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Living Water Park

PLACE DESIGN AWARD

Design director: Betsy Damon. *Project manager:* Todd Damon.
Landscape master plan: Margie Ruddick. *Microbiologist-hydrologist:*
Huang Shi Da (City of Chengdu). *Architect:* Alice Choy.

Project director: Zhang Jihai, FuNan Rivers Renovation Bureau.
Team leader: Huang Cher Chen (City of Chengdu Office of
Landscape Architecture).

Regional landscape and local environmental values are embedded in a park that demonstrates natural processes for cleansing water and provides a city with new access to its river.



Location of Sichuan and Chengdu in China
Graphic: Margie Ruddick

The Fu and Nan rivers have brought life and prosperity to the people of Chengdu, capital of China's Sichuan province, for nearly two thousand years, and Chinese culture have long incorporated an understanding of the connection between water quality and life. But in recent decades Chengdu's rivers have become degraded as a result of the region's rapid industrial and population boom. People's daily connection to the river, once a place for fishing and washing laundry, has disappeared (along with fifty-four species of fish that had lived there).

Living Water Park is part of a massive effort by Chengdu, a city of nine million, to reclaim its rivers. In 1992 Chengdu started the China's largest comprehensive water quality initiative, constructing flood control and waste treatment facilities, relocating 100,000 residents to new, modern housing, and creating about fifty miles of new public waterfront with gardens and parks.

Within this open space system, Living Water Park serves as an educational and inspirational model, demonstrating how water can be cleansed through biological means. It also manifests the Chinese spiritual connection to water in an urban place, providing new ways to get to the river itself.

The park design centers on filtering polluted river water through a series of aeration surfaces, constructed wetlands and water features that enable

people to observe how these natural processes can remove pollutants from the river. Visitors can step down to the river along terraces that also allow the river to flow into the park; they can stroll along the riverbank or sit in an amphitheater on the river edge.

The project was a collaboration between visiting designers and designers, scientists and engineers from Chengdu. It was conceived by Betsy Damon, an American environmental artist, at the invitation of Zhang Jihai, director of the Fu-Nan Rivers Renovation Bureau. Damon directed the design and worked closely during construction with city staff and contractors. Damon's son, Jon Otto, was project manager, physicist and translator, and Margie Ruddick, a Philadelphia landscape architect, developed the schematic landscape plan. The \$2.5 million park was completed in 1998.

Damon had been visiting China since the early 1989 as part of her research on sacred water sites. After meeting Chinese artists with similar interests, she took part in an environmental conference in Chengdu. That led to directing a project that brought artists, scientists and community members together to address water quality issues (one event involved washing white silk in the dirty river water). Eventually she was introduced to Zhang, who wanted to create a permanent place for expressing ideas about water, and to whom she proposed the idea of a living water garden.



Damon and the people in Chengdu she was working with wanted to establish a spiritual connection to the water in the city and create references to the Sichuan landscape — “that is where we met very beautifully,” she said. The park is designed with an abundance of vegetation, including rare species from Mt. Emei in northern Sichuan (one of five sacred mountains in China and a source of healing waters), and is embellished with sculpture, carvings and mosaics.

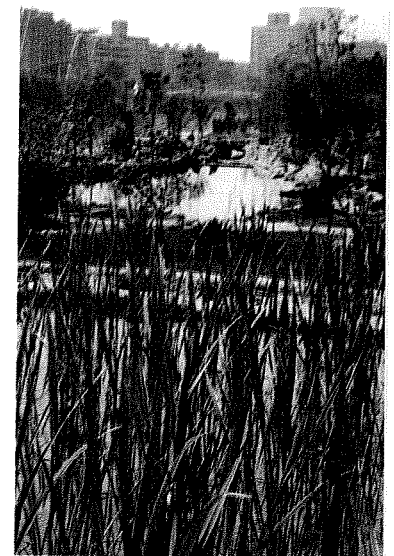
The main element is a system that filters river water through natural means and runs the length of the park (about 1,500 feet). Water is pumped in and emerges through a fountain into a settling pond, courses along a series of flow forms (sculptures that aerate water and spin off toxins), drains through constructed wetlands and fish ponds, and returns to the river. The system tells about the river basin’s original landscape character, the consequences of pollution and what can be done about it: People can see particulate matter in the settling pond, monitor the water as it is cleansed in ponds and filtering channels, and watch it return to the river.

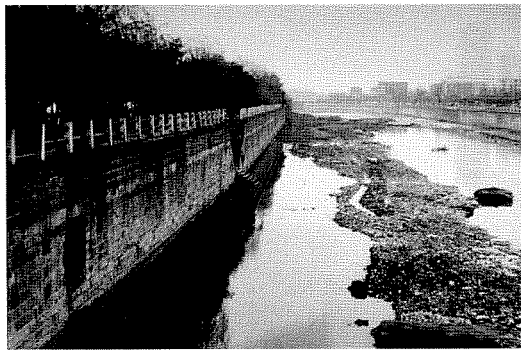
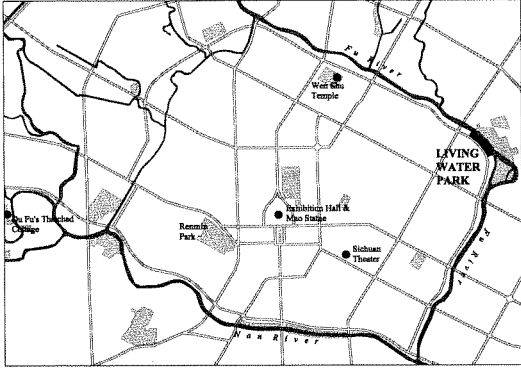
Ruddick says that when she began to lay out the programmatic and technical aspects of the park, the site plan began to resemble a fish, which excited the city landscape architects with whom she was working: “They thought it was very appropriate, because a fish is a symbol of good fortune and health, and it will help people understand that this is a place where the river is being healed.” The eye of the fish is where the water is pumped up from the river; the fish ponds are shaped like scales.

Several aspects of the design reflect local traditions. The fish ponds drain into a stream with a bridge over it; wooden walkways are part of a tradition of small-scale public space design. The water wheel is modeled on ancient structures of that type (though it is not operational). Other elements were controversial: city staff originally thought the river terraces wasted space that people could have used in other ways.

Damon’s desire to design features as organic connections is reflected in various details. The fountain sur-

Above: Aerial view of park
Below: Constructed wetlands
Photos: Margie Ruddick





Top: Map locating park along the Fu River in Chengdu
Photo: Margie Ruddick

Above: The river channel, drained during project construction
Photo: Margie Ruddick

Below right: Site plan
Graphic: Betsy Damon

face is designed from a microscopic photograph of a drop of water. One of the flow forms evolves into the shape of a bird, suggesting that water grows life, and another recalls the shape of a ginkgo leaf, which is the symbol of the city. Damon worked with Chengdu sculptor Deng Le on these pieces. “My role was to bring forward what is innate in Chinese ontology and build a contemporary language related to water cleaning,” she said.

The project involved an unusual collaboration between the designers,

city staff and officials from the Fu-Nan Rivers Restoration Bureau — complicated by language and cultural barriers and the fact that city designers had already completed plans for the site.

After Zhang invited Damon to design the park, she returned to the U.S. to raise funds, undertake further research and interview landscape architects. Damon and Ruddick returned to China in March, 1996, and were asked to develop a program, pick a site and sketch a conceptual plan — all in about three weeks. Ruddick saw merits in this level of collaboration: “I pointed out that because I was there did not necessarily mean they

would be acquiring a so-called Western design. I would be helping them figure out how to organize these technologies within the framework of their own landscape architecture, and the design development is something I think they should be very proud of.”

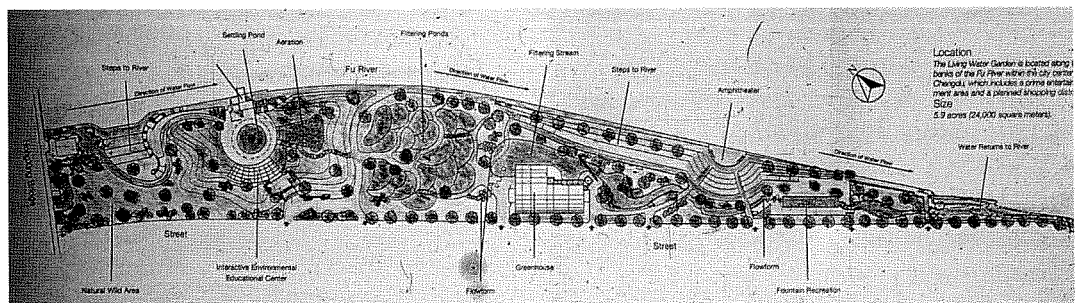
Damon left to do more research, then returned for a year to see the details of the design through. “I developed the rhythm of the park, the flow of the paths, the connectors and how the flow forms would go,” she said, along with sculptural elements like the fountain and a nautilus. A local scientist, Huang Shi Da, designed the wetlands, selecting plants and fish for the treatment ponds (Huang had already been cultivating test plots to study how plants could metabolize local water). City staff designed elements like the bridges and stone walkways.

Damon and Ruddick credit Zhang’s vision and persistence for launching the project when a design for the park had already been completed and seeing it through even though people didn’t understand how it would work. “It mobilized all these people who were doing this work separately around the city, artists doing installations, a microbiologist and engineers looking at water quality. Now everyone in the whole city knows about this park,” Ruddick said.

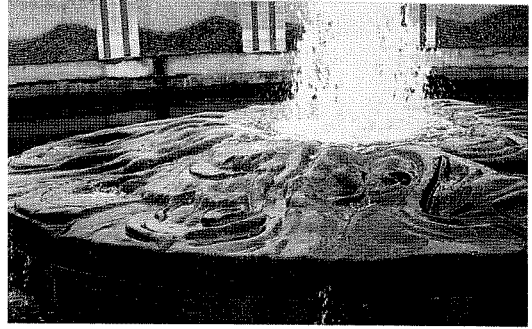
Jury comments

HALSBAND: This is an amazing public works project. What this does in terms of bringing people to the river..., there are some places that are designed for kids to interact with water. We actually learn something from this, by following through the spaces.

ZEISEL: The water moves into a settling pond whose design is patterned on a microscopic drop of water.



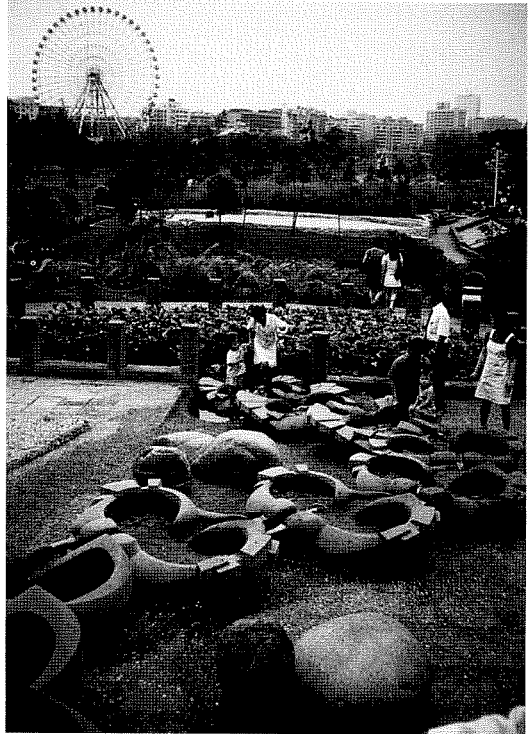
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Left: Terraces that allow visitors descend to river level. Photo: Fu-Nan Rivers Restoration Bureau

Right: Four stages in the progression of water through the treatment system. (1) Fountain from which water emerges. Photo: Fu-Nan Rivers Restoration Bureau (2) Flow form that connects various wetlands Photo: Margie Ruddick (3) Fish pond, with walkway for pedestrian access Photo: Margie Ruddick (4) Flow form that returns water to the river. Photo: Fu-Nan Rivers Restoration Bureau

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HALSBAND: It transforms from a very formal garden into this wonderful, very loose space.

VERNEZ-MOUDON: People are going to be using it. This is not a luxury.

FRANCIS: What's interesting to me is that it's a wonderful example of merging ecological design with social design.

VERNEZ-MOUDON: And urban engineering.

GANTT: It has absolutely superb design details. We don't like those architectural shots that are nothing but the details of a building, but I don't want to suggest that the details are not important.

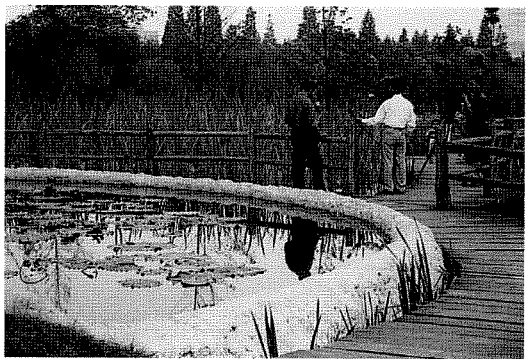
VERNEZ-MOUDON: Those are important in context, not by themselves.

GANTT: I think we can have well-designed places that also have those elements of design; I think they add some life. That is why this project rises to the top.

ZEISEL: Seeing what had to be done by the city with that wall and the backfill and moving the canal you also realize that it is a collaboration of the whole city.

FRANCIS: If you only look at the plan, you would think that this would never be published anywhere as an example of great design, based on its geometry. It's not one of these great axial unities, it's very organic. But when you get to it as a place, it really is designed as a series of experiences.

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