

## Water , Water Everywhere, Just Not Where and When We Need It

People frequently say our weather can be described as long periods of drought punctuated by occasional floods. That may be a bit of an exaggeration, but there is some truth to it. If we could direct the rain in just the amounts and times we need it, we, and the landscape, would do just fine with our average amount of annual rainfall. The problem is that in our semi-arid climate we frequently go long periods with little or no rain, only then to get more rain than we can handle.

A recent survey showed that 70 % of Texans could not accurately answer the question, “Where does your water come from?” Most answered, “the tap” or “the city”, or “the well”. The correct answer, of course, is rainfall. If you get your water from the river, the water may have fallen somewhere upstream. If you get your water from an aquifer, it may have fallen some time ago. But one thing is certain. If you are drinking it, it used to be rain.

The population of the Hill Country is increasing dramatically as more and more folks discover our little piece of the world. That means more demand for water. But the amount of rainfall is not going to increase to meet that increasing demand. So our only options are to use less, waste less and capture more. I have written before about the use of drought-tolerant native plants, small native grass lawns, and efficient drip irrigation systems as ways to minimize water usage.

Rainwater harvesting is another practice that is gaining in popularity, again. In the old days, when people were first settling the Hill Country, most settlers tried to locate near a spring or creek so they could have water all the time, even if they had to carry it some distance. People who lived farther from any surface water frequently built cisterns where rainwater was collected, a practice which dates back literally thousands of years. Modern rainwater harvesting, or catchment, is just an extension of ancient practice.

Modern rainwater harvesting systems usually involve collecting rainwater that falls on a roof into gutters and piping it to storage tanks where it can then be used over a period of time. Systems can be designed for just landscape use or for all household use as well.

The simplest system is a “rainbarrel” that captures 50 or 100 gallons of water from a gutter downspout for use in watering plants. More complete systems involve several much larger tanks that can literally hold all the water needed for a household for a year.

People are sometimes surprised at how much water can be collected in a single rainfall. The rule of thumb is that 1000 square feet of roof area can capture 600 gallons of water in a 1 inch rain. The average 2000 square foot house can thus collect about 36,000 gallons of rain in an average rainfall year in Kerrville, which can provide for almost 100 gallons of soft, pure water a day.

Rainwater collection not only reduces the demand on conventional water supplies, from both surface water and aquifer sources, but it also evens out the flow of water into our rivers and helps maintain base flow. In a heavy rain, the water collected does not run off into the river and down to the gulf, but is stored and used a little at a time over dry periods. When the rainwater is used it either goes back into the river as treated sewage effluent or seeps into the ground recharging the shallow aquifers that feed the base flow of creeks and rivers.

There are two water-related events occurring in Kerrville in the next few days. The League of Women Voters is sponsoring one Forum, "Water Planning for the Future" on Saturday, March 19 from 9:00 to 1:00 at UGRA, and another Forum on water quality and things you can do on April 9.

The Texas Rainwater Catchment Association is holding an event discussing all aspects of rainwater harvesting at the Hill Country Youth Exhibition Center Friday afternoon and Saturday, March 18 and 19. All events are free to the public.

Way back in 1947, Lyndon B. Johnson wrote, "Saving the land and the water must start where the first raindrop falls".

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