Cisterns Back by Popular Demand

by Lisa Strange, FYN Community Association Coordinator

Historically, cisterns were used for potable and non-potable uses. I accidentally discovered an association with cisterns directly through my great grandmother, Granny King, while doing genealogy research. I visited her house, a small one bedroom with no indoor plumbing located on top of Parrott Mountain, a community nestled in the Appalachian Mountains. Today, it has since caved in and decomposed, but the cistern is still intact. There were no means of pumping water at 1,900 feet elevation in hard rock. Although several of the newer homes on that mountain still have working cisterns, they are used as backup systems for non-potable use. A timely article authored by Lynn Barber, Florida Yards & Neighborhoods Agent, UF/IFAS-Hillsborough County Extension, describes statistics and benefits of cisterns.

Rainwater Harvesting with Cisterns (by Lynn Barber)

Rain, rain, go away, come again another day? Let's hope it arrives soon and stays a long while! The cheapest source of water is rain. One way to capture rainfall is in a rain barrel. While this is effective, most rain barrels don't hold enough amounts of water for our landscape beds. Cisterns, however, can. Nearly 50 percent of residential water use is for irrigation during dry periods. Of this 50 percent, 41 percent could be met with a 4,000-gallon cistern.

Cisterns, watertight storage tanks, function similarly to rain barrels, holding water to be used for landscapes, potted plants, car washing, cleaning yard tools, etc. (Be sure to check your local restrictions first as cisterns are still under the current watering ordinances!) The increased capacity of a cistern, up to thousands of gallons, is much more adequate to capture and supply water needed during extended periods of low rainfall, such as the drought we're currently facing. Cisterns are more expensive and worth the cost depending on your water needs. They are made of non-reactive materials, designed for water quantity control, they provide no water quality improvements.

Out of necessity, cisterns have been used in the Florida Keys for more than a century and in Bermuda for more than 400 years. Cisterns collect rainfall from catchment areas, roofs, gutters, downspouts, gutter guards, and roof washers. The cistern size and catchment area must be sized together. To determine the size needed, note that approximately one inch of rain on a square foot roof area is equivalent to .623 gallons. Multiply the roof area by the number of inches of rainfall to determine the gallons of storage required. (One inch of rain on a 1,000-square foot roof yields 625 gallons.)

Advantages of a cistern include a reduction in water bills and saving potable water. Using non-potable water for irrigation is an act of recycling. The absence of statewide standards or rules is the disadvantage concerning cisterns today.

Cisterns can be aboveground or below ground and should be as far away from trees as possible. There is maintenance involved. Roof surfaces/gutters need to be cleaned, removing leaves, twigs, dust, and bird droppings. The cistern should be checked for possible leaks at least once a year. Deposits at the tank bottom need to be removed periodically. Mosquito larvae should be treated/eliminated. Alternatives to cisterns are wells and reclaimed water, where available.

Examples of successful cisterns are listed below. Check with your local Extension office for more information on water collection and other demonstration sites to visit.

- Hillsborough County Extension, Seffner, Bette S. Walker Discovery Garden, 275-gallon cistern collects rainwater and AC condensate, water source for irrigating carnivorous plant garden.
- Florida House Learning Center, Sarasota, two 2,500-gallon cisterns store water for irrigation and toilet flushing.
- UF Rinker Hall, Gainesville, 8,000-gallon cistern for irrigation and toilets. Serves 1,000 students and faculty daily using less potable water than an average home.

* Before considering installing a cistern on your property or new development, always check with your local authorities for any restrictions, permitting, zoning and inspection requirements, as each locale varies in project rules to ensure design and installation has been entirely thought through.

For more information on Florida-friendly landscaping contact your local county UF/IFAS Extension office or visit ***floridayards.org****. To order one (1) free Florida-friendly handbook and plant list from the Southwest Florida Water Management District, go to* ***WaterMatters.org****. For more information on the Florida Yards & Neighborhoods program go to* ***http://fyn.ifas.ufl.edu****.*

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FEATURED PLANT:

Crossvine, Bignonia capreolata 'Shalimar Red,' which is used to camouflage the cistern in photo at left.

Crossvine has twining tendrils with adhesive discs at tips, helping the vine to attach itself to most surfaces and will grow 30 to 50 feet. The growth rate is considered rapid for hardiness zones six to nine. The orange to red two-inch trumpet shaped flower is very fragrant and attracts hummingbirds. The foliage displays a purple to burgundy color in winter. Crossvine is a hardy vine that has few or no pest problems. Tolerates light shade but prefers full sun to produce more blooms. Also a good vine for coastal areas because it is tolerant of salt spray.