

It's Raining, It's Pouring - Water for Storing

People have collected rainwater since ancient times. It is an old skill that is still relevant today. An average residential roof will produce a large amount of runoff even with little rainfall. During a 1-inch rainfall you can collect a just over a half gallon of water for each square foot of roof, about 60 gallons for every 100 square feet. That's a lot of water!

Rainwater harvesting systems can be as simple as a large container with a spigot at the bottom placed under a downspout. A 55-gallon barrel is the most commonly available container size. Set the barrel on a level, hard surface that has a solid foundation underneath it. A full 55-gallon barrel will weigh almost 500 pounds. Raise it higher using concrete blocks or bricks to improve water flow rate. The increased pressure works well for low-pressure drip irrigation or soaker hoses but will not support sprinklers or a hose end sprayer. It is important to cover the barrel with screens to prevent mosquitoes from breeding in it. Installing a 1 mm or smaller screen at any point where standing water could be exposed to the outside environment will keep them out.

Because roofs will collect dust and bird droppings between rainfall events, it is best to include debris screens and a diverter in your rain harvesting system. Debris screens fixed into the gutter or piping will help pull out large debris like leaves and twigs. Note that the run-off that first comes off the roof is called the "first-flush" and will have the highest percentage of contaminants.

A diverter helps isolate the "first-flush" from the rest of the runoff so harvested water will have a lower percentage of roof contaminants. This diverter routes the water coming off a roof into a slow draining pipe that will fill up first. Once it is full, an overflow valve will carry subsequent runoff into the primary storage container. After every storm event while the system is in use, the first flush diverter should be cleaned out. It is important to include an overflow valve in the storage container as well. Once the container is full, any excess runoff can be directed away from buildings and foundations to French or surface water drains. Be sure to cover the end of the overflow line with wire mesh or a flap valve to keep out insects and animals. You can also link two barrels together to collect this overflow and store more water.

Pre constructed rain barrels and ready to assemble kits are available at your local lawn and garden and big box stores. For us DIY folks, *Oklahoma Gardening* features two episodes on "How to Build a Rain Barrel" available on the Tulsa Master Gardener website. Go to mg@tulsamastergardeners.org. Choose Lawn and Garden Help on the main page, then under Tips and Techniques, click on the Water Conservation tab.

Capturing rain run-off from your house is a good water conservation technique. Finally, decorate your rain barrel. Show your sense of style and save a little on your water bill at the same time.

You can get answers to all your gardening questions by calling the Tulsa Master Gardeners Help Line at 918-746-3701 or by emailing us at mg@tulsamastergardeners.org.



[BAE-1757 Design of Rainwater Harvesting Systems in Oklahoma, OSU Extension](#)
[L-332 Xeriscape Demo Garden, Edmond, OK, OSU Extension](#)