IN ONE FELL SWOOSH, LOCAL LANDSCAPES TAKE THE PLUNGE INTO WATERFALLS.

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The sight and sound or rushing, cascading water has been known to make people cross continents, hike through wilderness and scale mountains. No wonder we long to create miniature Niagara Falls in our own back yards.

Nowadays, constructing a waterfall is easier than ever, thanks to improved pump systems; light-weight, faux boulders; and prefabricated waterfall forms. What remains elusive are the aesthetics(or lack of) in these water to flow and fall in such a way that it enhances the senses, and yet does not seem artificial or contrived?

To learn the secrets of successful waterfall design, we consulted two local landscape architects known for creating exceptionally pleasing waterfall features: **Takendo Arii**, who designed the Japanese gardens at Escondido's Golden Door Health spa; and Jim Preston of Western Land Concepts in San Marcos, who has created waterfalls for both large commercial and small residential projects in California and Arizona.

Tricks of the trade

Both landscape architects agreed that the setting should inspire the design of any man-made waterfall, the terrain should be altered as little as possible and the waterfall should complement and /or enhance the architecture of any nearby structures.

Preston has created natural waterfalls using native stone (such as the massive granite boulders found in San Diego's back country), as well as "architectural" waterfalls constructed of glass block. For a downtown Phoenix office complex, for example, he designed an award-winning series of glass-block fountains-cum-water-falls that are as refreshing to view as ice floes, even when temperatures exceed 100 degrees. Preston said waterfalls made of glass block also work well in small areas "because you can see through the glass."

"The glass block gives you a light and airy feeling. In a tight space, you don't want a big blob of concrete," he said. But he cautioned that glass block isn't for everyone; it works best with the unadorned, geometric lines that characterize modern houses and similar structures.

According to Arii, a common mistake novices make when designing a waterfall for a flat area is to "build a mound and have the water coming out of the top of it." The end result looks odd because the mound is not in proportion to its surroundings. Rather than building a small hill in this situation, Arii advises construction a stone wall for the water to spill over the top of. He also advocates not letting the water fall in such a way that it is thin and widely dispersed.

"When people make a wide drop point, the water falls slowly," Arii said. "If you make the entry narrow, the water flows rapidly. When it overflows the narrow spot, it is more pleasing, more natural-looking." An additional bonus to building a wall, he said, is that you can conceal the pump equipment behind it. On the subject of pumps, Arii cautioned about yet another common mistake made by novice waterfall builders; under- or overestimating the horsepower of the pump that returns the water from the bottom of the waterfall to the top. "It's math," he explained. "You calculate depth, width, cubic feet. Contractors and designers who do not understand this wonder why all the water suddenly disappears from the bottom (of the pool) and then suddenly comes back out the top."

Noncontrived look

Preston agreed that allowing water-pumping equipment to remain visible will ruin the aesthetic effect of any waterfall. "Also," he added, "you shouldn't see any concrete, not even a drop of mortar."

"You have to hide the foundation," Arii said, nothing that even though his waterfalls are lined in concrete and have a waterproof surface finish, all artificial materials used in the construction are carefully concealed. "One of the simplest ways to hide mortar, cement or waterproofing material is to add color to it," he said. "If it's dark, it doesn't stand out." Preston cements his glass-block waterfalls with commercial-grade silicone, because "everything you do shows through, and mortar would block the light." If you want a natural-looking waterfall, both designers recommend setting pebbles into the concrete to conceal it and using pebbles to line basins where the water pools. In the end, though, the most important part of designing a waterfall has to do not with what you see but with what you don't see. Says Arii:

"When people look at it, they should wonder, 'Where does the water come from? Where does it go?' You create curiosity. A successful waterfall has an element of mystery."