

## Using Cisterns for Rain Water Harvesting

**Question:** We have had an abundance of rain this spring, and I know I will wish I had stored some of it for the hotter and drier weather that is soon to come. Is it difficult and costly to install a cistern system to store water?

**Answer:** Cisterns have been used for centuries and the technology is well developed. For many reasons, we in the Southeast have not taken advantage of these systems as our neighbors to the west have. Mainly, this is because our average rainfall amounts are higher, and water is cheaper and more plentiful. Considering the fact that water is necessary to sustain life, it is still relatively inexpensive in spite of the fact that its cost has gone up dramatically over the past several years.

A large percentage of potable water is used for landscape purposes. This must come to an end if our population in the Southeast continues to increase. Cisterns offer a great opportunity to capture rain water during the rainy periods for later use in the landscape, or possibly to wash clothes or flush commodes, provided your municipality allows this.

Cisterns can vary tremendously in cost depending on size and desired appearance. If you want to try rain water harvesting “on the cheap,” I would suggest you start with a simple rain barrel attached to your gutter downspout. A 55 gallon drum can be attached in a couple hours with a few simple tools, at a cost of fifty to a hundred dollars depending on how much of a “do it yourself-er” you are.

A rain barrel will not provide enough water to maintain a thirsty lawn or a large garden, but it will provide an inexpensive drink for a container garden or a small vegetable or flower garden. If the barrel is located above the area to be watered or you are just filling up a watering can, you will need only the help of gravity to water your plants.

However, a small submersible pump can be dropped into the barrel to pump the needed water out through a water hose to any part of the landscape.

Larger cisterns can be much more expensive but can be designed to provide all of your irrigation needs and some of your non potable water needs in the home. These systems may consist of large plastic, concrete or metal tanks that can be either above or below ground.

You can even purchase large water bags that are flat when empty and expand as they fill. These bags can be stored under a porch, in a basement or even in the crawl space of a home.

If you plan to irrigate a large area and you want enough water stored to do the job, you will need to do some math. North Carolina State University has a great web site with lots of rain water harvesting information to help design a large system and to calculate the estimated time it will take to recoup your investment. Just go to [www.ncsu.edu](http://www.ncsu.edu) and search the site for “rain water harvest.”

On a smaller scale, the Alabama Cooperative Extension System will conduct a Rain Water Harvesting workshop at the Birmingham Botanical Gardens on July 14<sup>th</sup> from 1:00 – 3:00 PM. This workshop will cover the basics of rain water harvesting and demonstrate the conversion of a 55 gallon drum into a ready to use rain barrel. For program and registration details visit [www.aces.edu/homegarden](http://www.aces.edu/homegarden) and click on the “Home Grown Workshop” tab and the rain barrel program link.