



How Do I ... Build a Rain Barrel

Collecting rainwater in a rain barrel will allow you to conserve natural resources or save money on your water bill.

By Rhoda Peacher

Remember the children's rhyme, "Rain, rain, go away. Come again another day"?

By catching rainwater runoff from your roof in a rain barrel, you can have the rain "come again" when you need it. Collecting rainwater will allow you to conserve natural resources or save money on your water bill.

Materials ListWater-tight, rust-free barrel or drum

Short length of 3/4-inch PVC pipe

3/4-inch PVC elbow, SLIP x MPT (male thread on one end, smooth or "slip" on the other end)

3/4-inch PVC adapter, SLIP x FPT (female thread on one end, smooth or "slip" on the other end)

Boiler faucet or another type of faucet that fits your PVC adapter and hose

Teflon thread-sealing tape

PVC cement and primer

The typical roof on a house can direct as much as 200 gallons of water into its downspouts during a 1/4-inch rain shower.

Already-assembled rain barrels are available at many garden centers and online; however, rain barrels aren't difficult to make.

Rain barrels can be made by reusing any water-tight, rust-free barrel or drum, but choose one that hasn't held hazardous chemicals. Depending on your location, you should be able to find discarded wine or whiskey barrels, metal barrels or plastic food-grade barrels for \$10 to \$15. Check feed stores, food distributors or even your local Craigslist site.

A common 55-gallon, food-grade plastic barrel has two holes in the top with screw-in plastic caps. (Use this type to construct the rain barrel in this article.) These are ideal, as the caps are each threaded, so they can easily be unscrewed to access the contents of the barrel. Typically, the caps also have a ready-made faucet tap, which will allow easy attachment of a pipe and water spigot.

Step 1: Rinse the Barrel

Even though you'll be using this collected rainwater as non-potable water, you should rinse out any residue. Remove the caps and rinse the barrel with a garden hose. Note that the caps you remove from the barrel might not be interchangeable, so don't try to force them or accidentally cross-thread one.

Step 2: Set up a Stand

The stand for your rain barrel should be tall enough so you can easily put a watering can under the barrel faucet.

Maintenance

However you connect your rain barrels to your downspout, it's important to be able to easily disconnect them. Keep this in mind when you're designing your system.

Drain the barrels before winter, as water expands when it freezes and can destroy your barrels.

If you treat your roof with moss killer, disconnect your rain barrels beforehand.



Wait until after two or three heavy rain showers before reconnecting the barrel to the downspout to be sure the roof has been well rinsed. You can build a stand from wood or even set up a platform of concrete blocks. Be sure you design a space or a gap in the top of the stand so the PVC pipe can run from the bottom of the rain barrel to the edge of the stand without being crushed.

Place the stand on level ground near an existing downspout that is convenient to the area where you want to use the water. Remember that the water will be gravity-fed, so the rain barrel must be higher than any areas where water will be used—water won't run uphill!

Step 3: Prepare the Barrel

The barrel will be mounted on your stand with the two capped holes on the bottom. One of the holes will be used to connect the PVC pipe. Leave this hole open, but securely replace the cap on the other hole—this is where the faucet will go.

Use Teflon tape on the cap threads to ensure a water-tight fit; wrap the tape in a clockwise direction so the tape doesn't unwind as the cap is screwed on.

Using a 3/4-inch drill bit, drill out the plastic faucet tap in the center of the cap. With a utility knife, carefully trim away any leftover plastic remnants on the inside of your drilled hole.

Step 4: Attach the PVC Pipe

You might find it easier to attach the elbow to the PVC pipe first, then screw the whole thing into the faucet tap. Put primer on the PVC elbow connector and one end of the PVC pipe, then apply the PVC cement to the pipe, fit them together, and screw the elbow into the cap.

Now place the barrel on your stand. The PVC pipe should reach just to the edge of the stand; cut off any extra.

Step 5: Attach the Faucet

The final step in constructing the rain barrel is to attach the PVC adapter to the end of the pipe, and then attach your faucet onto the adapter.

Put PVC primer on the adapter and the cut end of the PVC pipe, then apply cement to the pipe and fit them together. Wrap the faucet threads in Teflon tape and screw the faucet into the PVC adapter.

Step 6: Direct Water to the Barrel

Make sure the barrel is exactly where you want it, because once it's filled with water it will weigh about 450 pounds.

There are many ways to direct water from a downspout into a rain barrel. Depending on your needs, you might want to develop your own solution.

One simple option is the Garden Watersaver Diverter. This device attaches to your downspout and has a hose that directs water from the downspout into your rain barrel. When the barrel is full, the water is automatically redirected back into the downspout. The diverter comes with downspout attachment instructions.

To attach the hose to your rain barrel, drill a hole in the top of your barrel, and put the Watersaver hose through the hole. To prevent a vacuum effect and to keep water flowing freely from the spigot, drill a 1/8-inch hole in the top of the barrel near where the hose enters.

Step 7: Connect Overflow Barrels

If you have room, you can connect two or more barrels together so one barrel can overflow into the next.

To do that, drill a hole near the top of each barrel and connect them with a hose or pipe. Be sure that this connection is large enough in diameter so the water flow into the next barrel equals the flow entering the barrel from the downspout. Fit each barrel with a water faucet just as you did the first.

Now that you see how easy it is to make your own rain barrel, make one (or more) to catch spring rain before the dry summer months set in.

Rainwater is better for your plants than treated tap water, so your garden will thank you and so will your checkbook. Then



you can change the old rhyme to something more appropriate: "Rain, rain, stored away, water plants another day!"

About the Author: Rhoda Peacher is a freelance photographer and writer living outside Portland, Ore. She specializes in subjects relating to small farms and rural life.

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