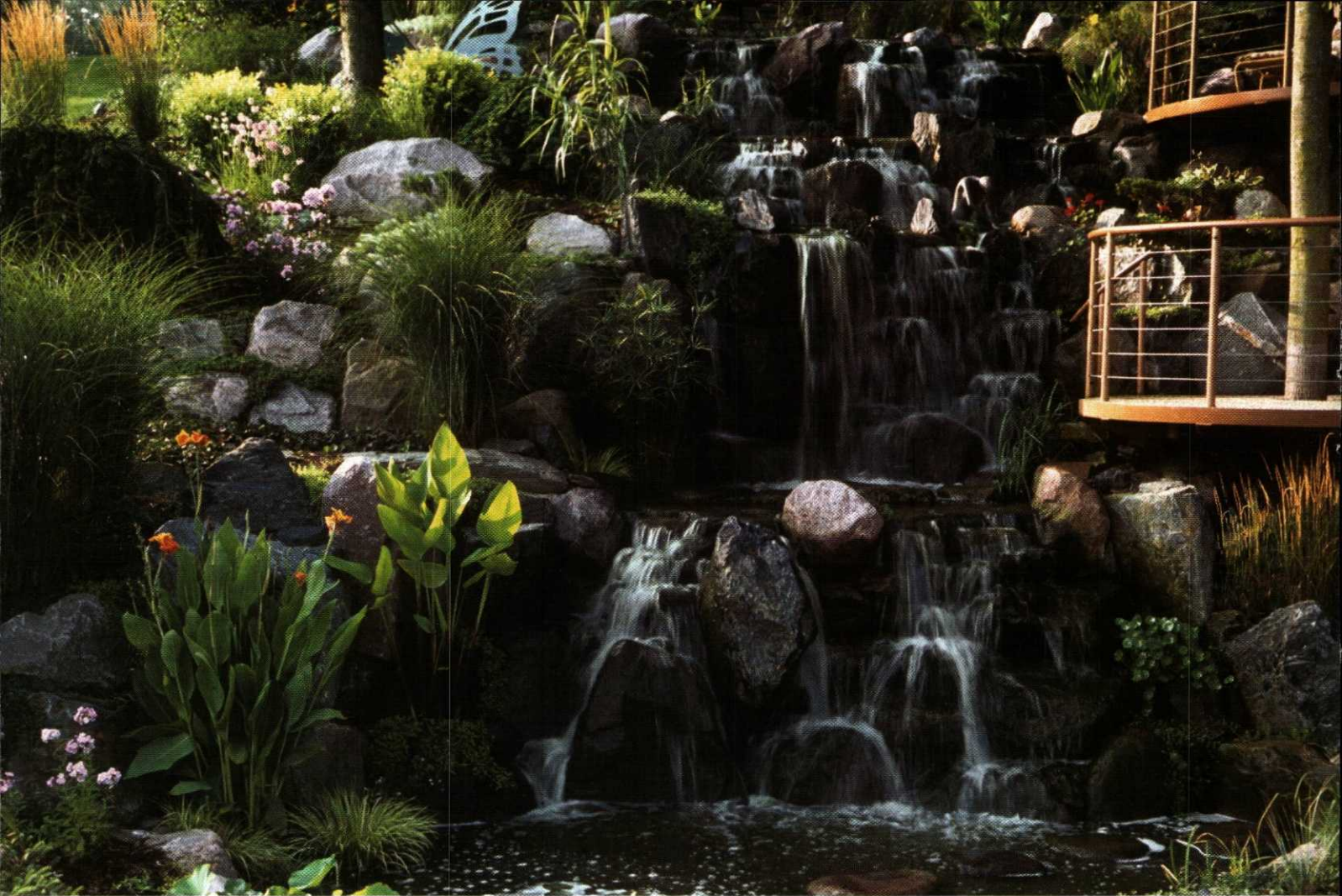




The property slopes steeply to the shores of the Fox River (a 30-foot drop), not the most practical piece of real estate, unless you add what nature neglected to do—waterfalls. To give you the proportions of this panorama, the photo was taken from atop a 25-foot frame ladder and the middle waterfall cascades seven feet.

From the river looking up to the top of the falls, Parrots' feather (center foreground) and lotus (left) set the scene.





Beneath this idyllic setting of terraces, cascading water, pools and aquatic plants are steel substructures that set the elevations and locations of the weirs to assure structural integrity against the Chicago area weather extremes. Reinforced concrete connects the weirs to form a solid structure, atop which is geotextile padding, used to protect the watertight liner from the heft of the Wisconsin granite and aqua blue boulders.

The river today is no longer nature's free flowing effluent (damn those dams), but its waters still attract property owners. The Kraft property, to those who want to nit-pick, could be called somewhat undesirable property, given the steep terrain and somewhat limited living space. The Krafts, however, saw the land's potential.

To Kane Brothers, Inc., however, a grade change is desirable for their aquascape work. The concern was that there would only be partial views of the falls as one looked down from the property toward the river. To better view the water features an interactive feature was necessary, in this case multi-level decking so that the falls could be viewed from different perspectives. A concept of drawing water from the river and recycling it over a 30-foot waterfall was developed into a formal plan. The proper permits were acquired and the undertaking began.

Construction began in the summer of 2000 and the project was estimated to take approximately 12 weeks to complete. First, steel substructures were driven into the ground to set the elevations and locations of the waterfall weirs. These weirs ensure the water feature will stand up to the Midwest freeze / thaw cycle without heaving. The design called for a series of five cascading waterfalls, varying in height and width, over the total drop. When the steel was in place, reinforced concrete was poured between the

waterfall weirs to connect each one to the next, forming a solid structure. The next step in the construction was to install a geotextile padding, which ultimately would protect the liner (45-mil EPDM) from being punctured when the boulders were placed. Once in position, the 5,500 square feet of liner (weighing in at 1,650 lbs.) was brought in. Two pieces were used in this application, which were eventually seamed together to make a watertight seal.

Next began the most time consuming and aesthetically critical step in the development: stone placement. Kane Brothers, prides itself on creating natural appearing water features. Stone placement not only has a direct result on the visual outcome of a project, but also allows the designers to control many of the audio aspects of the feature. The projection and pitch of the sound created by a waterfall is important to a project's success. Keeping these considerations in mind, and taking an artistic approach, proved to be time consuming. The challenges were the tremendous amount of detail in the water features, plus working on a steep incline. A crane was needed to assist in the placement of the selected boulders. Kane Brothers decided to use a combination of Wisconsin granite and aqua blue boulders. This arrangement allowed the color pattern in each variety of stone to complement the other and present a unique palette. The sizing of boulders related directly to the scale of the project and ranged anywhere from eight inch up to six foot, totaling over 150 tons.

Each section of the waterfall began with a base course of rock. Once in place, these rocks were drilled and bound together with rebar and eventually back filled with reinforced concrete. As these rock formations begin to take shape, the more meticulous stonework came into play. This detail assisted us in forming watercourses containing the abundance of white water needed to truly accent the falling water. Using the selected stone created a dark backdrop guaranteed to enhance the expression of white water.

"We realized the pooling areas between the cascades would be fairly small due to the amount of vertical drop," explains Christopher Kane. "These areas were especially important because we relied on them to house the aquatic plant life. A combination of boulders and gravel were used to create planting pockets along the shoreline. All of these areas were eventually planted with an array of marginal aquatics. The pools with the proper depth, which had less turbulent waters, were heavily planted with lilies. We also incorporated aquatics within the falls that would eventually creep down the stonework and create a dramatic appearance," he added.

To make the feature as interactive as possible, a series of decks were built alongside the waterfalls. In certain points the deck shared the same foundation as the weirs. This building process allowed the decking to remain as close to the falls as possible, in some cases cantilevered over the pools. The pool in front of the tallest drop in the sequence of cascades was chosen as a

point at which people could cross. A step was attached to the deck allowing people access down onto a pathway of strategically placed boulders elevated slightly out of the water. As you cross these boulders you can reach out and touch the water, or, if you're looking to really cool down, step in and take a shower under the seven-foot water fall.

A garden path leads down to the next pool in the cascades, allowing access to the lowest deck using a similar arrangement of key boulders. Although this pathway through the water does not expose travelers so closely to the waterfall it does lead through a stunning water lily garden. Glass panels inserted in the floor of the deck level above allow light down to this deck level. Without them the variety and health of the plantings would be limited. This deck leads to a small beach area on the shore of the river.

Just as important as the intimate outdoor living space these decks provide are the views. The waterfalls can be observed from four different elevations from the decking alone. Each terrace level essentially offers a unique interaction with the water.

Without the addition of aquatic plants, the stones would dominate. "The softscape allows us to naturalize the appearance of the feature by softening the shoreline, retaining boulder walls and outcropping stone. By using different types of plant material we can accent various grade changes and assist in creating mystery throughout the garden," explained Chris Kane. "In this project the plant life also played




AQUATICS PLANTS

- black magic taro 1
- blue sedge
- bald cypress
- calla lily
- candy stripe reed
- Canna
- cattail
- chameleon plant 2
- creeping jenny
- dwarf variegated reed
- forget me not
- giant papyrus 3
- horsetail rush
- imperial taro
- iris
- Japanese variegated iris 4
- lotus
- miniature cattail 5
- parrots feather 6
- pennywort 7
- pickerel rush
- red scarlet rosemary
- spike rush
- strawberries and cream 8
- grass
- sweet flag
- umbrella palm
- variegated bacopa
- water celery
- water hyacinth
- water lettuce
- water lily



a key role in establishing direction to focal points and garden pathways. A variety of perennials, ground covers, shrubs, evergreens, ornamental trees and aquatics were used to enhance color, texture and scent throughout the entire project," he added.

To keep the romance alive into the evening hours, Kane Brothers installed a variety of low voltage Kichler landscape lighting fixtures. A combination of underwater, path and accent lights illuminate the waterfalls, garden areas and pathways. Eighty-five low voltage lighting fixtures create soft pools of light. Blue lenses were used to filter out yellow light created by the accent bulbs. This system establishes a warm, visually appealing ambiance.

The accomplishment of this project is not only appreciated by the client, but also by the hundreds of boaters out on the water. The Kane Brothers credit the project's success to the attention to detail throughout the planning and developmental phases. Detail in texture, color, and sound all contribute to a common goal, creating spectacular water features using natural elements. 

Above: At dusk, approximately 85 low-voltage fixtures accent the water features and the surrounding gardens.

Right: The bottom fall tumbles the water back into the Fox River. There's even a small beach area for sunning and accessing the river for water sports.

