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Bury pipes to save plants during drought



Permaculture in Practice

by Nate
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This relentless drought is the best thing that could happen to Santa Fe.

Optimistic projections suggest that the San Juan-Chama water-diversion project will be complete by 2007. The problem is that this will only provide enough water for for about 40 years. Without a drought now that forces our community to learn how to survive on very little water, what will happen to Santa Fe when there is no new diversion project to turn to?

If we really want to prevent Santa Fe from becoming a ghost town, we need to take this Stage 3 Drought Emergency very seriously. This means watering outdoors no more than once per week from the city system.

Right now, I should probably apologize to my landscaper colleagues as well as conventional gardeners. For most of them, seeing these words in print will cause heart palpitations. The good news is that there actually *are* ways to establish drought-tolerant plants on once-a-week watering.

This is especially true if you supplement with roof water caught in cisterns. But, since the average monsoon season doesn't start until July 7, even if you installed a cistern today, it would likely remain empty until at least mid-June.

In the meantime here are some techniques you can adopt to ensure that young plants survive if you live in the City of Santa Fe or if you just wish to do the right thing voluntarily. These techniques assume that you select plants that are drought-tolerant and that your mulch is at least three inches thick.

My favorite technique is one that I devoted an entire column to during the drought of 2000. (Feel free to contact me for a copy). It's called deep-pipe irrigation, and it's quite simple.

All you have to do is "plant" small-diameter perforated pipes next to roots of plant material and fill the pipes with gravel. When you water normally, also make sure that water is directed down the perforated pipes so that the entire root zone gets moist.

A similar technique, what permaculturalist Tim Murphy calls "wick drip irrigation", is a modern version of a "French wick" (not to be confused with a pumice wick or a French drain!). Get a 2.5 gallon water jug or similar container. Then, get some dirty, well-worn nylon twine that will wick water, and shove the twine through a plastic tube. Make sure there is slack on either end of the tube, and tie knots at the ends of the twine.

Next poke a small hole through the top of the container and shove the plastic tube with the twine in it into the bottom of the container. Then, put some rocks on top of the end of the twine to prevent the twine slipping and also to prevent the container from blowing away in the wind.

Plant your plant so that the other end of the twine is coiled around

the root zone of the plant. Be sure that the plastic tube covers the twine such that none of the twine is exposed to air. Finally, water the plant and then fill the container with water. Water should gradually migrate from the container to the root zone of the plant through the twine over the course of a week or two (depending on the size of your container and the effectiveness of the twine you choose).

The use of deep, unglazed, terracotta pots buried so that they can be filled with water, but so that they can also slowly leak water through the pores in the pots is called "buried olla irrigation." This technique has been used for centuries very effectively.

Hopefully people will have the opportunity to continue to use all of these techniques here in Santa Fe for centuries and centuries to come.

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