

# collect

rainwater for capture & re-use

## rain barrels & cisterns defined:

A rain barrel is designed to capture and store rainwater for future use. Rain barrels attach to the downspout of your stormwater gutter to capture rain that would normally become runoff. Rain barrels have a spigot at the bottom to access the water. Rain barrels often hold 40 to 70 gallons. A cistern is a rain barrel on a much larger scale, so it stores more stormwater. Cisterns could be almost any size, from 100 to 1,000 gallons or more. Cisterns are sometimes buried underground and can have a pump hooked up to them.



## uses for your captured stormwater:

Rainwater captured and stored in your rain barrel can be used for outdoor water needs, such as watering plants or washing your car. Rainwater has a higher nutrient content than tap water and therefore supplies more of your plants' needs. It is *not* drinking water. Place your rain barrel where you can easily access it. Work it into your existing landscape. It is important to use stored rainwater before the next storm or the additional water will overflow. You can direct this overflow into a rain garden or onto the lawn. See the factsheets on downspout disconnection and rain gardens for more information.



## instructions:

Most rain barrels come with instructions and you should follow those first. In general, all rain barrels are installed the same way and you can use the instructions here.

1. Position your barrel on level ground or level blocks, next to a downspout. Leave enough room under the spigot for a watering can. If you plan on using a hose, remember water runs downhill.
2. Cut the downspout with a hacksaw 8 to 12 inches above the top of the barrel. Remove the lower section of downspout and set the barrel in place. Attach a downspout elbow and a short section of downspout to direct water onto the screened lid of your rain barrel.
3. Attach a section of hose to the overflow fitting (some barrels come with these). If the hose that came with the rain barrel is



## instructions (continued):

too short, you can use an old piece of garden hose instead. Make sure it flows away from the foundation of your house, preferably into a landscaped area or onto rocks or a splash block toward your lawn. If your home is on a steep slope, be sure to direct the rain barrel overflow into the existing drainage system or in such a way that it does not increase erosion.

4. Different types of downspout adapters are also available. These are installed along the downspout and have a hose leading to the rain barrel. When the rain barrel fills, the rainwater will bypass the barrel and continue down the downspout as it did before the rain barrel was installed.
5. A rain barrel has a spigot usually set high enough to fill a watering can. You can also attach a hose to the drain valve at the bottom of your rain barrel.
6. You can connect two or more barrels together by linking the overflow ports at the top, so one barrel flows into the next.

## want more than a rain barrel can hold?

An average-sized, 65-gallon rain barrel is not large enough to capture all the runoff from your roof. A 300-square-foot roof section that drains to a downspout would produce approximately 162 gallons of water. If you use a 65-gallon rain barrel, 97 gallons of water will overflow from the barrel (hopefully into your rain garden). If you would like to capture more rain than you can with a rain barrel, see the NC Cooperative Extension publication *Rainwater Harvesting: Guidance for Homeowners*: [www.content.ces.ncsu.edu/rainwater-harvesting-guidance-for-homeowners](http://www.content.ces.ncsu.edu/rainwater-harvesting-guidance-for-homeowners).

Here is a quick calculation for determining how many gallons of water will run off your roof from one inch of rainfall:  **$V = A \times 0.6$** .

Volume = gallons of runoff, A = surface area of your roof, and 0.6 is a conversion factor for inches/feet/gallons. A general rule is 1" of rainfall on a 1,000-square-foot roof will produce 600 gallons.



## where can I get one?

Hardware stores, and even grocery stores, now sell rain barrels. Check with your town or county to see if they are selling them. Various styles and sizes of cisterns and rain barrels can be found online at different rain barrel and rainscaping companies. You can also make your own rain barrel — many towns offer guidance on their websites. Check with your local Cooperative Extension Service for more ideas and information.