Rain Barrels and Cisterns: Two Old Ideas Taking on New Life!
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The droughts of the past several years have helped focus public attention on water quantity issues. What is your drinking water source? Surface water? Ground water? Are you on a public supply? Have fees been increasing? Do you really need to use drinking water (also known as “potable” water) to wash your car or water your lawn and garden? In North Carolina, water conservation is important because...

• Conserving water means more water is available to serve additional water needs, as well as for wildlife and recreation.
• Conserving water reduces the amount of money you spend each month for household water use.
• Your community saves the money spent pumping and treating water before and after use, plus conservation can delay expenditures for additional water sources and treatment facilities.
• Water conservation can positively affect the reliability of your water supplies during periods of high demand and during droughts.

To save on potable water usage AND help reduce storm water runoff, consider adding a cistern or rain barrel to your yard. These are easily adapted to homes with gutters and downspouts. The water can also be used to replenish decorative ponds.

The use of a rain barrel or cistern to collect water, which is also called “rain water harvesting”, has been used for centuries. In some areas of the world, they are still the primary source of water. The size of the rain barrel or cistern is based on how much roof area is available and the amount of water you wish to collect. A roof will collect 0.62 gallons of water per square foot during a 1-inch rain; therefore, a 100 square foot roof area would yield 62 gallons of water. For this section of North Carolina, nearly 90 percent of the rain events are 1-inch or less. You can measure the length and width of your roof to determine the amount of water that could be collected at your site.

What is the difference between a rain barrel and a cistern? In general, cisterns are larger in volume (1000+ gallons), and can be installed either at-grade or below-grade. Rain barrels have a smaller volume (roughly 30 to 500 gallons) and are installed above-grade. The collected water is naturally soft and contains no minerals or chemicals, which makes it very beneficial for plants. The water can also be used to wash cars, fill birdbaths, and clean garden tools. Do NOT use the water for drinking or...
cooking. Besides helping to reduce your use of potable water, rain barrels, and cisterns help reduce storm water runoff.

When installing a rain barrel, be sure to place it on a firm level surface. A 50-gallon barrel will weigh more than 400 pounds when full. It is generally recommended that the barrel be placed on concrete blocks, and perhaps even attached to a structure with a strap. Individual barrels can be placed at each downspout, or for larger volumes, multiple barrels can be linked together. If the area of roof provides a lot more water than your barrel can hold, make sure that there is an overflow pipe. Be sure to direct the overflow to an area that can accept the water without causing erosion problems. A rain garden is a great destination for the overflow water.

Pre-made rain barrels and cisterns can be purchased from numerous sources; however, you can also make your own. The key ingredients are a food-grade barrel; a screened inlet; an overflow pipe; a faucet; and a firm, raised, level base. To re-cap:

- Use water wisely by watering your garden with free water collected from your roof.
- Be sure to use a food-grade quality recycled barrel (55-gallons is a common size). Most recycled barrels need to be cleaned before first use.
- Connect a soaker hose to your barrel. This is a convenient way to make use of the collected water.
- Install an overflow at the top. This is an important feature. A full barrel has the potential to spill additional water over the top and may cause localized erosion. Direct the overflow line to an area where the water will be beneficial.
- DO NOT use collected water for drinking, cooking, or bathing.
- Keep the lid secure so children or animals cannot fall into the barrel.
- Elevate the rain barrel slightly to make access to the spigot easier.
- The screened louver vent will prevent mosquitoes from breeding in your barrel.

Source:
http://www.cityofbremerton.com/content/sw_makeyourownrainbarrel.html

Planters and foliage placed around the rain barrels will help them blend in with the rest of the landscape. Painting the barrels is a great option. It also helps protect the barrel from sunlight. Barrels, structurally designed to be buried, can be placed in the ground; however, a pump would be needed to access the water, and a high water table could cause the barrels to pop out of the ground.

If you have questions about rain barrels and cisterns or want to learn how to make them, contact Dr. Diana Rashash, in the Onslow County Center, by phone at 910-455-5873 or E-mail at diana_rashash@ncsu.edu. The Cooperative Extension Center in Robeson County has a variety of publications to help you save money - and water - in your home and can be reached by phone at 910-671-3276 or visit our website at Robeson.ces.ncsu.edu.