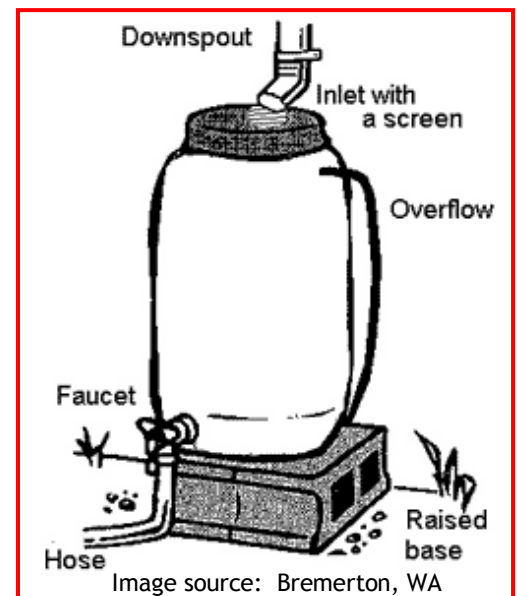


Rain barrels and cisterns ...

Take advantage of the water nature gives us. Using a rain barrel or cistern to collect rainwater can lower your water bill, be good for your plants, and also protect the environment by reducing runoff from your property.

What is the difference between a rain barrel and a cistern? Size. Rain barrels are generally smaller and are installed above-grade, whereas cisterns are larger and may be installed above- or below-grade. Pre-made rain barrels and cisterns can be purchased from numerous sources; however, you can also make your own. A quick web search pulls up a long list of sites with instructions and videos. There are also sites that tell how to paint the barrels.

Be sure to use a food-grade quality recycled barrel (50 to 55-gallons and 275-gallons are common sizes). You will need a faucet at the bottom and an overflow pipe near the top. There will also be a screened opening to allow the water to enter the barrel from the downspout, while helping to keep out debris and mosquitos. Elevate the rain barrel slightly to make access to the faucet easier and improve water flow. Make sure the base is level and stable. Water weighs a little more than eight pounds per gallon. **A full barrel is very heavy.** In fact, you may want to tether the barrel in place, so it can't tip over. Once your rainbarrel is put in place, the overflow pipe should be taken to ground level and positioned to direct water away from your foundation.



Sizing your system is important. Fortunately, it is not hard to do. A quick approximation is that for every 100 square feet of roof area, a 1" rainfall will yield 62 gallons of water. In eastern NC, 90% of our rain events are less than 1-1.5"; 50% of our rain events are less than 0.2". A single 55-gallon barrel can be quite useful, but will overflow during large rain events. Several barrels can be linked together at the bottom if you want to collect larger volumes of water, or you can get larger tanks.

If you decide on a cistern, it can be placed totally or partially in the ground; however, a pump (hand, solar, or electric powered) would be needed to access the water. In areas with a high water table, ground water may cause the tank to pop out of the ground when empty. When purchasing a tank to go in the ground, make sure that it is built for that purpose. In-ground tanks are stronger and have extra

ribbing support to keep them from being crushed. New, un-used 1,000-gallon concrete septic tanks work well as cisterns.

If you don't have gutters but still want to collect rainwater from your roof, don't despair! It is still possible. A French drain can be placed in the ground along your roof's drip line. The pipe from the drain would lead to an in-ground cistern. This has the benefit of no gutters are needed, plus the water is filtered prior to entering the tank. Do check with your termite control company for any requirements about cistern or trench placement, so that your contract is not voided. The tank would need to be placed at least 10-ft from the home's foundation.

Rainbarrel materials list:

<u>Number</u>	<u>Item</u>
1	Food-grade barrel
1	Tube of silicone caulk
1	½" brass hose bibb
1	4" sink strainer
1	bulkhead fitting <i>OR</i> ½" female adapter and ¾" ID flat washer
2	1.5" ABS elbow
1	1.5" ABS trap adapter
1	1.5" ABS cleanout adapter
1	1.5" rubber washer ("shoe")
1	1.5" ABS pipe of desired length

Other items:

2 Adjustable wrenches

Various size hole saw bits, including 4" for sink strainer opening

Drill

Teflon tape

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