



Practical Rain Harvesting

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That the water table in the Trinity Aquifer under us is declining extraordinarily fast is probably no surprise to you. One alternative for your family to have its own sustained water supply is rain harvesting which refers to collecting and storing roof run-off rainwater.

Rainwater harvesting has gained popularity in Texas particularly where water scarcity is prominent, making rain one of the major sources of water for many. And while it remains a major source of aquifer recharge water for our declining aquifer, rain harvesting continues to gain popularity as a reliable water source for residents and businesses in the hill country's high growth areas such as Comal and surrounding counties.

In Texas' central regions, such as our Hill Country, we are blessed with adequate collectible rainfall—about 30" per year, so harvesting rain here creates a sense of water independence, preparedness, and self-sufficiency. Once installed, rain harvesting is a low maintenance, free source of water and, because of its nitrogen and lack of chlorine, rain is ideal for gardens and plants. Having our own, on site emergency store of water gives us a strong sense of security.

Rain harvesting also helps reduce water runoff which solves some of the reduced percolation to the aquifer that is associated with our increased urban growth's impervious surfaces. Collecting rain also acts as an excellent backup source of water. For every 1" of rain, one square foot of collection area yields 0.623 gallons of water. The annual yield for your home can be estimated by multiplying your structure's roof square footage times .62, times our 30" of annual rainfall (Sq Ft X .62 X 30 = number of annual gallons of water collected). That's a lot of water!

A significant benefit of harvesting rain is that it acts as a backup water source. Many of us sought ANY water source during the area's severe freeze just a few winters ago. We melted snow to flush our toilets. Droughts like the one we have been experiencing have also caused area water shortages. Additionally, major water purveyor line breaks or repairs will sometimes result in water being unavailable when we really need it. Even a small rain harvesting "emergency storage" system allows access to alternative water for household purposes while saving the available potable water for drinking and cooking.

Probably one of the most important benefits of rainwater harvesting is the role it plays in the fight against water scarcity. Nationally, it is estimated that about 35% of water in homes is used to flush the toilet. When you add that to the amount of water you use to water your garden, lawn, and wash cars, we see so much wasted potable water. Oddly, we purify water to drinking standards and then dump it on our lawns. Simple systems of rain harvesting can greatly reduce the amount of purified water needed to perform these chores. This reduced potable water use will, in turn, reduce the amount of water being pumped from the Trinity aquifer which will, in turn, lessen the aquifer's depletion rate.

Because of its relatively simple components, installing a rain collection system does not require a lot of capital—today, it is less than the cost of drilling a well. And the extra water provided by a rain harvesting system will eventually bring down our overall water costs—a cost that will most certainly rise.

With its low maintenance costs, the entire rain harvesting application is not only efficient and effective, but it also saves money in the long-term.