

Putting away something for a rainy day? If you do it right, perhaps a rainy day can put something away for you.

Rainwater Collection Systems – What are they? How do they work? How much do they cost? Where can I find them in the Raleigh area?

Worried about water restrictions and the condition of your lawn? You may want to consider a rain collection system. Remember water pouring out of your gutters, down the driveway, and into the storm drain in a Southern summer rainstorm, only to have to add to your water bill four days later when your parched lawn urges you to get out the hose? What if that water didn't have to travel all the way through storm drains, to creeks and streams, into the lake, then to the water treatment plant, then back through a huge system of underground pipes in order for you to use it?

How much water lands on my roof?

In the Raleigh area, average rainfall year round is between 3 and 5 inches per month. It is estimated that even a tenth of an inch of rain falling on an average home's roof can fill a 50 gallon collection barrel. An average Triangle storm drops an inch of rain. This equates to about 623 gallons of water falling on a typical 1000 square foot roof! Multiply that by the 45-50 inches of rain we get each year, and you've got 28,000 gallons of water falling like gold out of the heavens for you to collect. This more than covers the amount of water used for landscaping, washing cars, and flushing toilets each year in a typical home.

How do I collect all this water?

Taking advantage of the water falling from the sky can mean a 50 gallon stylish bucket placed under your gutters, an elaborate 30,000 gallon underground tank and pumping system, or something in between.

What's the easiest way to collect rain?

The simplest system is a rain barrel, which can range from 50 to 200 gallons. Rain Water Solutions in Raleigh offers barrels made out of 100% recycled material, which are designed and manufactured in North Carolina. These barrels attach to a home's gutter system, with a screen trap on top to keep pests, debris, and animals out. If the container fills up, any excess water can be directed with a hose away from the home's foundation, or sent to a second or third water barrel. A spigot at the bottom of the barrel allows easy garden hose attachment, so that you can let the water wait until you need it for your lawn and landscaping, and then let it flow wherever you direct it. This 65 gallon barrel is priced at \$198.99 with shipping, or you can save the \$49.00 shipping fee by purchasing at a Triangle retailer – see below. Rain Water Solutions also offers 100 and 200 barrels, in 6 different colors. Find out more about Rain Water Solutions at <http://www.rainwatersolutions.com/>.

The City of Raleigh also offers rain barrels for sale. The barrels are constructed of 25% recycled material, by Rain Barrel USA (also based in NC). These barrels look similar to garbage cans with lids. A 60 gallon barrel sells for \$80.06, a discounted price through the city. Also available in an 80 gallon size, these

barrels come only in dark green. A rain barrel is not pressurized, and will not support a sprinkler without a pump, but does allow watering by hand with a hose.

I want to store a little more water – what are my options?

There are quite a few above ground options; some that homeowners can install themselves and some that require professional help from a builder or contractor. Systems start with tanks that hold about 225 gallons, with a simple straining system and a gravity hose attachment. These can be attached to a single gutter. There's a company called BRAE, with headquarters in Oakboro, NC, that offers a variety of different options. Their "cottage series" for the do-it-yourself customer advertises systems that can be installed by owners in existing or new homes. Ranging in price from \$780 to \$1226, the upper end choice offers a 550 gallon tank (big enough to take full advantage of most storms!), a ¾ horsepower motor to help with water pressure, a "nested" filtration system to keep the water as clean as possible, and a wireless water level indicator. Their Cottage Pro series can be attached to an in-ground irrigation system. A system with an 1100 gallon tank starts at \$1449. You can find out more about their products at <http://www.braewater.com>.

Is anyone in North Carolina using a system that provides indoor water?

The NC Green Building Organization is collecting information on several North Carolina rainwater collection and distribution projects. R.D. & Euzell P. Smith Middle School in Chapel Hill is pioneering green building techniques, such as a huge rainwater collection system installed near the building. Roof drains and a network of pipes bring water to six 13,000 gallon underground tanks. The rainwater is filtered, chlorinated, and metered. A pumping system is then used to take the treated water to the school's restrooms, where it is used only for toilets at this point. The water is also used to irrigate the school's landscaping, including the football fields. The project summary notes that the school saves money on monthly water bills, but that it also had lower general construction costs because a less intensive storm water management system was needed.

What would it take for a full system to be installed in my home?

NC building code currently prohibits rain water from being used for anything but irrigation and flushing toilets. To be used indoors, rain water must be filtered and treated. Rain Pro Inc, based in High Point, NC, has been installing collection systems in North Carolina for almost three years now. An elaborate system featuring a large underground tank with filters and pumps can run up to \$10,000 (including installation) depending on many factors. BRAE systems also installs underground water collection tanks in the Raleigh area. When looking at costs online, make sure to factor in the cost of professional help, particularly if plumbing is involved.

It's easier to install a full home system during construction, as plumbing will have to be adjusted so that filtered rainwater is used only in toilets, while the remainder of the home uses well or city water. Without an extensive, highly rated filtering system, rainwater is not considered "potable" water, that is, it shouldn't be used for drinking, cooking, or bathing. But if you're looking for an environmentally sound way to keep your lawn green, look into purchasing a rain barrel or a mid-size cistern. If you're

considering homes for sale, ask your local builder about installing a larger collection system and possibly integrating it into the plumbing and/or irrigation systems.

Rain Water Solutions rain barrels can be found at the following retailers:

Logan's Trading Company

707 Semart Drive
Raleigh, NC 27604
Phone: 919-828-5337

Fifth Season Garden Co

106 S Greensboro St
Carrboro, NC 27510
Phone: 919-932-7600

Wilson's Lawn & Garden Center

US 15-501 North at Old Durham Road
Chapel Hill, NC 27515-3668
Phone: 919-942-3914

Or purchase a rain barrel from the City of Raleigh. These may only be purchased Mon-Fri from 7am to 4pm, and only by check or money order. Call ahead to make sure they are in stock.

Raleigh Solid Waste Services

400 W. Peach Street
Raleigh, NC 27603
Phone: 919-831-6890

Pricing and availability current as of 12/07. Although the information in this post is presented in good faith and believed to be correct, Stanton Homes makes no representations or warranties as to the completeness or accuracy of the information.

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