

# Trickle Down Theory

By designing waterfeatures within the pool structure, you can control leakage



Photo courtesy of Lew Akins

Rock waterfalls leak. But by redirecting leakage to the pool, you can eliminate headaches.



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**Q.** I am a pool builder in Georgia. I don't do very much in the way of fancy work, but recently I've had a number of customers wanting to add waterfalls to their pools. I have built several waterfalls in the past, and occasionally have trouble with them leaking. I build my waterfalls apart from the pool's structure.

**Could you offer any suggestions on waterfall construction that will help reduce that difficulty?**

**A.** If we start with the premise that all waterfalls will leak, this problem is easy to address. Our job is to make sure they leak into the pool.

The best way to reduce potential waterfall leaks is to build the entire waterfall within the pool structure. When you attempt to attach a waterfall to a pool, there is almost certainly going to be a break between the two structures where water can seep in. By building the waterfeature within the pool structure, we can ensure that it leaks into the pool itself — as long as we follow a few simple steps. Let me outline how to build a waterfall within the pool's structure.

Once you lay out the pool, locate the waterfall. Stake or paint the waterfall footprint on the ground outside the basic pool shape. Don't forget

to allow bond beam thickness in the layout. Then excavate the waterfall area as you would a love seat. Make sure you dig deep enough to be in load-bearing ground.

During the forming process, form the back and sides of the waterfall area at the height the waterfall is designed to reach. If you and your client have decided on a 3-foot-high waterfall, then the finished formation of the waterfall should resemble a 3-foot raised beam in that area, with a large, shallow bench under it. Make certain the height of the waterfall pad is at least 7 inches below pool bond beam height. This will ensure that the first course of rock will finish under the water, so it looks as natural as possible.

I recommend using a separate pump for waterfall operation, so you can operate the waterfall and spa at the same time. If you choose this route, be sure to plumb the waterfall pump suction in the sidewall of the pool. If you were to place the pump suction on the bottom of the pool, you would have much more debris pumped into the waterfall. Don't forget to allow 4-foot spacing between suction points on the suction line to avoid entrapment. Use anti-vortex covers over each suction point. Plumbing at the waterfall location be