

On water-wise landscape design

With water rates rising by 40 percent by the end of this year, harvesting precipitation from roofs is coming increasingly into vogue. Recently the city of Santa Fe commissioned Richard Jennings of Earthwrights Designs to compose water-harvesting guidelines, and the New Mexico Office of the State Engineer hired me to write a manual. So, for those who think our elected officials have no plans to address our water woes, think again.

Since New Mexico's water suppliers report 70 percent increases due to landscaping, and since our culture is currently too squeamish to consider harvested precipitation as a viable source of household water, governmental efforts focus on harvesting precipitation primarily for plant material. Not that there's anything wrong with this. Actually, at this stage in the development of our nascent water-harvesting industry, a little skepticism makes sense when considering the use of potable water from cisterns.

Why not work out the kinks in such systems using plants as guinea pigs? Plus, when times get really dry, we'll be ready.

The first step to harvesting water is drafting an appropriate landscape design. This will not only save money, time, and water, but it will also ensure healthier plants, more comfortable outdoor spaces, and, as a corollary to these, a more valuable property.

Water-wise landscape design starts with water budgeting. Knowing how much water your landscape will need in its first year, third year, fifth year, and beyond is beneficial when sizing your cistern. There are three major factors that determine your water budget: quantity, quality, and timing.

Clearly the quantity of the plant material affects your water use. However, the idea of quantity has at least two senses. One is the sheer number of plants and trees that will be planted. Another is the size of each plant. For example, a one-gallon-size plant needs less water than a

five-gallon-size plant of the same species.

Knowing your quality, or type, of plant material is also critical when establishing a water budget. Will you plant drought-tolerant shrubs or bluegrass? Will you get shade from the native, but ever-thirsty, cottonwood, or might you be happy with the lovely New Mexico locust?

The timing of your installation is also essential. Can you plant your trees in the first year, your shrubs the following year, and your perennials the next? If so, the same quantity and quality of plants might fit within a reasonable water budget, whereas planting everything at once might not.

Other factors can also play significant roles in water reckoning. Soil conditions, depth of mulch, and water-conscious techniques like deep pipe irrigation and on-contour swaling can make or break a landscape. In addition, proper plant placement is often crucial. For example, friends try not to let friends plant aspens below 8,000 feet. But if such water-



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dependent trees must be incorporated into a design at this elevation, let's hope they end up in the shady and wind-protected north side of a house under a couple of burly canales.

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